INITIAL STUDY

FOR THE

CHINO BASIN WATERMASTER
OPTIMUM BASIN MANAGEMENT PROGRAM UPDATE

Prepared for:

Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, California 91708
(909) 993-1600

Implementing Agency:

Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

Prepared by:

Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, California 92405
(909) 882-3612

In association with Wildermuth Environmental, Inc.

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Attachment 1 – General Plan Maps for All Cities Within Chino Basin

ABBREVIATIONS AND ACRONYMS

AFY or afy	acre-feet per year
AMP	Adaptive Monitoring Program
ASR	Aquifer Storage and Recovery
Basin Plan	Santa Ana River Basin
CASGEM	California Statewater Groundwater Elevation Monitoring Program
CCWF	Chino Creek Well Field
CCWRF	Carbon Canyon Water Recycling Facility
CDA	Chino Basin Desalter Authority
CEQA	California Environmental Quality Act
CIM	Chino Institute for Men
Court	California State Superior Court for San Bernardino County
DDW	Division of Drinking Water
DFW	Department of Fish and Wildlife
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
DYYP	Dry-Year Yield Program
EDMs	electronic distance measurements
FMSB	First Managed Storage Band
FWC	Fontana Water Company
GE	General Electric
GLMC	Ground-Level Monitoring Committee
GMZ	Groundwater Management Zone
HP	horsepower
IEUA	Inland Empire Utilities Agency
IMP	Interim Monitoring Program
IP	Implementation Plan
IX	RO/ion exchange
JCSD	Jurupa Community Services District
Judgment	Chino Basin Municipal Water District vs. City of Chino et al.
MAR	Managed Aquifer Recharge
MCLs	maximum contaminant levels
MGD	million gallons per day
MPI	Material Physical Injury
MS4	Municipal Separate Storm Sewer System
MVWD	Monte Vista Water District
MZ-1	Management Zone 1
NLs	notification levels
OBMP	Optimum Basin Management Program
PBHSP	Prado Basin Habitat Sustainability Program
PEs	Program Elements
PFAS	per-and polyfluoroalkyl substances
PFOA	perfluorooctnoic acid
PFOS	perfluorooctane sulfonate

POTW	Publicly-owned Treatment Works
Regional Board	Santa Ana Regional Water Quality Control Board
RIPComm	Recharge Investigations and Projects Committee
RMPU	Recharge Master Plan Update
RO	reverse osmosis
RODs	Records of Decisions
RP	Regional Plant
SEIR	Supplemental Environmental Impact Report
SFI	Storage Framework Investigation
SGMA	Sustainable Groundwater Management Act
SMP	Storage Management Plan
SNMP	Salt-and-Nutrient Management Plan
SSC	Safe Storage Capacity
SWRCB	State Water Resources Control Board
TDS	total dissolved solids
TIN	total inorganic nitrogen
TOC	total organic carbon
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
UV	ultraviolet
VOC	volatile organic compound
WEI	Wildermuth Environmental, Inc.
WFA	Water Facilities Authority

ENVIRONMENTAL CHECKLIST FORM

INTRODUCTION

Project Title:	Chino Basin Watermaster Optimum Basin Management Program Update (OBMPU)
Lead Agency Name:	Inland Empire Utilities Agency
Address:	6075 Kimball Avenue, Chino, CA 91708
Contact Person:	Ms. Sylvie Lee, P.E.
Phone Number:	(909) 993-1600

Project Location: The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin consists of an alluvial valley that is relatively flat from east to west, sloping from north to south at a one to two percent grade. Basin elevation ranges from about 2,000 feet adjacent to the San Gabriel foothills to about 500 feet near Prado Dam. As shown in Exhibit 2, the Chino Basin is bounded:

- on the north by the San Gabriel Mountains and the Cucamonga Basin;
- on the east by the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills;
- on the south by the La Sierra Hills and the Temescal Basin; and
- on the west by the Chino Hills, Puente Hills, and the Spadra, Pomona, and Claremont Basins.

Project Sponsor's Name and Address:	Chino Basin Watermaster 9641 San Bernardino Road Rancho Cucamonga, CA 91730
Present Land Use / Zoning / General Plan Designation:	Multiple

Detailed Project Description:
(All exhibits are located at the end of this section, not immediately following their reference in text.)

1. INTRODUCTION

This chapter contains a detailed description of the proposed project, the Optimum Basin Management Program Update (OBMPU), with focus on those program characteristics and activities that have the potential to cause a direct physical change in the environment, or a reasonably foreseeable indirect physical change to the environment. This project description focuses on the relationship between OBMPU Program Elements and activities and facilities proposed by the overall OBMPU programs that may be implemented if the proposed program is approved by the Chino Basin Watermaster (subsequently referred to as CBWM or Watermaster). However, because the CBMW is not considered a public agency, the Inland Empire Utilities Agency (IEUA), whose service area encompasses most of the Chino Basin, will serve as the Lead Agency for this environmental document and compliance with the California Environmental

Quality Act (CEQA). Actual implementation of the OBMPU activities described herein may be carried out by the CBWM or any of its member agencies/stakeholders in the Chino Groundwater Basin (Chino Basin) through the planning period, 2020 through 2050.

The description of the OBMPU's scope in this document is of necessity expansive as it covers the nine (9) Program Elements (PEs) that make up the original OBMP, and which were analyzed in a 2000 Program Environmental Impact Report (2000 PEIR). The OBMP is the program developed by the Watermaster and stakeholders under the discretionary authority given to the Watermaster Board by the 1978 Judgment. This document contains the management actions to achieve the four goals identified and discussed below. The OBMP is often defined as an aspirational document. The OBMP Implementation Plan (IP) describes the implementation plan for the Chino Basin Management Program. The goals and objectives for the OBMP are described in Section 3 of the Phase 1 OBMP report dated August 1999. Nine program elements were developed during the OBMP Phase 1 process to meet the goals of the OBMP. The Implementation Plan provides time certain and concrete actions to achieve the goals in the OBMP Phase 1 Report.

The OBMPU is intended to address possible program activities and projects at a programmatic level over the next 30 years, with some site-specific detail where near-term future locations of facilities are known. The CBWM and stakeholders have been meeting to review Program Elements and define potential project activities and facilities for about the past two years. Since the Inland Empire Utilities Agency (IEUA) has jurisdiction throughout most of the Chino Basin, it has agreed to serve as the Lead Agency for purposes of complying with the California Environmental Quality Act (CEQA). The CBWM and parties/stakeholders of the OBMPU and regulatory agencies that will function as CEQA Responsible Agencies will have the option of relying upon this CEQA document for any future actions they take in support of the proposed program or an individual project described in this environmental document (Section 15268, State CEQA Guidelines). Where necessary in the future second-tier environmental documents may be prepared for specific projects (Section 15162, State CEQA Guidelines).

In conjunction with this project description, CBWM and IEUA have authorized the preparation of a detailed Initial Study (attached) to determine whether the OBMPU, as defined below, has the potential to cause any significant adverse environmental impacts. Based on the findings in this Initial Study, a decision has been made to circulate this Initial Study which recommends that a focused Environmental Impact Report (PEIR) be prepared to address environmental issues that may result in potentially significant adverse environmental impacts.

The OBMPU and its associated activities are so interrelated that they merit consideration under a single CEQA document. CBWM and IEUA are in the unique position to evaluate implementation of the OBMPU on behalf of the Chino Basin as they integrate management of water supply, wastewater and groundwater management over the next 30 years and derive important benefits through cooperation with all other water management agencies and stakeholders in the Chino Basin.

This current environmental review is the most recent in a series of environmental documents that began in 1999-2000 when the original OBMP PEIR was published and certified. These documents include the following:

- *Final Program Environmental Impact Report for the Optimum Basin Management Program* (SCH#200041047), July 2000 prepared by Tom Dodson & Associates (2000 OBMP PEIR)

- *Final Program Environmental Impact Report for the Wastewater Facilities Master Plan, Recycled Water Master Plan, Organics Management Master Plan* (SCH#2002011116), June 2002 prepared by Tom Dodson & Associates
- *Final Subsequent Environmental Impact Report for Inland Empire Utilities Agency Peace II Project* (SCH#2000041047), September 2010 prepared by Tom Dodson & Associates (2010 Peace II SEIR)
- *IEUA Facilities Master Plan Final Environmental Impact Report* (SCH#2016061064), February 2017 prepared by ESA (2017 FMP EIR)
- *IEUA Addendum to 2000 OBMP PEIR*, March 2017 prepared by Tom Dodson & Associates (2017 OBMP Addendum)

These documents were prepared to address planned water, wastewater, biosolids, and recycled water management activities in the Chino Basin as called for by the OBMP's Program Elements, originally analyzed in the 2000 OBMP PEIR. Each document addresses changes in management activities at different times over the past 20 years and each document provides an important update of environmental conditions and management activity impact forecasts on the environment. These updates and forecasts provide a fundamental building block of support for local agencies can rely on when seeking funding from state or federal agencies that provide grants or loans to implement the facilities required to meet the then current management objectives/requirements within the Chino Basin. Some examples of such facilities already implemented and supported by previous environmental documents include the Chino Basin desalters, recharge basin utilization, pipelines to convey water from points of origin to points of use, and aquifer storage and recovery wells.

The OBMPU is being analyzed in this updated environmental document for several reasons:

1. First, while the OBMP goals have been partially achieved, the understanding of the hydrology and hydrogeology of the Chino Basin has substantially improved since 2000. This understanding opens up opportunities to revise the OBMP for the benefit of the Chino Basin parties.
2. Second, updated programs, such as the Updated Storage Management Plan, have been identified that will affect most of the OBMP Program Elements (described in detail in the following text).
3. Third, there are new water management issues have been identified that necessitate adapting the OBMP to protect the collective interests of the Chino Basin parties and their water supply reliability. Specific examples include: adaptation to climate change (including future drought conditions); focused management activities to address salt balance in the Chino Basin; and the emergence of environmental management issues affecting the whole of the Upper Santa Ana River Watershed.
4. State and federal agencies that provide funding for water management projects typically want to have an environmental document that contains a current environmental data base. The OBMPU environmental document will establish an appropriate environmental baseline for both new and revised facilities for the near future. The most recent Basin-wide water management environmental document is now 10 years old (Peace II, 2010) and no longer contains a current environmental baseline.

2. PROJECT LOCATION

The Chino Basin is one of the largest groundwater basins in Southern California and has an unused storage capacity of over 1,000,000 acre-feet. The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin consists of an alluvial valley that is relatively flat from east to west, sloping from north to south at a one to two percent grade. Basin elevation ranges from about 2,000 feet adjacent to the San Gabriel foothills to about 500 feet near Prado Dam. As shown in Exhibit 2, the Chino Basin is bounded:

- on the north by the San Gabriel Mountains and the Cucamonga Basin;
- on the east by the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills;
- on the south by the La Sierra Hills and the Temescal Basin; and
- on the west by the Chino Hills, Puente Hills, and the Spadra, Pomona, and Claremont Basins.

The 2000 Optimum Basin Management Program (OBMP), focused on management actions within the Chino Groundwater Basin (Chino Basin or the Basin) as shown on the inset in Exhibit 1. Exhibit 2 illustrates the boundary of the Chino Basin as it is legally defined in the stipulated Judgment in the case of Chino Basin Municipal Water District *vs.* the City of Chino *et al.* Exhibit 2 also shows the Regional Water Quality Control Board, Santa Ana Region (Regional Board) management zones as established in the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan).

The principal drainage course for the Santa Ana River watershed is the Santa Ana River. It flows 69 miles across the Santa Ana Watershed from its origin in the eastern San Bernardino Mountains to the Pacific Ocean. The Santa Ana River enters the Chino Basin at the Riverside Narrows and flows along the southern boundary to the Prado Flood Control Reservoir, where it is eventually discharged through the outlet at Prado Dam and flows the remainder of its course to the Pacific Ocean. The Basin is traversed by a series of ephemeral and perennial streams that include: San Antonio Creek, Chino Creek, Cucamonga Creek, Deer Creek, Day Creek, Etiwanda Creek and San Sevaine Creek. Please refer to Exhibit 2 for the location of drainages.

These creeks flow primarily north to south and carry significant natural flows only during, and for a short time after, the passage of Pacific storm fronts that typically occur from November through April. IEUA discharges year-round flows to Chino Creek and to Cucamonga Channel from its Regional Plants. The actual volume of wastewater discharges varies seasonally and is expected to be attenuated in the future by a combination of water conservation measures being implemented by water users and through diversion of flows for delivery as recycled water to future users that can utilize this source of water, including landscape irrigation, industrial operations, and recharge into the Chino Basin groundwater aquifer.

The Chino Basin is mapped within the USGS – Corona North, Cucamonga Peak, Devore, Fontana, Guasti, Mount Baldy, Ontario, Prado Dam, Riverside West and San Dimas Quadrangles, 7.5 Minute Series topographic maps. The center of the Basin is located near the intersection of Haven Avenue and Mission Boulevard at Latitude 34.038040N, and Longitude -117.575954W.

3. PROJECT PURPOSE AND OBJECTIVES

The *2020 Optimum Basin Management Program Update Report* (2020 OBMP Update Report), released in July 2019 by CBWM, documents the stakeholder process that was used to update the OBMP and it describes the 2020 OBMP Management Plan. The management plan forms the basis for the 2020 OBMP Implementation Plan Update. Through this process, the stakeholders concluded that the goals of the 2020 OBMP Update should be identical to the 2000 OBMP goals.

Accordingly, the 2020 OBMPU's goals remain the same as the 2000 OBMP's goals:

> ***Goal No. 1 - Enhance Basin Water Supplies.*** The intent of this goal is to increase the water supplies available for Chino Basin Parties and improve water supply reliability. This goal applies to Chino Basin groundwater and all other sources of water available for beneficial use.
>
> ***Goal No.2 - Protect and Enhance Water Quality.*** The intent of this goal is to ensure the protection of the long-term beneficial uses of Chino Basin groundwater.
>
> ***Goal No.3 - Enhance Management of the Basin.*** The intent of this goal is to encourage sustainable management of the Chino Basin to avoid Material Physical Injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin Parties.
>
> ***Goal No. 4 - Equitably Finance the OBMP***. The intent of this goal is to identify and use efficient and equitable methods to fund OBMP implementation.

4. PROJECT CHARACTERISTICS (Original OBMP, OBMP Implementation to Date, and OBMPU Program Elements)

4.1 Introduction

The Optimum Basin Management Program (OBMP) is a regional water resources and groundwater management program for the Chino Basin. The location of the Chino Basin is shown in Exhibit 1. On January 2, 1975, several Chino Basin groundwater producers filed suit in the California State Superior Court for San Bernardino County (Court) to settle the problem of allocating water rights in the Chino Basin. On January 27, 1978, the Court entered a judgment in "Chino Basin Municipal Water District v. City of Chino et. al." (Judgment). The Judgment adjudicated the groundwater rights of the Chino Basin, established the Watermaster--a Court created entity—to administer the Judgment, and contains a Physical Solution to meet the requirements of water users having rights in or dependent upon the Chino Basin. Exhibit 2 shows the adjudicated boundary as it is legally defined in the Judgment, the hydrologic boundary, the Chino Basin management zones, and the groundwater management zones defined by the Santa Ana Regional Water Quality Control Board (Regional Board) in the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan).

4.2 Project Characteristics

Watermaster, at the direction of the Court, began developing the OBMP in 1998 and completed it in July 2000. The OBMP was developed in a collaborative public process that identified the needs and wants of all stakeholders, described the physical state of the groundwater basin, defined a set of management goals, characterized impediments to those goals, and developed a series of actions that could be taken to remove the impediments and achieve the management

goals. This work was documented in the *Optimum Basin Management Program – Phase I Report* (OBMP Phase 1 Report).[1]

The four goals of the 2000 OBMP included:

Goal 1 – Enhance Basin Water Supplies
Goal 2 – Protect and Enhance Water Quality
Goal 3 – Enhance Management of the Basin
Goal 4 – Equitably Finance the OBMP

The actions defined by the stakeholders to remove the impediments to the OBMP goals were logically grouped into sets of coordinated activities called Program Elements (PEs), each of which included a list of implementation actions and an implementation schedule. The nine PEs defined in the 2000 OBMP included:

PE 1 – Develop and Implement Comprehensive Monitoring Program. The objectives of the comprehensive monitoring program are to collect the data necessary to support the implementation of the other eight PEs and periodic updates to the *State of the Basin Report*.[2]

PE 2 – Develop and Implement Comprehensive Recharge Program. The objectives of the comprehensive recharge program include increasing stormwater recharge to offset the recharge lost due to channel lining, to increase Safe Yield, and to ensure that there will be enough supplemental water recharge capacity available to Watermaster to meet its Replenishment Obligations.

PE 3 – Develop and Implement a Water Supply Plan for Impaired Areas. The objective of this program is to maintain and enhance Safe Yield with a groundwater desalting program that is designed to replace declining agricultural groundwater pumping in the southern part of the basin with new pumping to meet increasing municipal water demands in the same area, to minimize groundwater outflow to the Santa Ana River, and to increase Santa Ana River recharge into the basin.

PE 4 – Develop and Implement Comprehensive Groundwater Management Plan for Management Zone 1. The objectives of this land subsidence management program are to characterize the spatial and temporal occurrence of land subsidence, to identify its causes, and, where appropriate, to develop and implement a program to minimize or stop land subsidence.

PE 5 – Develop and Implement Regional Supplemental Water Program. The objective of this program is to improve the regional conveyance and availability of imported and recycled waters throughout the basin.

PE 6 – Develop and Implement Cooperative Programs with the Regional Board and Other Agencies to Improve Basin Management. The objectives of this water quality management program are to identify water quality trends in the basin and the impact of the OBMP implementation on them, to determine whether point and non-point contamination sources are being addressed by water quality regulators, and to collaborate with water-quality regulators to identify and facilitate the cleanup of soil and groundwater contamination.

PE 7 – Develop and Implement Salt Management Plan. The objectives of this salinity management program are to characterize current and future salt and nutrient conditions in the basin and to develop and implement a plan to manage them.

[1] WEI. (1999). *Optimum Basin Management Program – Phase I Report*. Prepared for the Chino Basin Watermaster. August 19, 1999. http://www.cbwm.org/docs/engdocs/OBMP%20-%20Phase%20I%20(Revised%20DigDoc).pdf
[2] See for example: WEI (2019). *Optimum Basin Management Program 2018 State of the Basin Report*. Prepared for the Chino Basin Watermaster. June 2018. http://cbwm.org/docs/engdocs/State_of_the_Basin_Reports/SOB%202018/2018%20State%20of%20the%20Basin%20Report.pdf

> *PE 8 – Develop and Implement Groundwater Storage Management Program*. The objectives of this storage program are to implement and periodically update a storage management plan that prevents overdraft, protects water quality, and ensures equity among the Parties, and to periodically recalculate Safe Yield. This PE explicitly defined the storage management plan, including a "Safe Storage Capacity" for the managed storage of 500,000 acre-feet (af)–inclusive of Local and Supplemental Storage and Storage and Recovery Programs.
>
> *PE 9 – Develop and Implement Storage and Recovery Programs*. The objectives of this conjunctive use program are to develop Storage and Recovery Programs that will provide broad mutual benefit to the Parties and ensure that Basin Water and storage capacity are put to maximum beneficial use while causing no Material Physical Injury (MPI). MPI means material injury that is attributable to the recharge, transfer, storage and recovery, management, movement or production of water, or implementation of the OBMP, including, but not limited to, degradation of water quality, liquefaction, land subsidence, increases in pump lift (lower water levels), and adverse impacts associated with rising groundwater. MPI does not include "economic injury" that results from other than physical causes. Once fully mitigated, physical injury shall not be considered to be material. (From Peace Agreement Definitions, page 8)

The PEs and their associated implementation actions (facilities and operations) were incorporated into a recommended management plan. The Parties used the management plan as the basis for developing the OBMP Implementation Plan (which identified specific projects for implementation under the OBMP) and an agreement between the Watermaster parties and stakeholders (the Peace Agreement, see the final section of this project description for a list of Watermaster parties) to implement it. The OBMP Implementation Plan is Exhibit B to the Peace Agreement. The Peace Agreement was reviewed in the 2000 OBMP PEIR.

The Parties entered into the Peace Agreement in June 2000. Under Resolution 2000-05,[3] Watermaster adopted the goals and plans of the OBMP Phase 1 Report and agreed to proceed in accordance with the Peace Agreement and the OBMP Implementation Plan. Following a July 2000 hearing, the Court directed Watermaster to proceed in a manner consistent with the Peace Agreement in order to implement the OBMP and received and filed the PEIR.

For the purposes of the discussions herein, the term "OBMP" refers to the collective programs implemented by Watermaster and others (e.g. IEUA, Chino Basin Desalter Authority [CDA], etc.) pursuant to the Peace Agreements (see discussion of Peace II below), the OBMP Implementation Plan, the PEIR, and any amendments to these documents.

4.2.1 2007 Supplement to the OBMP Implementation Plan and the Peace II Agreement

The work to develop the OBMP determined that the groundwater production of the Chino Basin Desalters (see Section 4.3.3) would ultimately need to be 40,000 acre-feet per year (afy) to accomplish the goals of the OBMP. The Chino I Desalter production capacity prior to the Peace Agreement was 8 million gallons per day (mgd; 9,000 afy). The Peace Agreement provided for the expansion of the Chino I Desalter to up to 14 mgd (15,700 afy) and the construction of the Chino II Desalter, with a production capacity of 10 mgd. The Peace Agreement required a minimum combined Desalter production capacity of 20 mgd (22,400 afy) and it committed the Parties to developing expansion and funding plans for the remaining capacity within five years of approval of the Peace Agreement. The Parties developed the Peace II Agreement, which included provisions to expand the desalting capacity such that groundwater production reaches 40,000

[3] Chino Basin Watermaster. (2002). The Resolution approving the OBMP is provided on the Watermaster's website.

afy. The Peace II Agreement introduced Re-operation[4] to achieve Hydraulic Control[5] of the Chino Basin and maintain Safe Yield (the rate of extraction for consumptive use that can be maintained indefinitely within the limits of economic feasibility and under specified conditions of water supply development). Hydraulic Control is both a goal of the OBMP and a requirement of the maximum benefit salt-and-nutrient management plan (maximum benefit SNMP, which is discussed on P. 34) that was developed by Watermaster and the IEUA under PE 7 to enable the expansion of recycled water recharge and reuse throughout the basin under PEs 2 and 5.

The Parties executed the Peace II Agreement in 2007, which included a supplement to the OBMP Implementation Plan to expand the Chino Basin Desalters to 40,000 afy of groundwater pumping, to incorporate Re-operation and Hydraulic Control, and to resolve other issues. There were no changes to the storage management plan in the OBMP Implementation Plan as a result of Peace II.

The IEUA Board certified a supplemental environmental impact report (SEIR) for the Peace II Agreement in 2010 (IEUA Addendum to 2000 OBMP PEIR).

4.2.2 2017 Addendum to the OBMP PEIR

In 2016, Watermaster identified the need to update the storage management plan in the OBMP Implementation Plan because the total amount of water in managed storage accounts was projected to exceed the Safe Storage Capacity (SSC) limit of 500,000 af defined in the 2000 OBMP. In 2017, the IEUA adopted an addendum to the SEIR to provide a "temporary increase in the Safe Storage Capacity from 500,000 acre-feet (af) to 600,000 af for the period of July 1, 2017 through June 30, 2021 […] until a comprehensive re-evaluation of the Safe Storage Capacity value/concept can be completed before June 30, 2021."[6] The addendum was supported with engineering work that demonstrated that this temporary increase in SSC would not cause material physical injury (MPI) or loss of Hydraulic Control.

4.2.3 Need for the 2020 Optimum Basin Management Program Update (OBMPU)

The 2000 OBMP contains a set of management programs (the PEs) that improve the reliability and long-term sustainability of the Chino Basin and the water supply reliability of the Judgment Parties. The framework for developing the OBMP—including the goals of the Parties, the hydrologic understanding of the basin, the institutional and regulatory environment, an assessment of the impediments to achieving the Parties' goals, and the actions required to remove the impediments and achieve the goals—were all based on 1998-1999 conditions and valid planning assumptions at that time.

As of 2020, many of the projects and management programs envisioned in the 2000 OBMP have been and continue to be implemented; though some have not. The understanding of the hydrology and hydrogeology of the Chino Basin has improved since 2000, and new water-management issues have been identified. The strategic drivers and trends that shaped the goals and implementation actions of the OBMP in the late 1990s have since changed. And, there are several

[4] Re-operation is the controlled overdraft of the basin by the managed withdrawal of groundwater pumping for the Chino Basin Desalters and the potential increase in the cumulative un-replenished pumping from the 200,000 acre-feet authorized by paragraph 3 of the Engineering Appendix Exhibit I to the Judgment, to 600,000 acre-feet for the express purpose of securing and maintaining Hydraulic Control as a component of the Physical Solution.
[5] Hydraulic Control is the elimination of groundwater discharge from the Chino-North Groundwater Management Zone to the Santa Ana River or its reduction to less than 1,000 afy.
[6] Tom Dodson & Associates. (2017). *Addendum No. 1 to the Optimum Basin Management Program Project*. Page 2.

drivers and trends in today's water management space that may challenge the ability of the Parties to protect their collective interests in the Chino Basin and their water supply reliability.

Exhibit 3 characterizes the drivers and trends shaping water management and their basin management implications for the Parties. "Drivers" are external forces that cause changes in the Chino Basin water space, such as climate change, regulations, and funding. Grouped under each driver are expected trends that emanate from that driver. For example, trends associated with climate change include reduced groundwater recharge, increased evaporation, and reduced imported water supply. The relationship of the drivers/trends to the management implications are shown by arcs that connect trends to implications. For example, a management implication of reduced groundwater recharge is the reduction of the Chino Basin Safe Yield.

As shown in Exhibit 3, growth is one of the drivers shaping water and basin management. As urban land uses replace agricultural and vacant land uses, the water demands of the Chino Basin Parties are expected to increase. The table below summarizes the actual (2015) and projected water demands, water supply plans, and population through 2040. Total water demand is projected to grow from about 290,000 afy in 2015 to about 420,000 afy by 2040, an increase of about 130,000 afy. The projected growth in water demand through 2040 is driven by the Appropriative Pool Parties (defined at the end of the project description), some of which will serve new urban water demands created by the conversion of agricultural and vacant land uses to urban uses.

Table 1
AGGREGATE WATER SUPPLY PLAN FOR WATERMASTER PARTIES: 2015 TO 2040[7]

Water source	2015 (Actual)	2020	2025	2030	2035	2040
Volume (af)						
Chino Basin Groundwater	148,467	139,236	144,314	151,525	164,317	173,522
Non-Chino Basin Groundwater	51,398	55,722	61,741	63,299	64,991	66,783
Local Surface Water	8,108	19,653	19,653	19,653	19,653	19,653
Imported Water from Metropolitan	53,784	90,444	97,657	103,684	105,152	111,036
Other Imported Water	8,861	9,484	10,095	10,975	11,000	11,000
Recycled Water for Direct Reuse	17,554	23,678	24,323	26,910	30,451	33,953
Total	**288,171**	**338,218**	**357,782**	**376,046**	**395,564**	**415,947**
Percentage						
Chino Basin Groundwater	52%	41%	40%	40%	42%	42%
Non-Chino Basin Groundwater	18%	16%	17%	17%	16%	16%
Local Surface Water	3%	6%	5%	5%	5%	5%
Imported Water from Metropolitan	19%	27%	27%	28%	27%	27%
Other Imported Water	3%	3%	3%	3%	3%	3%
Recycled Water for Direct Reuse	6%	7%	7%	7%	8%	8%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Population (million)*	1.95	2.07	2.21	2.38	2.57	2.73

*The population projection is based on the service area population of all Chino Basin Appropriative Pool agencies. For some Appropriative Pool agencies, the service areas expand outside of the Chino Basin.

[7] Sourced from: WEI. (2019). *Final 2020 Storage Management Plan*. December 2019.

As stated under Section 3, Project Purpose and Objectives, the stakeholders concluded that the goals of the 2020 OBMP Update (OBMPU) are identical to the 2000 OBMP goals. The goals and their intents for the OBMPU include:

Goal No. 1 - Enhance Basin Water Supplies. The intent of this goal is to increase the water supplies available for Chino Basin Parties and improve water supply reliability. This goal applies to Chino Basin groundwater and all other sources of water available for beneficial use.

Goal No.2 - Protect and Enhance Water Quality. The intent of this goal is to ensure the protection of the long-term beneficial uses of Chino Basin groundwater.

Goal No.3 - Enhance Management of the Basin. The intent of this goal is to encourage sustainable management of the Chino Basin to avoid Material Physical Injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin Parties.

Goal No. 4 - Equitably Finance the OBMP. The intent of this goal is to identify and use efficient and equitable methods to fund OBMP implementation.

4.3 OBMPU Program Elements

There are physical, institutional, and financial impediments to achieving the OBMPU goals. The stakeholders identified and described several management activities that, if implemented, could remove these impediments and achieve the OBMPU goals. These activities have objectives and tasks that are directly related to one or more of the 2000 OBMP PEs. Thus, the nine PEs defined in the 2000 OBMP have been retained for the OBMPU. The OBMPU Implementation Plan Update (OBMPU IP) is a revision of the implementation plans included in the Peace I and Peace II Agreements and incorporates the proposed activities and facilities identified in the 2020 OBMPU and ongoing activities from the 2000 OBMP. The Project Description that follows those projects contained in the OBMPU Implementation Plan (IP) is an update to the OBMP Project Description evaluated in the 2000 OBMP PEIR and the 2010 Peace II SEIR. This environmental document will be used for all of the OBMPU components including the Implementation Plan whose proposed facilities are identified in the following section of this Project Description.

This section describes a series of one-time actions and ongoing management processes, organized by PE, that help achieve the goals of the OBMPU and set the framework for the next 30 years of basin-management activities. The implementation actions are listed by PE in Exhibit 4. Implementation of these management actions may result in the construction and operation of new facilities or the substantial upgrade of existing facilities and their operations. The facilities improvements that could result from the implementation of the OBMPU are listed in Exhibit 5.

For each PE, the following subsections (4.3.1 through 4.3.8) describe: the objectives and implementation actions established in 2000, implementation progress since 2000, and the implementation actions of the OBMPU, including the potential facility improvements that could result from implementation.

4.3.1 Program Element 1. Develop and Implement Comprehensive Monitoring Program

4.3.1.1 Objectives

The objective of PE 1 in the 2000 OBMP—*Develop and Implement Comprehensive Monitoring Program*—was to provide the information necessary to support the implementation of all other

OBMP PEs and to evaluate their performance over time. The OBMPU restates the objective of PE 1: to collect the data and information necessary to support the implementation of all other OBMP PEs and to satisfy other regulations and Watermaster's obligations under its agreements, Court orders, and CEQA.

4.3.1.2 2000 OBMP Project Description and Implementation Progress

Watermaster began implementing its monitoring programs during the development of the 2000 OBMP. Pursuant to the 2000 OBMP Implementation Plan, long-term plans for monitoring groundwater production, groundwater level, groundwater quality, ground level (including remote sensing), surface water, and well construction/destruction monitoring programs have been developed and implemented. The monitoring programs have evolved over time to ensure that the data and information acquired not only meet the OBMP requirements, but also other regulatory requirements and Watermaster obligations under agreements, Court orders, and CEQA. In some instances, the monitoring programs were expanded to satisfy new basin-management initiatives and regulations. In other instances, the scope of the monitoring programs has been reduced with periodic reevaluation and redesign to achieve the monitoring objectives at reduced cost. Below is a summary of these monitoring programs as described in the 2000 OBMP PEIR and their current status:

Groundwater-level monitoring. The 2000 OBMP estimated that about 500 wells would be initially surveyed for groundwater levels to develop a long-term key-well monitoring program. The 2000 OBMP acknowledged that key wells located in agricultural areas would need to be replaced as necessary if the original well is destroyed when the agricultural land is converted to another use. From 1998 to 2001, Watermaster conducted the initial survey and developed the long-term monitoring program. The current groundwater-level monitoring program consists of about 1,300 wells: about 250 wells are measured by Watermaster at monthly to quarterly frequencies and about 1,050 wells are measured by the owners at various frequencies who then report the data to Watermaster. Exhibit 6 is a map that depicts the existing current groundwater-level monitoring program.

Groundwater-quality monitoring. The 2000 OBMP estimated that about 600 wells would be initially surveyed for groundwater quality to develop a long-term key-well monitoring program. The long-term monitoring program would consist of a minimum set of key wells monitored by Watermaster, but the number of wells was not specified. Additional groundwater-quality data would be obtained from the California Division of Drinking Water. From 1999 to 2001, Watermaster conducted the initial survey and developed a long-term monitoring program. The current groundwater-level quality program consists of about 800 wells: about 150 wells are sampled by Watermaster at quarterly to annual frequencies and about 650 wells are measured by the owners at various frequencies who then report it to the State Water Board's Division of Division Water (DDW). Exhibit 7 is a map that depicts the current groundwater-quality monitoring program.

Groundwater-production monitoring. The 2000 OBMP estimated that in-line totalizing flow meters would be installed at about 300 wells owned by private parties within the Agricultural Pool and assumed that Watermaster staff would visit all active wells in the Agricultural Pool to record groundwater-production data. It also assumed that the Appropriative and Overlying Non-Agricultural Pool well owners, and some Agricultural Pool well owners, would report production records to Watermaster. The groundwater-production monitoring program also included reporting of the sources of water used by each producer and how that water is disposed of after use to enable accurate salt budget estimates per PE 7 and for other water management investigations. Meters were installed at most Agricultural Pools wells by 2003. Currently, Watermaster staff

monitors groundwater production at 150 agricultural wells, as well as collecting and compiling groundwater-production data reported by the Appropriative and Overlying Non-Agricultural Pool well owners. Exhibit 8 is a map that depicts the current groundwater-production monitoring program.

Surface-water discharge and quality monitoring. The 2000 OBMP estimated that 16 new water-level sensors would be installed at recharge and retention basins to estimate recharge. These water-level meters were installed in 2005 and are currently used to estimate recharge at these basins. It also assumed that Watermaster would assess the existing surface-water discharge and water-quality programs of the Santa Ana River and Chino Basin tributaries to determine the adequacy of the monitoring for characterizing ambient water quality and the impacts of basin management activities. In 2004 Watermaster implemented a surface-water monitoring program as part the maximum benefit monitoring program; this program has been modified over time with approval from the Regional Board. Currently, the program includes compiling discharge and water quality data from existing POTW discharges and USGS stream gaging stations and collecting grab water quality samples from sites along the Santa Ana River. Exhibit 9 is a map that depicts the current surface-water monitoring program.

Ground-level monitoring. The 2000 OBMP assumed that a network of ground-elevation stations in subsidence-prone areas would be installed and surveyed periodically. Currently, the ground-level monitoring program consists of high-frequency, groundwater-level monitoring at wells, remote-sensing and traditional leveling surveys at benchmarks to monitor vertical ground motion, monitoring of the vertical component of aquifer-system compression and expansion at Watermaster extensometer facilities, and measurement of horizontal ground-surface deformation across areas that are experiencing differential land subsidence by electronic distance measurements (EDMs) to understand the potential threats and locations of ground fissuring. Exhibit 10 is a map that depicts the existing ground-level monitoring program.

Well construction, abandonment, and destruction. The 2000 OBMP assumed that Watermaster would develop cooperative agreements with the counties of Los Angeles, Orange, Riverside, and San Bernardino to be informed when a new well has been constructed. Additionally, Watermaster would review its well database, make appropriate inspections, consult with well owners, compile a list of abandoned wells, and request that wells be properly destroyed by the owner. Watermaster continues to implement this program. Watermaster has developed cooperative agreements with the DDW and the Counties of Los Angeles, Orange, Riverside, and San Bernardino to ensure that the appropriate entities know that a new well has been constructed. Watermaster staff makes best efforts to obtain well design information, lithologic and geophysical logs, groundwater-level and quality data, and aquifer-stress testing data.

4.3.1.3 OBMPU Project Description

Exhibit 4 shows the implementation actions for PE 1 under the OBMPU, which include continuing the ongoing monitoring and reporting program described below and developing and updating an *OBMP Monitoring and Reporting Work Plan*. Implementation of these actions may result in the construction of new monitoring facilities in the Chino Basin as described by monitoring type below. The following summarizes each of the Watermaster's ongoing monitoring and reporting programs, and any new monitoring facilities envisioned in the OBMPU, that are needed to comply with regulations or to meet Watermaster's obligations under its agreements, Court orders, and CEQA. Table 2 below is a list of the monitoring and reporting requirements and the associated regulatory entities.

Table 2
WATERMASTER MONITORING AND REPORTING REQUIREMENTS

Monitoring and Reporting Requirement	Requiring Entity					
	Court	State Board	Regional Board	California DFW	California DWR	CEQA
Water Rights Compliance Annual Reports		X		X		
SGMA Annual Report for Adjudicated Basins					X	
Biannual Evaluation of the Cumulative Effect of Transfers	X					
Biannual Evaluation of the Balance of Recharge and Discharge	X					
Annual Finding of Substantial Compliance with the Recharge Master Plan	X					
Annual Report of Compliance with SB 88 and SWRCB Regulations for Measurement and Reporting of Diverted Surface Water		X				
Safe Yield Recalculation	X					
Recharge Master Plan Update (RMPU)	X					
State of the Basin Report	X					
California Statewide Groundwater Elevation Monitoring Program (CASGEM)					X	
Chino Basin Maximum Benefit Annual Report			X			
Annual Report of the Prado Basin Habitat Sustainability Committee						X
Water Recycling Requirements for the Chino Basin Recycled Water Groundwater Recharge Program			X			
Annual Report of the Ground-Level Monitoring Committee	X					
OBMP Semi-Annual Status Reports	X					

Groundwater-level monitoring. Watermaster's groundwater-level monitoring program supports many Watermaster management functions, including: groundwater model development and recalibration, periodic recalculations of Safe Yield, evaluating the cumulative impacts of transfers and the balance of recharge and discharge, subsidence management, MPI evaluations, estimation of storage changes, other scientific demonstrations required for groundwater management, and many regulatory requirements, such as the demonstration of Hydraulic Control, the triennial recomputation of ambient water quality, and Prado Basin habitat sustainability. The monitoring program includes field work implemented by Watermaster staff and consultants at private wells and monitoring wells, and cooperative programs to collect, compile, and store data from well owners and other entities including municipal water agencies, private water companies, the California Department of Toxic Substance Control (DTSC), the County of San Bernardino, and various private consulting firms. To continue to comply with regulations and meet Watermaster's obligations under its agreements, Court orders, and CEQA, it is anticipated that new monitoring wells will need to be constructed. Many of the new monitoring wells will be needed to replace private wells that are currently used for monitoring, but will be destroyed as agricultural lands are converted to urban land uses. Other new monitoring wells will be needed to support regulatory compliance or other Watermaster management initiatives.

Under the OBMPU, up to 100 new monitoring wells will be constructed to monitor groundwater levels in the Chino Basin with total depths ranging from 50 to 1,500 feet and four- to six-inches in

diameter. The average area of disturbance of each well site is anticipated estimated to be half an acre or less. Additionally, the ongoing groundwater-level monitoring program will continue. (See Exhibit 6).

Groundwater-quality monitoring. Watermaster's groundwater-quality monitoring program supports many Watermaster management and regulatory-compliance functions including: compliance with the maximum benefit SNMP (refer to P. 34 for a detailed discussion), characterization of non-point source contamination and plumes associated with point-source discharges, support for ground-water modeling, characterization of groundwater/surface-water interactions in the Prado Basin area, and characterization of basin-wide trends in groundwater quality as part of the Watermaster's biennial State of the Basin report. The monitoring program includes sampling and analysis programs implemented by Watermaster staff at private wells and monitoring wells, and cooperative programs to collect, compile, and store data from well owners and other entities that conduct groundwater-quality monitoring programs. To continue to comply with regulations and meet Watermaster's obligations under its agreements, Court orders, and CEQA, it is anticipated that new monitoring wells will need to be constructed. Many of the new monitoring wells will be needed to replace private wells that are currently used for monitoring but will be destroyed as agricultural lands are converted to urban land uses. Other new monitoring wells will be needed to support regulatory compliance or other Watermaster management initiatives.

Under the OBMPU, up to 100 new monitoring wells (this is a total of 100 monitoring wells for all monitoring purposes) will be constructed to monitor groundwater quality in the Chino Basin with total depths ranging from 50 to 1,500 feet and four- to six-inches in diameter. The average area of disturbance of each well site is estimated to be half an acre or less. Additionally, the ongoing groundwater-quality monitoring program will continue. Note that monitoring wells can serve multiple purposes by monitoring groundwater levels and providing water quality sampling sites. (See Exhibit 7).

Groundwater-production monitoring. Watermaster uses groundwater-production data to quantify and levy assessments pursuant to the Judgment. Estimates of production are also essential inputs to recalibrate Watermaster's groundwater flow model, which is used to inform the recalculation of Safe Yield, evaluate the state of Hydraulic Control, perform MPI evaluations, and support many other Watermaster initiatives. Members of the Appropriative and Overlying Non-Agricultural Pools and CDA record their own meter data and submit them to Watermaster. For Agricultural Pool wells, Watermaster performs a field program to install totalizing flow meters, repair or replace broken meters, and visit the wells quarterly to record the metered data. Watermaster has determined that for some Agricultural Pool wells it is not practical to repair, replace or install new meters. In these cases, Watermaster applies a water-duty based method to estimate production on an annual basis.

Under the OBMPU, up to 300 in-line flow meters will be installed in agricultural wells to accurately estimate production by the Agricultural Pool. Watermaster's ongoing groundwater-production monitoring program will continue. (See Exhibit 8). This activity is an ongoing management activity being carried out by the Watermaster.

Surface-water and climate monitoring. Watermaster's surface-water and climate monitoring program supports many Watermaster management functions, including: groundwater model development and recalibration, periodic recalculations of Safe Yield, evaluating the cumulative impacts of transfers and the balance of recharge and discharge, evaluating Storage and Recovery Program applications, evaluating MPI, recharge master planning, evaluating Prado Basin habitat sustainability, evaluating compliance with the SWRCB diversion permits, supporting maximum

benefit SNMP compliance (refer to P.34), and supporting recycled-water recharge permits compliance. Most of the data are collected from publicly available sources, including POTW discharge data, USGS stream gaging station data, and precipitation and temperature data measured at public weather stations or downloaded from spatially gridded datasets. Chino Basin stormwater, imported water, and recycled water recharge data are collected by the IEUA and shared with Watermaster. Watermaster staff also performs surface-water monitoring of the Santa Ana River to comply with the maximum-benefit SNMP.

Under the OBMPU, flow and stage measuring equipment and meteorological monitoring equipment will be installed in and near stormwater drainage and recharge facilities, respectively, to improve the accuracy of surface-water diversion and recharge measurements. Watermaster and IEUA's ongoing surface-water and climate monitoring efforts will continue. (See Exhibit 9). This activity will typically occur within a 10' x 10' area and most often within existing disturbed areas.

Ground-level monitoring. Watermaster's ground-level monitoring program is conducted pursuant to the *Chino Basin Subsidence Management Plan.* The objective of the plan is to minimize or stop the occurrence of land subsidence and groundwater fissuring within the Chino Basin. The ground-level monitoring program is focused across the western portion of Chino Basin within defined Areas of Subsidence Concern—areas of Chino Basin that are susceptible to land subsidence.

Under the OBMPU, up to three extensometers will be constructed in the areas prone to subsidence with a total depth ranging from 50 to 1,500 feet. The extensometers are installed in conjunction with new or existing wells. Watermaster's ongoing ground-level monitoring program will continue. (See Exhibit 10).

Well construction, abandonment, and destruction. Watermaster maintains a database of all wells in the basin and performs periodic well inspections. Sometimes, Watermaster staff identifies a new well while implementing its monitoring programs. Well owners must obtain permits from appropriate county and state agencies to drill and construct a well and put it into use.

The presence of abandoned wells is a threat to groundwater supply and a physical hazard. Watermaster staff periodically reviews its database, makes appropriate inspections, consults with well owners, maintains a list of abandoned wells in the Chino Basin, and provides this list to the counties for follow-up and enforcement. The owners of the abandoned wells are requested to properly destroy their wells following the ordinances developed by the county in which they are located.

Under the OBMPU, Watermaster will continue these efforts, which will not involve and new or upgraded facilities.

Biological monitoring. Watermaster's biological monitoring program is conducted pursuant to the adaptive monitoring program (AMP) for the Prado Basin Habitat Sustainability Program (PBHSP). The PBHSP was created under a Peace II mitigation measure to monitor potential impacts on Prado Basin habitat from implementing hydraulic control. The objective of the PBHSP is to ensure that the groundwater-dependent ecosystem in Prado Basin will not incur unforeseeable significant adverse impacts due to implementation of the Peace II Agreement. The monitoring program produces time series data and information on the extent and quality of the riparian habitat in the Prado Basin over a historical period that includes both pre- and post-Peace II implementation. Two types of monitoring and assessment are performed: regional and

site-specific. Regional monitoring and assessment of the riparian habitat is performed by mapping the extent and quality of riparian habitat over time using multi-spectral remote-sensing data and air photos. Site-specific monitoring performed in the Prado Basin includes field vegetation surveys and seasonal ground-based photo monitoring.

Under the OBMPU, Watermaster will continue these efforts, which will not involve any new or upgraded facilities. Since the 2000 OBMP PEIR and related CEQA documents have already evaluated the environmental impacts associated with the OBMP and the OBMPU will simply continue this previously analyzed program component, this activity will be treated as part of the baseline against which the OBMPU is evaluated.

Water-supply and water-use monitoring. Watermaster compiles water supply and water-use data from the Parties to support two required reporting efforts: the Watermaster Annual Report to the Court and annual reporting requirements for adjudicated basins pursuant to the Sustainable Groundwater Management Act (SGMA). The data are also used to support calibration of Watermaster's surface-water and groundwater models. Monthly water use volumes for supply sources other than Chino Basin groundwater are collected from the Parties; this includes groundwater from other basins, recycled water, imported water, and native surface water.

Under the OBMPU, Watermaster will continue these efforts, which will not involve any new or upgraded facilities.

Planning information. Watermaster periodically collects and compiles information on the Parties' best estimates of their future demands and associated water-supply plans. The data are used for future planning investigations that require the use of Watermaster's surface-water and groundwater models, such as Safe Yield recalculations and RMP updates.

Under the OBMPU, Watermaster will continue these efforts, which will not involve any new or upgraded facilities.

4.3.2 Program Element 2. Develop and Implement Comprehensive Recharge Program

4.3.2.1 Objectives

The 2000 OBMP included PE 2—*Develop and Implement Comprehensive Recharge Program*—to increase stormwater recharge to offset the recharge lost due to channel lining, to ensure there will be enough supplemental water recharge capacity available to Watermaster to replenish overdraft, and to maximize the recharge of recycled and supplemental waters to protect or enhance Safe Yield. Through the OBMPU process it was determined that the objective of PE 2 remains the same.

4.3.2.2 2000 OBMP Project Description and Implementation Progress

The comprehensive recharge program, as described in the 2000 OBMP PEIR, consisted of three phases, (1) to screen and assess potential recharge sites (completed prior to the development of the 2000 OBMP PEIR), (2) to develop engineering and institutional assessments for the sites that passed the screening assessment, including expected recharge rates, cost, etc., and (3) to develop a recharge master plan (RMP) to design, construct, and manage recharge basins. The plan would incorporate recycled water and imported water recharge.

The specific projects described in the 2000 OBMP PEIR included improvements to the Upland, College Heights, Brooks, Eight and Seventh Street, Etiwanda Conservation, Lower Day, Victoria,

San Sevaine, Turner, Hickory, Etiwanda Percolation, Jurupa, and Wineville Basins, and the construction of the RP-3 Basins.

Watermaster completed the RMP in 2001. The 2001 RMP and subsequent Recharge Master Plan Updates (RMPU) (2010, 2013, and 2018) were developed in open and transparent planning processes that were convened by Watermaster through an ad-hoc committee. As part of the *2013 Amendment to the 2010 RMPU* (2013 RMPU), the RMPU Steering Committee, now referred to as the Recharge Investigations and Projects Committee (RIPComm), was created to assist Watermaster and the IEUA in preparing RMPUs. The RIPComm is open to all interested stakeholders and meets regularly to discuss the status of recharge projects under construction and potential new projects for inclusion in future RMPUs. The outcomes of the 2001 Recharge Master Plan and subsequent RMPUs (2010, 2013, and 2018) are summarized below:

- 2001 Recharge Master Plan: Watermaster and the IEUA, constructed the first set of recharge facilities to exercise its rights pursuant to its diversion permits, increasing average annual stormwater recharge by about 9,500 afy. As part of this work, Watermaster and the IEUA modified seventeen existing flood retention and conservation facilities to increase diversion rates, conservation storage, and recharge, and constructed two new recharge facilities. The cost of these recharge improvements was about $60 million. The IEUA and Watermaster paid for about half of this cost, while the other half was funded through Proposition 13 grants and other grant programs.
- 2013 RMPU: As of this writing, Watermaster and the IEUA are completing the final design/construction of five of the recommended 2013 RMPU facilities, and they should be online in 2021. These facilities are expected to increase stormwater recharge by about 4,700 afy with a cumulative increase to 14,200 afy.
- 2018 RMPU: The 2018 RMPU did not recommend any new recharge projects. One of the findings of the 2018 RMPU was that Watermaster, based on the best available planning information at that time, had enough supplemental water recharge capacity to it meet its Replenishment Obligations via wet-water recharge through 2050.

Upon completion of the 2013 RMPU facilities, the annual average stormwater recharge performed pursuant to its diversion permits is expected to be about 15,000 afy.[8] Thus, in the first 20 years of OBMP implementation, average annual stormwater recharge will have increased by about 14,200 afy, and supplemental water recharge capacity will have increased by 27,600 afy. And, the IEUA has increased the recharge of recycled water from about 500 afy in 2000 to about 13,000 afy in 2018. The next RMPU must be completed and submitted to the Court by October 2023. Exhibit 11 shows the recharge basins improvements by recharge master plan effort.

There are four managed recharge mechanisms in the Chino Basin:

Recharge basins. Imported water, stormwater, dry-weather flow, and recycled water are recharged at 17 recharge basins. Watermaster has permits from the State Water Resources Control Board (SWRCB) (which are held in trust for Watermaster parties). This allows the parties to divert stormwater and dry-weather flow to the recharge basins for recharge, store it in the Chino Basin, and subsequently recover it for beneficial use.

Aquifer Storage and Recovery (ASR) wells. ASR wells are used to inject treated imported water into the Basin and to pump groundwater. The MVWD owns and operates four ASR wells in the Chino Basin.

[8] WEI (2018). Recharge Master Plan Update. September 2018.
http://www.cbwm.org/docs/engdocs/2018%20RMPU/20180914_2018_RMPU_final.pdf

In-lieu recharge. In-lieu recharge can occur when a Chino Basin Party with pumping rights in the Chino Basin elects to use supplemental water directly in lieu of pumping some or all its rights in the Chino Basin for the specific purpose of recharging supplemental water.

MS4 facilities. The 2013 RMPU implementation included a process to create and update a database of all known runoff management projects implemented through the Municipal Separate Storm Sewer System (MS4) permits in the Chino Basin. This was done to create the data necessary to evaluate the significance of new stormwater recharge created by MS4 projects. As of FY 2016/2017, a total of 114 MS4 projects were identified as complying with the MS4 permit through infiltration features. These 114 projects have an aggregate drainage area of 1,733 acres.

Table 3 below describes the existing recharge capacity in the Chino Basin by source water and recharge mechanism. [9]

Table 3
ESTIMATED RECHARGE CAPACITIES IN THE CHINO BASIN

Source Water	Recharge Mechanism	2018 Conditions	2018 Conditions Plus Current Recommended 2013 RMPU Projects	2018 Conditions Plus Current Recommended 2013 RMPU Projects and Restoration of WFA Capacity [10]
Stormwater	Average Stormwater Recharge in Spreading Basins	10,150	14,950	14,950
	Average Expected Recharge of MS4 Projects	380	380	380
	Subtotal	10,530	15,330	15,330
Supplemental Water	Spreading Capacity for Supplemental Water	56,600	56,600	56,600
	ASR Injection Capacity	5,480	5,480	5,480
	In-Lieu Recharge Capacity	17,700	17,700	40,900
	Subtotal	79,780	79,780	102,980
Total		90,310	95,110	118,310

[9] WEI (2018). Recharge Master Plan Update. September 2018.
http://www.cbwm.org/docs/engdocs/2018%20RMPU/20180914_2018_RMPU_final.pdf

[10] The Water Facilities Authority (WFA) Agua de Lejos Treatment Plant (WFA plant) treats imported water purchased from the IEUA at the WFA plant and delivers it to the cities of Chino, Chino Hills, Ontario, and Upland, and to the MVWD. Each of these WFA member agencies has a contracted share of the plant's total capacity of 81 million gallons per day (mgd) (90,700 afy). The WFA plant's current capacity is less than its rated capacity of 81 mgd (90,700 afy) due to solids handling limitations. According to WFA, the current capacity of the WFA plant is about 40 mgd in the summer months and about 20 mgd in the winter months. Based on the estimated recharge capacities developed in the 2018 Recharge Master Plan, restoring the WFA plant to its rated capacity would increase in-lieu recharge capacity in the Chino Basin by about 23,000 afy.

4.3.2.3 OBMPU Project Description

Exhibit 4 shows the implementation actions for PE 2 under the OBMPU, which include continuing to convene RIPComm, complete the 2023 RMPU and update it no less than every five years thereafter, and implementing recharge projects based on need and available resources. The RMPU process is an ongoing requirement of the Peace Agreement, the Peace II Agreement, and the December 2007 Court Order that approved the Peace II Agreement. The next RMPU is due to the Court by October 2023 and must be updated no less frequently than every five years thereafter.

Through the OBMPU stakeholder process, the Parties expressed interest in maximizing the recharge of recycled, imported, and stormwaters where feasible. Although meeting these objectives is not a requirement for the RMPU, the next (or a future) RMP process could accomplish this by considering projects that will meet other needs of the Parties, such as providing additional recharge capacity for Storage and Recovery Programs and addressing pumping sustainability and land subsidence challenges. There are opportunities and challenges for increasing these efforts in the future:

- The theoretical average annual stormwater discharge available for diversion under the existing water rights permits is about 74,000 afy (ranging from 21,400 to 110,500 afy for the combined permitted diversions) and the annual average stormwater recharge performed pursuant to these permits is expected to be about 14,950 afy. The difference between these two values, about 60,000 afy, is a lost opportunity for stormwater recharge. Improvements to existing facilities and operations and/or new facilities are required to achieve the stormwater recharge potential.
- Using criteria developed by the Watermaster parties, Watermaster and IEUA shall select projects that are implemented only if the melded unit cost of stormwater recharge resulting from the projects is less than the avoided unit cost of purchasing imported water from the Metropolitan Water District of Southern California [MWD or Metropolitan]). No new recharge projects were recommended for implementation in the 2018 RMPU. New evaluation criteria that includes both cost and reliability of the new recharge will be required to increase stormwater recharge.
- The criteria on how and where to conduct recharge needs to be reviewed and updated if it can be demonstrated that recharge can be used to effectively address existing basin management challenges that include land subsidence, maintaining Hydraulic Control, and pumping sustainability. Historically, Watermaster has attempted to manage the recharge of stormwater and supplemental water to promote the balance of recharge and discharge to, in part, address these challenges. Additional investigation needs to be done to determine if recharge improvements can be made to better address these basin management challenges. New evaluation and selection criteria will to be developed that consider both cost and reliability to increase the stormwater available for recharge.
- New recharge facilities and/or improvements to existing facilities will be needed if Parties or others want to increase supplemental water recharge capacity for Storage and Recovery Programs.
- Recharge of recycled and imported water via recharge basins is limited by competing uses for recharge basins for storm, imported and recycled water recharge and by seasonal storage – recycled and imported water supplies in excess of demands tend to be available in the winter, at the same time the recharge basins are being used for stormwater recharge. Thus, groundwater recharge facilities that increase recycled and imported water recharge and storage capacity, specifically during the wintertime should be evaluated.

The new recharge facilities and/or improvements to existing facilities that may result from the 2023 RMPU process as envisioned under the OBMPU are listed below and shown on Exhibit 12.

- Constructing and operating a new surface water storage basin for stormwater and supplemental waters at the Chino Institute for Men (CIM), facilities to divert stormwater from Chino Creek to the new storage basin, facilities to convey stormwater and dry-weather flow from the new storage basin to recharge facilities in the northern part of the basin, and facilities to convey supplemental waters to the storage basin.
    - The new storage basin at the CIM would have an area between 50 and 100 acres.
- Constructing flood (Managed Aquifer Recharge (MAR) facilities in the northeast part of basin to recharge supplemental water. This assumes that land in existing agricultural uses can be flooded to achieve managed aquifer recharge. The potential cumulative area of these facilities is about 200 acres, the total agricultural land use area in the northern part of the Chino Basin.
- Constructing and operating a new surface water storage basin at the existing Lower Cucamonga Ponds, facilities to divert stormwater and dry-weather flow from Cucamonga Creek to the new storage basin and facilities to convey stormwater from the new storage basin to recharge facilities in the northern part of the basin.
    - The Lower Cucamonga Ponds are an existing detention basin owned by the San Bernardino County Flood Control District. The ponds would be converted into one large conservation facility to store stormwater. It would have an area of about 50 acres.
- Constructing and operating a new surface water storage basin at the existing Mills Wetlands, facilities to divert stormwater and dry-weather flow from Cucamonga Creek to the new storage basin and facilities to convey stormwater from the new storage basin to recharge facilities in the northern part of the basin.
    - The Mills Wetlands are existing artificial wetlands used to treat water from the Cucamonga Creek. The wetlands would be converted into a conservation facility to store stormwater with an area of about 30 acres.
- Constructing and operating a new surface water storage basin at the existing Riverside Basin, facilities to divert stormwater and dry-weather flow from Day Creek to the new storage basin and facilities to convey stormwater from the new reservoir to recharge facilities in the northern part of the basin.
    - The Riverside Basin is an existing detention basin owned by the San Bernardino County Flood Control District. The basin would be converted into a conservation facility to store stormwater with an area of about 60 acres.
- Constructing and operating a new surface water storage basin for stormwater and supplemental waters at the existing Vulcan Basin, facilities to divert stormwater and dry-weather flow from the West Fontana Channel and surrounding urban areas to the new storage basin, facilities to convey stormwater from the new reservoir to recharge facilities in the northern part of the basin, and facilities to convey supplemental waters to the storage basin.
    - The Vulcan Basin is an existing facility formerly used as a sand and gravel mine. The basin would be converted into a conservation facility to store stormwater and has an area of about 60 acres.
- Constructing improvements at the Jurupa Basin that include grading improvements to enable the diversion and storage of storm and supplemental waters, removing fine-grained material from the Jurupa Basin to improve its infiltration rate and increase recharge capacity and improvements at the Jurupa pump station to increase the time the pump station can operate at full capacity. The amount of area that may be impacted has not yet been defined.
- Constructing and operating a new surface water storage basin at the confluence of San Antonio and Chino Creeks (proposed Confluence Project), facilities to divert stormwater

and dry-weather flow from of San Antonio and Chino Creeks to the new storage basin and facilities to convey stormwater from the new reservoir to recharge facilities in the northern part of the basin.
    - The Confluence Project would have an area of about 10 acres and a depth of about 35 feet
    - This would result in about 200,000 cubic yards of material removal, with the goal of balancing the cut and fill to minimize material export.
- Constructing improvements to the Water Facilities Authority (WFA) plant to remove some or all its solids handling limitations and other improvements to increase its capacity to its original design capacity and thereby increase in-lieu recharge capacity.
- Collaborating with the MS4 permittees to ensure MS4-compliance projects prioritize recharge. This would result in the construction of new MS4-compliance facilities that increase recharge in the Chino Basin. No estimate of potential area impacts is available.
- Constructing up to 60 ASR wells to increase supplemental water recharge capacity by up to 70,000 afy. In the case that recycled water is injected into the basin, a subset of these wells would also be injection wells.
    - Depth of new ASR wells could range between 500 and 1,500 feet.
    - The average area of disturbance of each well site is estimated to be half an acre or less.
    - Constructing conveyance facilities to convey the supplemental water to the ASR wells and to convey produced water to end users.
    - Constructing improvements to wastewater treatment plants if recycled water is injected (described in Section 4.3.5).
    - The expected location of ASR wells is north of Highway 60 in MZ-1, MZ-2 and MZ-3.

As shown in Exhibit 5, some of these facilities help achieve the objectives of PE 4 by creating additional recharge capacity in MZ-1 that could be used to increase piezometric levels in that area (see Section 4.3.4). The additional recharge capacity created from these facilities can also help achieve the objectives of PE 5 and PEs 8/9, because these facilities can be used to recharge supplemental water to improve water supply reliability and/or implement a Storage and Recovery Program. Finally, these facilities will help address pumping sustainability issues in the JCSD, FWC, and Chino-II Desalter wellfield areas.

4.3.3 Program Element 3. Develop and Implement a Water Supply Plan for Impaired Areas

4.3.3.1 Objectives

The 2000 OBMP included PE 3—*Develop and Implement a Water Supply Plan for Impaired Areas*—to maintain and enhance Safe Yield and maximize beneficial uses of groundwater. The OBMP recognized that urban land uses would ultimately replace agricultural land uses, which had been the primary land use in the southern portion of the basin throughout the 20th century, and that if municipal pumping did not replace agricultural pumping, groundwater levels would rise and discharge to the Santa Ana River. The potential consequences would be the loss of Safe Yield and the outflow of high-TDS and high-nitrate groundwater from the Chino Basin to the Santa Ana River—the latter of which could impair downstream beneficial uses in Orange County.

The OBMP estimated that to maintain the Safe Yield, approximately 40,000 afy of groundwater would need to be produced to replace Agricultural Pool pumping in the southern part of the basin. The Chino Basin Desalters were identified as the optimal multi-benefit project to replace the expected decrease in agricultural production to maintain or enhance Safe Yield, to pump and treat

high-salinity groundwater in support of PE 7, to meet growing municipal demands in support of PE 5, and to protect the beneficial uses of the Santa Ana River. Additionally, PE 6 envisioned that the Chino Basin Desalters could also be used to clean up the volatile organic compound (VOC) plumes that would eventually be intercepted by the Desalter wells. Through the OBMPU process it was determined that the objective of PE 3 remains the same.

4.3.3.2 2000 OBMP Project Description and Implementation Progress

The water-supply plan for impaired areas, as described in the 2000 OBMP PEIR, consisted of two options: a reverse osmosis (RO) only alternative and a RO/ion exchange (IX) alternative. Both alternatives involved the construction of two RO regional desalter facilities with their associated wellfields, expansion of the Chino Desalter Number 1, and construction of water transmission pipelines, brine disposal pipelines and pump stations. The RO/IX alternative would also include an IX treatment train. The wellfields would be located north of the Santa Ana River along the southern portion of the Chino Basin to help maintain Safe Yield by reducing losses to the river. The locations of the groundwater treatment plant would be based on the location of the proposed well fields, proposed product water delivery points and access to the Inland Empire Brine Line for brine disposal. Facility capacities for both RO and RO/IX were based on the assumption that approximately 40,000 afy of poor-quality groundwater would need to be pumped in the southern portion of the Chino Basin in order to maintain Safe Yield value and to prevent approximately 40,000 afy of poor-quality groundwater from discharging into the Santa Ana River. Both facilities would require the installation of approximately 32,000 feet of pipeline ranging in size from 10 to 20 inches in diameter and two pump stations of 200 to 250 Horsepower (HP).

As of January 2020, there are 31 Chino Desalter wells with the capacity to pump about 34 mgd (37,600 afy) of brackish groundwater from the southern portion of the Chino Basin, though not all wells are currently in operation. Pumped groundwater is conveyed to the Chino-I and Chino-II Desalters that treat the groundwater with RO, IX and air strippers. The treated water is then conveyed to the CDA's member agencies. The brine created in the treatment process is discharged to the Inland Empire Brine Line. Over the last five years, total desalter production has ranged from about 28,100 to 30,000 afy, averaging 29,200 afy. The following describes the history of the expansion of the Chino Basin Desalters:

- The Chino-I Desalter, which included 11 production wells, began operating in 2000 with a design capacity of 8 million gallons per day (mgd; about 9,000 afy).
- In 2005, the Chino-I Desalter capacity was expanded to 14 mgd (about 16,000 afy) with the construction of three additional wells.
- The Chino-II Desalter, which included eight production wells, began operating in June 2006 with a design capacity of 15 mgd (about 17,000 afy).
- In 2012, the CDA completed construction of the Chino Creek Well Field (CCWF) in the western portion of the basin which added five wells and additional capacity of about 1.3 mgd (1,500 afy) to the Chino-I Desalter; four of these wells began pumping between 2014 and 2016.
- In 2015, two additional Chino-II Desalter wells were constructed, and pumping began in 2018. These two wells, plus one additional well that is planned for construction, are part of the final expansion of the Chino Basin Desalters to meet the 40,000 afy pumping requirement of the OBMP, Peace Agreements, and maximum benefit SNMP (refer to P.34). This final expansion is expected to be completed by 2021.

The construction and operation of the Chino Basin Desalters became a fundamental component of the Chino Basin maximum benefit SNMP developed pursuant to PE 7. Watermaster and the IEUA are jointly responsible for the implementation of the maximum benefit SNMP, which enables

the recycled-water reuse and recharge programs in the Chino Basin in support of PEs 2 and 5. The SNMP (refer to P. 34) includes nine "maximum benefit commitments." One commitment is the achievement and attainment of Hydraulic Control to limit groundwater outflow from the Chino-North Groundwater Management Zone (GMZ) to *de minimis* levels to protect downstream beneficial uses. Hydraulic Control is also necessary to maximize the Safe Yield. The operation of the Chino Basin Desalters is necessary to attain Hydraulic Control. Three of the nine maximum benefit commitments are related to the design and construction of the Chino Basin Desalters.

Through the OBMPU process it was determined that no new or upgraded facilities beyond those previously envisioned to achieve PE 3 would be implemented.

4.3.4 Program Element 4. Develop and Implement Comprehensive Groundwater Management Plan for Management Zone 1

4.3.4.1 Objectives

The 2000 OBMP included PE 4—*Develop and Implement Comprehensive Groundwater Management Plan for Management Zone 1*—to characterize land subsidence spatially and temporarily, identify its causes, and, where appropriate, develop and implement a program to manage it. Through the OBMPU process, the objective of PE 4 was refined to: reduce or stop the occurrence of land subsidence and ground fissuring in the Chino Basin or reduce it to tolerable levels. PE 4 achieves this objective by implementing the Watermaster's Subsidence Management Plan and adapting the plan as warranted by data, analyses, and interpretations.

4.3.4.2 2000 OBMP Project Description and Implementation Progress

The comprehensive groundwater management plan for MZ-1, as described in the 2000 OBMP PEIR, called for the development and implementation of an interim management plan for MZ-1 that would:

- Minimize subsidence and fissuring in the short-term.
- Collect information necessary to understand the extent, rate, and mechanisms of subsidence and fissuring.
- Formulate a management plan to reduce to tolerable levels or abate future subsidence and fissuring.

The interim management plan for MZ-1 included: (1) a voluntary reduction of production in the deep aquifer system in southern MZ-1 for a 5-year period to evaluate its impacts on subsidence, (2) an effort to balance the recharge and discharge in MZ-1, in part, through the physical recharge of 6,500 afy of Supplemental Water in MZ-1, and (3) an aquifer-system and land-subsidence investigation in the southwestern region of MZ-1 to support the development of a long-term management plan for MZ-1 (second and third bullets above). The investigation was titled the *MZ-1 Interim Monitoring Program* (IMP). [11]

From 2001 to 2005, Watermaster developed and conducted the IMP under the guidance of the MZ-1 Technical Committee, which consisted of the MZ-1 Parties and their technical consultants. The implementation of the IMP provided enough information for Watermaster to develop "Guidance Criteria" for the MZ-1 Parties that, if followed, would minimize the potential for subsidence and fissuring in the investigation area (Managed Area). The methods, results, and conclusions of the IMP, including the Guidance Criteria, were described in detail in the *MZ-1*

[11] Chino Basin Watermaster. (2003). *Optimum Basin Management Program, Management Zone 1 Interim Monitoring Program*. Prepared by Wildermuth Environmental, Inc. January 8, 2003.

Summary Report.[12] The Guidance Criteria formed the basis for the long-term management plan, documented as the *MZ-1 Subsidence Management Plan* (MZ-1 Plan).[13] To minimize the potential for future subsidence and fissuring in the Managed Area, the MZ-1 Plan recommended that the MZ-1 Parties manage their groundwater pumping pursuant to the Guidance Criteria. Implementation of the MZ-1 Plan began in 2008. The MZ-1 Plan called for the continuation of monitoring, data analysis, annual reporting, and adjustments to the MZ-1 Plan, as warranted by the data. Additionally, the MZ-1 Plan expanded monitoring of the aquifer-system and land subsidence into other areas of the Chino Basin where the IMP indicated concerns for future subsidence and ground fissuring. These so-called "Areas of Subsidence Concern" are: Central MZ-1, Northwest MZ-1, Northeast Area, and Southeast Area (see Exhibit 10).

The MZ-1 Plan stated that if data from existing monitoring efforts in the Areas of Subsidence Concern indicate the potential for adverse impacts due to subsidence, Watermaster would revise the plan to avoid those adverse impacts. This resulted in the development of the *2015 Chino Basin Subsidence Management Plan* (Subsidence Management Plan)[14] and a recommendation to develop a subsidence management plan for Northwest MZ-1. Land subsidence in Northwest MZ-1 was first identified as a concern in 2006 in the MZ-1 Summary Report and again in 2007 in the MZ-1 Plan. Since then, Watermaster has been monitoring vertical ground motion in this area via InSAR and groundwater levels with pressure transducers at selected wells. Of concern is that subsidence across the San Jose Fault in Northwest MZ-1 has occurred in a pattern of concentrated differential subsidence—the same pattern of differential subsidence that occurred in the Managed Area during the time of ground fissuring. Ground fissuring is the main subsidence-related threat to infrastructure. Because of the threat for ground fissuring, Watermaster increased monitoring efforts in Northwest MZ-1 beginning in FY 2012/13 to include ground elevation surveys and EDMs to monitor ground motion and the potential for fissuring.

In 2015, the GLMC developed the *Work Plan to Develop a Subsidence Management Plan for the Northwest MZ-1 Area* (Work Plan).[15] The Work Plan is an ongoing Watermaster effort and includes a description of a multi-year scope-of-work, a cost estimate, and an implementation schedule. The Work Plan was included in the Subsidence Management Plan as Appendix B. Implementation of the Work Plan began in 2015.

Pursuant to the Subsidence Management Plan, each year, Watermaster has produced the *Annual Report of the Ground-Level Monitoring Committee (GLMC)* that contains the results of ongoing monitoring efforts, interpretations of the data, and recommended adjustments to the Subsidence Management Plan, if any. The annual report includes recommendations for Watermaster's

[12] Chino Basin Watermaster. (2006). *Optimum Basin Management Program, Management Zone 1 Interim Monitoring Program, MZ-1 Summary Report*. Prepared by Wildermuth Environmental, Inc. February, 2006. http://www.cbwm.org/docs/engdocs/Land%20Subsidence/20071017_MZ1_Plan%20--%20Appendix_A_MZ1_SummaryReport_20060226.pdf

[13] Chino Basin Watermaster. (2007). *Chino Basin Optimum Basin Management Program, Management Zone 1 Subsidence Management Plan*. October, 2007. http://www.cbwm.org/docs/engdocs/Land%20Subsidence/20071017_MZ1_Plan.pdf

[14] Chino Basin Watermaster. (2015). *Chino Basin Subsidence Management Plan.* July 23, 2015. http://www.cbwm.org/docs/engdocs/Land%20Subsidence/20150724%20-%20Chino%20Basin%20Subsidence%20Management%20Plan%202015/FINAL_2015_CBSMP.pdf

[15] Chino Basin Watermaster. (2015). *Work Plan, Develop a Subsidence-Management Plan for the Northwest MZ-1 Area.* July 23, 2015. http://www.cbwm.org/docs/engdocs/Land%20Subsidence/20150724%20-%20Chino%20Basin%20Subsidence%20Management%20Plan%202015/FINAL_CBSMP_Appendix_B.pdf

ground-level monitoring program for the subsequent fiscal year. The Watermaster publishes the annual reports on its website. The most recent annual report was finalized in October 2019.

Although Watermaster was not specifically described in the 2000 OBMP PEIR, Watermaster has exercised best efforts to arrange for the physical recharge of 6,500 afy of Supplemental Water at the MZ-1 spreading facilities. Although not a party to the Peace II Agreement, Watermaster committed to continue the physical recharge of at least 6,500 afy of Supplemental Water as an annual average through the term of the Peace Agreement (2030).

4.3.4.3 OBMPU Project Description

Exhibit 4 shows the implementation actions for PE 4 under the OBMPU, which include continuing to implement Watermaster's Subsidence Management Plan, and adapt it as necessary, and continuing the physical recharge of at least 6,500 afy of Supplemental Water as an annual average through the term of the Peace Agreement.

The Chino Basin will always be susceptible to the future occurrence of land subsidence and ground fissuring, so Watermaster will continue to implement the Subsidence Management Plan pursuant to PE 4, which includes:

- Conducting the ground-level monitoring program pursuant to the Subsidence Management Plan and the recommendations of the GLMC. The monitoring program includes the monitoring of groundwater pumping, recharge, groundwater levels, aquifer-system deformation, and vertical and horizontal ground motion across the western portion of the Chino Basin. The then-current description of the ground-level monitoring program is always included in each Annual Report of the GLMC [third bullet below]).
- Convening the GLMC annually to review and interpret the data from the ground-level monitoring program.
- Preparing annual reports of the GLMC that include recommendations for changes to the monitoring program. The annual report describes recommended activities for the monitoring program for the future fiscal year(s) in the form of a proposed scope-of-work, schedule, and budget. The recommended scope-of-work, schedule, and budget is run through Watermaster's budgeting process for revisions (if needed) and approval. The final scope-of-work, schedule, and budget for the upcoming fiscal year is included in the final annual report.

A key element of the Subsidence Management Plan is the verification of its protective nature against land subsidence and ground fissuring in the Chino Basin. This verification is accomplished through continued monitoring, testing, and reporting by the GLMC, and revision of the Subsidence Management Plan when appropriate. In this sense, the Subsidence Management Plan is adaptive. The GLMC will make these recommendations within its annual reports and prepare a draft revised Subsidence Management Plan that will be run through the Watermaster process for revisions and/or approval. Upon Watermaster Board approval, the revised Subsidence Management Plan will be submitted to the Court.

A potential recommendation of the Subsidence Management Plan for Northwest MZ-1 is conducting wet-water and/or in-lieu recharge methods that will result in a net increase in recharge. Interim work performed in Northwest MZ-1 to support the development of a subsidence management plan for this area[16] suggests that land subsidence could be reduced or abated if

[16] Chino Basin Watermaster. 2017. *Task 3 and Task 4 of the Work Plan to Develop a Subsidence Management Plan for the Northwest MZ-1 Area: Development and Evaluation of Baseline and Initial Subsidence Management Alternatives*.

recharge in Northwest MZ-1 is increased by at least 20,000 afy, pumping is decreased by at least 20,000 afy, or some combination of both totaling about 20,000 afy. Exhibit 13 is a time-series chart of groundwater pumping, wet-water recharge, and land subsidence (represented as negative vertical ground motion) in Northwest MZ-1 from 1978-2019. Recent pumping in Northwest MZ-1 has decreased significantly: 2017-2019 pumping averaged about 12,000 afy compared to about 19,000 afy since the implementation of the OBMP (2001-2016), a reduction of about 7,000 afy. The reduced pumping is mainly due to water quality issues. Additionally, recent wet-water recharge in Northwest MZ-1 has increased: 2017-2019 recharge averaged about 15,000 afy compared to about 9,000 afy since the implementation of the OBMP (2001-2016), an increase of about 6,000 afy. Exhibit 13 shows that these recent decreases in pumping and increases in recharge, totaling about 13,000 afy, appear to coincide with reduced rates of land subsidence in Northwest MZ-1. This suggests that reduced pumping and/or increased recharge can abate land subsidence in Northwest MZ-1. If the Subsidence Management Plan for Northwest MZ-1 recommends a combination of reduced pumping and wet-water recharge to abate ongoing land subsidence, the pumpers in this area who elect to reduce pumping in accordance with the plan may have difficulty in fully utilizing their water rights with existing infrastructure.

Under the OBMPU, facilities may be needed to: (1) relocate pumping from Northwest MZ-1 to MZ-2 and/or MZ-3, (2) replace some of their pumping with surface or recycled water as a form of in-lieu recharge, (3) facilitate increased wet-water recharge, or (4) a combination of some or all of the above. The operation of these facilities would result in increased groundwater levels that would impact the state of Hydraulic Control; thus, facilities and operations would be needed to ensure that Hydraulic Control is maintained.

The facilities and/or improvements to existing facilities envisioned under the OBMPU to address land subsidence are listed below and are shown on Exhibit 14.

- Constructing up to 10 wells in MZ-2 and MZ-3 to relocate up to 25,000 afy of pumping from MZ-1 to MZ-2 and/or MZ3.
    - Depth of a new well could range between 500 and 1,000 feet.
    - The average area of disturbance of a well site is anticipated to be half an acre or less.
- Constructing improvements to the WFA Agua de Lejos treatment plant to increase its capacity by up to 25,000 afy and the increase in use of imported water purchased from Metropolitan Water District of Southern California by up to 25,000 afy. Some of the surface water supplied could be obtained through TVMWD and its Miramar treatment plant.[17]
- Constructing up to 15 ASR wells in Northwest MZ-1 and Central MZ-1 to increase wet-water recharge capacity in MZ-1 by up to 25,000 afy. This would require improvements to the WFA Agua de Lejos treatment plant to increase its capacity by up to 25,000 afy and the increase in use of imported water purchased from Metropolitan Water District of Southern California by up to 25,000 afy. Some of the surface water supplied could be obtained through TVMWD and its Miramar treatment plant. [18]
    - Depth of a new ASR wells could range between 500 and 1,500 feet.
    - The average area of disturbance of a well site is anticipated to be half an acre or less.
    - Constructing conveyance facilities to convey the supplemental water to the ASR wells and to convey produced water to end users.
    - Constructing improvements to wastewater treatment plants if recycled water is injected into ASR wells (described in Section 4.3.5.2).

[17] Note that this project is also discussed under PE 2.
[18] Some of the new ASR wells that will be constructed for PE 2 can be used for PE 4.

    - The expected location of ASR wells is north of Highway 60 in MZ-1.
- Implementing a combination of the facilities and operating concepts to achieve an overall net increase in recharge of 25,000 afy.
- Expanding the existing Chino Desalter capacity by up to 2,000 afy by adding new wells in the Chino Creek wellfield area and expanding the Chino-I and/or Chino-II treatment capacity (see facilities in Section 4.3.7.2).

As shown in Exhibit 5, some of these facilities help achieve the objectives of PE 8/9, because these facilities that provide additional recharge capacity in MZ-1 and pumping capacity in MZ-2/3 can be used to implement Storage and Recovery programs.

4.3.5 Program Element 5. Develop and Implement Regional Supplemental Water Program

4.3.5.1 Objectives

The 2000 OBMP included PE 5—*Develop and Implement Regional Supplemental Water Program*—to improve regional conveyance and the availability of imported and recycled waters throughout the basin. Through the OBMPU process it was determined that the objective of PE 5 remains the same.

4.3.5.2 2000 OBMP Project Description and Implementation Progress

The regional supplemental water program, as described in the 2000 OBMP PEIR, consisted of expanding the IEUA's recycled water distribution system for recycled water reuse and importing potable water from the Bunker Hill Basin for direct use through the expansion of the Baseline Feeder.[19]

Watermaster and the IEUA have aggressively pursued programs to improve water supply reliability through the implementation of PEs 2, 3, and 5. Since 2000, the IEUA has constructed and operated a recycled water conveyance system throughout the basin, enabling it to provide recycled water to its member agencies for direct reuse and indirect potable reuse. The IEUA owns and operates four wastewater treatment facilities: Regional Plant No. 1 (RP-1), Regional Plant No. 4 (RP-4), Regional Plant No. 5 (RP-5), and the Carbon Canyon Water Reclamation Facility (CCWRF). Recycled water produced by these plants is used for direct reuse, groundwater recharge (indirect potable reuse), and discharged to Chino Creek or Cucamonga Creek, which are tributaries to the Santa Ana River. Historically, the IEUA's operating plan has prioritized the use of recycled water as follows: (1) to meet the IEUA's discharge obligation to the Santa Ana River (17,000 afy), (2) to meet direct reuse demands for recycled water, and (3) to recharge the remaining recycled water. Exhibit 15 shows the location of the IEUA's treatment plants, discharge points to surface water, recharge facilities receiving recycled water, and recycled water distribution pipelines for direct use deliveries.

Although recycled water had been reused since the 1970s, the growth of the IEUA's recycled water reuse programs started in 1997, and in 2005 the OBMP enabled the IEUA's recycled water reuse program to be aggressively expanded. When the OBMP was completed in 2000, the IEUA was recharging about 500 afy of recycled water and utilizing about 3,200 afy for non-potable direct uses. The incorporation of Watermaster and the IEUA's maximum benefit SNMP (refer to P.34) into the Basin Plan in 2004 triggered the ability to rapidly increase recycled water reuse. Over the last five years, the annual direct reuse of recycled water ranged from 17,000 afy to 24,600 afy

[19] Note that the Baseline Feeder was not specifically identified as an implementation action in the 2000 OBMP Implementation Plan and has not been implemented.

and averaged 20,600 afy. And, the annual recycled water recharge ranged from 10,800 to 13,900 afy and averaged 13,000 afy.

The recycled water provided by the IEUA has replaced a like amount of groundwater and imported water that would have otherwise been used for non-potable purposes. Much of the post-2000 increase in supplemental water storage in the Chino Basin is attributable to the increased availability and recharge of recycled water.

4.3.5.3 OBMPU Project Description

Recycled Water Reuse
Exhibit 4 shows the implementation actions for PE 5 under the OBMPU, which include maximizing recycled water reuse and establishing or expanding future recycled water planning efforts to maximize the reuse of all available sources of recycled water.

The IEUA is continuing to expand its recycled-water distribution system and recharge facilities throughout the Chino Basin for direct non-potable reuses and recharge. Growth is still occurring in the Chino Basin and will result in additional wastewater flows to the IEUA's treatment plants and an increase in recycled water production. The new recycled water will be used to meet part of the demand created by urban growth.

The facilities and/or improvements to existing facilities to maximize recycled water reuse envisioned under the OBMPU are listed below and shown on Exhibit 16.

- Constructing an advanced water treatment plant.[20] The area expected to be disturbed by the construction and operation of the plant is 10-20 acres. The location of the treatment plant is currently unknown and it could be collocated at an existing IEUA Water Reclamation Plant (WRP). This facility was previously evaluated in the 2017 FMP PEIR and data will be brought forward into this document.
- Expanding the recycled water distribution systems for indirect potable reuse by constructing up to 100,000 lineal feet (LF) of pipelines of various diameters in the shaded regions shown on Exhibit 16.
- Conducting direct potable reuse (DPR) that will require the construction of the advance water treatment plant described in the first bullet and conveyance facilities to move the product water to the potable system, preferably using existing potable water line(s) within the general area.
- Acquiring surplus recycled water supplies from other entities and constructing conveyance facilities to distribute the water to the Chino Basin. IEUA has evaluated one specific program for transfer of recycled water from Pomona to the Montclair Basins area.

As shown in Exhibit 5, some of these facilities help achieve the objectives of PE 7 by removing salts from the basin through advanced treatment of recycled water.

Water Reliability
Exhibit 4 shows the implementation actions for PE 5 under the OBMPU, which include maximizing recycled water reuse and establishing or expanding future integrated water resources planning efforts to address water supply reliability for all Watermaster Parties.

[20] Advanced water treatment refers to the following waste water treatment processes: RO, membrane filtration, or functionally equivalent processes, and potentially ultraviolet (UV) disinfection.

As described above (see Table 1), the total water demand of the Chino Basin Parties is projected to grow from about 290,000 afy in 2015 to about 420,000 afy by 2040, an increase of about 130,000 afy. The projected growth in water demand by the Appropriative Pool Parties drives the increase in aggregate water demand as some Appropriative Pool Parties are projected to serve new urban water demands created by the conversion of agricultural and vacant land uses to urban uses. A similar challenge was observed during the development of PEs 3 and 5 in the 2000 OBMP. Each of the water sources available to the Chino Basin Parties listed has its limitations:

- The ability to produce groundwater from the Chino Basin is limited by current basin management challenges, such as ongoing land subsidence in MZ-1 and parts of MZ-2, pumping sustainability issues in the JCSD and CDA well field areas, and water quality.
- The challenges to the use of imported water include the reliability of the individual imported sources and infrastructure required to convey it to the Chino Basin and the local capacity to treat it if required for municipal use
- The reliability of non-Chino Basin groundwater supplies depends on water quality, water rights, and infrastructure to convey the supplies to a Parties' water system.
- The reliability of local surface water supplies depends on the hydrologic characteristics of the individual supplies, water quality, water rights, and infrastructure to convey it from points of diversion to a Party's water system.
- The challenges to maximizing the reuse of recycled water include the timing of recycled water demands, recycled water availability, and complying with the maximum benefit SNMP and water quality regulations.

In addition to the challenges to specific water sources, climate change is expected to result in higher temperatures, longer dry periods, and shorter more intense wet periods, which is expected to affect the availability and management of all water supply sources. For example, shorter more intense precipitation periods are expected to result in reduced recharge, and longer dry periods are expected to result in reduced imported water supplies (as occurred with State Water Project supplies in the recent drought from 2013 to 2016). And, many of the challenges are interrelated and compounding. For example, the reliability of imported water (and other non-groundwater supplies) not only affects the imported water supply but also the groundwater supplies that are dependent on imported water for blending and replenishment.

The facilities and/or improvements to existing facilities to improve water reliability envisioned under the OBMPU are listed below and shown on Exhibit 17.

- Constructing conveyance facilities to enable the distribution of future imported water supplies. The amount of new pipeline needed has not yet been defined.
- Constructing an east to west 75,000-lineal foot regional pipeline across the northern part of the Chino Basin to enable the efficient conveyance and distribution of basin waters to Chino Basin water users; and or the construction of improvements to existing conveyance facilities to accomplish the same.
- Constructing a north-to-south 45,000-lineal foot regional pipeline across the eastern part of the Chino Basin to enable the efficient conveyance and distribution of basin waters to Chino Basin water users; and or the construction of improvements to existing conveyance facilities to accomplish the same.

As shown in Exhibit 5, the new supplemental supplies and facilities contribute to achieving the objectives of PE 8/9.

4.3.6 Program Element 6. Develop and Implement Cooperative Programs with the Regional Board and Other Agencies to Improve Basin Management

4.3.6.1 Objectives

The 2000 OBMP included PE 6—*Develop and Implement Cooperative Programs with the Regional Board and other Agencies to Improve Basin Management*—to assess water quality trends in the basin, to evaluate the impact of OBMP implementation on water quality, to determine whether point and non-point contamination sources are being addressed by water quality regulators, and to collaborate with water quality regulators to identify and facilitate the cleanup of soil and groundwater contamination. Through the OBMPU process, the objective of PE 6 was refined to: to perform routine and coordinated water quality monitoring to characterize water quality in the Chino Basin so that there is adequate information to ensure that contamination sources are being addressed by water quality regulators and to help address compliance with new and increasingly stringent drinking water regulations for emerging contaminants established by the DDW.

4.3.6.2 2000 OBMP Project Description and Implementation Progress

The cooperative programs to improve basin management, as described in the 2000 OBMP PEIR, consisted of working cooperatively with the Regional Board and other agencies, to identify water quality anomalies through monitoring, assist in determining sources of the water quality anomalies, and establish priorities for clean-up.

Through its own monitoring at private wells and dedicated monitoring wells and the monitoring efforts of others, Watermaster reports on water quality trends and findings in several reports, including the State of the Basin Reports, which are prepared and submitted to the Court every two years.

In 2003, the Watermaster convened a Water Quality Committee to coordinate many of the activities performed under PE 6. The Committee met intermittently through 2010. The main activities of the Water Quality Committee included investigations to characterize and address point and non-point sources of groundwater contamination in the Chino Basin and collaboration with the Regional Board in its efforts to facilitate the cleanup of groundwater contamination. Some of the significant groundwater quality investigations performed under the guidance of the committee included: the characterization of groundwater contamination in MZ-3 near the former Kaiser Steel Mill and Alumax facilities, tracking studies on the source and extent of the Chino Airport plume; identification of sources and responsible parties for the South Archibald plume; and the identification of the sources of legacy perchlorate contamination in groundwater throughout the basin. The investigations were coordinated through the Water Quality Committee for the Chino Airport and South Archibald plumes and contributed to the definitive identification of responsible parties and the issuance of cleanup and abatement orders by the Regional Board.

Since 2010, Watermaster has continued to perform monitoring for contaminants related to point-source and non-point source contamination, to assist the Regional Board with the investigation and regulation of point source contaminant sites in the Chino Basin, and to prepare status reports on the monitoring and remediation of point-source contaminant sites in the basin. Periodic status reports have been prepared for: Chino Airport and South Archibald plumes[21] and the General Electric (GE) Test Cell plume, the GE Flatiron plume, the former Kaiser Steel Mill Facility plume,

[21] Status reports for the Chino Airport and South Archibald plumes were prepared monthly in 2013; quarterly from 2014-2017; and semi-annually effective in 2018. Status reports for the other plumes and sites are prepared annually effective 2018.

the CIM plume, the Stringfellow plume, and the Milliken Landfill plume. Updated delineations of the spatial extent of the plumes in the Chino Basin are prepared every two years by Watermaster and are included in the plume status reports and biennial State of the Basin Reports.

Currently, the responsible parties for the Chino Airport plume and South Archibald plume are initiating remedial actions that include the use of the Chino Basin Desalters describe in PE 3 (see Section 4.3.3) for pumping and treating the contaminated groundwater associated with these plumes. This use of the Chino Basin Desalters as a mutually beneficial project was recognized in the 2000 OBMP Implementation Plan as a potential management strategy and provides cost sharing benefits to all involved parties. Additionally, the CDA and IEUA have acquired over $85 million in federal and state grant funds for the Chino Basin Desalter Phase III expansion project that is planned to be used for the remediation of the Chino Airport and South Archibald plumes.

4.3.6.3 OBMPU Project Description

Exhibit 4 shows the implementation actions for PE 6 under the 2020 OBMP which include re-convening the water quality committee, developing and implementing an initial emerging contaminants monitoring plan, preparing a water quality assessment of the Chino Basin to evaluate the need for a *Groundwater Quality Management Plan* and preparing a long-term emerging contaminants monitoring plan.

Pursuant to the PE 6 implementation plan, Watermaster will continue to perform the following to ensure that point-source contamination is being adequately addressed: monitor water quality at monitoring wells and private wells within the basin and collect data from others to support the quantification of point-source contaminant plumes; prepare updated delineations of the plume extents for the biennial State of the Basin Reports; track and report on the status of plumes and remediation in the recurrent plume status reports; and other ad-hoc investigations needed to support the Regional Board in their efforts to address groundwater contamination. Watermaster will continue to support the Regional Board and other parties to identify and implement mutually beneficial projects for addressing groundwater contamination cleanup and identify funding opportunities to help pay for the cleanup efforts. Watermaster will continue to characterize and report on water-quality in the biennial State of the Basin Reports using data collected for the PE 1 Groundwater Quality Monitoring Program. Watermaster will also develop a *Groundwater Quality Management Plan* as a proactive and basin-wide approach to address emerging contaminants to prepare the Parties for addressing compliance with new and increasingly stringent drinking water regulations, defined by the DDW.

Exhibits 18 through 21 show the most current characterization of regulated drinking water contaminants in the Chino Basin. Exhibit 18 shows the locations of active municipal supply wells and symbolizes them based on the number of regulated drinking water contaminants that have been detected in exceedance of their respective primary maximum contaminant levels (MCLs). Of the 141 recently active municipal supply wells, 45 have at least one drinking water contaminant, 17 wells have two contaminants, 14 have three contaminants, five have four contaminants, and five have five contaminants. The wells with regulated drinking water contaminants are primarily located in the southern (south of the 60 freeway) and western (west of Euclid Avenue) areas of the Basin. Exhibits 19 through 21 show the spatial distribution of the maximum observed nitrate, 1,2,3-TCP, and perchlorate concentrations – the three most prevalent contaminants in the Chino Basin – at all wells for the five-year period of 2014 to 2018.

Several of the drinking water contaminants found in the Chino Basin are associated with known point-source contaminant discharges to groundwater. Characterizing and understanding point-sources contaminant sites are critical to the overall management of groundwater quality to ensure

that Chino Basin groundwater remains a sustainable resource. Watermaster closely monitors the status, decisions, cleanup activities, and monitoring data pertaining to point-source contamination within the Chino Basin. The following is a list of the regulatory and voluntary point-source contaminant sites in the Chino Basin that are tracked by Watermaster, the locations of which are shown in Exhibit 22.

Table 4
POINT-SOURCE SITES TRACKED BY WATERMASTER

Site Name	Constituents of Concern	Order
Alumax Aluminum Recycling Facility	TDS, sulfate, nitrate, chloride	Regional Board Cleanup and Abatement Order 99-38
Alger Manufacturing Co	volatile organic chemicals (VOCs)	Voluntary Cleanup and Monitoring
Chino Airport	VOCs	Regional Board Cleanup and Abatement Orders 90-134, R8-2008-0064, and R8-2017-0011
California Institution for Men	VOCs	Voluntary Cleanup and Monitoring (No Further Action status, as of 2/17/2009)
GE Flatiron Facility	VOCs and hexavalent chromium	Voluntary Cleanup and Monitoring
GE Test Cell Facility	VOCs	Department of Toxic Substances Control (DTSC) Consent Order Docket No. 88/89-009CO. Regional Board Status of Open-Verification Monitoring
Former Kaiser Steel Mill	TDS, total organic carbon (TOC), VOCs	Regional Board Order No. 91-40 Closed. Kaiser granted capacity in the Chino II Desalter to remediate
Former Kaiser Steel Mill – CCG Property	chromium, hexavalent chromium, other metals, VOCs	DTSC Consent Order 00/01-001
Milliken Sanitary Landfill	VOCs	Regional Board Order No. 81-003
Upland Sanitary Landfill	VOCs	Regional Board Order No 98-99-07
South Archibald Plume	VOCs	Stipulated Settlement and Cleanup and Abatement Order No. R8-2016-0016 to a group of eight responsible parties
Stringfellow Site National Priorities List (NPL) Superfund Site	VOCs, perchlorate, N-nitrosodimethylamine (NDMA), trace metals	United States Environmental Protection Agency (USEPA) Records of Decision (RODs): R09-83/005, R09-84/007, R09-87/016, and R09-90/048.

Finally, tracking emerging contaminants that are being considered for regulation and performing monitoring to characterize their occurrence in the Chino Basin will help to identify and plan for optimal solutions to manage groundwater quality for drinking water supply. Exhibit 23 shows the occurrence of two emerging contaminants that may be regulated in the future – the per-and polyfluoroalkyl substances (PFAS) compounds—perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS)—in groundwater and some blending sources for the recycled water recharge in the Chino Basin as of March 2019, based on all monitoring performed since 1998. The exhibit shows that the majority of wells in the Chino Basin have not been sampled for PFOA and/or PFOS. The 30 wells in the Chino Basin that have been sampled for PFOA and PFOS were tested using the laboratory detection limits four and eight times higher than the current notification levels (NLs) for these emerging contaminants. Monitoring of recycled water recharge blending sources shows that many of the sources sampled have detectable concentrations of PFOA and

PFOS, and many are above the NLs. The EPA and the DDW have both indicated that they are moving forward with the process to adopt MCLs for PFOA and PFOS in the near future. The occurrence of PFOA and PFOS in Chino Basin groundwater as of March 2019 is not well characterized at concentrations equivalent to or below the current NLs, and there are recharge water sources with concentrations of PFOA and PFOS above the NLs.

The facilities and/or improvements to that may be implemented based on the recommendations of the *Groundwater Quality Management Plan* to address the contaminants described herein and other contaminants are listed below.

- Constructing water treatment facilities at well sites or at sites near to wells to treat groundwater to meet drinking water standards for local use.
    - The area expected to be disturbed by the construction and operation of the treatment facilities would be limited to existing well sites if the plant is located at an existing well site; and will range from about 0.5 acres to 2 acres per facility for new treatment facilities located near a well site. The locations of these treatment facilities are currently unknown.
- Constructing regional water treatment facilities taking groundwater from multiple wells to treat groundwater to meet drinking water standards for local use and or export.
    - The area expected to be disturbed by the construction and operation of the treatment facilities is expected to be less than 20 acres per facility. The locations of the treatment facilities are currently unknown.
- Constructing improvements at existing treatment facilities to treat contaminated groundwater to drinking water standards for local use.
- Constructing conveyance facilities to convey the untreated groundwater to the treatment facilities and to convey treated water from the treatment facilities to water users.

4.3.7 Program Element 7. Develop and Implement Salt Management Plan

4.3.7.1 Objectives

The 2000 OBMP included PE 7—*Develop and Implement Salt Management Plan*—to characterize current and future salt and nutrient conditions in the basin and to subsequently develop and implement a plan to manage them. Such a management strategy was necessary to address historical salt and nutrient accumulation from agricultural operations and to support the aggressive expansion of recycled water recharge and reuse envisioned in PEs 2 and 5. Through the OBMPU process, the objective of PE 7 was refined to: implement, and periodically update, the maximum benefit SNMP. The maximum benefit SNMP is a Regional-Board-approved management program incorporated into the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) to monitor, characterize, and address current and future salt and nutrient conditions in the Chino Basin. The maximum benefit SNMP enables the implementation of the recycled water recharge program in PE 2 and the direct reuse of recycled water in PE 5.

4.3.7.2 2000 OBMP Project Description and Implementation Progress

The salt management plan, as described in the 2000 OBMP PEIR, consisted of computing a salt budget for existing conditions as the baseline, developing alternatives to reflect the OBMP Implementation, and computing the salt budget for these alternatives to ensure that Watermaster reduced the salt loading then projected to occur in the Chino Basin.

In 2002, recognizing that implementing the recycled water reuse program would require large-scale treatment and mitigation of salt loading under the then-current antidegradation objectives for TDS and nitrate defined in the Basin Plan, Watermaster and the IEUA petitioned the Regional

Board to establish a maximum benefit-based SNMP that involved (1) defining a new groundwater quality management zone that encompasses the northern parts of MZ-1, MZ-2 and MZ-3 called the Chino-North GMZ, (2) establishing TDS and nitrate objectives for the Chino-North GMZ[22] to numerically higher values than established for MZ-1, MZ-2 and MZ-3 to enable maximization of recycled water reuse and (3) committing to a program of salt and nutrient management activities and projects ("maximum benefit commitments") that ensure the protection of beneficial uses of the Chino-North GMZ and downgradient waters (the Santa Ana River and the Orange County GMZ). The technical work performed to support the maximum benefit SNMP proposal included the development and use of an analytical salt budget tool to project future TDS and nitrate concentrations in the Chino-North GMZ with and without the maximum benefit SNMP. The maximum benefit SNMP was incorporated into the Basin Plan by the Regional Board in January 2004.

Implementation of the maximum benefit SNMP is a regulatory requirement of the Basin Plan. The requirement is also incorporated into Watermaster and the IEUA's recycled water recharge program permit (R8-2007-0039) and the IEUA's recycled water discharge and direct reuse permit (R8-2015-0021; NPDES No. CA 8000409). There are nine maximum benefit commitments included in the Basin Plan and recycled water permits:

1. The development and implementation of a surface-water monitoring program
2. The development and implementation of a groundwater monitoring program
3. The expansion of the Chino-I Desalter to 10 mgd and the construction of the Chino-II Desalter with a design capacity of 10 mgd
4. The additional expansion of desalter capacity to a total capacity of 40 mgd pursuant to the OBMP and the Peace Agreement
5. The construction of the recharge facilities included in the Chino Basin Facilities Improvement Program
6. The management of recycled water quality to ensure that the IEUA agency-wide, 12-month running average wastewater effluent quality does not exceed 550 milligrams per liter (mgl) for TDS and 8 mgl for total inorganic nitrogen (TIN)
7. The management of the basin-wide, volume-weighted TDS and nitrate concentrations of artificial recycled, storm, and imported waters to concentrations that are less than or equal to the maximum benefit objectives as a five-year rolling average
8. The achievement and maintenance of the Hydraulic Control of groundwater outflow from the Chino Basin, specifically from the Chino-North GMZ, to protect the water quality of the Santa Ana River and downstream beneficial uses
9. The triennial recalculation of ambient TDS and nitrate concentrations of the Chino Basin GMZs

These commitments are all activities that were planned to be implemented in the 2000 OBMP through implementation actions within PEs 1, 2, 3, 5, and 7.

Watermaster and the IEUA are also required to prepare an annual report to the Regional Board on the status of implementation of the maximum benefit commitments, including reporting of annual data collected through the monitoring program and assessments of compliance with the groundwater and recycled water-quality limits defined in the SNMP. If the maximum benefit commitments are not implemented to the Regional Board's satisfaction, the antidegradation-based objectives would apply for regulatory purposes. The application of the antidegradation

[22] The Chino-North GMZ has a maximum-benefit TDS objective of 420 mgl and is a combination of the Chino-1, Chino-2, and Chino-3 antidegradation GMZs that have lower TDS objectives, ranging from 250 to 280 mgl.

objectives would result in a finding of no assimilative capacity for TDS and nitrate in the Chino-North GMZ, and the Regional Board would require mitigation for all recycled water discharges to Chino-North that exceeded the antidegradation objectives retroactively to January 1, 2004. The retroactive mitigation for past discharges would be required to be completed within a ten-year period, following the Regional Board's finding that the maximum benefit commitments were not met.

Watermaster has prepared and submitted annual reports to the Regional Board every year since 2005. As of the most recent annual report for CY 2018, Watermaster and the IEUA remain in compliance with all requirements of the maximum benefit commitments.[23]

4.3.7.3 OBMPU Project Description

Exhibit 4 shows the implementation actions for PE 7 under the OBMPU, which include (1) completing the 2020 update of TDS and nitrate projections to evaluate compliance with maximum benefit SNMP and, if necessary, based on the outcome, preparing a plan and schedule to implement a salt offset compliance strategy,[24] (2) continuing to implement the maximum-benefit SNMP pursuant to the Basin Plan (see list below), and (3) starting in 2025 and every five years thereafter, updating water quality projections to evaluate compliance with the maximum-benefit salt and nutrient management plan.

Compliance with the maximum benefit commitments is an ongoing requirement of the Basin Plan. The ongoing actions to implement the maximum benefit SNMP as currently defined in the Basin Plan, and thus PE 7, will include:

- Implementing monitoring program and reporting requirements
- Maintaining Hydraulic Control through operation of the Chino Basin Desalters and other means, as necessary
- Increasing and maintaining desalter pumping at 40,000 afy
- Continuing storm and imported water recharge program to comply with recycled water recharge dilution requirements
- Complying with recycled water TDS and TIN limitations
- Computing ambient water quality every three years
- Constructing treatment and/or salt offset facilities if one or more of the compliance limits are exceeded.

There are three water-quality limitations and associated compliance metrics established in the maximum benefit SNMP. When these metrics are exceeded, Watermaster and the IEUA must develop a plan and schedule to achieve compliance. The limitations, compliance metrics, and compliance actions are summarized in Exhibit 24.

The management actions for achieving compliance with the metrics once they are exceeded could include, but are not limited to: desalting recycled water to reduce TDS concentrations, increasing the recharge of low-TDS supply sources (storm or imported waters), additional desalting of high-TDS groundwater as a salt offset or combination of the above.

[23] WEI. (2019). *Optimum Basin Management Program Chino Basin Maximum Benefit Annual Report 2018*. April 2019.

[24] The management actions for achieving compliance with the metrics once they are exceeded could include, but are not limited to: desalting recycled water to reduce TDS concentrations, increasing the recharge of low-TDS supply sources (storm or imported waters), or additional desalting of high-TDS groundwater as a salt offset. It could also include: new regulatory compliance metric based on a longer-term averaging period for recycled water TDS

With the exception of the ambient nitrate concentration of the Chino-North GMZ, which has exceeded the objective of 5.0 mgl since it was established in 2004, none of the other TDS and nitrate limitations have been exceeded. That said, the ambient TDS and nitrate concentrations in the Chino-North GMZ continue to increase due to legacy agricultural activities and current irrigation practices regardless of water source. The current ambient TDS and nitrate concentrations are 360 and 10.3 mgl, respectively. Based on the rate of increase of the ambient TDS concentration since 1997, which has been about three mgl per year, the maximum benefit objective of 420 mgl is not expected to be exceeded until about 2035.

More recently, the TDS concentration of recycled water has approached the compliance metric defined in commitment number 6. During the 2012 to 2016 drought, the 12-month running-average IEUA agency-wide TDS concentration in recycled water approached the 545 mgl action limit that would require the IEUA and Watermaster to submit a water-quality improvement plan and schedule. In analyzing the available data, the IEUA determined that the primary drivers for the increasing recycled water TDS concentration were the increase in the TDS concentration of the water supplies used by its member agencies and an increase of the TDS waste increment[25] due to indoor water conservation. Similarly, drought conditions also threaten the ability to comply with the recycled water recharge dilution requirements. During drought conditions there is: a reduction in the amount of high-quality stormwater recharge, limited or no availability of imported water for recharge, an increase in the TDS concentrations of imported water, and a concomitant increase in the TDS concentrations of the recycled water. Not only are the two primary sources of low-TDS recharge water less available during drought periods, but the source water quality of municipal water supplies is also higher in TDS due to increases in imported water TDS and indoor water conservation practices. It is expected that future droughts, the duration and frequency of which could be exacerbated by climate change, could potentially threaten compliance with the existing permit limits.

Although the 12-month running-average IEUA agency-wide TDS concentration declined from the 2015 peak before reaching the 545 mgl action limit, it was an important indicator that the TDS concentration of recycled water is likely to approach or exceed the recycled water action limit during the next prolonged dry period and trigger the planning for recycled water quality improvements. In May 2017, recognizing the potential cost of implementing recycled water quality improvements for what might be only short-term exceedances of the action limit, Watermaster and the IEUA petitioned the Regional Board to consider updating the maximum benefit SNMP to incorporate a revised compliance metric for recycled water TDS and nitrate specifically to allow a longer-term averaging period. The Regional Board agreed that an evaluation of the recycled water compliance metric is warranted and directed Watermaster and the IEUA to develop a technical scope of work to demonstrate the potential impacts of the revised compliance metric.

The primary objectives of the technical work to support the maximum benefit SNMP and permit updates are: to develop and use an updated groundwater solute-transport model to evaluate the TDS and nitrate concentrations of the Chino Basin (e.g. a new salt-budget tool), to define alternative salinity management scenarios, and to project the future TDS and nitrate concentrations in the Chino Basin for each scenario. The results will be used to work with the Regional Board to develop a regulatory compliance strategy that potentially includes a new

[25] The TDS concentration of wastewater that is treated at a given reclamation plant is higher than the source water TDS concentration served in the sewer shed tributary to the reclamation plant. The TDS "waste increment" is the increase in the TDS concentration, measured in mgl, that occurs due to indoor water use activities (showering, toilet flushing, laundry, etc.). Indoor water conservation measures that reduce indoor water use volumes can increase the TDS waste increment because the same mass of TDS additions from the indoor activities are being disposed of with a smaller volume of water.

compliance metric based on a longer-term averaging period for recycled water TDS, contingent on the ongoing modeling and analysis efforts. The regulatory compliance strategy can also address any projected challenges in complying with the recycled water dilution requirements. The work began in September 2017 and is expected to be completed in 2020.

The Regional Board has indicated that in accepting any proposal to modify the recycled water compliance metrics, it will require Watermaster and the IEUA to add a new maximum benefit commitment to the Basin Plan that involves updating the TDS and nitrate projections every five years. Thus, proactive planning to achieve compliance is a required ongoing activity under PE 7 and the maximum benefit SNMP.

If compliance with the maximum benefit limitations were to become an issue, and/or if changes in basin management and operation as described herein impact the ability to maintain Hydraulic Control, the facilities and/or improvements to that may need to be implemented are listed below and shown on Exhibit 25.

- Constructing a new treatment train at one or more IEUA recycled water treatment plants (RP-1, RP-4, RP-5, CCWRF) to reduce the TDS concentration of recycled water to levels that ensure compliance with IEUA and Watermaster's recycled water permits. The area disturbed during construction of the new treatment train capacity expansion would be limited to the disturbed areas at IEUA's existing recycled water treatment plants.
- Constructing an advanced water treatment plant (see Section 4.3.5.2).
- Expanding the existing Chino Desalter capacity by up to 6,000 afy by adding new wells and either expanding the Chino-I and/or Chino-II treatment capacity or constructing a new treatment facility and product water conveyance facilities.
    - The area disturbed during construction of the treatment plant capacity expansion would be limited to the disturbed areas at the existing Chino Desalter treatment plant sites.
    - Developing 6,000 afy of new groundwater supply
        - Constructing up to eight wells in the existing desalter well field areas to increase pumping up to 6,000 afy to maintain Hydraulic Control and to mitigate reductions in net recharge and Safe Yield caused by land subsidence management and Storage and Recovery Programs. Well depths could range from 250 to 1,000 feet. The average area of disturbance of a well site is anticipated to be half an acre or less.
        - Acquiring up to five existing wells in in the Chino Creek well field area that, in aggregate, can pump up to 2,000 afy to maintain Hydraulic Control.
        - Combination of constructing new and acquiring existing wells up to a pumping capacity of 6,000 afy to maintain Hydraulic Control and to mitigate reductions in net recharge and Safe Yield caused by land subsidence management and Storage and Recovery Programs.
        - Constructing brine management facilities.
- Construct a new treatment plant, new wells, and new conveyance facilities to accomplish the same effect as described above to expand the existing Chino Desalter system capacity by up to 6,000 afy.

4.3.8 Program Element 8. Develop and Implement Groundwater Storage Program and Program Element 9. Develop and Implement Conjunctive Use Program

4.3.8.1 Objectives

The objectives of PE 8 are (1) to develop and implement a storage management plan that prevents overdraft, protects water quality, and ensures equity among the Parties, and (2) to periodically recalculate Safe Yield. The objective of PE 9 is to develop Storage and Recovery Programs that benefit all Parties in the basin and ensure that basin waters and storage capacity are put to maximum beneficial use without causing MPI to any producer or the basin. Through the OBMPU process, the objectives of PEs 8 and 9 have been refined to:

- PE 8: Implement, and periodically update, a storage management plan that: (1) is based on the most current information and knowledge of the basin, (2) prevent unauthorized overdraft, (3) prioritize the use of storage space to meet the needs and requirements of the lands overlying the Chino Basin and of the Parties over the use of storage space to store water for export.
- PE 9: Support the development and implementation of Storage and Recovery Programs in the Chino Basin that provide defined benefits to the Parties and the basin.

PEs 8 and 9 have been combined for discussion because the Implementation Plans for these PEs were combined in the IPs.

4.3.8.2 2000 OBMP Project Description and Implementation Progress

The groundwater storage management program described in the 2000 OBMP PEIR considered, four potential methodologies for setting storage limits that included: (1) deducting rising water losses from planned storage for all local storage accounts and for the storage accounts of non-Judgment parties, (2) establishing arbitrary storage limits, such as a multiple of the Safe Yield, (3) limiting storage based on the time that water is in storage, such as not being able to store water for more than 10 years and (4) limiting storage based on total storage and the time that water is in storage. Under all methodologies, Parties would sell their current year underproduction to Watermaster or other parties to the Judgment each year if their local storage accounts are full, and the water would then be used to meet Replenishment Obligations. The conjunctive use programs, as described in the 2000 OBMP PEIR, consisted of (1) completing the existing short-term conjunctive-use project, (2) seasonal peaking program for in-basin use and dry-year yield program to reduce the demand on various water supply entities to 10 percent of normal summer demand (requiring 150,000 acre-ft of storage), (3) dry-year yield export program, and (4) seasonal peaking export program.

Watermaster has developed rules and regulations, standard storage agreements, and related forms pursuant to the Judgment and Peace Agreement. There are three types of storage agreements that result in five types of storage accounts: Excess Carryover, Local Supplemental-Recycled, Local Supplemental-Imported, Pre-2000 Quantified Supplemental, and Storage and Recovery. An Excess Carryover account includes a Party's unproduced rights in the Safe Yield (Safe Yield for Overlying Non-Agricultural Pool Parties and Operating Safe Yield for Appropriative Pool Parties) and Basin Water acquired from other Parties. A Local Supplemental Water account includes imported and recycled water that is recharged by a Party and similar water acquired from other Parties. A Storage and Recovery account includes Supplemental Water and is intended to produce a "broad and mutual benefit to the Parties to the Judgment" (§5.2(c)(iv)(b) of the Peace Agreement). Watermaster tracks the puts, takes, losses, and end of year storage totals for all of these storage accounts, and reports on this accounting in the annual assessment process. The losses assessed by Watermaster are based on the amount of water in managed storage (excluding Carryover) and they offset the increase in groundwater discharge to the Santa Ana

River from the Chino Basin attributable to managed storage (excluding Carryover). Watermaster also assesses losses due to evaporation on the puts when water is recharged in spreading basins.

In evaluating applications for storage agreements, Watermaster must conduct an investigation to determine if the water stored and recovered under a proposed storage agreement has the potential to cause MPI to a Party or the basin. If Watermaster determines that implementation of the proposed storage agreement has the potential to cause MPI, the applicant must revise its application and demonstrate that there will be no MPI, or Watermaster must impose conditions in the storage agreement to ensure there is no MPI. Watermaster cannot approve a storage agreement that has the potential to cause MPI.

The Parties, amongst themselves, are actively involved in water transfers of annual unproduced rights in the Safe Yield and water in their storage accounts. Watermaster has an application and review process for transfers that is similar to the storage agreement application process. Transfers are one way that the Parties recover water held in storage accounts.

A final SSC of 500,000 af was established in the 2000 OBMP Implementation Plan. The water occupying the SSC includes Carryover, and water stored in Excess Carryover and Local Supplemental Storage accounts. Water stored for Storage and Recovery Programs also occupies space in the SSC. Water in Carryover, Excess Carryover, local supplemental, and Storage and Recovery accounts are referred to collectively as “managed storage.”

Watermaster keeps a record of the puts, takes, losses, and end of year storage totals for all of these storage accounts, and reports on this accounting in the annual assessment process. Starting in 2005, pursuant to the Peace Agreement and OBMP Implementation Plan, Watermaster began assessing losses in stored water at a rate of two percent per year. In February 2016, Watermaster changed the loss rate to 0.07 percent per year, based on the estimated groundwater discharge from the Chino-North GMZ to the Santa Ana River (a finding of the Safe Yield recalculation).

The only active Storage and Recovery Program in the basin is the Metropolitan Dry-Year Yield Program (DYYP). The DYYP can store up to 100,000 af with maximum puts of 25,000 afy and maximum takes of 33,000 afy. The DYYP Storage and Recovery agreement provides that puts and takes can exceed these values if agreed to by Watermaster (as was done in fiscal years 2018 and 2009, respectively). The agreement that authorizes the DYYP will expire in 2028.

Exhibit 26 summarizes the amount of water in managed storage by the Parties and for the DYYP. The total volume of water in managed storage as of June 30, 2019 was about 549,200 af, which includes about 46,000 af stored in the DYYP account. As previously stated, and described below, in 2017, the IEUA adopted an Addendum to the Peace II SEIR that provided a temporary increase in the SSC to 600,000 af through June 30, 2021 and required Watermaster to update the storage management plan.

4.3.8.3 OBMPU Project Description

Exhibit 4 shows the implementation actions for PE 8/9 under the OBMPU, which include (1) complete and submit to the Court the 2020 Safe Yield Recalculation, (2) completing and submitting to the Court the 2020 Storage Management Plan (SMP), (3) developing a *Storage and Recovery Master Plan* to support the design of optimized storage and recovery programs that are consistent with the 2020 Storage Management Plan and provide the Watermaster with criteria to review, condition, and approve applications in a manner that is consistent with the Judgment and the Peace Agreement, (4) assessing losses from storage accounts based on the findings of the

2020 Safe Yield Recalculation, (5) updating the Storage Management Plan, (6) perform safe yield recalculation every 10 years (2030, 2050), and (7) updating the storage loss rate following each recalculation of Safe Yield (2030, 2040, 2050) and during periodic updates of the SMP.

2020 Storage Management Plan

The 2000 OBMP storage management plan is based on fixed storage volumes (e.g. the OSR and the Safe Storage), and its technical basis is not supported by new information available after the storage management plan was first developed. Review of the new information developed pursuant to the OBMP since 1999 indicates that it is possible to expand the use of storage space beyond that anticipated in the 2000 OBMP and Peace Agreement implementation plan. This new information includes: an updated hydrogeologic conceptual model; 20 years of intensive monitoring of basin operations (not available in 1999), including monitoring the basin response to managed storage activities; and groundwater model-based projections of the basin response to future management plans where the managed storage exceeded the SSC of 500,000 af. Re-operation, which over time will reduce the amount of Basin Water in storage by 400,000 af, was not accounted for in the 2000 OBMP storage management plan.

New information developed since 1999 suggests that the use of managed storage to meet future desalter and other Replenishment Obligations could cause potential MPI and other adverse impacts: it has the potential to exacerbate land subsidence and pumping sustainability challenges, impact net recharge and Safe Yield, increase groundwater discharge through the CCWF and cause a loss of Hydraulic Control, and change the direction and speed of the contaminant plumes. Thus, Watermaster initiated a process to update the OBMP storage management plan to enable increased storage by the Parties and to include features that will ensure there is no MPI to a Party or the basin caused by the conjunctive-use activities of the Parties and Storage and Recovery Programs.

The *Storage Framework Investigation*[26] (SFI) was completed in 2018 to provide technical information required to update the 2000 OBMP storage management plan that is included in the Peace Agreement implementation plan. In the SFI, future projections of the use of managed storage[27] were estimated and evaluated for potential MPI and other adverse impacts[28]. The SFI projected that MPI and other adverse impacts could occur due to the implementation of prospective Storage and Recovery Programs and described potential facilities and operating concepts that, if implemented, would minimize potential MPI and adverse impacts. The results of the SFI, together with the *Final 2020 Storage Management Plan White Paper,* [29] were used to inform the development of the *2020 Storage Management Plan* (SMP).

The Watermaster completed the 2020 SMP in December 2019. The 2020 SMP includes the following provisions regarding the use of storage space in the basin:

- An aggregate amount of 800,000 af is reserved for the Parties' conjunctive-use activities (includes Carryover, Excess Carryover, and Supplemental Accounts) and Metropolitan's DYYP. This amount is referred to as the "First Managed Storage Band" (FMSB).

[26] WEI. (2018). *Storage Framework Investigation – Final Report*. Prepared for the Chino Basin Watermaster. October 2018.
[27] Managed storage refers to water stored by the Parties and other entities and includes Carryover, Local Storage, and Supplemental Water held in storage accounts by the Parties and for Storage and Recovery Programs.
[28] Adverse impacts include and are not limited to reductions in net recharge and Safe Yield and increases in groundwater discharge from the Chino North GMZ to the Santa Ana River that have the potential to cause a loss of Hydraulic Control.
[29] WEI. (2019). *Final 2020 Storage Management Plan White Paper*. Prepared for the Chino Basin Watermaster. July 2019.

- The managed storage space between 800,000 and 1,000,000 af is reserved for Storage and Recovery Programs.
    - Storage and Recovery Programs that utilize the managed storage space above 800,000 af will be required to mitigate potential MPI and other adverse impacts as if the 800,000 af in the FMSB is fully used.
    - Renewal or extension of the DYYP agreement will require the DYYP to use storage space above the 800,000 af of the FMSB.

The 2020 SMP includes the following provisions specific to the Parties and Storage and Recovery Program:

- Watermaster will prioritize the use of spreading basins to satisfy Watermaster's recharge and Replenishment Obligations over the use of spreading basins for other uses.
- With regard to the storage management activities of the Parties:
    - Watermaster acknowledges transfers or leases of water rights and water held in managed storage (hereafter transfers) from Parties that are situated such that they pump groundwater outside of MZ-1 to Parties that pump in MZ-1 have the potential to cause potential MPI.
    - The reduction in net recharge caused by storage in the FMSB is an adverse impact, and Watermaster considers this adverse impact to be mitigated by the prospective calculation of Safe Yield.
- With regard to the Storage and Recovery Programs:
    - Puts and takes should be prioritized to occur in MZ-2 and MZ-3 to avoid new land subsidence and interfering with land subsidence management in MZ-1, to minimize pumping sustainability challenges, to minimize the impact of Storage and Recovery operations on solvent plumes, to preserve the state of Hydraulic Control, and to take advantage of the larger and more useful storage space in MZ-2 and MZ-3.
    - Watermaster will evaluate Storage and Recovery Program impacts, assess MPI (including, but not limited to land subsidence, pumping sustainability, water quality, shallow groundwater, and liquefaction), and define mitigation requirements. The Storage and Recovery Program applicants must develop mitigation measures acceptable to Watermaster and include them in the Storage and Recovery Program agreements.
    - Watermaster will evaluate the Storage and Recovery Program, assess adverse impacts (including, but not limited to reductions in net recharge and Safe Yield and an increase in the groundwater discharge from the Chino North GMZ to the Santa Ana River contributing to a loss of Hydraulic Control), and define mitigation requirements. The Storage and Recovery Program applicants must develop mitigation measures acceptable to Watermaster and include them in the Storage and Recovery Program agreements.
    - Watermaster will periodically review current and projected basin conditions and compare this information to the projected basin conditions prepared in the evaluation of the Storage and Recovery Program applications; compare the projected Storage and Recovery Program operations to actual Storage and Recovery Program operations; make findings regarding the efficacy of related mitigation of MPI and other adverse impact requirements and measures in the Storage and Recovery Program storage agreements; and based on its review and findings, require changes in the Storage and Recovery Program agreements to mitigate MPI and adverse impacts.

- Watermaster will modify the existing *Form 8 Local Storage Agreements* to be consistent with an "evergreen agreement" paradigm and establish that the evergreen agreements will be valid for the duration of the Peace Agreement and will be automatically adjusted upon Watermaster's approval of each subsequent Assessment Package so long as the cumulative amount of water in storage is less than the quantity reserved for the Parties' conjunctive-use operations and Metropolitan's DYYP (cumulatively, the FMSB) and Watermaster has made no finding that MPI is threatened to occur as a result of the increase in the quantity of water in storage.
- Watermaster will periodically review and update the SMP at a frequency of no less than once every five years, when the Safe Yield is recalculated, when it determines a review and update is warranted based new information and/or the needs of the Parties or the basin, and at least five years before the aggregate amount of managed storage by the Parties is projected to fall below 340,000 af.

The facilities and/or improvements to existing facilities envisioned under the OBMPU to conduct a Storage and Recovery Program within the SMP are listed below and shown on Exhibit 27.

- Constructing up to 40 new ASR wells and/or 30 new conventional production wells in MZ-2/3 north of Highway 60 to increase pumping and recharge capacity by up to 70,000 afy to implement Storage and Recovery programs. [30]
    - Depth of new wells could range between 500 and 1,500 feet.
    - The average area of disturbance of a site is anticipated to be half an acre or less.
    - Constructing conveyance and treatment facilities to supply water to the ASR wells for recharge.
    - Constructing conveyance and treatment facilities to supply the recovered stored groundwater from the ASR wells to municipal and industrial users within and outside of the Chino Basin.
- Expanding the Chino Desalters or construction of new functionally equivalent facilities (see Section 4.3.7.2) to mitigate increases in groundwater discharge from the Chino North GMZ to the Santa Ana River caused by a Storage and Recovery Program that has the potential to cause a loss of Hydraulic Control. These same facility improvements could be used to mitigate the loss of net recharge and Safe Yield caused by a Storage and Recovery Program.
- Constructing facility improvements at active groundwater remediation projects to mitigate the effects of Storage and Recovery Program on the remediation projects (see Section 4.3.6.2). These improvements could include construction of additional wells and raw water conveyance facilities, treatment plant expansions and other treatment modifications and product water facilities
- Constructing replacement wells and or modification to existing wells to mitigate loss of pumping capacity caused by a Storage and Recovery Program.

5. SUMMARY OF ALL FACILITIES

The 2020 OBMPU and related documents is a revision of the implementation plans included in the Peace and Peace II Agreements and incorporates the new activities in the 2020 OBMPU and ongoing activities from the 2000 OBMP. The 2020 OBMPU IP puts forth a series of one-time actions and ongoing management processes, organized by Program Elements (PE), that help achieve the goals of the OBMP and set the framework for the next 30 years of basin-management activities. This section of the Project Description is intended to outline the specific facilities and

[30] Some of the new conventional pumping wells and ASR that will be constructed for PE 2 and 4, respectively, can be used for PE 8/9.

specific types of facilities and/or improvements that could result from the implementation of the OBMPU. These facilities are listed in Exhibit 5 and are outlined in further detail below.

5.1 Monitoring Wells and Devices

PE 1
The objectives of PE 1 under the OBMPU to provide the information necessary to support the implementation of all other OBMP PEs and to evaluate their performance. In order to accomplish the objectives of PE 1, as outlined under Project Characteristics above, the following monitoring facilities are required:

Groundwater-level monitoring. Under the OBMPU, up to 100 new monitoring wells will be constructed for multiple purposes to monitor groundwater levels in the Chino Basin with total depths ranging from 50 to 1,500 feet. The average area of disturbance of each well site is anticipated estimated to be half an acre or less. The precise location of the proposed new wells is unknown at this time, beyond that they will be located within the Chino Basin, shown on Exhibit 6. The new monitoring wells will be equipped with pressure transducer data-loggers that measure and record groundwater levels.

Groundwater-quality monitoring. Under the OBMPU, these new monitoring wells will be constructed to monitor groundwater quality in the Chino Basin with total depths ranging from 50 to 1,500 feet and four- to six-inches in diameter. The average area of disturbance of each well site is estimated to be half an acre or less. Additionally, the ongoing groundwater-quality monitoring program will continue. The precise location of the proposed new wells is unknown at this time, beyond that they will be located within the Chino Basin, shown on Exhibit 7. A subset of the new monitoring wells will be equipped with probes that measure and record water-quality parameters.

Groundwater-production monitoring. Under the OBMPU, Watermaster's ongoing groundwater-production monitoring program will continue. Up to 300 in-line flow meters will be installed in private wells to accurately estimate production by the Agricultural Pool. The flow meters are installed on the existing well discharge pipe. The proposed/possible locations for the in-line flow meters on Agricultural Pool wells are shown on Exhibit 8.

Surface Water and Climate Monitoring. Under the OBMPU, Watermaster and IEUA's ongoing surface-water and climate monitoring efforts will continue. Surface-water discharge and stage measuring equipment and meteorological monitoring equipment will be installed in and near stormwater drainage and recharge facilities, respectively, to improve the accuracy of surface-water diversion and recharge measurements. The surface-water discharge equipment will consist of flow meters, data loggers and communications equipment that measure flow rate at discrete points along creeks, and inlets and outlets of existing recharge facilities, store the measure data and transmit it to IEUA's SCADA system. The surface-water stage monitoring equipment will consist of pressure transducer data-loggers and communications equipment that measure and record water levels, store the measurement data and transmit it to IEUA's SCADA system. The meteorological monitoring equipment will be similar to the California Irrigation Management Information System (CIMIS) stations and include data loggers and communications equipment. The proposed/possible locations for the installation of surface-water and climate monitoring devices are shown on Exhibit 9.

Ground-level monitoring. Under the OBMPU, Watermaster's ongoing ground-level monitoring program will continue. Up to three new extensometers will be constructed in the areas prone to subsidence with total extensometer depths of up to 1,500 feet. An extensometer is a sophisticated

monitoring facility consisting of piezometers and extensometers. As the aquifer system undergoes various stresses due to groundwater production and recharge, the facility monitors the hydraulic response of the aquifer system at the piezometers and the mechanical response of the aquifer system at the extensometers. The facility is equipped with pressure transducers to measure water levels in the piezometers, linear potentiometers to measure the vertical aquifer-system deformation at the extensometers, and data loggers to record the data at frequent intervals (e.g. 15 minutes). The possible locations of the extensometers are within the Areas of Subsidence concern shown on Exhibit 10.

5.2 ASR, Injection and Pumping Wells

PE 2
Under the OBMPU, the objective of PE 2, as outlined under Section 4, Project Characteristics above, includes the implementation of recharge projects based on need and available resources. The new recharge facilities that may result from the RMPU process as envisioned under the OBMPU are listed below and shown on Exhibit 12; however, the precise location for well development sites is unknown at this time, beyond that the proposed wells are expected to be located north of Highway 60 in MZ-1, MZ-2 and MZ-3 within Chino Basin.

Aquifer Storage and Recovery (ASR) Wells (Part 1). ASR wells are used to inject treated supplemental water into the Basin and to pump the injected groundwater on some periodic schedule. The OBMPU envisions constructing up to 60 ASR wells to increase supplemental water recharge capacity by up to 70,000 afy. Some of the new ASR wells that will be constructed for PE 2 can be used for PE's 4, 7 and 8/9; as such the total number of ASR wells anticipated to be constructed under these assumptions is 60. In the case that recycled water is injected into the Chino Basin, an ASR well would be replaced by one dedicated injection well plus one conventional extraction well. Please refer to the discussion under Wells: PE 4 and Wells: PE 8/9 below. The ASR wells also meet the objectives of **PEs 4, 5, 7 and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

- The depth of new ASR wells and/or injection/extraction well pairs could range between 500 and 1,500 feet.
- The average area of disturbance of each well site is estimated to be half an acre or less.
- The installation of the proposed ASR wells and or injection/extraction well pairs includes the construction of facilities to convey the supplemental water to the ASR wells and to convey pumped groundwater to end users. Conveyance facilities include pipelines, booster stations, reservoirs and related appurtenances. The length of pipelines is estimated to be about 150,000 lineal feet (LF). The location of associated booster stations, reservoirs and minor appurtenances are currently unknown.
- The installation of the proposed injection wells includes the construction of improvements to wastewater treatment plants if recycled water is injected (described under Wastewater Treatment Facilities below).
- The expected location of ASR wells is north of Highway 60 in MZ-1, MZ-2 and MZ-3.

PE 4
As outlined under Section 4, Project Characteristics above, the goal of PE 4 is to develop and implement comprehensive groundwater management plan for Management Zone 1 that will characterize land subsidence spatially and temporarily, identify its causes, and, where appropriate, develop and implement a program to manage it. Under the OBMPU, facilities may be needed to: (1) relocate pumping from Northwest MZ-1 to MZ-2 and/or MZ-3, (2) replace some of their pumping with surface water as a form of in-lieu recharge, (3) facilitate increased wet-water

recharge, or (4) a combination of some or all of the above. As such, the following well development projects that are envisioned to address land subsidence are listed below and are shown on Exhibit 14.

MZ 1 Well Relocation. The OBMPU envisions constructing up to 10 wells in MZ-2 and MZ-3 to relocate up to 25,000 afy of pumping from MZ-1 to MZ-2 and/or MZ3. The depth of these new wells could range between 500 and 1,000 feet and the average area of disturbance of a well site is anticipated to be half an acre or less. Conveyance facilities to convey the water pumped from these new wells to MZ1 pumpers include pipelines, booster pump stations, reservoirs and related appurtenances, the capacity and locations of which are presently unknown. The new wells could also meet the objectives of **PE 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

Aquifer Storage and Recovery (ASR) Wells (Part 2). The OBMPU envisions constructing up to 15 ASR wells in Northwest MZ-1 and Central MZ-1 (part of the 60 overall ASR wells) to increase wet-water recharge capacity in MZ-1 by up to 25,000 afy. This will require improvements to the WFA Agua de Lejos treatment plant to increase its capacity by up to 25,000 afy and the increase in use of imported water purchased from Metropolitan Water District of Southern California by up to 25,000 afy. Some of the surface water supplied could be obtained through TVMWD from its Miramar treatment plant. Some of the new ASR wells that will be constructed for PE 2 can be used for PE 4; as such the total number of ASR wells anticipated to be constructed is: 15. Please refer to the discussion under Wells: PE 2 above and Wells: PE 8/9 below. The ASR wells also meet the objectives of **PEs 2, 5, 7 and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

- The depth of a new ASR wells could range between 500 and 1,500 feet.
- The average area of disturbance of a well site is anticipated to be half an acre or less.
- The installation of the proposed ASR wells includes the construction of conveyance facilities to convey the supplemental water to the ASR wells and to convey pumped groundwater to end users. Conveyance facilities include pipelines, booster stations, reservoirs and related appurtenances. The length of pipelines is estimated to be about 37,500 lineal feet (LF). The location of possible associated booster stations, reservoirs and related appurtenances are unknown.
- The installation of the proposed ASR wells includes the construction of improvements to wastewater treatment plants if recycled water is injected into an ASR well (described under Wastewater Treatment Facilities below). In the case that recycled water is injected into the Chino Basin, an ASR well would be replaced by one dedicated injection well plus one conventional extraction well.
- The expected location of ASR wells is north of Highway 60 in MZ-1.

PE 7

Under the OBMPU, the objective of PE 7, as outlined under Section 4, Project Characteristics above, includes (1) completing the 2020 update of TDS and nitrate projections to evaluate compliance with maximum benefit salt and nutrient management plan, and, if necessary, based on the outcome, preparing a plan and schedule to implement a salt offset compliance strategy, (2) continuing to implement the maximum-benefit salt and nutrient management plan pursuant to the Basin Plan, and (3) starting in 2025 and every five years thereafter, updating water quality projections to evaluate compliance with the maximum-benefit salt and nutrient management plan. The following proposed well projects would enable the Watermaster to maintain Hydraulic Control as envisioned under the OBMPU are listed below and shown on Exhibit 25.

Expand the Existing Chino Desalter Groundwater Pumping. The OBMPU envisions expanding the existing Chino Desalter capacity by up to 6,000 afy by adding new wells. This will require constructing up to eight wells in the existing desalter wellfield areas (shown on Exhibit 25) to increase pumping up to 6,000 afy to maintain Hydraulic Control and to mitigate reductions in net recharge and Safe Yield caused by the implementation of a future land subsidence management and Storage and Recovery Programs. Well depths could range from 250 to 1,000 feet. The average area of disturbance of a well site is anticipated to be half an acre or less. Additionally, the effort to maintain Hydraulic Control in the future may require the Watermaster to acquire up to five existing wells in in the Chino Creek well field area that, in aggregate, can pump up to 2,000 afy to maintain Hydraulic Control. This effort is anticipated to be ministerial in nature; however, it is possible that any one of the acquired wells may require redevelopment, removal and disposal of existing pumping equipment, installation of new pumping equipment and well head improvements to enable adequate pumping. Up to 65,000 lineal feet of conveyance would be required to connect the new wells to a treatment facility. The new wells also meet the objectives of **PE 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

PE 8/9

Through the OBMPU process, the objectives of PEs 8 and 9, as outlined under Section 4, Project Characteristics above, are to:

- Implement, and periodically update, a storage management plan that: (1) is based on the most current information and knowledge of the basin, (2) prevent unauthorized overdraft, (3) prioritizes the use of storage space (storage bands) to meet the needs and requirements of the lands overlying the Chino Basin and of the Parties over the use of storage space to store water for export.
- Support the development and implementation of Storage and Recovery Programs in the Chino Basin that provide defined benefits to the Parties and the basin.

The facilities and/or improvements to existing facilities envisioned under the OBMPU to conduct a Storage and Recovery Program within the SMP are listed below and shown on Exhibit 27.

Aquifer Storage and Recovery (ASR) and Conventional Wells (Part 3). The OBMPU envisions constructing up to 40 new ASR wells and/or 30 new conventional production wells in MZ-2/3 north of Highway 60 to increase pumping and recharge capacity by up to 70,000 afy to implement Storage and Recovery programs. Some of the new conventional pumping wells and ASR wells that will be constructed for PE 2, respectively, may be used for PE 8/9; as such the total number of ASR wells anticipated to be constructed is: 60. Please refer to the discussion under Wells: PE 2 above. The ASR wells also meet the objectives of **PEs 2, 4 and 5**, the objectives of which are outlined under Section 4, Project Characteristics above.

- The depth of a new wells could range between 500 and 1,500 feet.
- The average area of disturbance of a site is anticipated to be half an acre or less.
- ASR well development will require the construction of conveyance and treatment facilities to supply water to the ASR wells for recharge and to convey pumped groundwater to end users. The estimated length of pipelines is estimated to be about 100,000 lineal feet (LF). The location of associated booster station, reservoirs and related appurtenances are unknown. The installation of the proposed ASR wells includes the construction of improvements to wastewater treatment plants if recycled water is injected into an ASR well (described under Wastewater Treatment Facilities below).
- The expected location of ASR wells is north of Highway 60 in MZ-2 and MZ-3.

Replacement and Modification to Existing Wells. The OBMPU envisions constructing replacement wells and or modification to existing wells to mitigate loss of pumping capacity caused by a future Storage and Recovery Program(s). The location of these wells has not yet been identified. For planning purposes, it is anticipated that a maximum number of 5 existing wells may be modified, and a maximum of 5 existing wells will be abandoned, destroyed, and replaced with a new well. Modification of a well could include deepening the well by drilling, lowering the pump, removal of the existing pumping equipment and replacing it with new pumping equipment and other well head improvements. Replacing a well includes the drilling, well completion, installation of new pumping equipment, site and well head improvements and new conveyance facilities.

Conclusion
It is estimated that under the OBMPU a total of 178 wells will be developed to serve the various purposes outlined above. Furthermore, the ASR wells will require construction of conveyance and treatment facilities to supply water to the ASR wells for recharge and to convey pumped groundwater to end users. As such, it is estimated that under the OBMPU a total of 190,000 LF will be required to connect wells to the distribution systems, which is inclusive of each of the three ASR well development projects required above.

Table 5
ASR WELLS PER PROGRAM ELEMENT

PE (Location)	Number of Wells
PE 4 with potential use for PE 2 (MZ 1 north of Hwy 60)	15
PE 8/9 with potential use for PE 2 (MZ 2/3 north of Hwy 60)	40
Additional wells for PE 2 (north of Hwy 60)	5
TOTAL	**60**

5.3 Well Destruction

PE 1
The objective of PE 1 under the OBMPU includes continuing the ongoing monitoring and reporting program and developing and updating an *OBMP Monitoring and Reporting Work Plan*. A part of this objective includes destroying abandoned wells due to the threat they pose to the groundwater supply. In order to accomplish the objectives of PE 1, as outlined under Section 4, Project Characteristics above, the following facilities or actions are required:

Well Destruction. The presence of improperly abandoned wells is a threat to groundwater supply and a physical hazard. Watermaster staff periodically reviews its database, makes appropriate inspections, consults with well owners, maintains a list of abandoned wells in the Chino Basin, and provides this list to the counties for follow-up and enforcement. Watermaster requests owners of abandoned wells to properly destroy their wells pursuant to the DWR Well Standards (Bulletins 74-81 & 74-90). This includes sealing the upper 20 feet with an impervious sealing material (neat cement, sand-cement grout, concrete, or bentonite clay). In areas where the interchange of water between aquifers occurs, impervious material will be placed opposite the confining formations above and below the producing formations for a distance of 10 feet or more. The remainder of the well shall be filled with suitable fill (clay, silt, sand, gravel, crushed stone, native soils, or mixtures of the aforementioned types). In urban areas, additional requirements must be met. These include: 1) A hole shall be excavated around the well casing to a depth of 5 feet below the ground surface and the well casing removed to the bottom of the excavation; 2) The sealing

material used for the upper portion of the well shall be allowed to spill over into the excavation to form a cap; and. 3) After the well has been properly filled, including sufficient time for sealing material in the excavation to set, the excavation shall be filled with native soil. Under the OBMPU, Watermaster will continue these efforts, though no specific abandoned wells have been identified to be destroyed at this time.

5.4 Storage and Recharge Facilities

PE 2
Under the OBMPU, the objective of PE 2, as outlined under Section 4, Project Characteristics above, includes the implementation of recharge projects based on need and available resources. The new recharge facilities and/or improvements to existing facilities that may result from the RMPU process as envisioned under the OBMPU are listed below and shown on Exhibit 12. Note that the RMPU process and facility modifications have been evaluated in detail

New Storage Basin: Chino Institute for Men. The OBMPU envisions constructing and operating a new storage basin for stormwater and supplemental waters at the Chino Institute for Men (CIM), which includes the following facilities: a diversion structure that would divert stormwater and dry-weather discharge from Chino Creek to the new storage basin; booster pump stations, pipelines and basins that would convey stormwater and dry-weather discharge from the new storage basin to recharge facilities in the northern part of the Basin; and, pipelines to convey supplemental waters to the storage basin for seasonal storage. The new storage basin at the CIM will have an area between 50 and 100 acres. The proposed new storage basin will require conveyance facilities that include estimated 60,000 lineal feet of pipelines and presently an unknown number, locations and capacities of booster pump stations, basins and related appurtenances. The location of the CIM is depicted on Exhibit 12. The new recharge resulting from this new storage basin also meets the objectives of **PEs 4, 5, and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

Flood Managed Aquifer Recharge. The OBMPU envisions constructing flood managed aquifer recharge (MAR) facilities in the northeast part of basin to recharge supplemental water. This assumes that land in existing agricultural uses can be flooded to achieve managed aquifer recharge. The potential cumulative area of these facilities is about 200 acres, which represents the total agricultural land use area in the northern part of the Chino Basin. Facilities to implement this include diversion structures and conveyance facilities that would convey surface water to the available agricultural land. Conveyance facilities include pipelines, booster stations, basins and related appurtenances. The proposed new MAR facilities will require conveyance facilities that include an estimated 50,000 lineal feet of new pipelines and presently unknown number, locations and capacities of booster pump stations, basins and related appurtenances. The precise location of the proposed new flood MAR facilities is unknown at this time, beyond that they will be located within northern portion of the Chino Basin as shown on Exhibit 12. The new recharge resulting from this new storage basin will meet the objectives of **PEs 5, and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

New Storage Basin: Lower Cucamonga Ponds. The OBMPU envisions constructing and operating a new storage basin at the existing Lower Cucamonga Ponds, which includes the following facilities: construction of dam and reservoir over the current foot print of the Lower Cucamonga ponds and adjacent Cucamonga Creek Channel; and booster pump stations, pipelines and reservoirs to convey stormwater and dry-weather discharges from the new storage basin to recharge facilities in the northern part of the basin. The Lower Cucamonga Ponds are existing detention basins owned by the San Bernardino County Flood Control District. The ponds

would be converted into one storage basin to store stormwater and dry-weather discharges, and will encompass an area of about 50 acres. The proposed new storage basin will require conveyance facilities that include an estimated 90,000 lineal feet of new pipeline and presently unknown number, locations and capacities of booster pump stations, reservoirs and related appurtenances. The location of the Lower Cucamonga Ponds is depicted on Exhibit 12. The new recharge resulting from this new storage basin will meet the objectives of **PEs 5 and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

New Storage Basin: Mills Wetlands. The OBMPU envisions constructing and operating a new storage basin at the existing Mills Wetlands, which includes the following components: expansion of the storage capacity of the existing Mills wetland by excavation of the bottom and other grading improvements to expand storage capacity; improvements to existing diversion facilities and or the construction of new diversion structures to divert stormwater and dry-weather discharge from Cucamonga Creek to the new storage basin; and, booster pump stations, pipelines and storage basins to convey stormwater and dry-weather discharges from the new basin to recharge facilities in the northern part of the basin. The Mills Wetlands are existing artificial wetlands used to treat Cucamonga Creek discharge. The wetlands would be converted into a storage basin to store stormwater and dry-weather discharges. It has an area of about 30 acres. The proposed new storage basin will require conveyance facilities that include an estimated 30,000 lineal feet of new pipelines and presently unknown number, locations and capacities of booster pump stations, reservoirs and related appurtenances. The location of the Mills Wetlands is depicted on Exhibit 12. The new recharge resulting from this new storage basin will meet the objectives of **PEs 5 and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

New Storage Basin: Riverside Basin. The OBMPU envisions constructing and operating a new storage basin at the existing Riverside Basin, which includes the following components: expansion of the storage capacity of the existing Riverside Basin by excavation of the bottom and other grading improvements to expand storage capacity and create conservation storage; and booster pump stations, pipelines and storage basins to convey stormwater and dry-weather discharges from the new storage basin to recharge facilities in the northern part of the basin. The Riverside Basin is an existing detention basin owned by the San Bernardino County Flood Control District. The basin would be converted into a multipurpose facility that would maintain its flood control function and temporarily store stormwater and dry-weather discharges. It has an area of about 60 acres. The proposed new storage basin will require conveyance facilities that include an estimated 5,000 lineal feet of pipelines specific to the Riverside Basin, and presently unknown number, locations and capacities of booster pump stations, reservoirs and related appurtenances. The location of the Riverside Basin is depicted on Exhibit 12. The new recharge resulting from this new storage basin will meet the objectives of **PEs 5 and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

New Storage Basin: Vulcan Basin. The OBMPU envisions constructing and operating a new storage basin for stormwater and supplemental waters at the existing Vulcan Basin, which includes the following components: facilities to divert stormwater and dry-weather flow from the West Fontana Channel and surrounding urban areas to the new storage basin; booster pump stations, pipelines, reservoirs and minor appurtenances to convey supplemental water to the Basin; grading improvements within the Basin to expand the storage capacity and to regulate stored water; booster pump stations, pipelines, reservoirs and minor appurtenances to convey stored water to recharge facilities in the northern part of the basin, the RP3 recharge facilities and to IEUA recycled water system for reuse. The Vulcan Basin is an existing facility formerly used as a sand and gravel mine. It has an area of about 60 acres. The proposed new storage basin

will require conveyance facilities that include an estimated 20,000 lineal feet of pipelines and presently unknown number, locations and capacities of booster pump stations, reservoirs and related appurtenances. The location of the Vulcan Basin is depicted on Exhibit 12. The new recharge resulting from this new storage basin will meet the objectives of **PEs 5 and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

Modifications to an Existing Reservoir: Jurupa Basin. The OBMPU envisions constructing improvements at the Jurupa Basin that include demolition of existing internal berms, constructing new internal berms, grading improvements to improve internal hydraulics within the basin, removing fine-grained materials from the Jurupa Basin floor to improve its infiltration rate and increase recharge capacity, and improvements at the Jurupa pump station intake that include the construction of trash racks or their functional equivalent and access to remove trash and debris from the pump intake structure. The location of the Jurupa Basin is depicted on Exhibit 12. The new recharge resulting from this new storage basin will meet the objectives of **PEs 2, 5 and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

New Storage Basin: Confluence Project. The OBMPU envisions constructing and operating a new storage basin at the confluence of San Antonio and Chino Creeks (proposed Confluence Project), which includes the following components: two diversion structures with rubber dams and pumps to divert stormwater and dry-weather flow from of San Antonio and Chino Creeks to the new storage basin; and booster pump stations, pipelines, reservoirs and minor appurtenances to convey stormwater and dry-weather discharges from the new storage basin to the Montclair spreading basins in the northern part of the basin. The Confluence Project will have an area of about 10 acres and a depth of about 35 feet, which will result in about 200,000 cubic yards of material removal, with the goal of balancing the cut and fill to minimize material export. The proposed Confluence Project will require conveyance facilities that include an estimated 35,000 lineal feet of pipelines and presently unknown number and locations of booster pump stations, reservoirs and related appurtenances. The new recharge resulting from this Confluence Project meet the objectives of **PEs 2, 5 and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

MS4 Compliant Projects. The OBMPU envisions collaborating with the MS4 permittees (typically cities and counties) to ensure MS4-compliance projects prioritize recharge. This will result in the construction of new MS4-compliance facilities that increase recharge in the Chino Basin. The Watermaster does not directly develop any MS4-compliance projects; these projects will occur as development within the overall Chino Basin area occurs. The MS4 compliance initiative also meets the objectives of **PEs 2, 4 and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

Conclusion
The conveyance facilities required to increase recharge in the Chino Basin include an estimated 240,000 LF of pipelines and presently unknown booster pump stations, reservoirs and minor appurtenances whose locations and capacities to achieve the OBMPU goals are presently unknown.

5.5 Water Treatment Plants

PE 2
Under the OBMPU, the objective of PE 2, as outlined under Section 4, Project Characteristics above, includes the implementation of recharge projects based on need and available resources. The new recharge facilities and/or improvements to existing facilities involving wastewater

treatment plants that may result from the RMPU process as envisioned under the OBMPU are listed below and shown on Exhibit 12. Please note that IEUA's 2017 FMP PEIR included extensive evaluations of future modifications to its four Water Reclamation Plants (WRPs: RP-1, RP-2, RP-4 and Carbon Canyon). The findings of this three-year old PEIR will be extensively referenced in this document.

Modifications to an Existing Imported Water Treatment Facility: Water Facilities Authority Agua de Lejos Treatment Plant (Part 1). The OBMPU envisions constructing improvements to the Water Facilities Authority (WFA) Agua de Lejos Treatment Plant to remove some or all its solids handling limitations, and envisions other improvements to increase its capacity to its original design capacity, thereby increasing in-lieu recharge capacity. The specific improvements needed to increase the capacity of the plan are currently unknown. Please refer to Water Treatment Plants: PE 4 below for further details on proposed improvements to the WFA Agua de Lejos Treatment Plant. The WFA modifications also meet the objectives of **PEs 4, 5 and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

PE 4
As outlined under Section 4, Project Characteristics above, the goal of PE 4 is to develop and implement comprehensive groundwater management plan for Management Zone 1 that will characterize land subsidence spatially and temporarily, identify its causes, and, where appropriate, develop and implement a program to manage it. Under the OBMPU, the following project(s) involving modifications to water treatment facilities are envisioned to address land subsidence are listed below and are shown on Exhibit 14.

Modifications to an Existing Imported Water Treatment Facilities: Water Facilities Authority Agua de Lejos Treatment Plant (Part 2). The OBMPU envisions constructing improvements to the WFA Agua de Lejos Treatment Plant to increase its capacity by up to 25,000 afy and also envisions an increase in the use of imported water purchased from Metropolitan Water District of Southern California by up to 25,000 afy. The specific improvements needed to increase the capacity of the plan are currently unknown. Some of the surface water supplied could be obtained through Three Valleys Municipal Water District (TVMWD) and its Miramar Treatment Plant. As stated above under Wastewater Treatment Plants: PE 2, the WFA modifications also meet the objectives of **PEs 2, 5 and 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

PE 7
Under the OBMPU, the objective of PE 7, as outlined under Section 4, Project Characteristics above, includes (1) completing the 2020 update of TDS and nitrate projections to evaluate compliance with maximum benefit salt and nutrient management plan, and, if necessary, based on the outcome, preparing a plan and schedule to implement a salt offset compliance strategy, (2) continuing to implement the maximum-benefit salt and nutrient management plan pursuant to the Basin Plan (Regional Board's or other such plan), and (3) starting in 2025 and every five years thereafter, updating water quality projections to evaluate compliance with the maximum-benefit salt and nutrient management plan. If compliance with the maximum benefit limitations were to become an issue, and/or if changes in basin management and operation as described herein impact the ability to maintain Hydraulic Control, the facilities and/or improvements that may need to be implemented are listed below and shown on Exhibit 25.

Upgrade Existing Recycled Water Treatment Plant(s). The OBMPU envisions constructing new treatment trains at one or more IEUA recycled water treatment plants (RP-1, RP-4, RP-5, CCWRF) to reduce the TDS concentration of recycled water to levels that ensure compliance with

IEUA and Watermaster's recycled water permits. The area disturbed during construction of the new treatment train capacity expansion would be limited to the disturbed areas at IEUA's existing recycled water treatment plants. Please note that IEUA's 2017 FMP PEIR included extensive evaluations of future modifications to its four Water Reclamation Plants (WRPs: RP-1, RP-2, RP-4 and Carbon Canyon). The findings of this three-year old PEIR will be extensively referenced in this document.

5.6 Desalters and Advanced Water Treatment Facilities

PE 4
As outlined under Section 4, Project Characteristics above, the goal of PE 4 is to develop and implement comprehensive groundwater management plan for management zone 1 that will characterize land subsidence spatially and temporarily, identify its causes, and, where appropriate, develop and implement a program to manage it. Under the OBMPU, the following project(s) involving modifications to water management facilities are envisioned to address land subsidence are listed below and are shown on Exhibit 14.

Modifications to the Chino Desalters. The OBMPU envisions the possible expansion of the existing Chino Desalter capacity by up to 2,000 afy by adding new wells in the Chino Creek wellfield area and expanding the Chino-I and/or Chino-II Desalter treatment capacity. The location of the Chino Desalters is shown on Exhibit 14. The new wells required to expand the Chino Desalters are discussed under Wells: PE 7, above. Additionally, the ultimate expansion of the existing Chino Desalters is discussed under Desalters and Advanced Water Treatment Facilities: PE 7, below.

PE 5
Under the OBMPU, the objective of PE 5, as outlined under Section 4, Project Characteristics above, maximizing recycled water reuse and establishing or expanding future recycled water planning efforts to maximize the reuse of all available sources of recycled water. The following proposed water treatment facilities would maximize recycled water reuse as envisioned under the OBMPU are listed below and shown on Exhibit 16.

New Advanced Water Treatment Plant. The OBMPU envisions constructing an advanced water treatment plant. Advanced water treatment refers to the following wastewater treatment processes: RO, membrane filtration, or functionally equivalent processes, and potentially ultraviolet (UV) disinfection. The area expected to be disturbed by the construction and operation of the plant is 10 acres. The location of this treatment plant is currently unknown; however, it could be collocated at an existing IEUA treatment plant. Please note that IEUA's 2017 FMP PEIR included extensive evaluations of future modifications to its four Water Reclamation Plants (WRPs: RP-1, RP-2, RP-4 and Carbon Canyon). The findings of this three-year old PEIR will be extensively referenced in this document.

The water produced by the new treatment plant could be used for direct potable reuse (DPR) and or indirect potable reuse (IPR). In either case, conveyance facilities will be required to convey the treatment plant product water to either use. These conveyance facilities include pipelines, booster pump stations, reservoirs and minor appurtenances whose number, locations and capacities are presently unknown. However, it is anticipated that the pipelines will be located below ground and within existing road rights-of-ways. The new advanced treatment plant also meets the objectives of **PE 7**, the objectives of which are outlined under Section 4, Project Characteristics above.

PE 7
Under the OBMPU, the objective of PE 7, as outlined under Section 4, Project Characteristics above, includes include (1) completing the 2020 update of TDS and nitrate projections to evaluate compliance with maximum benefit salt and nutrient management plan, and, if necessary, based on the outcome, preparing a plan and schedule to implement a salt offset compliance strategy, (2) continuing to implement the maximum-benefit salt and nutrient management plan pursuant to the Basin Plan, and (3) starting in 2025 and every five years thereafter, updating water quality projections to evaluate compliance with the maximum-benefit salt and nutrient management plan. The following proposed water treatment facilities or modifications to existing facilities would enable the Watermaster to maintain Hydraulic Control as envisioned under the OBMPU are listed below and shown on Exhibit 25.

Expand the Existing Chino Desalter. The OBMPU envisions expanding the existing Chino Desalter capacity by up to 6,000 afy by adding new wells and either expanding the Chino-I and/or Chino-II treatment capacity or constructing a new treatment facility and product conveyance facilities. The area disturbed during construction of the treatment plant capacity expansion would be limited to the disturbed areas at the existing Chino Desalter treatment plant sites. This effort would require developing 6,000 afy of new groundwater supply. The development of the wells required to expand the Chino Desalters are outlined under Wells: PE 7 above. Conveyance facilities will be required to convey the treatment plant product water to its end potable use. These conveyance facilities include pipelines, booster pump stations, reservoirs and minor appurtenances whose number, locations and capacities are presently unknown. The expansion of the Chino Desalters or construction of new functionally equivalent facilities could be used to mitigate the loss of net recharge and Safe Yield caused by a Storage and Recovery Program, which would meet the objectives of **PE 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

Brine Management Facilities. The OBMPU envisions constructing brine management facilities for the expanded desalting described above that result in no net increase in brine disposal. The specific brine management facilities are currently unknown.

5.7 Recycled and Potable Water Distribution/Conveyance

PE 5
Under the OBMPU, the objectives of PE 5, as outlined under Section 4, Project Characteristics above, are maximizing recycled water reuse and establishing or expanding future recycled water planning efforts to maximize the reuse of all available sources of recycled water. The proposed recycled water distribution facilities that maximize recycled water reuse as envisioned under the OBMPU are listed below and shown on Exhibit 16, while the facilities and/or improvements to existing facilities to improve water reliability envisioned under the OBMPU are listed below and shown on Exhibit 17.

Indirect Potable Reuse Conveyance Improvements. The OBMPU envisions expanding the recycled water distribution system for indirect potable reuse by constructing conveyance facilities that include pipelines, booster pump stations, reservoirs and minor appurtenances. The general location of these facilities is shown in Figure 16. The number, location and capacities of the proposed conveyance facility improvements are presently unknown; however, it is anticipated that the up to 50,000 lineal feet of pipeline could be constructed underground and within existing road rights-of-ways. The proposed recycled water *conveyance improvements* also meet the objectives of **PE 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

East/West Regional Pipeline. The OBMPU envisions constructing an east to west 75,000-foot regional pipeline across the northern part of the Chino Basin to enable the efficient conveyance and distribution of supplemental and basin waters to Chino Basin water users; and or the construction of improvements to existing conveyance facilities to accomplish the same. This pipeline project will require ancillary facilities that include booster pump stations, reservoirs and related appurtenances. The precise locations, number and capacities of the proposed conveyance facility improvements are unknown, though the alignment envisioned under the OBMPU is shown approximately on Exhibit 17. It is anticipated that the proposed pipeline will be constructed underground and within existing road rights-of-ways. The proposed regional pipeline also meets the objectives of **PE 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

North/South Regional Pipeline. The OBMPU envisions constructing a north-to-south 45,000-foot regional pipeline across the eastern part of the Chino Basin to enable the efficient conveyance and distribution of supplemental and basin waters to Chino Basin water users; and or the construction of improvements to existing conveyance facilities to accomplish the same. This pipeline project will require ancillary facilities that include booster pump stations, reservoirs and related appurtenances. The precise locations, number and capacities of the proposed conveyance facility improvements are unknown, though the alignment envisioned under the OBMPU is shown approximately on Exhibit 17. It is anticipated that the proposed pipeline will be constructed underground and within existing road rights-of-ways. The proposed regional pipeline also meets the objectives of **PE 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

PE 6

Under the OBMPU, the objective of PE 6, as outlined under Section 4, Project Characteristics above, is to perform routine and coordinated water quality monitoring to characterize water quality in the Chino Basin so that there is adequate information to ensure that contamination sources are being addressed by water quality regulators and to help address compliance with new and increasingly stringent drinking water regulations for emerging contaminants established by the DDW. The following proposed groundwater treatment conveyance facilities would address the contaminants of concern within the Chino Basin based on the recommendations of the *Groundwater Quality Management Plan.* The facilities envisioned under the OBMPU are listed below. Exhibits 18 through 21 show the most current characterization of regulated drinking water contaminants in the Chino Basin. Exhibit 18 shows the locations of active municipal supply wells and symbolizes them based on the number of regulated drinking water contaminants that have been detected in exceedance of their respective primary maximum contaminant levels (MCLs).

Groundwater Treatment Conveyance. The OBMPU envisions constructing conveyance facilities to convey the untreated groundwater to the treatment facilities and to convey treated water from the treatment facilities to water users. The precise location, number and capacities of the proposed conveyance systems is presently unknown; however, it is anticipated that the pipelines will be constructed underground and within existing road rights-of-ways. It is anticipated that the treated conveyance systems would be located in proximity to the municipal wells shown Exhibit 18 that have experienced exceedances of DDW MCLs. The construction of new groundwater treatment conveyance facilities has the potential to mitigate the effects of Storage and Recovery Program on the remediation projects, which would meet the objectives of **PE 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above. Additionally, the construction of new groundwater treatment conveyance facilities meets the objectives of **PE 5**, the objectives of which are outlined under Section 4, Project Characteristics above.

Conclusion
Approximately 120,000 LF of pipelines and associated conveyance facilities improvements are required to improve the recycled and potable water distribution systems to achieve the OBMPU goals. And, about 120,000 LF of pipelines and associated conveyance facilities improvements are required to supply groundwater treatment facilities to achieve the OBMPU goals.

5.8 Surplus and Supplemental Water Supply Acquisition

PE 5
Under the OBMPU, the objectives of PE 5, as outlined under Section 4, Project Characteristics above, are maximizing recycled water reuse and establishing or expanding future recycled water planning efforts to maximize the reuse of all available sources of recycled water. The following proposed recycled water facility improvements that maximize recycled water reuse are listed below and shown on Exhibit 16. The facilities and/or improvements to existing facilities to improve water reliability envisioned under the OBMPU are listed below and shown on Exhibit 17.

Imported recycled water facilities. The OBMPU envisions acquiring surplus recycled water supplies from non-IEUA sources and constructing conveyance facilities to import the recycled water. These conveyance facilities include pipelines, booster pump stations, reservoirs and minor appurtenances whose locations and capacities are presently unknown. However, it is anticipated that the pipelines will be located below ground and within existing road rights-of-ways. The proposed acquisition and importation of surplus recycled water supplies also meets the objectives of **PE 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above.

Constructing conveyance facilities to enable the distribution of future imported surface water and groundwater from nearby streams and groundwater basins. This may require new conveyance facilities including pipelines, booster pump stations, reservoirs and related appurtenances whose number, locations and capacities are presently unknown. It is anticipated that the pipelines will be constructed underground and within existing road rights-of-ways.

Conclusion
The conveyance facilities required to import non-IEUA recycled water include pipelines, booster pump stations, reservoirs and related appurtenances whose number, locations, and capacities to achieve the OBMPU goals are presently unknown.

5.9 Groundwater Treatment Facilities

PE 6
Under the OBMPU, the objective of PE 6, as outlined under Section 4, Project Characteristics above, is to perform routine and coordinated water quality monitoring to characterize water quality in the Chino Basin so that there is adequate information to ensure that contamination sources are being addressed by water quality regulators and to help address compliance with new and increasingly stringent drinking water regulations for emerging contaminants established by the DDW. The following proposed groundwater treatment facilities would address the contaminants of concern within the Chino Basin based on the recommendations of the *Groundwater Quality Management Plan,* as envisioned under the OBMPU are listed below. Exhibits 18 through 21 show the most current characterization of regulated drinking water contaminants in the Chino Basin. Exhibit 18 shows the locations of active municipal supply wells and symbolizes them based on the number of regulated drinking water contaminants that have been detected in exceedance of their respective primary MCLs.

Groundwater Treatment at Well Sites. The OBMPU envisions constructing water treatment facilities at well sites or at sites near to wells to treat groundwater to meet drinking water standards for local use. The area expected to be disturbed by the construction and operation of the treatment facilities would be limited to existing well sites if the plant is located at an existing well site; and will range from about 0.5 acres to 2 acres per facility for new treatment facilities located near a well site. New pipelines, booster pumps, reservoirs and related appurtenances will be required to convey groundwater to each treatment plant that is not collocated with a well. The precise number, locations and capacities of the proposed new water treatment plants, pipelines, booster pumps, reservoirs and related appurtenances are presently unknown. However, it is anticipated that for off-wellsite treatment plants, the pipelines will be constructed underground and within existing road rights-of-ways. The length of pipelines to convey groundwater to an off-wellsite treatment plant is expected to range between 2,500 to 10,000 LF, connecting one to four wells to the treatment plant. It is assumed that the groundwater treatment facilities would be located at or near wells shown in on Exhibit 18 where the water quality in water produced at those wells currently exceed drinking water MCLs. The construction of water treatment facilities at well sites or at sites near to wells to treat groundwater has the potential to mitigate the effects of Storage and Recovery Programs on the remediation projects, which would meet the objectives of **PE 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above. Additionally, the construction of groundwater treatment facilities meets the objectives of **PE 5**, the objectives of which are outlined under Section 4, Project Characteristics above.

Regional Groundwater Treatment. The OBMPU envisions constructing regional water treatment facilities that treat groundwater from multiple wells to meet drinking water standards for local use and/or export. The area expected to be disturbed by the construction and operation of the treatment facilities is expected to be less than 20 acres per facility. New pipelines, booster pumps, reservoirs and related appurtenances will be required to convey groundwater to each treatment plant. The precise number, locations and capacities of the proposed new water treatment plants are presently unknown. However, it is anticipated that the pipelines will be constructed underground and within existing road rights-of-ways. The length of pipelines to convey groundwater the proposed treatment plants is expected to range between 5,000 to 50,000 LF, connecting up to ten wells to the treatment plant. It is assumed that the regional groundwater treatment facilities will be located in close proximity to wells shown in on Exhibit 18 where the water quality in water produced at those wells currently exceed drinking water MCLs. The construction of regional water treatment facilities has the potential to mitigate the effects of Storage and Recovery Program on the remediation projects, which would meet the objectives of **PE 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above. Additionally, the construction of regional groundwater treatment facilities meets the objectives of **PE 5**, the objectives of which are outlined under Section 4, Project Characteristics above.

Improve Existing Groundwater Treatment Facilities. The OBMPU envisions constructing improvements at existing treatment facilities to enable them to continue to treat contaminated groundwater to drinking water standards for local use. These treatment plants treat contaminants known at the time they were designed and constructed. New treatment processes may need to be added to these existing plants with current and future drinking water regulations. The capacities of these treatment improvements are presently unknown. The treatment processes that could be used include granulated activated carbon, air stripping, ion exchange, reverse osmosis, biological, and other processes. The improvement of existing groundwater treatment facilities has the potential to mitigate the effects of Storage and Recovery Programs on the remediation projects, which would meet the objectives of **PE 8/9**, the objectives of which are outlined under Section 4, Project Characteristics above. Additionally, the construction of

improvements at existing treatment facilities meets the objectives of **PE 5**, the objectives of which are outlined under Section 4, Project Characteristics above.

5.10 Biological Monitoring

PE 1
The objective of PE 1 under the OBMPU includes continuing the ongoing monitoring and reporting program and developing and updating an *OBMP Monitoring and Reporting Work Plan*. In order to accomplish the objectives of PE 1, as outlined under Section 4, Project Characteristics above, the following projects are required:

PBHSP Biological Monitoring. Watermaster's biological monitoring program is conducted pursuant to the adaptive monitoring program (AMP) for the Prado Basin Habitat Sustainability Program (PBHSP). The objective of the PBHSP is to ensure that the groundwater-dependent ecosystem in Prado Basin will not incur unforeseeable significant adverse impacts due to implementation of the Peace II Agreement. The monitoring program produces time series data and information on the extent and quality of the riparian habitat in the Prado Basin over a historical period that includes both pre- and post-Peace II implementation. Two types of monitoring and assessment are performed: regional and site-specific. Regional monitoring and assessment of the riparian habitat is performed by mapping the extent and quality of riparian habitat over time using multi-spectral remote-sensing data and air photos. Site-specific monitoring performed in the Prado Basin includes field vegetation surveys and seasonal ground-based photo monitoring. Under the OBMPU, Watermaster will continue these efforts.

6. SUMMARY OF OPERATIONAL SCENARIOS

In order to evaluate the possible operational scenarios for the equipment or facilities described in the preceding section, the following future modes of operation (activities) are provided for evaluation. These are representative scenarios that describe a range of plausible future operations and activities. They are not intended to be exhaustive but they represent future operations based on the past activities carried out in the Chino Basin to implement the original OBMP Program Elements.

6.1 Wells

Groundwater-level monitoring. Wells will be visited by a field technician on a monthly to quarterly frequency. There is negligible energy consumption in obtaining groundwater levels from a monitoring well.

Groundwater-quality monitoring. Wells will be visited by a field technician on a monthly to quarterly frequency. There is negligible energy consumption in obtaining groundwater quality samples from a monitoring well.

Aquifer Storage and Recovery (ASR) Wells (Part 1). The operation of these wells is discussed in under PE4 (Part 2) and PE8/9 (Part 3). See below for operational discussion.

MZ 1 Well Relocation. New conventional pumping wells in MZ-2/3 are assumed be operated 80 percent of the time for a maximum of 25,000 afy at a pumping rate of 2,300 gpm. Based on the depth to water in this area, energy consumption would be about 550 kWh per af.

Aquifer Storage and Recovery (ASR) Wells (Part 2). ASR wells under PE 4 will be operated seasonally, and pumping is expected to occur during the summer at an assumed utilization rate of 80 percent, while recharge is expected for the remainder of the year at an assumed utilization rate of 70 percent. The wells will pump up to 12,500 afy at an assumed rate of 1,200 gpm. Recharge for ASR wells (or injection wells) will occur by gravity flow and will require no pumping to place the water in the aquifer. Energy consumption is expected to range between 300 and 650 kWh per af.

Expand the Existing Chino Desalter through Expanded Well Pumping. New conventional pumping wells in the Chino Desalter area are assumed be operated 80 percent of the time for a maximum of 6,000 afy at pumping rates of ranging from 400 to 2,300 gpm. Energy consumption is expected to range between 300 and 550 kWh per af.

Aquifer Storage and Recovery (ASR) and Conventional Wells (Part 3) Incorporated into Watermaster Storage Management Plan. Based on the 2018 Storage Framework Investigation (SFI) (WEI, 2018) and the 2020 Storage Management Plan (SMP) (WEI, 2019), the Chino Basin Parties will utilize up to 720,000 af of groundwater storage for their individual conjunctive-use activities. Metropolitan Water District of Southern California (Metropolitan) currently has a storage agreement that allows them to operate a Storage and Recovery Program (Dry-Year Yield Program or DYYP) in the Chino Basin through 2028. Collectively, the Chino Basin Parties and Metropolitan will use up to 800,000 af through 2030 and the amount of storage space used by Chino Basin Parties for their individual conjunctive-use activities is projected to gradually decline for several decades thereafter. The 2018 SFI analyzed the basin response from the Chino Basin Parties use of storage space up to 700,000 af and the conjunctive-use by Storage and Recovery Programs from 700,000 af to 1,000,000 af (including Metropolitan's DYYP). Based on the work done in the 2018 SFI, the storage space was divided into two bands: First Managed Storage Band (FMSB) of 800,000 af for use by the Chino Basin Parties and Metropolitan and 200,000 af of storage space between 800,000 af and 1,000,000 af for use by future Storage and Recovery Programs. The 2020 SMP requires that the facilities used to conduct Storage and Recovery programs using the storage space between 800,000 af and 1,000,000 to be located in the Northern parts of MZ2 and MZ3 as shown in Exhibit 27.

The facilities required by the Chino Basin Parties and Metropolitan to conduct their conjunctive-use activities within the FMSB currently exist and they are in operation today. The facilities required to conduct Storage and Recovery Programs using the storage space between 800,000 af and 1,000,000 af consist of a combination of existing facilities (spreading basins, ASR wells and conventional wells) and new facilities. The table below summarizes the range in existing and new facilities required to implement Storage and Recovery Programs that operate in the storage band between 800,000 af and 1,000,000 af. For purposes of this EIR and consistent with the assumptions in the 2018 SFI, the operational cycle of Storage and Recovery Programs consists of four put years, three hold years and three take years.

Table 6
RANGE OF EXISTING AND NEW FACILITIES REQUIRED TO IMPLEMENT STORAGE AND RECOVERY PROGRAMS

	2018 SFI			OBMPU EIR		
	Put and takes (afy)	Number of operating wells	New energy require-ment (kwh)	Put and takes (afy)	Number of operating wells	New energy require-ment (kwh)
Annual put	50,000			50,000		
Existing spreading basin capacity used	29,280		0	0		0
Existing ASR well capacity used	2,740		219,200	0		0
Total existing put capacity used	32,020		219,200	0		0
New ASR well capacity used	17,980	9	1,438,400	50,000	24	4,000,000
Annual take	66,666			66,666		
Take through existing wells	16,667		10,173,066	0		0
Take through new ASR wells	49,999	8	30,517,977	50,000	0	30,518,587
Take through new conventional wells	0	0	0	16,666	6	10,172,455
Total new wells		17			30	
Total energy requirement			42,547,843			44,691,043

For purposes of this EIR, it is assumed that the entire put will be accomplished with new ASR wells and the take will be accomplished with a combination of new ASR and new conventional wells. Based on the 2018 SFI, the ASR wells were assumed to have recharge and pumping capacities of 1,800 gpm and 2,300 gpm, respectively.

- During put years the ASR wells would be utilized 70 percent of the time. The energy required to conduct recharge through ASR would occur at treatment plants where imported water is treated prior to injection. The energy required to treat imported water prior to injection is estimated to be about 80 kwh per af based on the treatment energy requirements at the Lloyd Michael and Sand Hill water treatment plant. The annual energy requirement for a put year of 50,000 afy is estimated to be 4,000,000 kwh.
- During take periods, the ASR and conventional wells would be utilized 80 percent of the time. The energy required to pump the groundwater to service pressure is estimated to be about 600 kwh per af. The annual energy requirement for a take year of 66,670 afy is estimated to be 45,000,000 kwh.

Replacement and Modification to Existing Wells. New or modified conventional pumping wells in the Chino Desalter area are assumed be operated (utilization rate) 80 percent of the time for a maximum of 6,000 afy at a pumping rate of ranging from 400 to 2,300 gpm. Energy consumption is expected to range between 300 and 550 kWh per af.

6.2 Monitoring Devices

Groundwater-production monitoring. Agricultural pumping wells will be visited by a field technician on a monthly to quarterly frequency to read up to 300 in-line flow meters. There is negligible energy consumption for accessing and reading the meter.

Surface Water and Climate Monitoring. Flow and stage measuring equipment and meteorological monitoring equipment will be visited by a field technician on a monthly to quarterly frequency to download data and service the equipment. The monitoring equipment will likely be powered by a solar panel and connected to a telemetry system.

Ground-level monitoring. Wells with extensometers will be visited by a field technician on a monthly to quarterly frequency to download data and service the equipment. The extensometer will likely be powered by a solar panel and connected to a telemetry system.

6.3 Well Destruction

Well Destruction. Watermaster requests owners of abandoned wells to properly destroy their wells pursuant to the DWR Well Standards (Bulletins 74-81 & 74-90). This includes sealing the upper 20 feet with an impervious sealing material (neat cement, sand-cement grout, concrete, or bentonite clay). In areas where the interchange of water between aquifers occurs, impervious material will be placed opposite the confining formations above and below the producing formations for a distance of 10 feet or more. The remainder of the well shall be filled with suitable fill (clay, silt, sand, gravel, crushed stone, native soils, or mixtures of the aforementioned types). In urban areas, additional requirements must be met. These include: 1) A hole shall be excavated around the well casing to a depth of 5 feet below the ground surface and the well casing removed to the bottom of the excavation; 2) The sealing material used for the upper portion of the well shall be allowed to spill over into the excavation to form a cap; and 3) After the well has been properly filled, including sufficient time for sealing material in the excavation to set, the excavation shall be filled with native soil.

6.4 Storage and Recharge Facilities

New Storage Basin: Chino Institute for Men, Lower Cucamonga Ponds, Mills Wetlands, Riverside Basin, Vulcan Basin, Confluence Project. Operations at these storage reservoirs consist of diversion and capture of stormwater and dry-weather discharges, pumping the stored water to recharge basins upstream of these storage reservoirs and maintenance of storage and conveyance facilities. The energy required to pump stored water to recharge facilities or for other uses is presently unknown. Basin maintenance is expected to occur every two to three years for each storage basin, consisting of removal of debris and trash that's diverted with the stormwater and dry-weather discharges, removal of vegetation and vector management. Other operations may include diversion, storage and recharge of imported water and pumping of recycled water from wastewater treatment plants owned by IEUA to these storage reservoirs.

Flood Managed Aquifer Recharge. Operations at these facilities consist of diversion and capture of supplemental water to flood existing agricultural land. Facility maintenance is expected to occur every two to three years, consisting of minor grading activities to remove fine-grained sediments, repair berms and hydraulic structures and removal of nuisance vegetation, debris and trash.

Modifications to an Existing Reservoir: Jurupa Basin. This Jurupa Basin improvements in this project will change the operation of the basin from a temporary storage basin to a temporary

storage and recharge reservoir. This will result in increased diversions from San Sevaine Creek, increased pumping from the basin (which basin) to the RP3 recharge basin and increased recharge in the Jurupa Basin. Basin maintenance is expected to occur every two to three years, consisting of grading activities to remove fine-grained sediments, repair berms and hydraulic structures, removal of debris and trash that's diverted with the stormwater and dry-weather discharges, removal of vegetation and vector management.

MS4 Compliant Projects. Operations of these MS4 compliant projects consists of diversion and capture of on-site stormwater and dry-weather discharges for treatment and recharge. Maintenance is expected to occur annually and will include activities specific to each facility type and could include: removal of debris and trash and replacement of components (e.g., filters)

6.5 Imported Water Treatment Plants

Modifications to an Existing Imported Water Treatment Facilities: Water Facilities Authority Agua de Lejos Treatment Plant (Parts 1 and 2). This project consists of expanding the existing solids handling capacity at the Water Facilities Authority Agua de Lejos Treatment Plant from 20 mgd in wintertime 40 mgd in summertime, to a constant capacity of 81 mgd. This will result in constantly operating the plant at two to four times its current capacity.

6.6 Wastewater Treatment Plants

Upgrade Existing Recycled Water Treatment Plant(s). Upgrades to the existing recycled water treatment plants will result in the operation of new treatment trains at one or more IEUA recycled water treatment plants.

6.7 Desalters and Advanced Water Treatment Facilities

Modifications to the Chino Desalters/ Expand the Existing Chino Desalter. Desalter groundwater well production will increase by 2,000 to 6,000 afy. This will result in upgrades to the existing Chino Desalters to increase their combined capacities by about 6 mgd or operation of a new 6 mgd desalter facility. Upgrades to the existing Chino Desalters or a new desalter facility will result in the operation of an additional 6 mgd of treatment through RO and pumping the additional product water into the distribution systems.

New Advanced Water Treatment Plant. Operations consist of running and maintaining the treatment plant. Operations will consist of treating up to 20 mgd of waste water through RO and microfiltration or functionally equivalent processes, and potentially ultraviolet (UV) disinfection. The plant will run 90 percent of the time. The energy requirements and chemicals required to operate the plants are presently unknown. Waste generation is presently unknown.

Brine Management Facilities. The OBMPU envisions constructing brine management facilities that result in no net increase in brine disposal. The specific brine management facilities are currently unknown.

6.8 Recycled and Potable Water Distribution/Conveyance

Once a pipeline is installed, operations do not require any visits unless unforeseen circumstances arise that would require maintenance or repair of the pipelines. In the event of routine maintenance one vehicle trip per maintenance event would be required. Booster pump stations

that are incorporated into the project will be operated to convey the water, but the capacity and amounts of water pumped is currently unknown.

6.9 Surplus and Supplemental Water Supply Acquisition

Once the pipeline is installed to enable future conveyance of recycled water, imported surface water and groundwater from nearby streams and groundwater basins, to the Chino Basin, operations do not require any visits unless unforeseen circumstances arise that would require maintenance or repair of the pipelines. In the event of routine maintenance one vehicle trip per maintenance event would be required. Booster pump stations that are incorporated into the project will be operated to convey the water, but the capacity and amounts of water pumped is currently unknown.

6.10 Groundwater Treatment Facilities

Groundwater Treatment at Well Sites. Operations consist of running and maintaining the treatment plant. The treatment plants are assumed to operate 50 to 90 percent of the time. The energy requirements and chemicals required to operate these plants are presently unknown. Waste generation is presently unknown.

Regional Groundwater Treatment. Operations consist of running and maintaining the treatment plant. The treatment plants are assumed to operate 50 to 90 percent of the time. The energy requirements and chemicals required to operate these plants are presently unknown. Waste generation is presently unknown.

Improve Existing Groundwater Treatment Facilities. Operations consist of running and maintaining the treatment plant. The treatment plants are assumed to operate 80 to 90 percent of the time. The energy requirements and chemicals required to operate the proposed improvements at these plants are presently unknown. Waste generation associated with the proposed improvements at these plants is presently unknown.

7. CONSTRUCTION SCENARIOS

In general, the types, configuration and exact location of future specific projects that will be constructed in support of the OBMPU have not been determined. However, there are a few specific Projects that have been identified at a sufficient level of detail that a location has been pinpointed in which a specific project will be developed. For instance, the CIM Storage Basin Project is proposed to be located at the CIM; however, the Project specifications at that site have not yet been identified. For the remaining projects listed under Section 5, Summary of All Facilities above, it is possible to foresee some of the infrastructure that is likely to be constructed and to project the maximum expected impacts that would result from construction and operation of the infrastructure. Impacts associated with specific future projects would be evaluated in second-tier CEQA evaluations to determine if the actual impacts fall within the impacts forecast by this analysis, or require subsequent CEQA evaluations and determinations. These evaluations would be conducted under Section 15162 of the State CEQA Guidelines.

The purpose of the following general construction scenarios is to assist the reviewer to understand how the proposed facilities will be installed and the amount of time required for their construction. This information also provides essential data for making the program air quality impact forecasts using the most current CalEEMod emission forecast model.

7.1 Wells

The OBMPU will require the installation of an estimated 78 wells over a period of 20 years; these figures are inclusive of wells proposed to be developed to relocate 25,000 afy of pumping from MZ-1 to MZ-2 and/or MZ3 (10 wells), constructing new wells in the existing desalter well field areas to increase pumping by up to 6,000 afy to maintain Hydraulic Control (8 wells), and 60 ASR wells proposed to be developed to increase pumping and supplemental water recharge capacity by up to about 70,000 afy and to increase wet-water recharge capacity in MZ-1 by up to 25,000 afy. Installing 78 wells over 20 years can be evaluated based on an average number of wells per year (4 wells) or based on a possible maximum number of wells per year, which for planning purposes will be 10 wells per year. Thus, for analysis purposes it is assumed that a maximum of 10 wells per year may be developed. Development of up to 10 new wells during a given year will require the delivery and set up of the drilling rig at each site. It is anticipated these wells will be drilled at different times and the drilling equipment will be transported to and from the sites on separate occasions. For the purposes of this evaluation, it is forecast that delivery of the drilling equipment 10 times (# of wells anticipated to be drilled in a year) in a year will result in ten 50-mile round-trips for the drill rigs.

It is assumed that the average pumping capacity for a new convectional pumping or ASR well will range from 400 to 2,300 gpm depending on the location of the well (see Summary of Operational Scenarios).

It is anticipated that about five persons will be on a given well site at any one time to support drilling a well: three drillers, the hydrologist inspector, and a foreman. Daily trips to complete the well will average about 15 roundtrips per day, which at various points of construction will include: two roundtrips for drill rigs; between 6 and 12 roundtrips for cement trucks; about 5 trips to deliver pipe; and about 10 trips per day for employees.

For analysis purposes it is assumed that each well would be drilled using the direct rotary or fluid reverse circulation rotary drilling methods. The average area of disturbance of each well site is estimated to be one-half an acre or less. Access to the drilling site for the drilling rig and support vehicles would be from adjacent roadways. Typically, well drilling requires only minimal earth movement and/or grading.

The drilling and development of each well to will require drilling to—in most cases—between 250 and 1,500 feet below ground surface (bgs). The proposed schedule for constructing each well would be as follows: drilling, construction, and testing of each well would require approximately six weeks to complete (about 45 days, of which 15 to 20 days would include 24-hour, 7-day a week drill activity). For planning purposes, a construction and testing schedule duration of 60 days per well is assumed to account for unforeseen circumstances (e.g. extreme weather, equipment break downs, etc.) that could affect the drilling and testing schedule. The well casings are expected to be welded and it will be assumed that well development and installation will require a two week use of a diesel generator.

The borehole for the well would be drilled using at least two separate drilling passes. The first pass, or pilot borehole, would be drilled using a 17.5-inch diameter bit to an estimated maximum depth below the ground surface, which would correspond to the top of the consolidated bedrock in the area, or a depth selected by the project hydrologist/hydrogeologist. Upon completion of the geophysical logs, the pilot borehole would be enlarged (reamed) to a diameter of 24 inches to approximately the same depth to accommodate the well casing, screen and filter pack.

Once each well is constructed it would immediately be developed through a process of swabbing and airlifting. During this process, drilling fluids and suspended sediment would be removed from the well. After the drilling fluids are removed along with most of the suspended sediment, the well would be further developed through pumping.

ASR well development has essentially the same construction impacts as production well development. The primary physical difference between ASR and production wells is that different valve options are installed according to the type of well.

7.2 Monitoring Wells

The OBMPU estimates that about 200 monitoring wells will be installed: 100 groundwater level monitoring wells, and 100 groundwater quality monitoring wells. It is assumed that a maximum average of 20 monitoring wells per year may be developed in a single year. Development of up to each new monitoring wells during a given year will require the delivery and set up of the drilling rig. It is anticipated these wells will be drilled at different times and the drilling equipment will be transported to and from the sites on separate occasions. For the purposes of this evaluation, it is forecast that delivery of the drilling equipment 20 times in a year will result in twenty 50-mile round-trips.

Monitoring well development has essentially the same construction impacts as production well development, except it does not require test pumping.

7.3 Monitoring Devices

The installation of up to 300 in-line flow meters and up to 100 transducer data loggers will require one round-trip per device, or a total of 400 round trips over an undefined period of time. These trips are anticipated to occur within the Basin, as such the average round-trip length to install one in-line flow meter is anticipated to be 40 miles. For analysis purposes up to 100 monitoring devises are assumed to be installed in a single year.

The OBMPU anticipates the installation of an unknown number of flow and stage measuring equipment and meteorological monitoring equipment in and near storm water drainage and recharge facilities. The installation of each device is anticipated to require one round-trip, for an estimated total of 50 round-trips. These trips are anticipated to occur within the Basin, as such the average round-trip length to install one in-line flow meter is anticipated to be 40 miles.

The installation of up to three extensometers will require 7 round-trips, and 7 days to complete the installation of each device. For each of the 7 days required for extensometer installation, it is anticipated that average trip length will be about 40 miles in length because these trips are anticipated to occur within the Basin. *A truck mounted crane could be used to lower the cable extensometer anchor weight into the well casing.*

7.4 Storage Reservoirs

The OBMPU proposes to develop 3 new storage reservoirs, and install modifications to four existing reservoir/basins. It is forecast that for site preparation of a basin and access road, no more than 2 acres will be actively graded on a given day, while the OBMPU envisions constructing an area of up to 260 to 310 acres of new storage reservoirs. Each new basin is anticipated to be excavated to depths ranging from 20 to 100 feet. Given the area required to install the 3 new storage reservoirs, it is anticipated that the time required for the construction of these 3 new

storage reservoirs is about 6-18 months per basin or a total of 18 months to 4.5 years to construct all reservoirs.

It is anticipated that grading activities will occur over an average of up to 90 to 120-day period and will require two bull dozers, two front end loaders, two water trucks, several scrapers, two excavators and four dump/haul trucks operating 6-8 hours per day. Calculations assume 20 workers will each commute 40 miles round-trip to each of the three storage basin sites. It is anticipated that no more than two reservoirs would be constructed per year.

Construction of each storage basin will require the delivery and installation of equipment and materials. It is not known whether each site will balance as the basins will require excavation to reach the desired depth. However, it is anticipated that no more than 2 million cubic yards (cy) of materials total would be hauled off site by 15 cy trucks. No more than 100 round trips per day at 30 miles round-trip would be required to accomplish the effort to remove excess materials off-site. As such, an estimated total of 110 round trips (trucks and employees) would be required to haul excess materials to a soil receiving facility. Additionally, given that it is known that contaminated may soils exist at one or more of the proposed storage basin sites, any contaminated soils will need to be properly characterized by identifying the contaminant discovered, and, based on the contaminants discovered, the soils will either be treated, blended, or directly disposed of at an appropriate facility.

It is assumed that at least two of the storage reservoirs described herein will require lining to prevent high groundwater issues in perched aquifers. The lining will consist of filling the basin floor with bentonite and soil, and compacting the top soil by rolling or tamping.

In addition to the above construction equipment, heavy duty trucks will be employed for on-site deliveries. Smaller trucks and automobiles will be utilized for on-site supervision and employee commuting. The diesel delivery trucks are assumed to require 300 on-road miles per day for a total of 30 days.

It is anticipated that the modifications proposed at the Lower Cucamonga Basins, Riverside Basin, Vulcan Basin, and Jurupa Basin will require 60 days to complete grading activities, and will require one bull dozer, a front-end loader, water truck, grader, excavator and two dump/haul trucks operating 8 hours per day. Completion of the modifications to these basins is anticipated to require a total of 6 months to a year to complete. As with the above outline for construction of new storage reservoirs, it is anticipated that the proposed basin modification will require the delivery and installation of equipment and materials. This phase of construction will result in 6 truck trips on the worst-case day with an average round trip of 40 miles delivering construction materials and equipment (concrete, steel, pipe, etc.). Calculations assume six workers will each commute 40 miles round-trip to the work site. In addition to the above construction equipment, heavy duty trucks will be employed for on-site deliveries. Smaller trucks and automobiles will be utilized for on-site supervision and employee commuting. The diesel delivery trucks are assumed to require 300 on-road miles per day for a total of 10 days.

Flood Managed Aquifer Recharge Facilities
In addition to the proposed storage reservoirs, the OBMPU proposes up to 200 acres of Flood Managed Aquifer Recharge (MAR) facilities within existing agricultural use areas. MAR facility construction consists of grading existing agricultural lands to be able to hold and recharge surface water. The construction impacts are assumed to be a fraction of the impacts of the storage reservoirs.

7.5 Water Treatment Plant Modifications

Upgrades at IEUA Recycled Water Treatment Plants (RP-1, RP-4, RP-5, CCWRF)
The construction of a new treatment train (i.e. advanced water treatment to minimize TDS concentration in the recycled water generated at IEUA's Treatment Plants) would require treatment of up to 15,000 afy of recycled water at one or more of IEUA's Recycled Water Reclamation Plants (WRP). For the purposes of this analysis, it is assumed that advanced recycled water treatment would be developed at one or more of IEUA's existing Treatment Plants, and that no more than one water treatment facility would be constructed per year. Upgrades to IEUA's four Recycled Water Treatment Plants were examined in detail within IEUA's 2017 FMP PEIR. The construction of WRP facilities will be referenced to the 2017 PEIR in the analyses presented the remainder of this document.

Modifications to an Existing Imported Water Treatment Facility: Water Facilities Authority Agua de Lejos Treatment Plant (Part 1). The OBMPU envisions constructing improvements to the Water Facilities Authority (WFA) Agua de Lejos Treatment Plant to remove some or all its solids handling limitations, and envisions other improvements to increase its capacity to its original design capacity, thereby increasing in-lieu recharge capacity. The specific improvements needed to increase the capacity of the plan are currently unknown.

7.6 Desalters and Advanced Water Treatment Facilities

The OBMPU envisions expanding the existing Chino Desalter capacity by a total of up to 6,000 afy. The area disturbed during construction of the treatment plant capacity expansion would be limited to the disturbed areas at the two existing Chino Desalter treatment plant sites. As such, desalter expansion is proposed occur within an existing facility and would not require grading or site preparation. Installation of the expansion equipment would require a maximum of 15 workers and typical construction site equipment (cranes for setting ion exchange vessels, front end loaders, fork lifts, etc.) Impact estimates will assume 1 vehicle round-trip per worker and 10 deliveries per day resulting in about 25 round-trips per day over a construction period of 12 months. The average daily round-trip is anticipated to be 40-miles.

Conversely, the OBMPU envisions constructing a new advanced water treatment plant. The area expected to be disturbed by the construction and operation of the plant is 10 acres. It is anticipated that a new advanced treatment plant would be designed to treat up to 20 mgd of water. The construction of the 20 mgd advanced water treatment facility would consist of site clearing, grading, construction of facilities, installation of equipment, and site completion. Construction equipment would include the following: one bull dozer or motor grader, backhoes, loaders, dump trucks, crew trucks, concrete trucks, cranes, personal vehicles, compactor, delivery trucks, and a water truck. It is anticipated that the maximum number of construction personnel at a site on any given day will be 15 persons. The maximum number of truck deliveries is forecasted at 10 per day at 40-miles round-trip per day of construction. Materials and equipment would be delivered to the site including piping, building materials, concrete forms, roofing materials, HVAC equipment, pumps, diffusers, screens, belt presses, and screw presses. Each advanced water treatment facility will require about 18 months to construct.

Brine Management Facilities. The OBMPU envisions constructing brine management facilities that result in no net increase in brine disposal. The specific brine management facilities are currently unknown.

7.7 Conveyance Pipelines

An estimated 500,000 LF of pipeline may be installed in support of OBMPU through 2050. The maximum pipe length that would be installed in a single year would be 100,000 LF, which is the total pipeline length anticipated to be required for the East/West Regional Pipeline, plus ancillary pipeline alignments. It is forecast that most of the pipe will range from 10-inch to 84-inch diameter. It is assumed that an underground utility installation team can install an average of 200-400 lineal feet of potable water pipeline, recycled water line, or storm drains per day. A team consists of the following:

200-400 feet of pipeline installed per day
1 Excavator
1 Backhoe
1 Paver
1 Roller
1 Water truck
Traffic Control Signage and Devices
10 Dump/delivery trucks (40 miles round trip distance)
Employees (14 members per team, 40-mile round-trip commute)

The emissions calculations are based upon the above assumptions for each pipeline installation team. Typically, up to 800 feet of pipeline trench could be excavated, the pipe installed, backfilled, and compacted each day during pipeline installation in undeveloped areas whereas only 400 ft per day can be installed in developed roadways. In either case equipment would be operated for roughly the same portion of the day and daily equipment emissions would be the same, except that undeveloped areas would not require pavement removal and reinstallation.

It is assumed that two teams will be installing pipelines for a maximum total of 800 LF per day (400 x 2 = 800 LF). It is assumed that the proposed pipeline installation will occur for a maximum of 260 days in one calendar year.

Ground disturbance emissions assume roughly half an acre of land would be actively excavated on a given day. It is anticipated that installation of pipeline in developed locations will require the use of a backhoe, crane, compactor, roller/vibrator, pavement cutter, grinder, haul truck and two dump trucks operating 6 hours per day; a water truck and excavator operating 4 hours per day and a paving machine and compacter operating 2 hours per day. Installation of pipeline in undeveloped locations would require the same equipment without the paving equipment (cutter, grinder, paving machine).

The pipelines that would be installed in support of OBMPU are anticipated to use push-on joints (e.g., gasketed bell-and-spigot) that do not require welding. However, the Contractor may occasionally use a portable generator and welder for equipment repairs or incidental uses.

7.8 Groundwater Treatment Facilities

Groundwater Treatment at Well Sites
The OBMPU envisions constructing water treatment facilities at well sites or at sites near to wells to treat groundwater to meet drinking water standards for local use. The area expected to be disturbed by the construction and operation of the proposed treatment facilities would be limited to existing well sites; and will range from about 0.5 acres to 2 acres per facility for new treatment facilities located near a well site. Construction of water treatment facilities may involve site

demolition; site paving; site prep/grading; excavation and installation of yard pipes; installation of treatment facilities; site finishing (landscaping, misc. curb/cutter, etc.); site drainage (above and below grade). Construction equipment would include the following: one bull dozer or motor grader, backhoes, loaders, dump trucks, crew trucks, concrete trucks, cranes, personal vehicles, compactor, delivery trucks, and a water truck. It is anticipated that the maximum number of construction personnel at a site on any given day will be 5 persons. The maximum number of truck deliveries is forecasted at 5 per day at 40-miles round-trip per day of construction. Each water treatment facility will require about three months to construct.

Regional Groundwater Treatment
The OBMPU envisions constructing an unknown number of regional water treatment facilities located in the vicinity of multiple wells. The area expected to be disturbed by the construction of the proposed treatment facilities would be 10 acres due to the pipeline installation required to convey water from multiple wells to a centralized location at which the treatment facility will be located. A regional groundwater treatment facility would will range from about 2 acres to 4 acres in size per facility. Construction of water treatment facilities may involve site demolition; site paving; site prep/grading; excavation and installation of yard pipes; installation of treatment facilities; site finishing (landscaping, misc. curb/cutter, etc.); site drainage (above and below grade).[31] Construction equipment would include the following: one bull dozer or motor grader, backhoes, loaders, dump trucks, crew trucks, concrete trucks, cranes, personal vehicles, compactor, delivery trucks, and a water truck. It is anticipated that the maximum number of construction personnel at a site on any given day will be 10 persons. The maximum number of truck deliveries is forecasted at 10 per day at 40-miles round-trip per day of construction. Each regional water treatment facility will require about 12-months to construct.

7.9 Booster Stations

Booster stations are required to pump water from areas at a lower elevation within the Basin, to areas located at a higher elevation. The total number of booster stations to be constructed in support of the OBMPU is unknown. It is forecasted that, at each site, no more than 0.5 acre will be actively graded on a given day for site preparation of each booster station. It is anticipated that grading activities will occur over a 5-day period and will require one bull dozer or motor grader operating 8 hours per day, one water truck operating 4 hours per day and one dump truck operating 4 hours per day. Calculations assume five workers will each commute 40 miles round-trip to each work site.

Construction of each pump station will require the delivery and installation of equipment and materials. This phase of construction will result in 6 truck trips on the worst-case day with an average round trip of 20 miles delivering construction materials and equipment (concrete, steel, pipe, etc.). Installation of the booster station will require the use a crane, forklift, backhoe and front loader operating 4 hours per day. Calculations assume five workers will each commute 40 miles round-trip to the work site.

Each booster pump station is assumed to be housed within a block building, and will require a transformed to be installed to handle the electric power delivered to the pumps. The proposed booster pump station building may include a pump room, electric control room, odor control facilities, chemical tanks, and storage room. Construction of the booster pump station would

[31] Please refer to the discussion of the construction scenario for conveyance facilities for a depiction of the construction associated with installation of pipeline that may be associated with the proposed regional groundwater treatment facilities.

involve installation of piping and electrical equipment, excavation and structural foundation installation, pump house construction, pump and motor installation, and final site completion.

The pump stations proposed are anticipated to be located at sites that have permanent power available for construction, as such a generator is not anticipated to be required for welding required to construct the booster pump stations.

8. ENTITLEMENTS, APPROVALS AND OTHER AGENCY PARTICIPATION

Implementation of future individual project(s) in accordance with the OBMPU may require a variety of approvals from other agencies. This section summarizes agency approvals that have been identified to date. This list may be expanded as the environmental review proceeds. Consequently, it should not be considered exhaustive.

- Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) for a NPDES general construction stormwater discharge permit. This permit is granted by submittal of an NOI to the SWRCB, but is enforced through a Storm Water Pollution Prevention Plan (SWPPP) that identifies construction best management practices (BMPs) for the site. In the project area, the Santa Ana Regional Water Quality Control Board enforces the BMP requirements described in the NPDES permit by ensuring construction activities adequately implement a SWPPP. Implementation of the SWPPP is carried out by the construction contractor, with the Regional Board and county providing enforcement oversight.

- The project includes the potential discharge of fill into or alterations of “waters of the United States,” “waters of the State,” and stream beds of the State of California. Regulatory permits to allow fill and/or alteration activities due to project activities such as pipeline installation are likely be required from the Army Corps of Engineers (ACOE), the Regional Board, and California Department of Fish and Wildlife (CDFW) over the life of the OBMPU. A Section 404 permit for the discharge of fill material into “waters of the United States” may be required from the ACOE; a Section 401 Water Quality Certification may be required from the Regional Board; a Report of Waste Discharge may be required from the Regional Board; and a 1600 Streambed Alteration Agreement may be required from the CDFW.

- The U.S. Fish and Wildlife Service (USFWS) and/or CDFW may need to be consulted regarding threatened and endangered species documented to occur within an area of potential impact for future individual projects. This could include consultations under the Fish and Wildlife Coordination Act.

- Land use permits may be required from local jurisdictions, such as individual cities and the two Counties (Riverside and San Bernardino).

- Air quality permits may be required from the South Coast Air Quality Management District (SCAQMD).

- Encroachment permits may be required from local jurisdictions, such as individual cities, California Department of Transportation (Caltrans), the two counties (Riverside and San Bernardino), Flood Control agencies, and private parties such as Southern California Edison, The Gas Company, or others such as Union Pacific Railroad.

- Watermaster has a separate approval process for determining material physical injury to the stakeholders within the Chino Basin.

- State Water Resources Control Board will be a responsible agency if permits or funding are requested from the State Revolving Fund Program or Division of Drinking Water.

This is considered to be a partial list of other permitting agencies for future OBMPU future individual projects.

9. CEQA RESPONSIBLE AGENCIES

In addition to the above agencies that may be required to review and grant authorizations for future OBMPU projects, the Chino Basin Watermaster functions as a unique entity that has been created by the court. The Watermaster is composed of a Board that consists of member agencies from three groups: an Appropriative Pool, Non-Appropriative Pool, and Agricultural Pool, and four other public agencies (see below), effectively the water producers in the Chino Basin. Individual members of the various pools may assume responsibility for implementing individual projects and activities covered by this OBMPU EIR. To do this the individual agency would identify a specific project or activity evaluated in this CEQA document and then conduct a shortened environmental review under Sections 15162 and 15168 of the State CEQA Guidelines. Such a review for CEQA compliance could conclude that the project falls within the scope of analysis in this document, i.e., it is consistent with the findings in this EIR; decide that the proposed project or activity is a minor technical change relative to the OBMPU project description and is subject to an Addendum; or the agency could find that a project or activity exceeds the scope of the this CEQA document's evaluation and requires a supplemental or subsequent environmental document as outlined in State CEQA Guidelines Sections 15162 or 15163. These Responsible Agencies include:

<u>Agricultural Pool, 2019*</u>

State of California, Chino Institute for Men
State of California, Department of Conservation
State of California, Department of Justice

- Please note that specific companies or parties that are not public agencies are part of the Agricultural Pool, but individuals or group representatives do not have authority to implement CEQA. Please refer to Appendix 2 for a list of all Agricultural Pool participants.

<u>Non-Agricultural Pool, 2019*</u>

City of Ontario
County of San Bernardino
Monte Vista Water District

- Please note that specific companies or parties that are not public agencies are part of the Agricultural Pool, but individuals or group representatives do not have authority to implement CEQA. Please refer to Appendix 2 for a list of all Non-Agricultural Pool participants.

Appropriative Pool Committee, 2019

Monte Vista Water District
Cucamonga Valley Water District
City of Chino
City of Chino Hills
City of Fontana
City of Norco
City of Ontario
City of Pomona
City of Upland
County of San Bernardino
Jurupa Community Services District
West Valley Water District

- Please note that specific companies or parties that are not public agencies are part of the Appropriative Pool Committee, but individuals or group representatives do not have authority to implement CEQA. Please refer to Appendix 2 for a list of all Appropriative Pool Committee participants.

Other Agencies Participating in the Judgment/Agreements

IEUA
Three Valleys Municipal Water District
Western Municipal Water District
Chino Basin Water Conservation District

In all future circumstances, IEUA will remain the Lead Agency for the OBMPU CEQA document and the Watermaster will maintain annual records for cumulative projects implemented under the OBMPU on an annual basis. A CEQA Responsible Agency shall coordinate with these agencies when it assumes CEQA Lead Agency status for a future specific project. Thus, IEUA and Watermaster will continue to accumulate information on implementation of the OBMPU and provide a future project specific Lead Agency with essential information regarding the cumulative impact circumstances at the time a proposed specific project is ready for implementation.

10. CUMULATIVE PROJECTS

The intent of a cumulative impact evaluation is to provide the public and decision-makers with an understanding of a given project's contributions to area-wide or community environmental impacts when added to other or all development proposed in an area. The state CEQA Guidelines provide two alternative methods for making cumulative impact forecasts: (1) a list of past, present and reasonably anticipated projects in the project area, or (2) the broad growth impact forecast contained in general or regional plans. Because of the planning character of this project, it will be evaluated in the context of adopted General Plans.

From a water planning perspective, the 2000 OBMP PEIR (Peace I Agreement) and the 2010 Peace II SEIR (Peace II Agreement) represent a cumulative, or carrying capacity, evaluation of water resources in the Chino Basin. Thus, the analysis of Chino Basin water resources contained in this document represents a cumulative analysis of the activities and facilities required to manage the Basin's water resources. No other projects were identified within the project area or vicinity that would contribute directly to cumulative impacts or cumulative demand for local

groundwater infrastructure. This does not include individual water infrastructure projects implemented by local water purveyors to supply potable water to customers. Most of the city General Plans for the Chino Basin assume that buildout or near buildout will occur within their jurisdiction by 2050. Thus, substantial general growth in these cities will occur concurrent with the implementation of the OBMPU. Individual water purveyor infrastructure will be implemented as needed in the future as growth occurs in the Chino Basin, but it is not possible to identify future specific projects without speculation. It is assumed that the proponents of such projects will incorporate the impact evaluations in this document as part of their cumulative impact analyses when such specific projects are proposed.

Because the OBMPU addresses comprehensive water management facilities or activities within a portion of the upper Santa Ana River watershed, there may also be other projects within the watershed that will be implemented. The only such project that is currently defined sufficiently to address under this cumulative impact analysis is the Habitat Conservation Plan (HCP) currently under consideration by the San Bernardino Valley Municipal Water District (Valley District). Where pertinent, the impacts from implementing the HCP on behalf of the upper Santa Ana River watershed will be considered in this document as a possible cumulative impact.

11. NATIVE AMERICAN CONSULTATION

Have California Native American tribes traditionally and cultural affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

> Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

Exhibit 1



Chino Basin Adjudicated Boundary

Major SAWPA Member Agencies

Santa Ana River Watershed



Produced by:

WEI Wildermuth Environmental, Inc.

Author: GAR
Date: 12/16/2019
Name: 1.) Chino in SAR Watershed

0 10 Miles
0 10 20 Kilometers

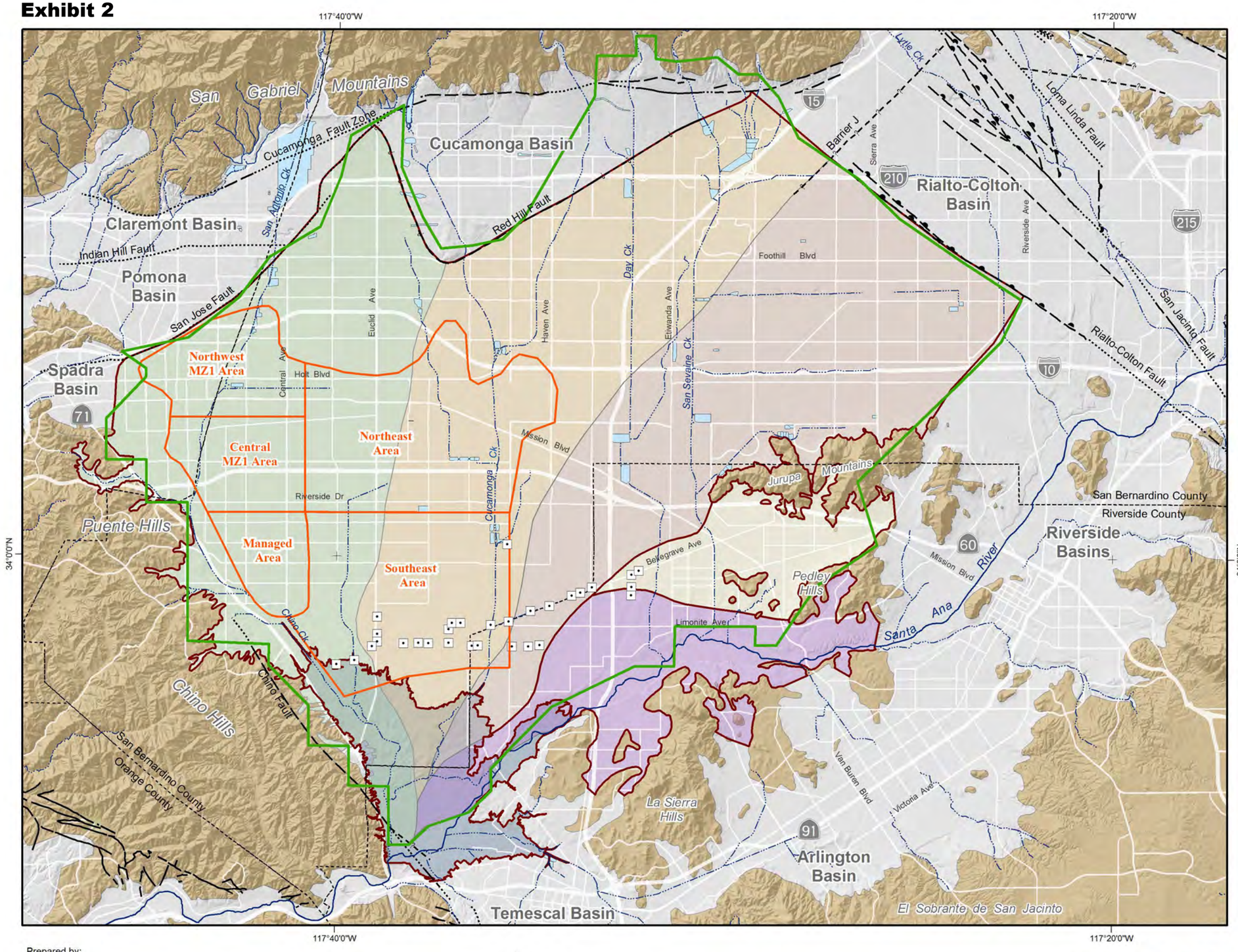
Prepared for:
OBMP 2020 Update
Project Description

Chino Basin Watermaster – Partners in Basin Management

Location of the Chino Basin and the Santa Ana River Watershed

Figure 1-1

Exhibit 2



OBMP Management Zones

- MZ1
- MZ2
- MZ3
- MZ4
- MZ5

Areas of Subsidence Concern

Chino Basin Desalter Well

Chino Basin Adjudicated Basin Boundary

Streams & Flood Control Channels

Flood Control & Conservation Basins

Maximum Benefit Management Zones



Geology

Water-Bearing Sediments

- Quaternary Alluvium

Consolidated Bedrock

- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: LG
Date: 12/19/2019
Document Name: 2.) Project Location + Bulletin 118

0 1 2 3 4 5 Miles
0 2 4 6 8 KM

Prepared for:

OBMP 2020 Update
Project Description

Chino Basin Watermaster
Partners in Basin Management

Chino Basin

OBMP Management Zones, Maximum Benefit Management Zones and Areas of Subsidence Concern

Figure 1-1

Exhibit 3

Figure 1 – Drivers and Trends and Their Implications
2020 OBMP Update

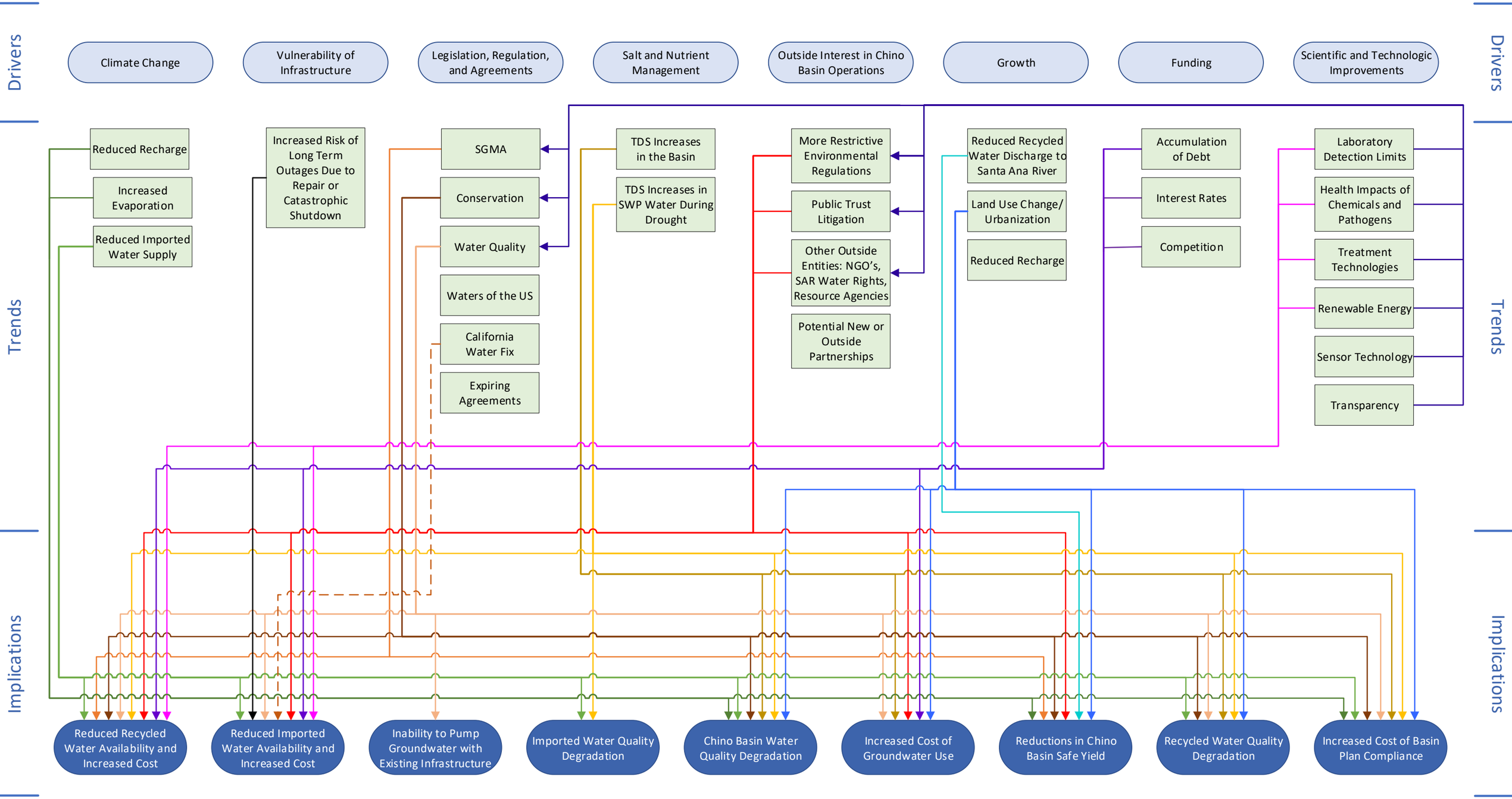


Exhibit 4

Implementation actions for the next 20 years by Program Element
Program Element 1
Watermaster will continue to conduct the required monitoring and reporting programs, including collection of: groundwater production, groundwater level, groundwater quality, ground level, surface water, climate, water supply planning, biological, and well construction/destruction monitoring data.
Perform review and update of Watermaster's regulatory and Court-ordered monitoring and reporting programs and document in a work plan: *OBMP Monitoring and Reporting Work Plan* .
Perform periodic review and update of the *OBMP Monitoring and Reporting Work Plan* (or other guidance documents developed by Watermaster) and modify the monitoring and reporting programs, as appropriate.
Program Element 2
Continue to convene the Recharge Investigations and Projects Committee.
Complete the 2023 Recharge Master Plan Update (RMPU).
Implement recharge projects based on need and available resources.
Update the RMPU no less than every five years (2028, 2033, 2038).
Program Element 4
Implement Watermaster's Subsidence Management Plan, and adapt it as necessary.
Watermaster will arrange for the physical recharge of at least 6,500 afy of Supplemental Water in MZ-1 as an annual average. Watermaster may re-evaluate the minimum annual quantity of Supplemental Water recharge in MZ-1 and may increase this quantity through the term of the Peace Agreement.
Program Element 5
The IEUA will maximize the reuse of its recycled water in the Chino Basin.
The IEUA, the TVMWD, the WMWD, and/or other Party acting as a coordinating agency will establish or expand future recycled water planning efforts to maximize the reuse of all available sources of recycled water.
Watermaster will support the IEUA, the TVMWD, the WMWD, and/or others in their efforts to maximize recycled water reuse to ensure these efforts are integrated with Watermaster's groundwater and salinity management efforts.
The IEUA, the TVMWD, the WMWD, and/or other Party acting as a coordinating agency will establish or expand future integrated water resources planning efforts to address water supply reliability for all Watermaster Parties.
Watermaster will support the IEUA, the TVMWD, the WMWD, and/or others in their efforts to improve water supply reliability to ensure those efforts are integrated with Watermaster's groundwater management efforts.

Implementation actions for the next 20 years by Program Element
Program Element 6
Re-convene the water quality committee and meet periodically to update groundwater quality management priorities.
Develop and implement an initial emerging contaminants monitoring plan.
Prepare a water quality assessment of the Chino Basin to evaluate the need for a *Groundwater Quality Management Plan* and prepare a long-term emerging contaminants monitoring plan.
Continue to support the Parties in identifying funding from outside sources to finance cleanup efforts.
Develop and implement a *Groundwater Quality Management Plan* and periodically update it.
Implement long-term emerging contaminants monitoring plan.
Continue to conduct investigations to assist the parties and/or the Regional Board in accomplishing mutually beneficial objectives as needed.
Implement projects of mutual interest.
Program Element 7
Complete the 2020 update of TDS and nitrate projections to evaluate compliance with maximum benefit salt and nutrient management plan, and, if necessary, based on the outcome, prepare a plan and schedule to implement a salt offset compliance strategy.
Continue to implement the maximum-benefit salt and nutrient management plan pursuant to the Basin Plan.
Starting in 2025 and every five years thereafter, update water quality projections to evaluate compliance with the maximum-benefit salt and nutrient management plan.
Program Element 8/9
Complete and submit to the Court the 2020 Safe Yield Recalculation.
Complete and submit to the Court the 2020 Storage Management Plan (SMP).
Develop a *Storage and Recovery Master Plan* to support the design of optimized storage and recovery programs that are consistent with the 2020 Storage Management Plan and provide the Watermaster with criteria to review, condition, and approve applications in a manner that is consistent with the Judgment and the Peace Agreement.
Assess losses from storage accounts based on the findings of the 2020 Safe Yield Recalculation.
Update the Storage Management Plan in 2025 and every five years thereafter, and when: • the Safe Yield is recalculated, • Watermaster determines a review and update is warranted based new information and/or the needs of the parties or the basin, and • at least five years before the aggregate amount of managed storage by the parties is projected to fall below 340,000 af
Perform safe yield recalculation every 10 years (2030, 2040).
Update the storage loss rate following each recalculation of Safe Yield (2030, 2040) and during periodic updates of the SMP.

Actions in blue represent actions that are not in the 2000 OBMP ("new" actions).

Exhibit 5

List of facilities to be evaluated in CEQA	PE1	PE2	PE4	PE5	PE6	PE7	PE8/9
New monitoring wells	✓	✓	✓	✓	✓	✓	✓
New surface water and groundwater recharge monitoring facilities	✓	✓					✓
New meteorological monitoring facilities	✓	✓					✓
New meter installation at pumping wells	✓						
New extensometers	✓		✓				✓
New benchmarks	✓		✓				✓
New stormwater diversion, storage, transfer and recharge facilities		✓	✓	✓			✓
CIM storage facilities*		✓	✓	✓			✓
Flood MAR*		✓	✓	✓			✓
Regional conveyance:*		✓	✓	✓			✓
Lower Cucamonga Basin		✓		✓			✓
Mills Wetlands		✓		✓			✓
Riverside Basin		✓		✓			✓
Vulcan Basin *		✓		✓			✓
Confluence Project*		✓		✓			✓
Injection wells*		✓	✓	✓			✓
Treatment (for some sources)*		✓	✓	✓			✓
Restore WFA Agua de Lejos Treatment Plant capacity for in-lieu recharge		✓	✓	✓			✓
MS4 recharge project incentives		✓	✓				✓
Relocate pumping from MZ1 to MZ2/3 and southern portion of the Chino Basin and/or increase recharge in MZ1			✓				✓
New production wells*			✓				✓
Acquire supplemental water supplies*		✓		✓			
Regional conveyance				✓			✓
New dedicated regional conveyance facilities				✓			✓
North-south pipeline*				✓			✓
East-west pipeline*				✓			✓
Incorporate local conveyance facilities into a regional conveyance system*				✓			✓
Maximize recycled water reuse				✓			
Expand system for indirect reuse*				✓			
Advanced water treatment*				✓		✓	
Direct potable use*				✓			
New regional groundwater treatment plants (up to 10 mgd for local use; up to 30 mgd for export)*				✓	✓		✓
Expansion of existing groundwater treatment plants*				✓	✓		✓
Upgrade recycled water treatment plant to desalt effluent*						✓	
Maintain or increase groundwater pumping in Chino Creek Well Field (CCWF) area:							
New production wells in CCWF area*						✓	✓
Acquire wells in CCWF area*						✓	✓
New ASR wells in MZ2/3 north of Highway 60*							✓

*Includes conveyance infrastructure

Exhibit 6

117°40'0"W

34°0'0"N

Up to 100 new monitoring wells to be located within the Chino Basin boundary

San Gabriel Mountains
San Antonio Ck
Cucamonga Basin
Claremont Heights Basins
Indian Hill Fault
Red Hill Fault
Pomona Basin
San Jose Fault
Euclid Ave
Haven Ave
Day Ck
Etiwanda Ave
Foothill Blvd
Rialto-Colton Basin
Sierra Ave
Riverside Ave
Rialto-Colton Fault
Holt Blvd
Central Ave
Mission Blvd
Riverside Dr
San Bernardino County
Riverside County
Jurupa Mountains
Puente Hills
Chino Ck
Cucamonga Ck
Bellegrave Ave
Limonite Ave
Mission Blvd
Santa Ana River
Riverside Basins
Chino Fault
Chino Hills
San Bernardino County
Orange County
Prado Basin
La Sierra Hills
Van Buren Blvd
Victoria Ave
Arlington Basin
Temescal Basin

Groundwater-Level Monitoring Program
Wells symbolized by Measurement Frequency

- Measurement by CBWM Staff - Monthly (69 wells)
- Measurement by Transducer - Every 15 Minutes (177 wells)
- Measurement by Owner at Various Frequencies (1,077 wells)

OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Concealed
- Location Approximate
- Location Uncertain
- Approximate Location of Groundwater Barrier



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: SO
Date: 12/17/2019
File: 6.) Map of GWL.mxd

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Prepared for:
OBMP 2020 Update
Scoping Report

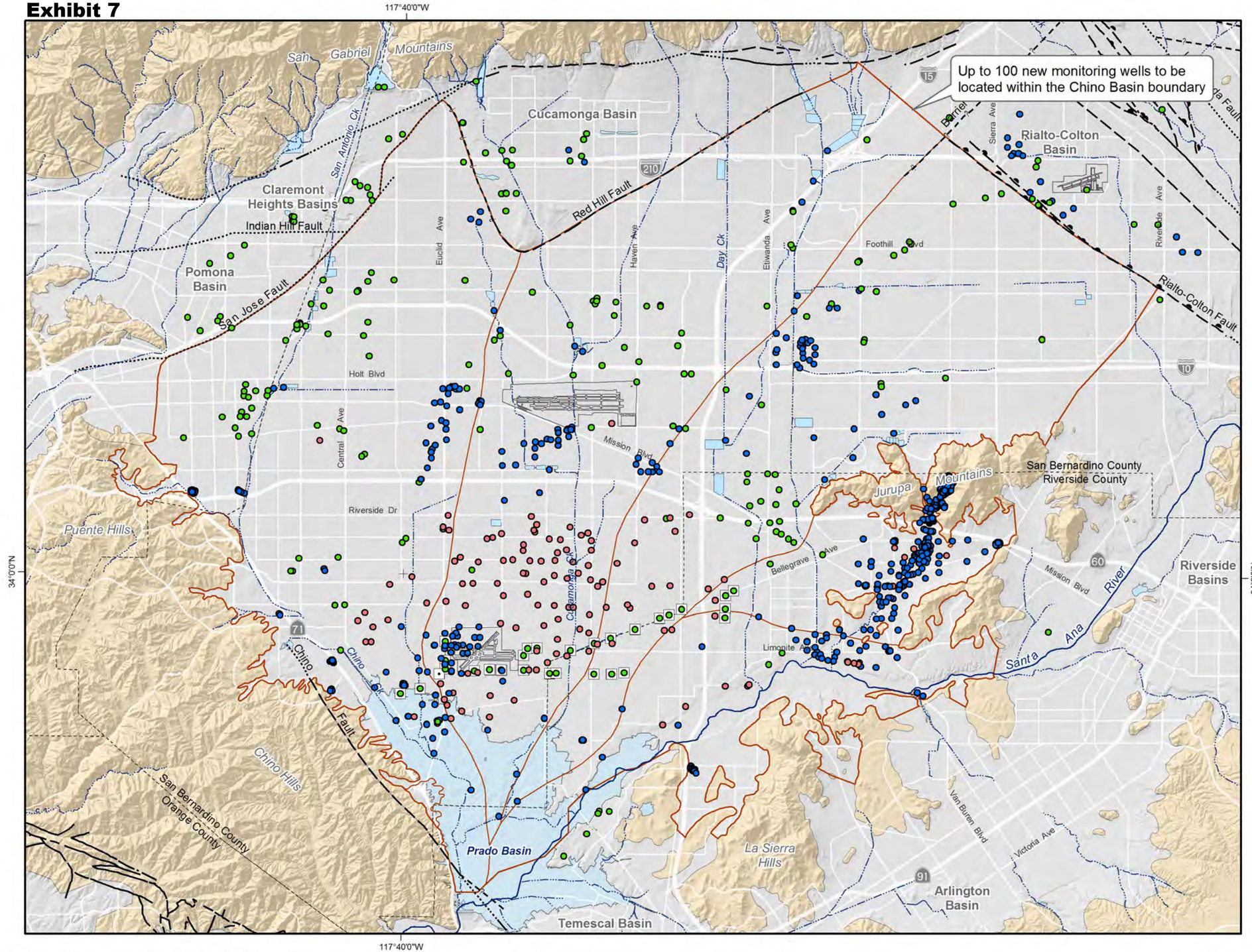
Chino Basin Watermaster
Partners in Basin Management

Groundwater-Level Monitoring

Well Location and Measurement Frequency
Fiscal Year 2017/18

Exhibit L-3

Exhibit 7



Wells with Groundwater-Quality Data
(June 2013 to June 2018)

- Monitoring Wells (986 wells)
- Municipal Production Wells (248 wells)
- Private Production Wells (123 wells)
- Chino Basin Desalter Wells

OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

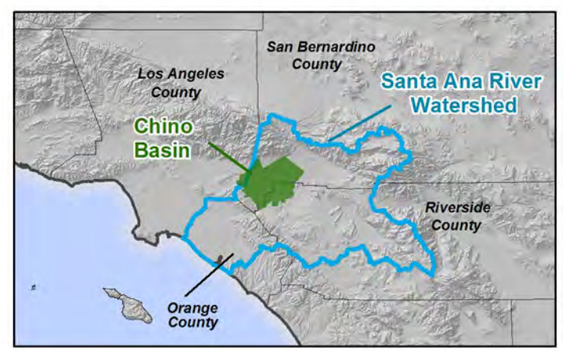
Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: SO
Date: 12/17/2019
File: 7.) Map of GWQ.mxd

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0 2 4 6 8 Km

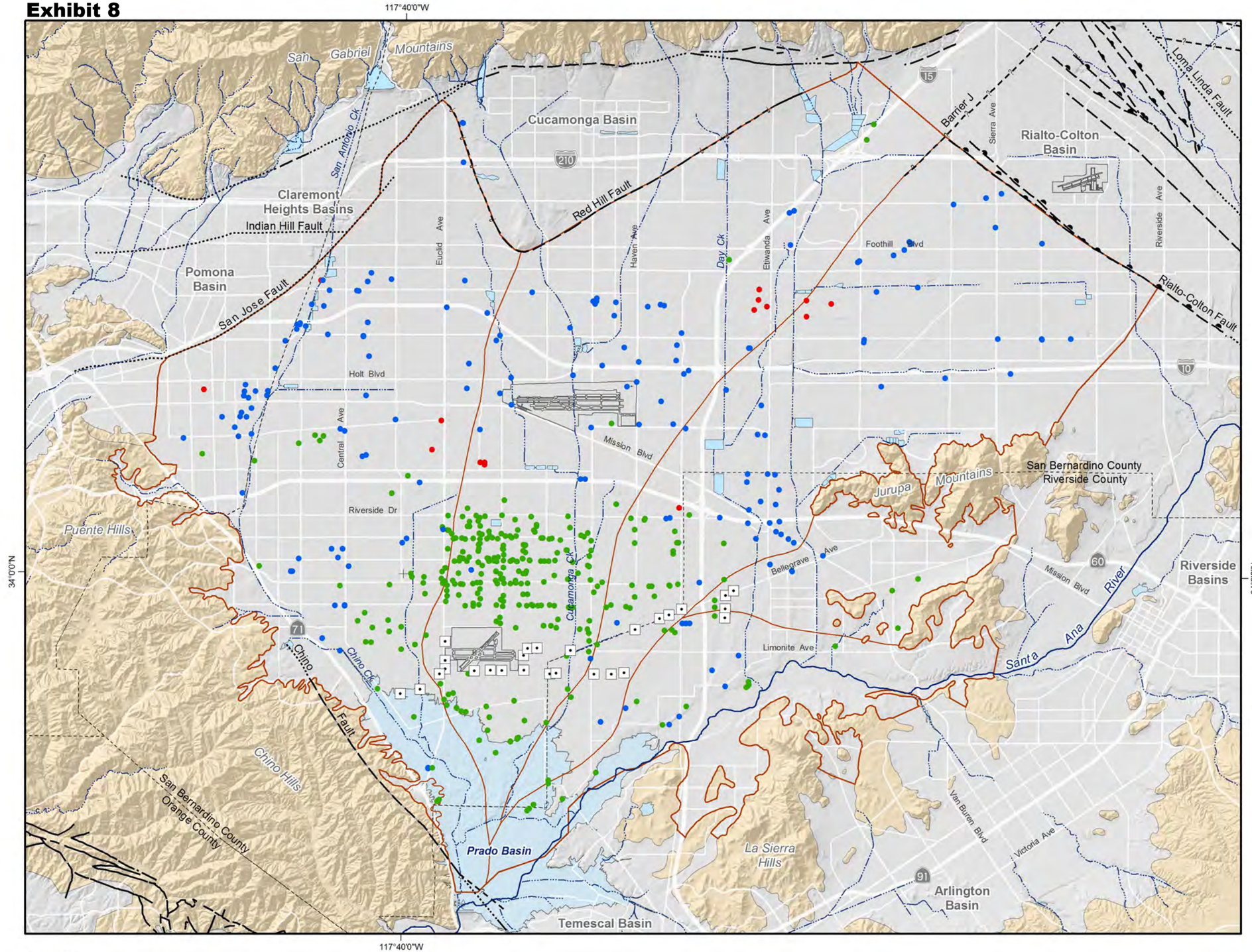
Prepared for:
OBMP 2020 Update
Scoping Report

Chino Basin Watermaster
Partners in Basin Management

Groundwater-Quality Monitoring
July 2013 to June 2018

Exhibit L-4

Exhibit 8



Groundwater Production Wells by Pool

- Agricultural Pool (Pool 1 - 276 Wells)
  Potential to install in-line flow meters
- Overlying Non-Agricultural Pool (Pool 2 - 13 Wells)
- Appropriative Pool (Pool 3 - 143 Wells)
- Chino Basin Desalter Authority (25 Wells)

OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Concealed
- Location Approximate
- Location Uncertain
- Approximate Location of Groundwater Barrier



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: SO
Date: 12/16/2019
File: 8.) Map of GWP.mxd

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0 2 4 6 8 Km

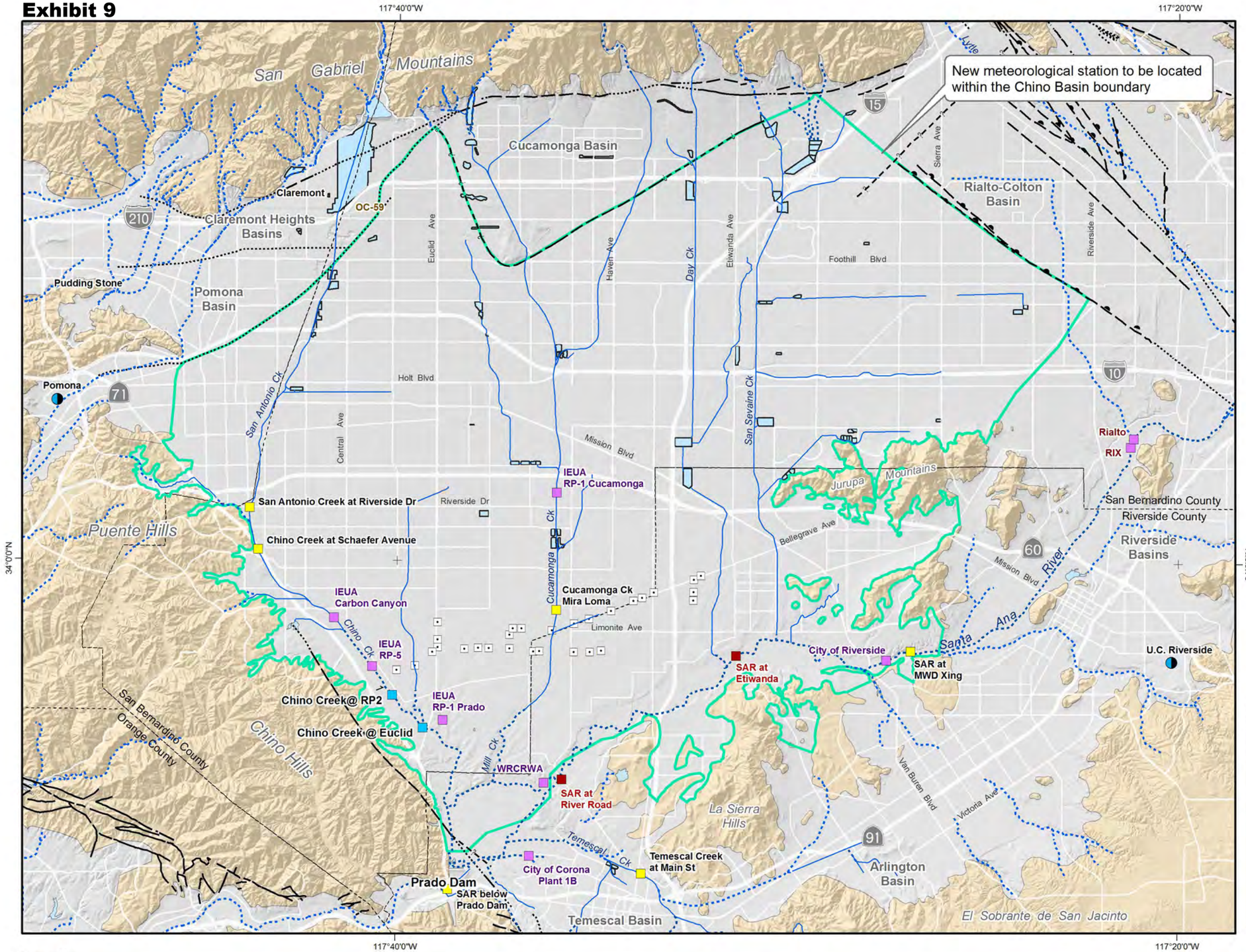
Prepared for:
OBMP 2020 Update
Scoping Report

Chino Basin Watermaster
Partners in Basin Management

Groundwater-Production Monitoring
Fiscal Year 2017/18

Exhibit L-2

Exhibit 9



Concrete-Lined Channels
Unlined Rivers and Streams
Flood Control & Conservation Basins

Locations of new flow and stage measuring equipment

Surface-Water Monitoring Program
- POTW Discharge Outfall
- USGS Stream Gage Station
- Maximum-Benefit Monitoring Program Site
- PBHSP Site

Climate Monitoring Program
- CIMIS Stations (Temperature and Evaporation)
- Chino Basin - Area to Extract Grided Data from PRISM and NEXRAD Data Sets (Precipitation)

Chino Basin Desalter Authority Well

Geology

Water-Bearing Sediments
- Quaternary Alluvium

Consolidated Bedrock
- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults
- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain



Prepared by:
WEI Wildermuth Environmental, Inc.

Author: SO
Date: 12/19/2019
File: 9.) Map of SWQ

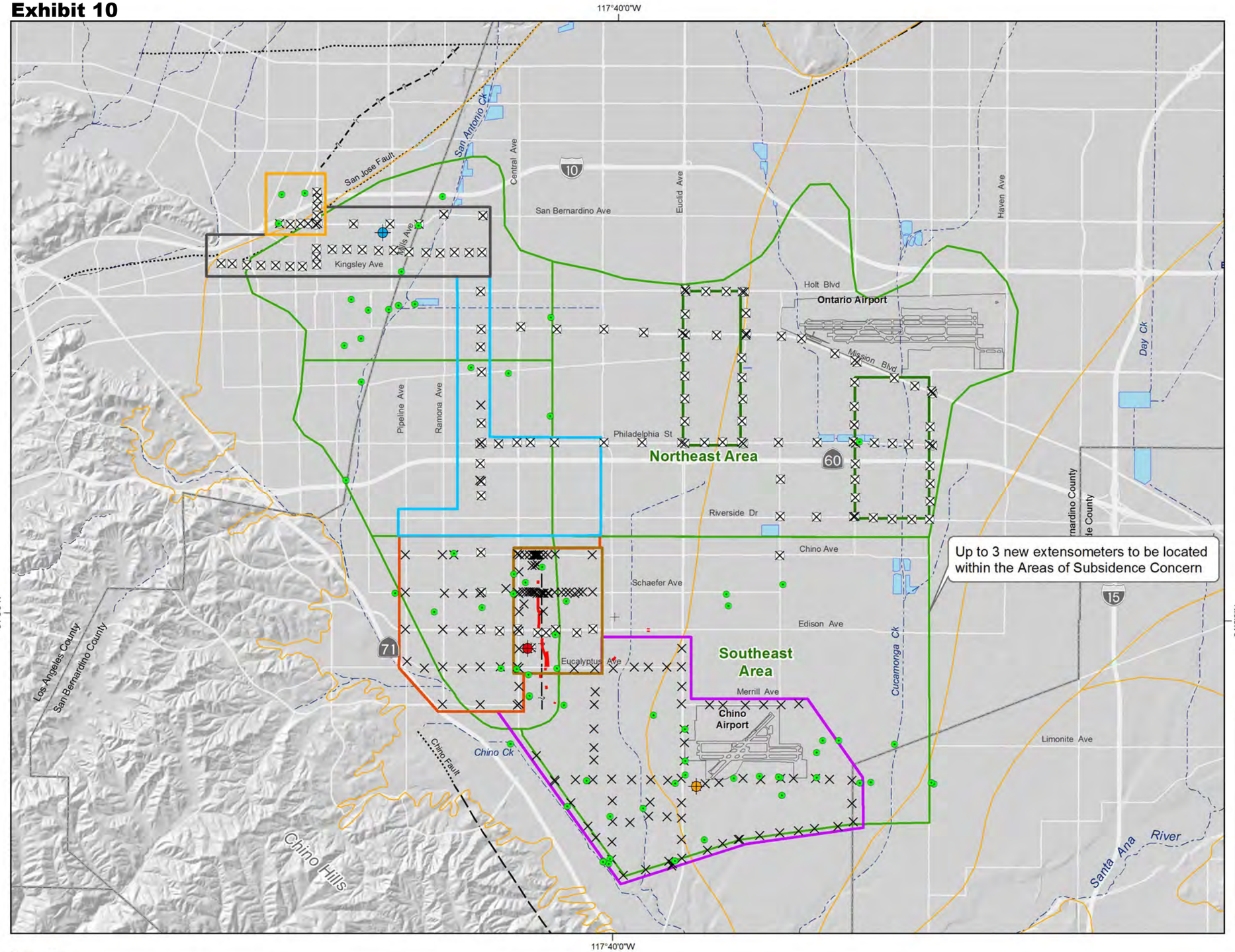
0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Prepared for:
OBMP 2020 Update
Scoping Report

Surface-Water and Climate Monitoring

Exhibit L-5

Exhibit 10



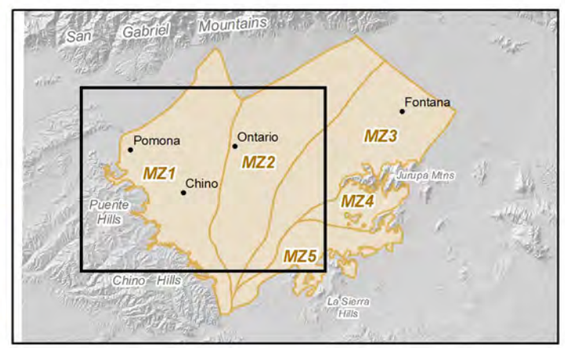
Ground-Level Monitoring Network Facilities

- Ayala Park Extensometer
- Chino Creek Extensometer
- Pomona Extensometer
- Well Equipped with Pressure Transducer (2018/19)
- Ground-Level Survey Benchmark
- Ground-Level Survey Benchmark (Measured in April 15, 2019)

Ground-Level Survey Areas

- Managed Area
- Fissure Zone Area
- Central Area
- Northwest Area
- San Jose Fault Zone Area
- Northeast Area
- Southeast Area

- Areas of Subsidence Concern
- Flood Control and Conservation Basins
- Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)
- Ground Fissures
- Approximate Location of the Riley Barrier



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: NWS
Date: 12/18/2019
File: 10.) Subsidence Monitoring.mxd

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

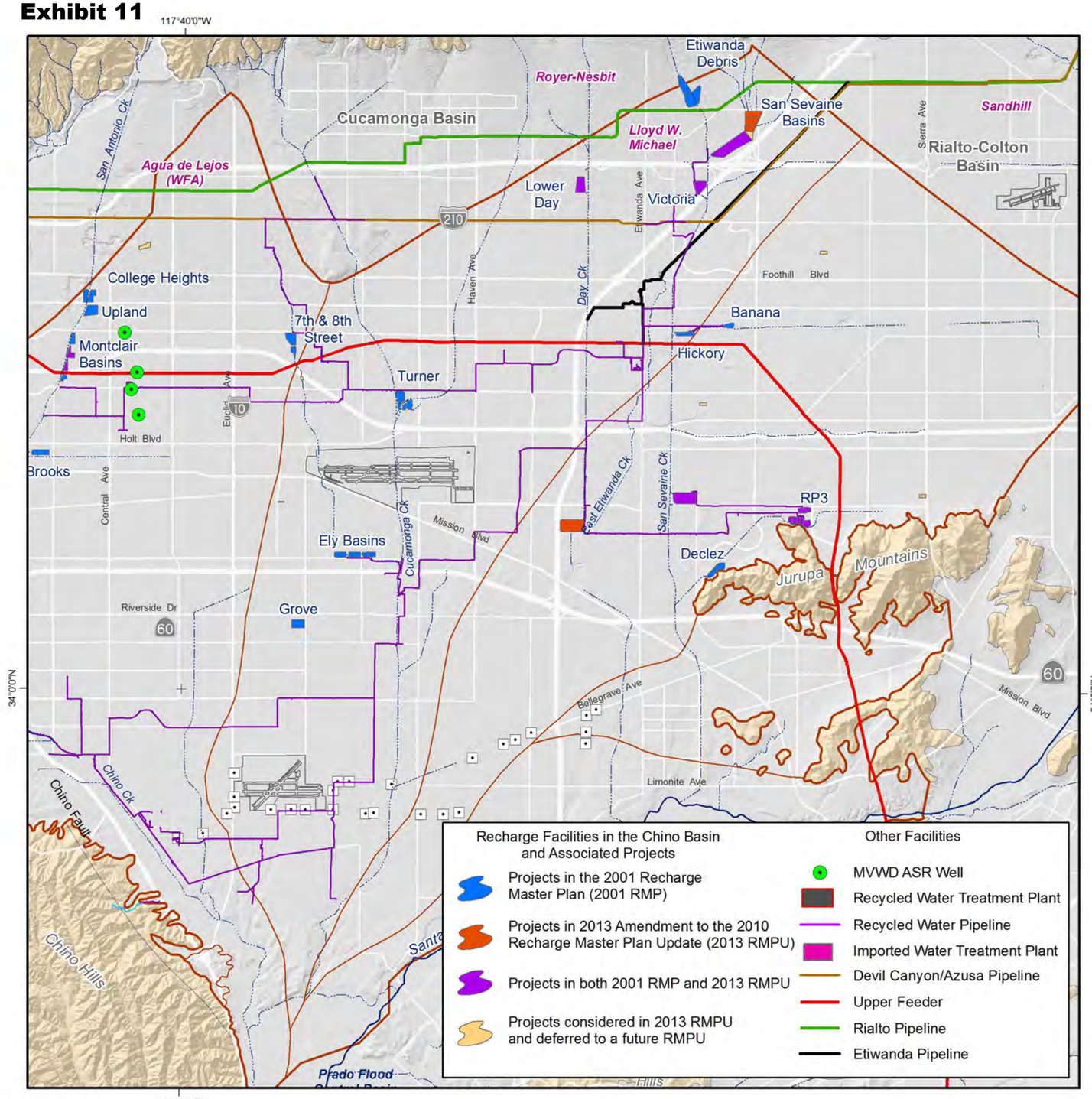
Prepared for:
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Scoping Report

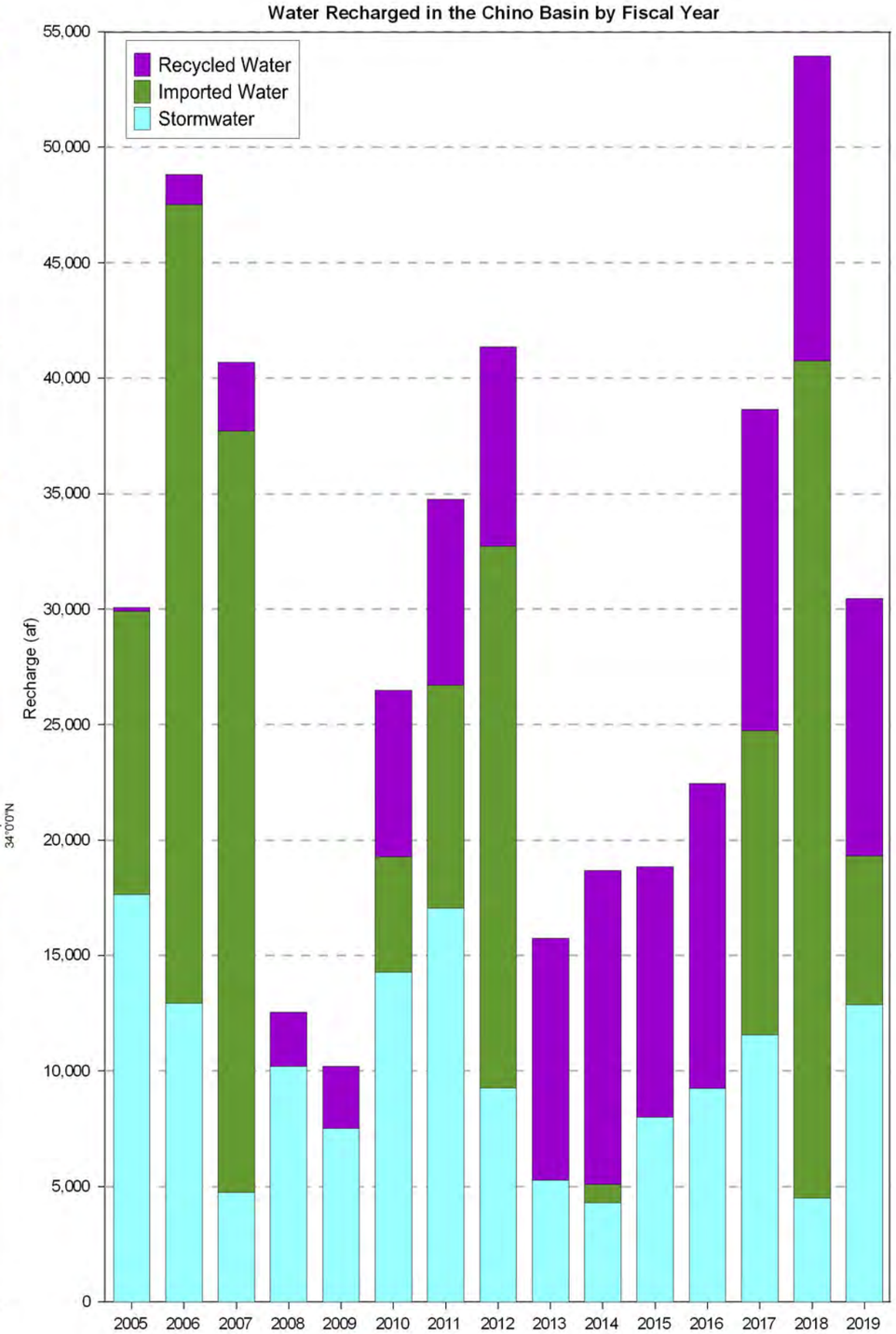
Chino Basin Watermaster — Partners in Basin Management

Ground-Level Monitoring Network
Western Chino Basin

Exhibit L-6

Exhibit 11





Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: CS
Date: 20181129
File: 11.) Recharge Basin + Recharge Chart

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0 2 4 6 8 Km

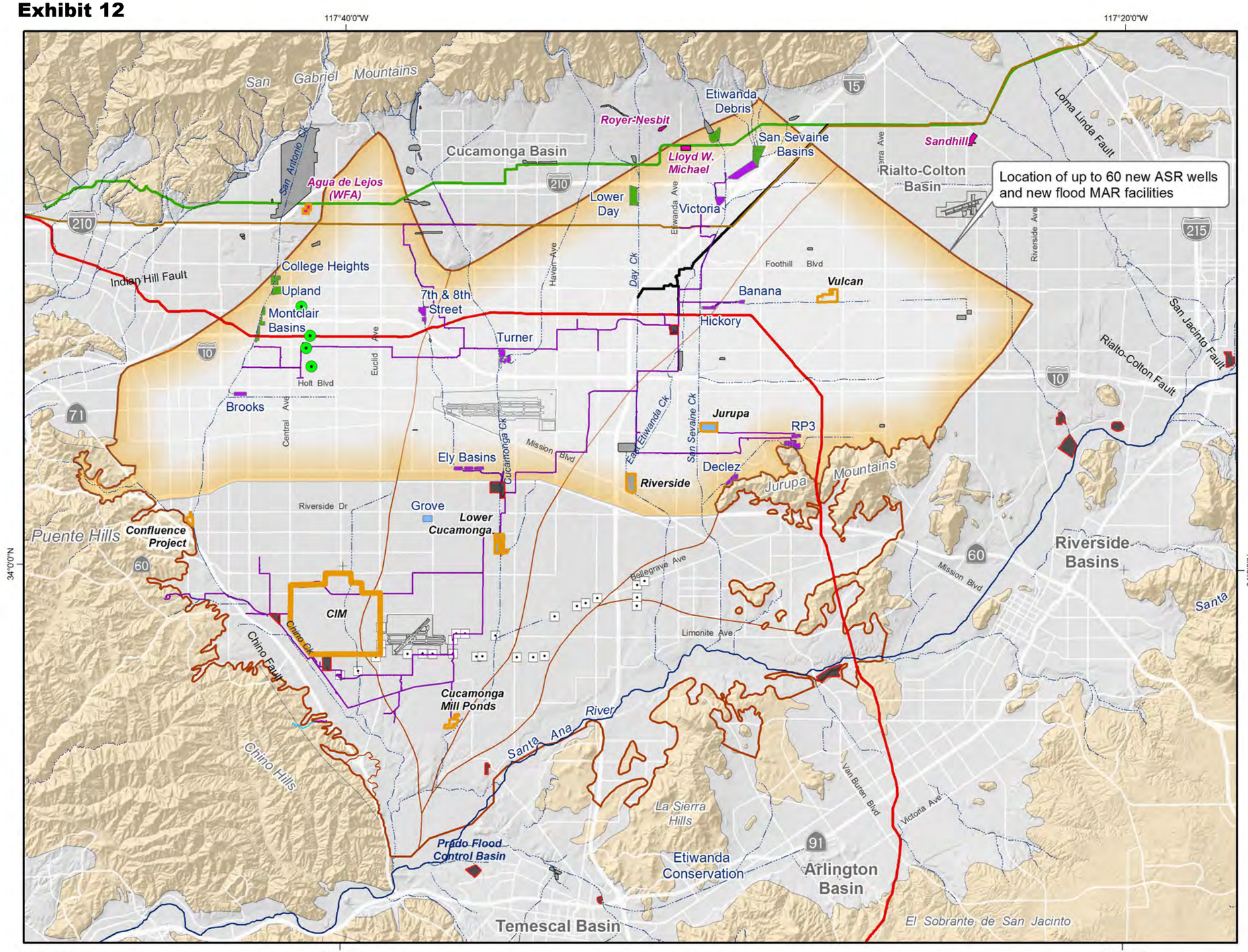
Prepared for:

2020 OBMP Update
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Groundwater Recharge in the Chino Basin

Exhibit 10

Exhibit 12



New Projects

Facilities Used for In-lieu and Wet-water Recharge

Recharge Basins

- Storm, Imported and Recycled Water
- Storm and Imported Water
- Stormwater
- Stormwater Facilities Not Managed Under the OBMP Recharge. Incidental Recharge Only

Other Facilities

- MVWD ASR Well
- Recycled Water Treatment Plant
- Recycled Water Pipeline
- Imported Water Treatment Plant
- Devil Canyon/Azusa Pipeline
- Upper Feeder
- Rialto Pipeline
- Etiwanda Pipeline

Prepared by:

WEI
WILDERMUTH ENVIRONMENTAL, INC.

Author: CS
Date: 20181129
File: 12.) New Recharge Basins

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Prepared for:

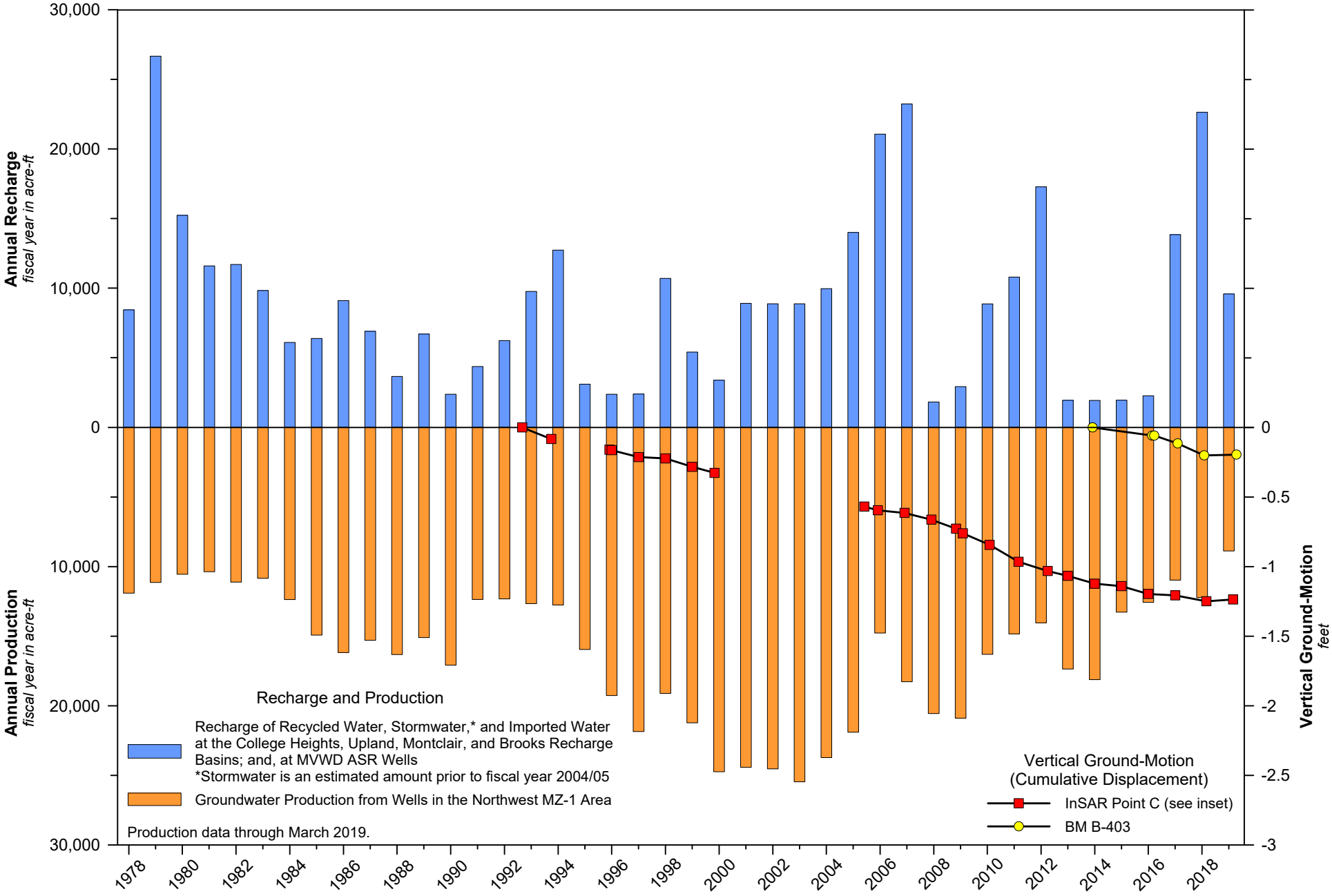
2020 OBMP Update
Project Description

CHINO BASIN WATERMASTER
Partners in Basin Management

Groundwater Recharge in the Chino Basin

Exhibit 11

Exhibit 13



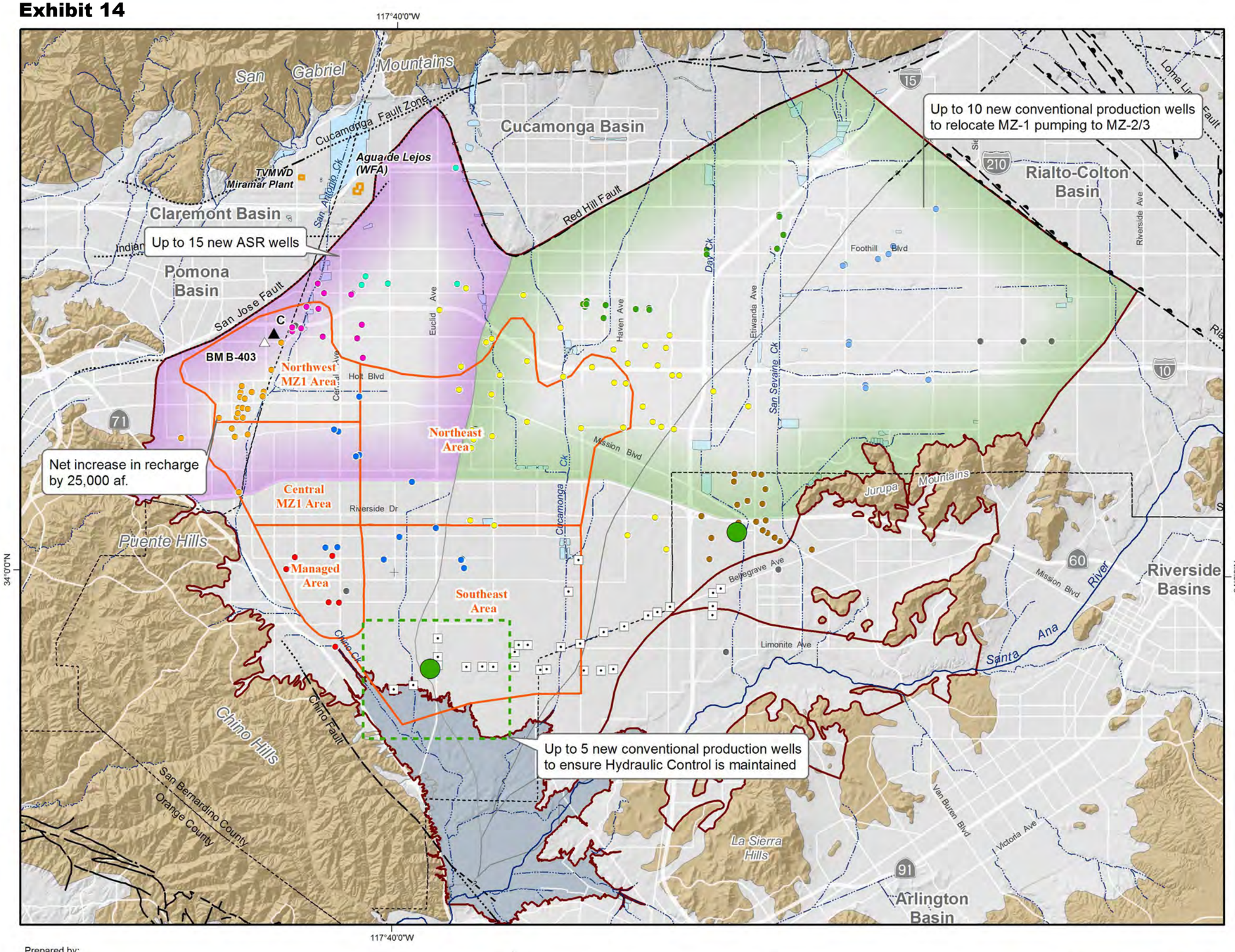
WEI
Wildermuth Environmental, Inc.

Prepared for:
OBMP 2020 Update
Scoping Report

Pumping, Recharge and Land Subsidence in the Northwest MZ-1 Area

Exhibit CG-3

Exhibit 14



Location of InSAR with Time Series of Ground Surface Elevation

Location of Benchmark with Time Series of Ground Surface Elevation

Appropriative Pool Pumping Wells

- City of Chino
- City of Chino Hills
- City of Ontario
- City of Pomona
- City of Upland
- Chino Basin Desalter Wells
- Cucamonga Valley Water District
- Fontana Water Company
- Jurupa Community Services District
- Monte Vista Water District
- Other Appropriators

Desalter Treatment Facility

Chino Creek Well Field

In-lieu recharge sources

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: LG
Date: 12/20/2019
Document Name: 14.) Map of Chino Basin Concerns_new

0 1 2 3 4 5 Miles
0 2 4 6 8 KM

Prepared for:

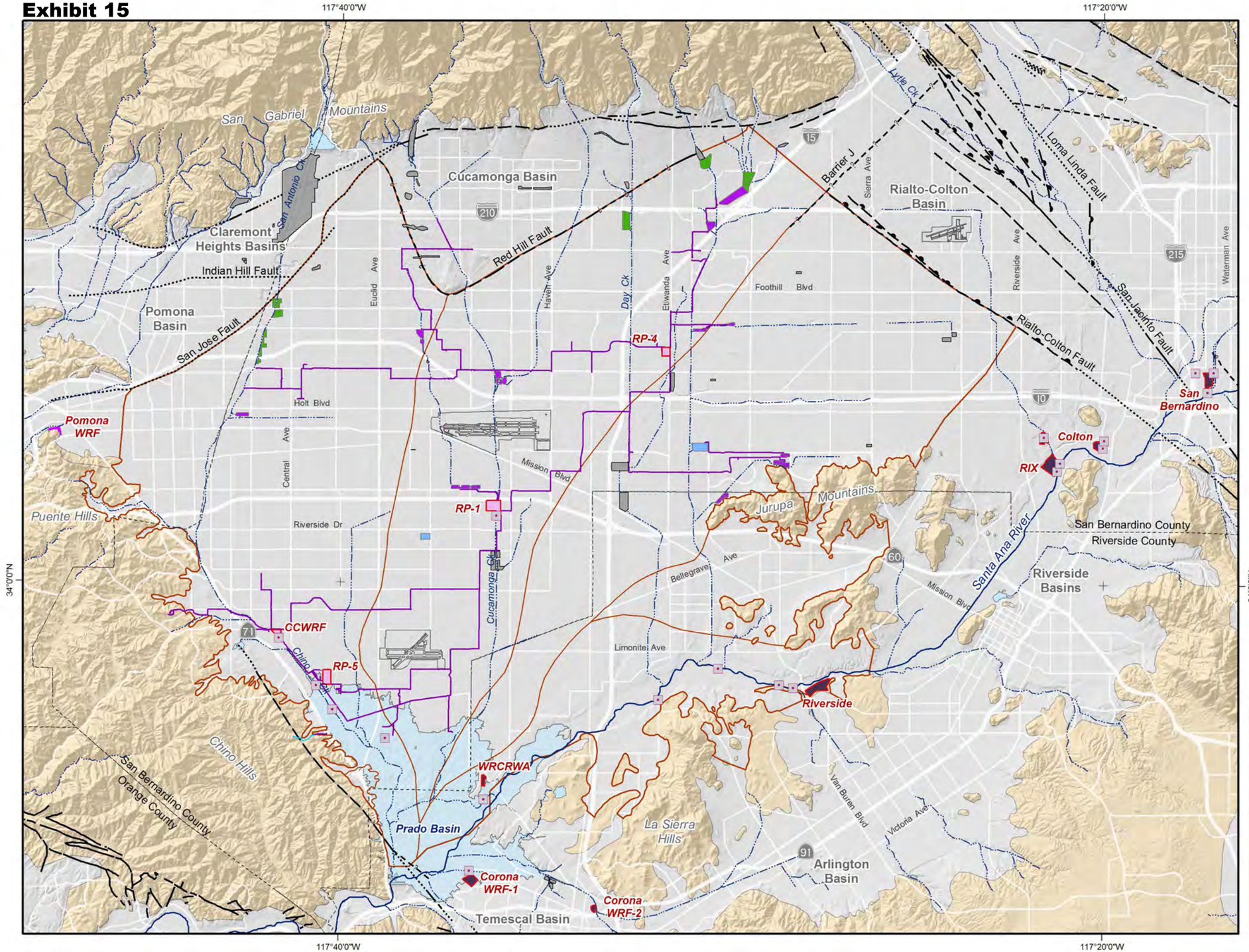
OBMP 2020 Update
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Chino Basin

OBMP Management Zones, Maximum Benefit Management Zones and Areas of Subsidence Concern

Figure 1-1

Exhibit 15



IEUA's Recycled Water Treatment Plant

Recycled Water Discharge Point

Recycled Water Distribution System

Recharge Basins

Storm, Imported and Recycled Water

Storm and Imported Water

Stormwater

Stormwater Facilities Not Managed Under the OBMP Recharge. Incidental Recharge Only

Other Recycled Water Treatment Plant



OBMP Management Zones

Streams & Flood Control Channels

Faults

Location Certain

Location Approximate

Approximate Location of Groundwater Barrier

Location Concealed

Location Uncertain

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: SO
Date: 12/20/2019
File: 15.) RW Treatment Plants.mxd

0 1 2 3 4 5 Miles

0 2 4 6 8 Km

Prepared for:
OBMP 2020 Update
Scoping Report

Chino Basin Watermaster
Partners in Basin Management

Recycled Water Treatment Plants and Discharge Points

Exhibit D-1

Exhibit 16

117°40'0"W

117°20'0"W

34°0'0"N

New advanced water treatment plant and conveyance facilities and expanded recycled water distribution within the Chino Basin

Reduce IEUA's discharge of recycled water to the Santa Ana River committed to satisfying its obligations in the Santa Ana River Judgment.

San Gabriel Mountains
San Antonio Ck
Cucamonga Basin
Claremont Heights Basins
Indian Hill Fault
Red Hill Fault
Pomona Basin
San Jose Fault
Pomona WRF
Puente Hills
Holt Blvd
Euclid Ave
Haven Ave
Day Ck
Etiwanda Ave
Foothill Blvd
RP-4
RP-1
Central Ave
Mission Blvd
Riverside Dr
Cucamonga Ck
Bellegrave Ave
Limonite Ave
CCWRF
RP-5
Chino Ck
Chino Hills
San Bernardino County
Orange County
WRCRWA
Prado Basin
Corona WRF-1
Corona WRF-2
Temescal Basin
La Sierra Hills
Arlington Basin
Jurupa Mountains
Riverside Basins
Riverside
Santa Ana River
Mission Blvd
Victoria Ave
Lytle Ck
Barrier J
Sierra Ave
Rialto-Colton Basin
La Linda Fault
Riverside Ave
Waterman Ave
Rialto-Colton Fault
San Jacinto Fault
San Bernardino
Colton
RIX
San Bernardino County
Riverside County
71
210
215
10
60
91

Recycled Water Treatment Plant
Recycled Water Discharge Point
Recycled Water Distribution System

OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Faults
Location Certain
Location Approximate
Approximate Location of Groundwater Barrier
Location Concealed
Location Uncertain

Geology

Water-Bearing Sediments
Quaternary Alluvium

Consolidated Bedrock
Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks



Prepared by:
WEI
Wildermuth Environmental, Inc.

Author: SO
Date: 1/29/2020
File: 16.) New RW Treatment Plants.mxd

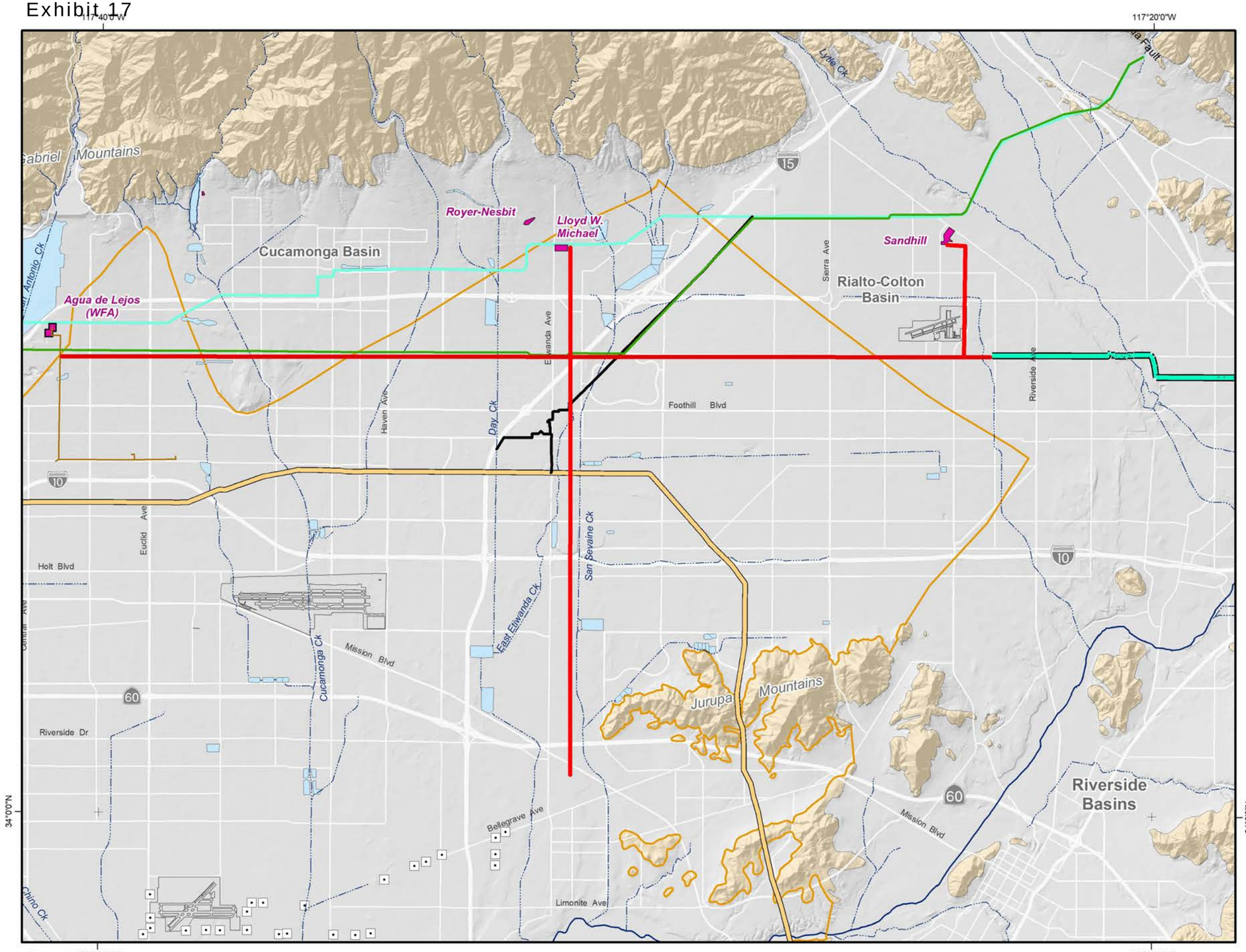
0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Prepared for:
OBMP 2020 Update
Scoping Report

Chino Basin Watermaster
Partners in Basin Management

Recycled Water Treatment Plants and Discharge Points

Exhibit 17



New regional pipelines*
*for demonstrative purposes only; does not represent final pipeline alignment

Other Facilities

- Imported Water Treatment Plant
- Baseline Feeder
- Devil Canyon/Azusa Pipeline
- Upper Feeder
- Rialto Pipeline
- Etiwanda Pipeline
- WFA Pipeline
- Chino Basin Desalter Well
- Flood Control & Conservation Basins
- Chino Basin Hydrologic Boundary

Prepared by:

WEI
WILDERMUTH ENVIRONMENTAL, INC.

Author: CS
Date: 202001
File: 17.) Regional Pipelines

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

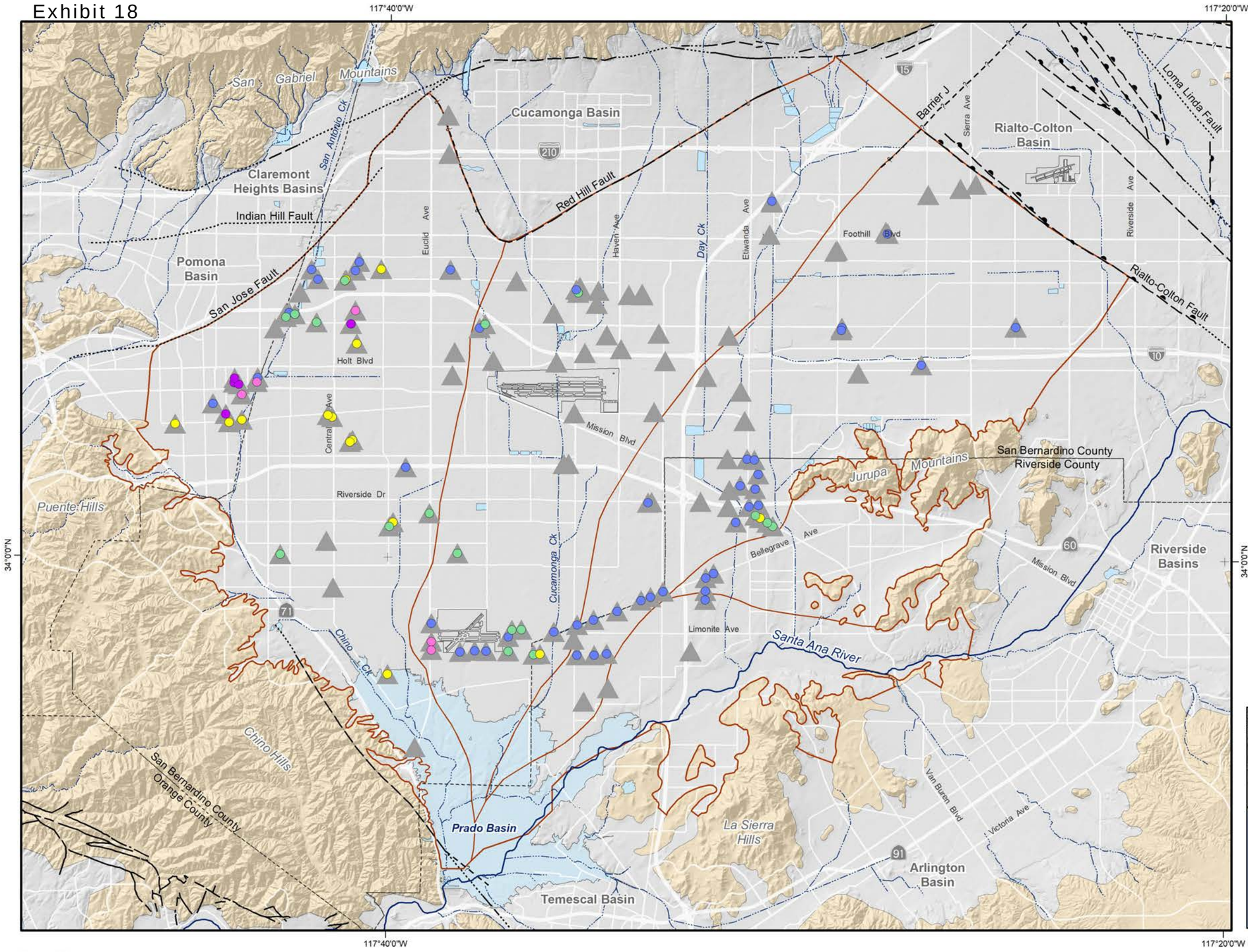
Prepared for:

2020 OBMP Update
Project Description

CHINO BASIN WATERMASTER
Partners in Basin Management

Regional Pipelines

Exhibit 18



Active Municipal Supply Well

Number of Contaminants that Exceed a MCL

- 1 (45 Wells)
- 2 (19 Wells)
- 3 (14 Wells)
- 4 (5 Wells)
- 5 (5 Wells)



OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Concealed
- Location Approximate
- Location Uncertain
- Approximate Location of Groundwater Barrier



Occurrence of Drinking Water Contaminants in Active Municipal Supply Wells in Chino Basin

2014-2018

Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: CS
Date: 1/30/2020
File: 18.) Exceedance_Count.mxd

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Prepared for:
OBMP 2020 Update
Scoping Report

Chino Basin Watermaster
Partners in Basin Management

Exhibit 19

117°40'0"W

117°20'0"W

34°0'0"N

San Gabriel Mountains

Cucamonga Basin

Claremont Heights Basins

Pomona Basin

Rialto-Colton Basin

Puente Hills

Chino Hills

Prado Basin

La Sierra Hills

Temescal Basin

Arlington Basin

Riverside Basins

Jurupa Mountains

San Bernardino County

Riverside County

Orange County

San Antonio Ck

Red Hill Fault

Indian Hill Fault

San Jose Fault

Rialto-Colton Fault

Loma Linda Fault

Barrier J

Day Ck

Chino Ck

Cucamonga Ck

Santa Ana River

Euclid Ave

Haven Ave

Etiwanda Ave

Sierra Ave

Riverside Ave

Foothill Blvd

Holt Blvd

Central Ave

Mission Blvd

Riverside Dr

Bellegrave Ave

Limonite Ave

Van Buren Blvd

Victoria Ave

15

210

10

60

71

91

1,2,3-TCP (µgl)

ND	0.005 - 0.01
< 0.0025	0.01 - 0.02
0.0025 - 0.005	> 0.02

California Primary MCL = 0.005 µgl

Active Municipal Supply Well

- Well with no contaminants that exceed the MCL
- Well with one contaminant that exceeds the MCL
- Well with two or more contaminants that exceed the MCL

OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain



Prepared by:

WEI Wildermuth Environmental, Inc.

Author: CS
Date: 12/16/2019
File: 19.) 1,2,3-TCP_2014-2018.mxd

0 1 2 3 4 5 Miles

0 2 4 6 8 Km

Prepared for:

OBMP 2020 Update

Scoping Report

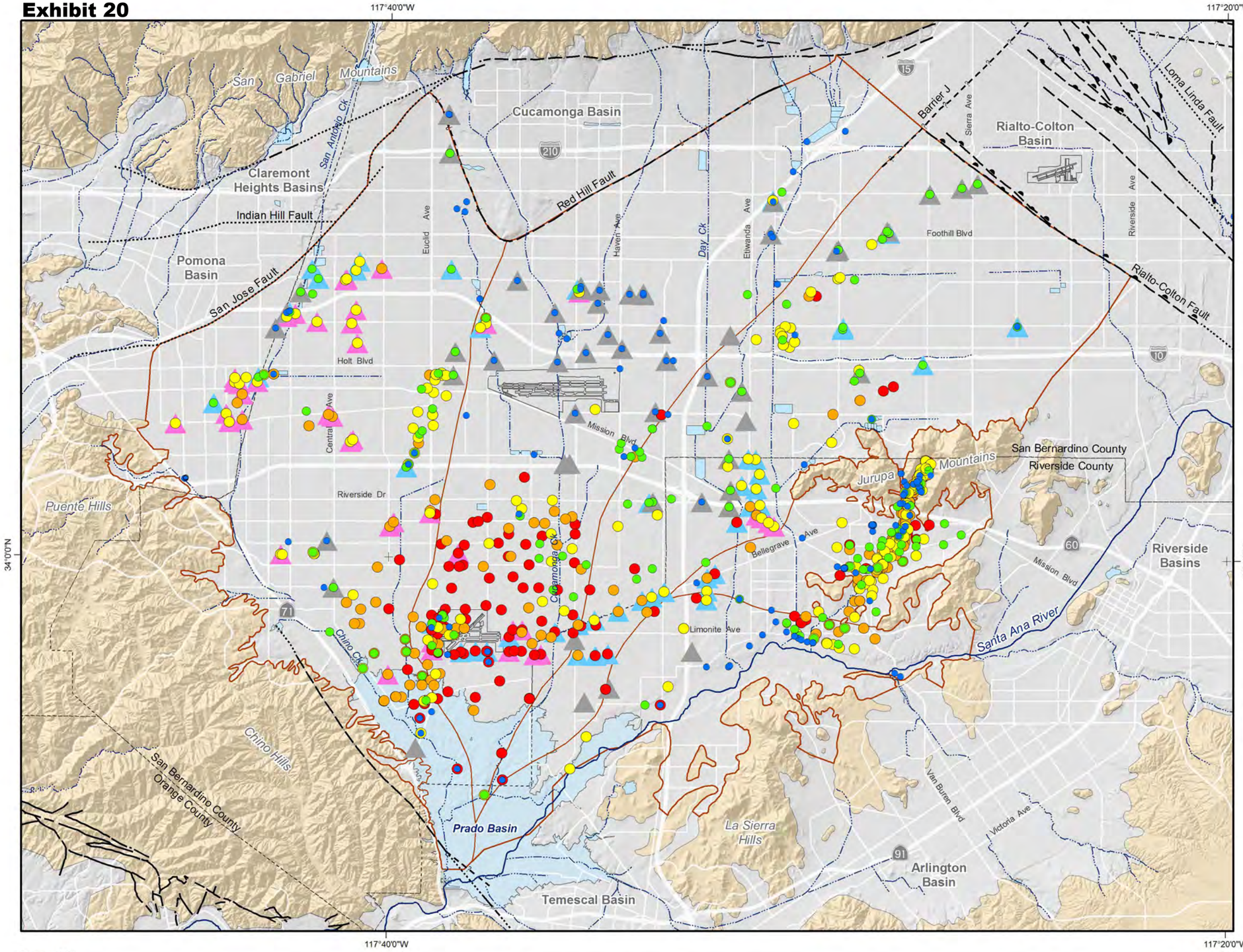
Chino Basin Watermaster — Partners in Basin Management

Maximum 1,2,3-Trichloropropane (1,2,3-TCP) Concentration

2014-2018

Exhibit EF-4

Exhibit 20



Nitrate-N (mgl)

- ND
- < 5
- 5 - 10
- 10 - 20
- 20 - 40
- > 40

California Primary MCL = 10 mgl

Active Municipal Supply Well

- Well with no contaminants that exceed the MCL
- Well with one contaminant that exceeds the MCL
- Well with two or more contaminants that exceed the MCL

OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: CS
Date: 12/16/2019
File: 20.) NO3_2014-2018.mxd

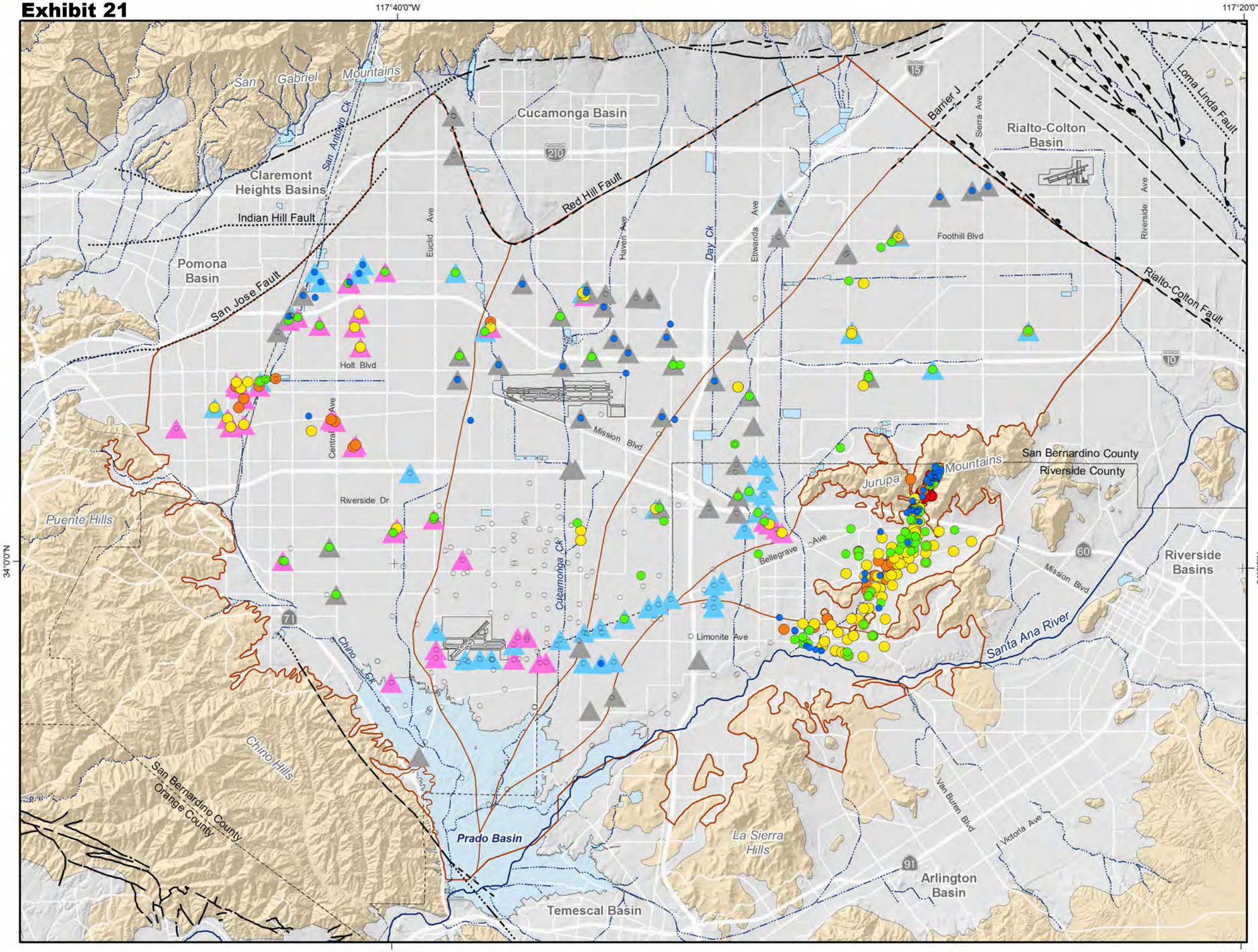
0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Prepared for:
OBMP 2020 Update
Scoping Report

Maximum Nitrate Concentration
2014-2018

Exhibit EF-3

Exhibit 21



Perchlorate (µgl)

ND	6 - 12
< 3	12 - 24
3 - 6	> 24

California Primary MCL = 6 µgl

Active Municipal Supply Well

- Well with no contaminants that exceed the MCL
- Well with one contaminant that exceeds the MCL
- Well with two or more contaminants that exceed the MCL

OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: CS
Date: 12/16/2019
File: 21.) CLO4_MCL_2014-2018.mxd

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

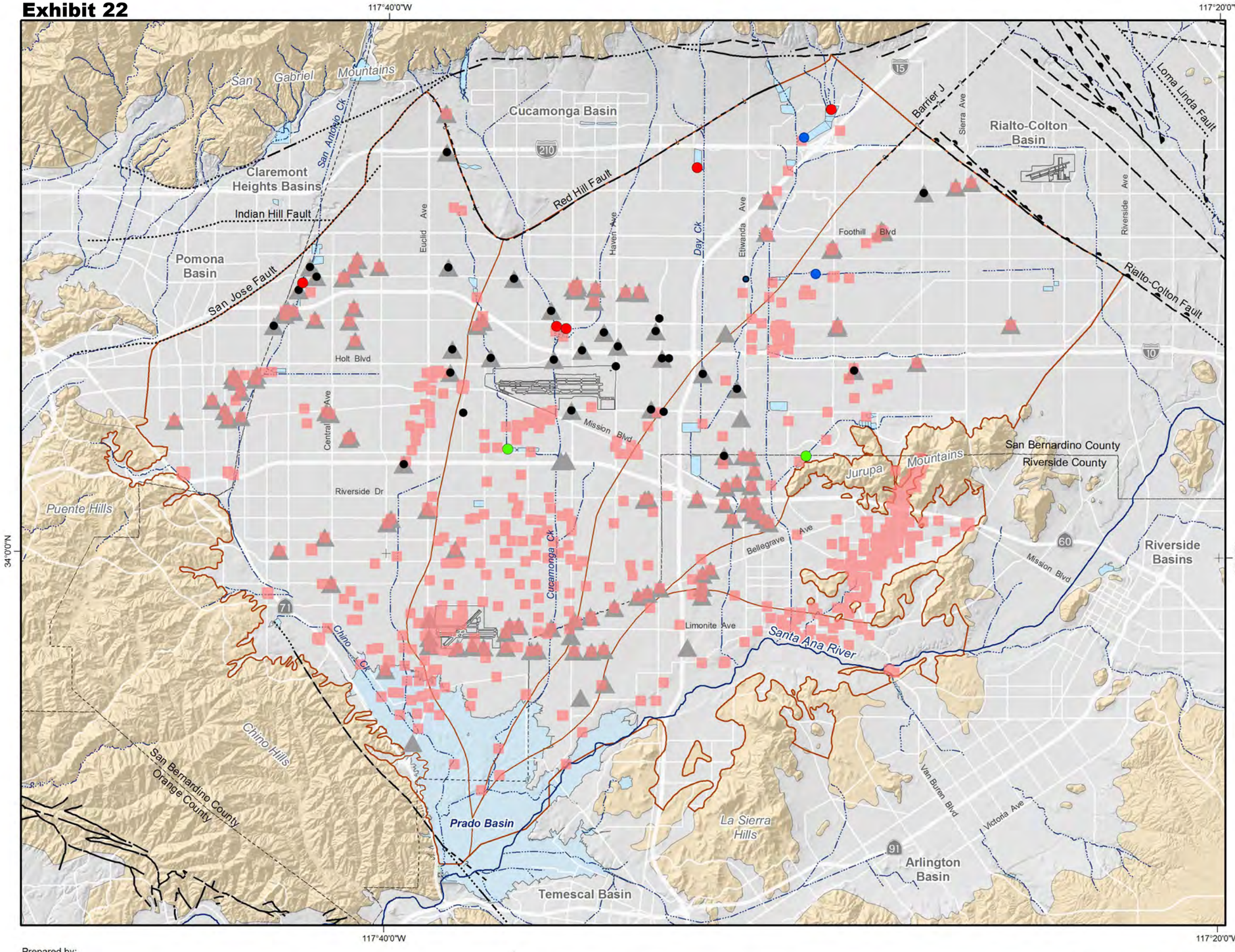
Prepared for:
OBMP 2020 Update
Scoping Report

Chino Basin Watermaster
Partners in Basin Management

Maximum Perchlorate Concentration
2014-2018

Exhibit EF-5

Exhibit 22



Occurrence of PFOA and PFOS in Groundwater

- Well not sampled for PFOA or PFOS
- Well sampled for UCMR3 between 2013-2015 using detection limits of 20 and 40 ngl, higher than the current notification levels (NL) of 5.1 for PFOA and 6.5 ngl for PFOS

Occurrence of PFOA and PFOS in Blending Sources for Recycled Water Recharge

- Source non-detect for PFOA and PFOS
- Source with detected concentration below the NLs of 5.1 and/or 6.5 ngl
- Source exceeding the NLs of 5.1 and/or 6.5 ngl
- Active municipal supply well

OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain



Prepared by:

WEI Wildermuth Environmental, Inc.

Author: CS
Date: 12/18/2019
File: 22.) PFAS_1998-2019.mxd

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Prepared for:

OBMP 2020 Update

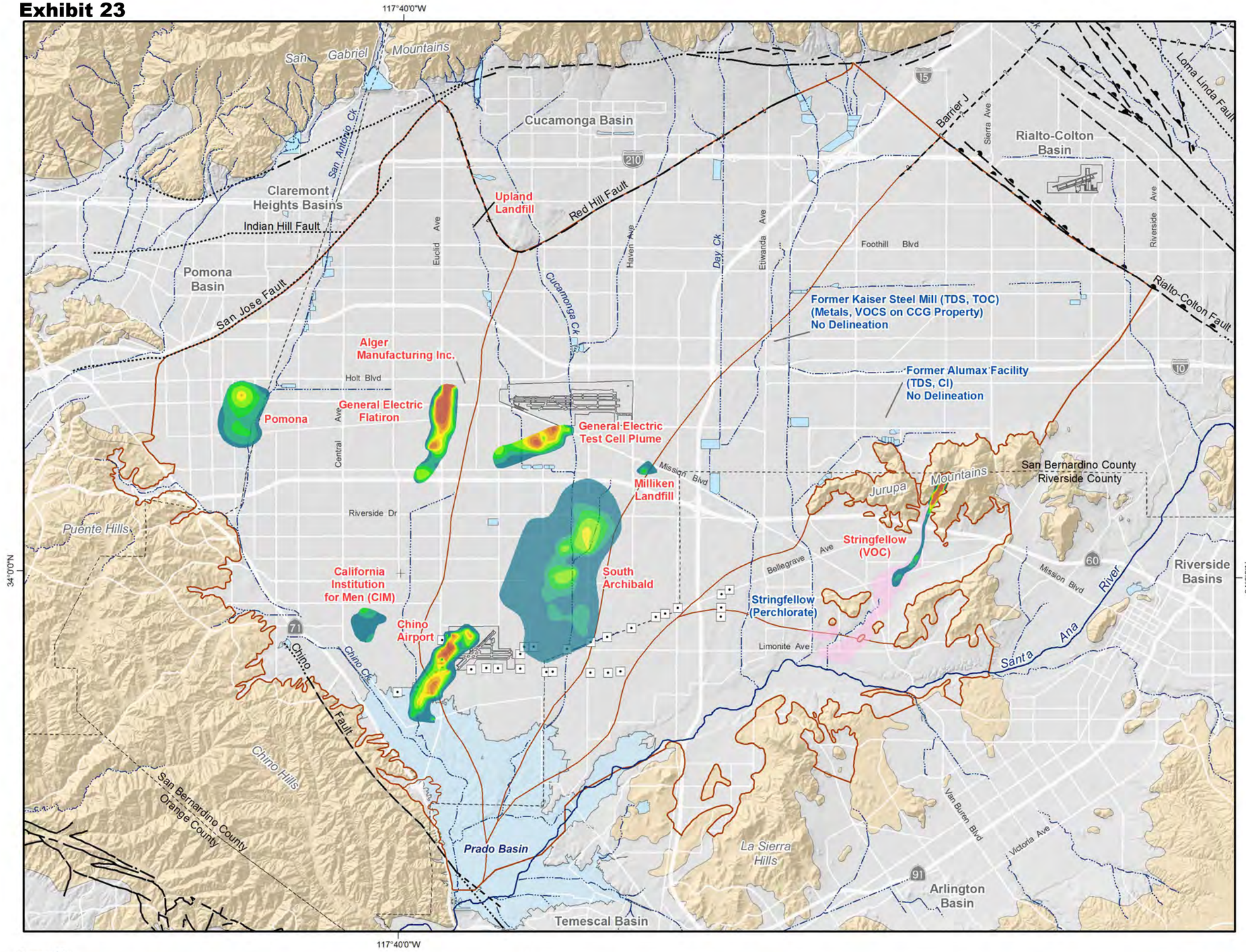
Scoping Report

PFOA and PFOS Concentrations

Through March 2019

Exhibit EF-10

Exhibit 23



VOC Concentration (µgl)

- > 0 to ≤ 5
- > 5 to ≤ 10
- > 10 to ≤ 20
- > 20 to ≤ 50
- > 50 to ≤ 100
- > 100 to ≤ 200
- > 200 to ≤ 500
- > 500

The VOC plumes shown on this map are generalized illustrations of the estimated spatial extent of TCE or PCE, based on the maximum concentration measured at wells over the five-year period of July 2013 to June 2018. The VOC plume illustrations were created with the grid function in Golden Software's Surfer 16 using an ordinary kriging interpolation model with model input parameter estimation and optimization performed by semivariogram analysis in Golden Software's Surfer 16. Interpretations of the plume extent and boundary delineation were made based on measured concentrations and local groundwater flow patterns as predicted by the Chino Basin groundwater flow model.

VOC Plumes Labeled in Red by Name

Other Plumes - Labeled in Blue by Name and Dominant Contaminant

The plumes characterized by color ramp represent Watermaster's most recent characterization of the primary contaminant of concern. The spatial extent of the VOC contamination was delineated by Watermaster based on the five-year maximum concentrations of the primary contaminant of concern for the period of July 2013 to June 2018. The primary VOC contaminant of concern in all of the plumes is TCE with the exception of the CIM plume, which is PCE. The VOC plumes associated with the Upland Landfill and the Alger Manufacturing Facility are of limited geographical extent at the scale of this map, so only their general locations are identified.

Other point-source contamination plumes in the Chino Basin include the former Kaiser Steel Mill, the former Alumax Facility, and the Stringfellow NPL Site, which are labeled by name and the primary contaminants associated with the sites. The former Kaiser Steel Mill TDS and total organic carbon (TOC) plume has not been delineated since 2008 (WEI, 2008b), and there are no plume delineations for the contamination associated with the former Kaiser Steel Mill CCG Property for metals and VOCs or the former Alumax Facility for TDS and chloride (Cl). The Stringfellow perchlorate plume shown here was delineated in the most recent remediation evaluation report for the site (Kleinfelder, 2018).

Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: LH
Date: 12/16/2019
File: 23.) Plumes_new_txt.mxd

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Prepared for:

2018 State of the Basin Report
Groundwater Quality

Chino Basin Watermaster
Partners in Basin Management

Delineation of Groundwater Contamination
Plumes and Point Sources of Concern

Exhibit 5-15

Exhibit 24

Exhibit 15
Limitations, Compliance Metrics, and Compliance Actions for the Chino Basin Maximum-Benefit Commitments

Source Waters with Water Quality Limitations in the Chino Basin SNMP	Water Quality Limitation	Compliance Metric	Action Limit	Required Compliance Action when Compliance Metric Exceeds the Action Limit
IEUA Recycled Water (Commitment 6)	TDS: 550 mgl	The agency-wide, 12-month running-average concentration	When the compliance metric exceeds 545 mgl for three consecutive months	Submit to the Regional Board for approval a plan and schedule to comply with the water quality limitations within 60 days.
	TIN: 8 mgl		When the compliance metric exceeds 8 mgl in any month	
Combined water sources used for managed recharge: storm, imported and recycled waters (Commitment 7)	TDS: 420 mgl Nitrate: 5 mgl	The five-year, volume-weighted running-average concentration of all sources of managed recharge	TDS: 420 mgl Nitrate: 5 mgl	Prepare a salt offset plan to mitigate salt loading from recharge greater than 420 mgl. Offsets could include desalting of recycled water or groundwater, or increased recharge of low-TDS waters.
Groundwater (Commitment 9)	TDS: 420 mgl	The volume-weighted concentration of groundwater in the Chino North GMZ (computed every three years)	TDS: 420 mgl	Reduce the TDS concentration of IEUA recycled water to comply with the maximum-benefit TDS objective or prepare a salt offset plan to mitigate loading from the use of recycled water than 420 mgl.
	Nitrate: 5 mgl		n/a	This action limit was already exceeded when the objective was established. So long as all other maximum benefit commitments are met, no compliance action is required.

Exhibit 25

117°40'0"W

117°20'0"W

34°0'0"N

New advanced water treatment plant and conveyance facilities to be located within the Chino Basin.

Expand capacity by up to 6,000 afy

San Gabriel Mountains

Cucamonga Basin

Claremont Heights Basins

Pomona Basin

Rialto-Colton Basin

Chino Basin

Arlington Basin

La Sierra Hills

Jurupa Mountains

Puente Hills

Chino Hills

Prado Basin

Temescal Basin

Riverside Basins

San Bernardino County

Orange County

Riverside County

Los Angeles County

Indian Hill Fault

Red Hill Fault

San Jose Fault

Rialto-Colton Fault

San Jacinto Fault

Pomona WRF

RP-4

RP-1

RP-5

CCWRF

WRCRWA

Corona WRF-1

Corona WRF-2

RIX

Colton

San Bernardino

Riverside

Foothill Blvd

Holt Blvd

Riverside Dr

Mission Blvd

Bellegrave Ave

Limonite Ave

Van Buren Blvd

Victoria Ave

Euclid Ave

Haven Ave

Etiwanda Ave

Central Ave

Riverside Ave

Waterman Ave

Day Ck

San Antonio Ck

Cucamonga Ck

Chino Ck

Lytle Ck

Santa Ana River

Recycled Water Treatment Plant*

**New treatment train at one or more IEUA plants to reduce the TDS concentration to levels to ensure compliance with its permits*

Recycled Water Distribution System

Desalter Treatment Facility

Chino Basin Desalter Well

OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Faults

- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain

Geology

Water-Bearing Sediments

- Quaternary Alluvium

Consolidated Bedrock

- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks



Prepared by:

WEI
Wildermuth Environmental, Inc.

Author: SO
Date: 12/20/2019
File: 25.) Exhibit D-1_RW Treatment Plants.mxd

0 1 2 3 4 5 Miles

0 2 4 6 8 Km

Prepared for:

OBMP 2020 Update

Scoping Report

Chino Basin Watermaster — Partners in Basin Management

Recycled Water Treatment Plants and Discharge Points

Exhibit D-1

Exhibit 26

Exhibit 16

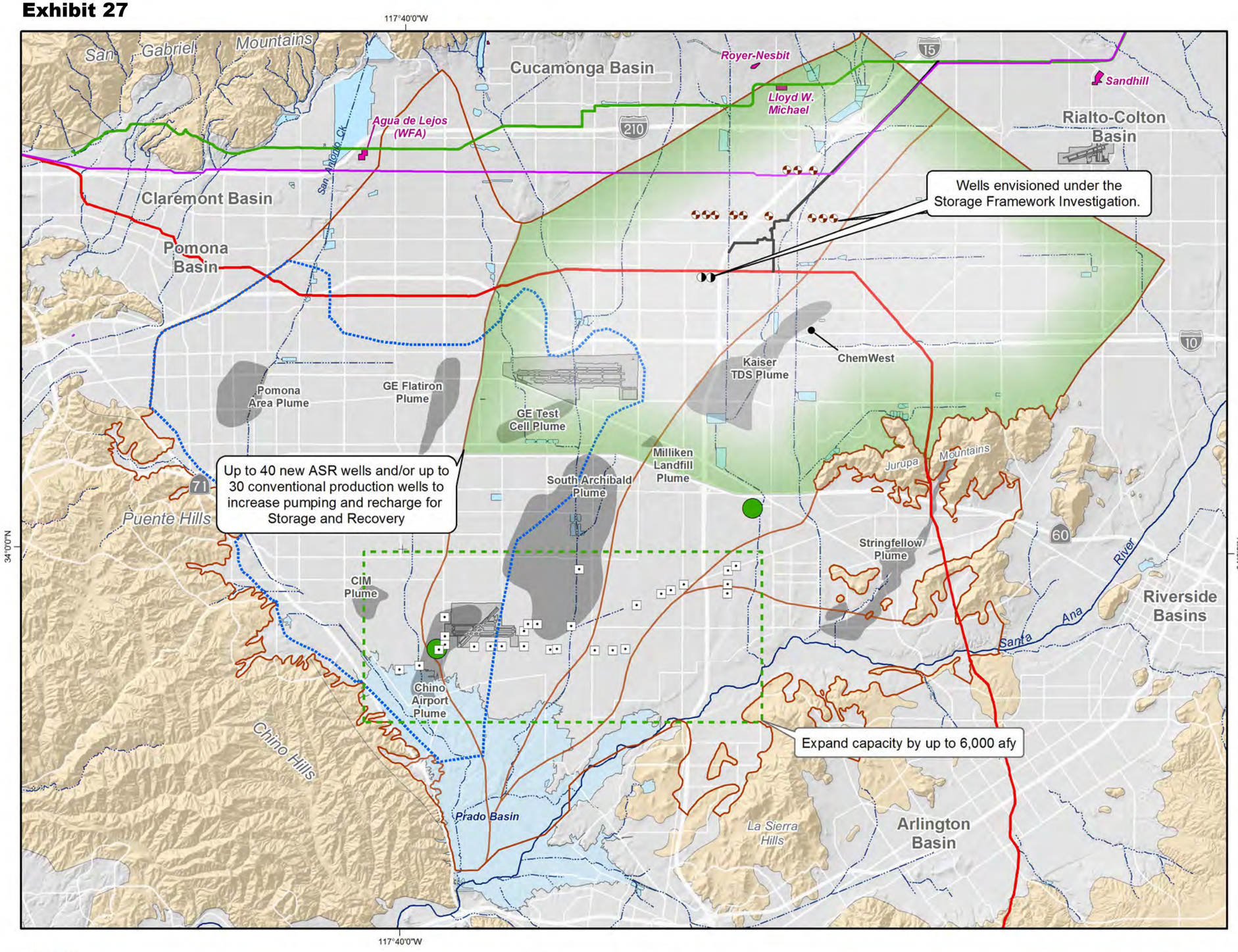
Ending Balances in Managed Storage in the Chino Basin[1]

(af)

Fiscal Year ending June 30	Appropriative Pool				Overlying Non-Agricultural Pool			Total Managed Storage by Parties	Dry Year Yield Program Storage	Total Managed Storage
	Carryover	Excess Carryover	Local Supplemental Storage	Subtotal	Carryover	Excess Carryover	Subtotal			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) = (7) + (4)	(9)	(10) = (9) + (8)
2000	28,911	170,342		199,253	6,541	31,031	37,572	236,825	0	236,825
2001	15,940	77,907	92,813	186,660	5,301	32,330	37,631	224,291	0	224,291
2002	13,521	70,103	87,801	171,425	5,285	33,727	39,012	210,437	0	210,437
2003	18,656	71,329	81,180	171,165	6,743	36,850	43,593	214,758	7,738	222,496
2004	21,204	70,503	80,963	172,670	7,177	40,881	48,058	220,728	26,300	247,028
2005	21,289	76,080	88,849	186,218	7,227	45,888	53,115	239,333	38,754	278,087
2006	32,062	56,062	86,170	174,294	7,227	49,178	56,405	230,699	58,653	289,352
2007	34,552	50,895	83,184	168,631	7,084	51,476	58,560	227,191	77,116	304,307
2008	41,626	83,962	81,520	207,108	6,819	45,248	52,067	259,175	74,877	334,052
2009	42,795	101,908	79,890	224,593	6,672	46,600	53,272	277,865	34,494	312,359
2010	41,263	120,897	90,133	252,293	6,934	47,732	54,666	306,959	8,543	315,502
2011	41,412	146,074	98,080	285,566	6,959	49,343	56,302	341,868	0	341,868
2012	42,614	209,981	116,138	368,733	6,914	13,993	20,907	389,640	0	389,640
2013	39,413	225,068	116,378	380,859	7,073	15,473	22,546	403,405	0	403,405
2014	41,708	224,496	123,484	389,688	6,478	12,812	19,290	408,978	0	408,978
2015	40,092	239,517	127,994	407,603	6,823	12,225	19,048	426,651	0	426,651
2016	39,733	248,013	131,522	419,267	7,195	9,949	17,144	436,411	0	436,411
2017	38,340	260,682	143,552	442,575	7,226	8,292	15,519	458,093	6,315	464,408
2018	34,582	254,221	155,018	443,821	7,198	10,775	17,973	461,795	41,380	503,174
2019	38,605	279,033	166,406	484,044	7,227	12,004	19,231	503,275	45,969	549,244

1 -- WEI. (2019). Draft Storage Management Plan.

Exhibit 27



- Desalter Treatment Facility
- Chino Basin Desalter Well
- Devil Canyon/ Azusa Pipeline
- Upper Feeder
- Rialto Pipeline
- Etiwanda Pipeline
- Imported Water Treatment Plant
- Groundwater Contamination Plumes

Facilities and Related Features to Facilitate Op Band 3

- New ASR Well
- New Extraction Well
- OBMP Management Zones

Geology

- Area of Subsidence Concern

Water-Bearing Sediments

- Quaternary Alluvium

Consolidated Bedrock

- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks



Prepared by:

WEI Wildermuth Environmental, Inc.

Author: GAR
Date: 12/20/2019
Document Name: 27.) MZ-2_3_ASR Additions

0 1 2 3 4 5 Miles
0 2 4 6 8 KM

Prepared for:

Storage Framework Investigation

Chino Basin Watermaster — Partners in Basin Management

Siting of New ASR and Extraction Wells to Facilitate Storage and Recovery Programs in Op Band 3

Figure 6-2a

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Energy
☐ Geology / Soils	☒ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☒ Hydrology & Water Quality	☐ Land Use / Planning	☐ Mineral Resources
☐ Noise	☐ Population / Housing	☐ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☒ Utilities / Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

☐	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☐	Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☒	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Tom Dodson & Associates — Prepared by

February 7, 2020 — Date



Lead Agency (signature)

February 7, 2020 — Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☒	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☒	☐	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

SUBSTANTIATION

I.1 Environmental Setting

The Chino Basin is one of the largest groundwater basins in Southern California and has an estimated unused storage capacity of over 1,000,000 acre-feet. The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin consists of an alluvial valley that is relatively flat from east to west, sloping from north to south at a one to two percent grade. Basin elevation ranges from about 2,000 feet adjacent to the San Gabriel foothills to about 500 feet near Prado Dam. As shown in Exhibit 2, the Chino Basin is bounded:

- on the north by the San Gabriel Mountains and the Cucamonga Basin;
- on the east by the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills;
- on the south by the La Sierra Hills and the Temescal Basin; and
- on the west by the Chino Hills, Puente Hills, and the Spadra, Pomona, and Claremont Basins.

Scenic Resources

The Chino Basin is characterized primarily by dense urbanization including residential, commercial and industrial land uses interspersed with undeveloped hilltops and distant mountain vistas. Valuable scenic resources within the service area are found sporadically on the valley floor and are visible from specific viewpoints on the valley floor. In contrast the surrounding hilltops and mountain scenic vistas are generally available from all locations within the service area, with the majestic view of the San Gabriel Mountains forming the primary background vista within the area.

San Bernardino County

The most significant visual resources in the unincorporated County are the hills and mountains, pastoral landscapes in and within view of the service area and the Prado Basin wetlands that occur in the southern portion of the Basin. The predominant scenic vistas in the service area, as identified in local General Plans (Cities of Upland, Montclair, Chino Hills, Chino, Ontario, Rancho Cucamonga, Fontana, and Counties of San Bernardino) include: views of the San Gabriel, San Bernardino and Santa Ana Mountains; Chino Hills, Jurupa Hills, Puente Hills and San Jose Hills; Tonner Canyon; Prado Basin; and the remaining pastoral

Chino farmlands. The Santa Ana River, Mill Creek (the southern portion of Cucamonga Creek), Chino Creek, the southern portion of San Antonio Creek, and the Prado Basin provide vegetated natural settings including riverine and wetland features bordering the southern edge of the service area.

The County of San Bernardino General Plan identifies State Route (SR) 71, within the unincorporated areas, as a local scenic route. In addition, the following Eligible State Scenic Highways are located within the southwestern portion of the service area: SR 142 (south of SR 71) and SR 71 (south of SR 83), and SR 91 (south of SR 71). Eligible State Scenic Highways are highways that have been identified and recommended for designation, but are not officially designated by the California Scenic Highway Mapping System (Caltrans, 2019).

Chino

The City is relatively flat as it lies on the southwestern alluvial valley floor of the Chino Basin. The City of Chino has views of the San Gabriel and San Bernardino Mountains to the north, the Jurupa Hills and Santa Ana Mountains to the east and south, respectively, and the Chino Hills to the west. The Chino General Plan does not identify specific scenic resources or local roadways of importance within its jurisdiction (City of Chino, 2010). The southern portion of the City contains pastoral agricultural areas that are slowly transitioning to suburban residential neighborhoods, some supporting commercial areas, and industrial warehouse areas. The southern-most portion of Chino is located below the 536 elevation that transitions into unincorporated territory, which constitutes the 100-year flood hazard area occupied by a mix of agricultural areas and Prado Basin, the largest riparian woodland remaining in southern California.

Chino Hills

Grass covered oak savannah woodland hillsides dominate the western and southern portion of the community and are a key aspect to the area's visual character. The hills are visible from nearly every neighborhood and major street within this community. Single-family neighborhoods penetrate into the hills in the northern half of the City, while most of the southern half is preserved as undeveloped open space. The principal component of the southern area is the Chino Hills State Park; a wilderness park of rangeland, oak woodlands, and chaparral. The Chino Hills General Plan identifies city and state eligible and officially designated scenic highways, as well as the following Exceptionally Prominent Ridgelines as important scenic resources and defers to Chapter 16 of the Municipal Code of development standards and policies regarding visual resources:

- Chino Valley Freeway (SR 71);
- Carbon Canyon Road (SR 142);
- Butterfield Ranch Road;
- Soquel Canyon Parkway;
- Chino Hills Parkway;
- Peyton Drive;
- Woodview Road;
- Eucalyptus Avenue;
- Tonner Canyon Road; and
- Grand Avenue.

Fontana

The central portion of the City of Fontana is located on an alluvial plain that gently slopes south from the San Gabriel Mountains. The northern portion of the City extends into the San Gabriel foothills and the southern portion of the City extends into the northern-edge of the Jurupa Hills. The topography varies from characteristically flat in the central portion of the City, to gently to steep sloping hillsides in the San Gabriel foothills and Jurupa Mountains to the south. Views of the mountains at the northern and southern borders of the City are an important component of the City's aesthetic quality. The Fontana General Plan discusses the importance of preserving the character of the city, downtown landmarks and view of nearby hills and mountains but does not identify specific scenic resources or local scenic roadways within its jurisdiction (City of Fontana, 2003).

Montclair
According to the Montclair General Plan, the most dominant visual element within the community is the I-10 Freeway which is elevated above existing grade for that entire segment between Mills Avenue (on the west) and Benson Avenue (on the east). The I-10 Freeway physically divides northern Montclair (which is predominately allocated to commercial uses) from the remainder of the community (which is predominately allocated for residential uses). Physical access between these segments is only available along four roadways that link north to south (i.e., Mills Avenue, Monte Vista Avenue, Central Avenue, and Benson Avenue). Many of the major roadways within the community lack a distinct visual character that promotes a sense of identity for the City, enhances the driving experience, links the roadway to adjoining uses, or softens the urban edge between the automotive and non-automotive domains (City of Montclair, 1999).

Ontario
The dominant visual characteristic in the City of Ontario is the San Gabriel Mountain range to the north. Other visual characteristics include the Jurupa Mountains and the San Bernardino Mountains to the east, the Santa Ana Mountains to the south, and Chino Hills to the southwest. Ontario is located in a highly developed, urban/suburban area with developed land uses (residential, commercial, industrial, agricultural, recreational, public, institutional, airport, and utility and transportation easements) located throughout the City. The City of Ontario is served by three freeways: I-10, I-15, and SR-60. I-10 and SR-60 traverse the northern and central portion of the City, respectively, in an east–west direction. I-15 traverses the northeastern portion of the City in a north–south direction. These segments of I-10, I-15, and SR-60 have not been officially designated as scenic highways by the California Department of Transportation. However, the Ontario General Plan identifies the Euclid Corridor and the Mission Boulevard Corridor as the primary scenic resources in the City of Ontario (City of Ontario, 2009).

Pomona
Though Pomona is largely built out, large areas of natural, undeveloped lands remain as open hillsides that are visible from all over the City. These hillsides are essential parts of Pomona's character and identity. They include Westmont Hill and Elephant Hill, remaining natural hillsides abutting S.R. 60, and master-planned areas retaining strategic "fingers" of open space such as in the Phillips Ranch development. One of the City's most valuable livability assets is its spectacular natural setting. By minimizing the visual prominence of hillside development, the City will protect features such as ridgelines, grasslands, stands of trees, and individual mature trees that contribute to Pomona's natural beauty (City of Pomona, 2014).

Rancho Cucamonga
The City of Rancho Cucamonga lies on the sloping alluvial plain of the Basin and extends up to the foothills of the San Gabriel Mountains. As the City's most prominent natural feature, the mountains run east-west and form an impressive visual background to the north. The orientation of the roadway network and elevation change (north-south) provides views of the foothills, the San Gabriel Mountains, and the San Bernardino National Forest. From the foothill area, long, open vistas to the south provide outstanding views of the Chino Basin to the Chino Hills and Santa Ana Mountains. These north-south views are particularly prominent along the straight alignments of Archibald, Haven, and Etiwanda Avenues. Additional scenic resources include the remaining stands of eucalyptus windrows, vineyards, and natural vegetation associated with flood control lands and utility corridors. Views of these resources are most prominent from the roadways and in certain locations from places of work and residences.

The Rancho Cucamonga General Plan identifies specific roadways as Special Boulevards and Historic and Special Design Streets. Special Boulevards are designated to incorporate extensive landscape setback areas, and denote where landscape and hardscape design, trails, and setback standards will be master planned and implemented and include all major arterials (divided and undivided), as well as several important secondary and collector segments. Historic and Special Design Streets are defined as streets worthy of special treatment due to their historic character and include: Etiwanda Avenue, Hillside Road, Hellman Avenue, and Foothill Boulevard (City of Rancho Cucamonga, 2010).

Upland
The City of Upland is located on the upper alluvial fan of San Antonio Creek, where the City extends into the San Gabriel Mountain foothills. The topography of the City is fairly flat sloping gradually north toward

the San Gabriel Mountains. Scenic resources in the City include Foothill Boulevard and Euclid Avenue north of Interstate 10. The Upland General Plan designates Foothill Boulevard and Euclid Avenue as scenic roadways (City of Upland, 2015).

County of Riverside
The County of Riverside has adopted General Plan Policies to deal with lighting and glare impacts to the Mount Palomar Observatory. Projects within a 45-mile radius of the Observatory must adhere to special standards relating to the use of low-pressure sodium lights. Additionally, it is policy of the County of Riverside to require that all new developments shield and direct lighting sources downward to minimize conflicts with adjacent land uses.

Eastvale
Eastvale is located in northwestern Riverside County, California, within the Inland Empire region of Southern California. Its boundaries extend from Hellman Avenue to the west (the San Bernardino county line), Philadelphia Avenue to the north (also the San Bernardino county line), the Santa Ana River and the City of Norco to the south, and Interstate 15 to the east. The City of Eastvale General Plan identifies how the design of new development also has an impact on how scenic vistas, natural areas (such as the Santa Ana River), and other desirable views are seen and appreciated. Good design ensures that desirable views are maintained and enhanced (City of Eastvale, 2012).

Jurupa Valley
Jurupa is located in northwestern Riverside County, California, within the Inland Empire region of Southern California. The topography of the City is varied with several hills along the northern boundary and center of the City. The City's quilted pattern of hills, valleys, and slopes provides a variety of scenic resources. Examples include the Jurupa Mountains, the Santa Ana River, and the Pedley Hills. The City's General Plan states the goal of preserving the City's scenic resources, including mountains, hills, ridgelines, rock outcroppings, canyons, mature trees, the Santa Ana River and floodplain, riparian corridors, agricultural fields, views of scenic resources from vista points or along scenic street or highway corridors (City of Jurupa, 2017).

I.2 Impact Discussion

Impacts are determined through assessing the project's potential to exceed significance thresholds outlined in the CEQA Guidelines Appendix G.

Except as provided in Public Resources Code Section 21099, would the project:

a. Have a substantial adverse effect on a scenic vista?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The construction of the proposed wells and monitoring devices would require temporary ground-disturbance within the project sites. While the wells could require approximately one-half acre of disturbance, the flow meters would be installed within streams and channels to monitor surface water, and as such, the area of disturbance would be minimal. The presence of construction equipment and related construction materials would be visible from public vantage points such as open space areas, sidewalks, and streets, but it would not affect any scenic views or vistas. Construction of the proposed wells and monitoring devices would not permanently affect views or scenic vistas. Thus, impacts would be less than significant.

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, though in most cases, the area a well would occupy would be about 10 feet by 10 feet. Many of the

wells would be enclosed in a small structure no larger than the size of a storage shed, which is designed to minimize noise from the pumps required to operate a well. As such, it is anticipated that the majority of the proposed wells would individually have small footprints and be low profile. Furthermore, the proposed extensometers would be installed within wells, and as such would not occupy any greater space than identified above, and the proposed flow meters would be located at or below ground level within streams and channels to monitor surface water. Therefore, given the small footprint required to install and operate the facilities under this Project Category, it is anticipated that any impacts to scenic vistas would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

The construction of the collection system facilities, conveyance systems and ancillary facilities would require temporary ground-disturbance almost wholly within existing roadway/public rights-of-way. The presence of construction equipment and related construction materials would be visible from public vantage points such as open space areas, sidewalks, and streets, but it would not adversely affect any scenic views or vistas. Construction of the conveyance pipelines and ancillary facilities would not permanently affect views or scenic vistas. Thus, impacts would be less than significant.

The conveyance pipelines would be placed underground and would not be visible once construction is complete. Implementation of conveyance system upgrades would not permanently alter a scenic vista, and as such, impacts to scenic vistas would be less than significant. It is anticipated that the majority of the proposed ancillary facilities would individually have small footprints and be low profile; for instance, a booster pump station would occupy less space and be no taller than a small residential home. Ancillary facilities may also include the construction of reservoirs; given that the location of such reservoirs is presently unknown, it is possible that the development of above ground, steel storage reservoirs could affect views or designated scenic vistas, particularly along hillsides where the majority of scenic views are located. The footprints of reservoirs are typically small and unobtrusive; furthermore, reservoirs are typical along hillsides due to the elevation required to distribute stored water. However, mitigation is provided below to minimize impacts to scenic vistas from the development of steel or concrete aboveground storage reservoirs.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The construction of new and improvement of existing storage basins at existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would require temporary ground-disturbance within the project sites. The presence of construction equipment and materials may be visible from public vantage points, but it would not permanently affect designated scenic views or vistas. Once in operation, the proposed storage basins would be consistent with the existing setting. Furthermore, storage basins are typically flat, below the ground surface, earthen excavations with berms. Operation of the storage basins would not obstruct or alter existing views of scenic vistas. Thus, impacts would be less than significant.

Mills Wetlands are located within the City of Chino, which has not identified any specific scenic resources. However, this area represents a pastoral viewshed within the City, particularly given its proximity to the Chino Preserve, which is accessed often by the public for hiking purposes. As such, the transformation of

this site to contain storage ponds would require mitigation to ensure that impacts to scenic vistas remain less than significant.

The construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites would, like those at existing facilities, require temporary ground-disturbance within the project sites that have generally been previously disturbed. The presence of construction equipment and materials would be visible from public vantage points such as open space areas, sidewalks, and streets, but it would not permanently affect designated scenic views or vistas. Operational storage basins are typically flat, below the ground surface, earthen excavations with berms. Operation of the recharge basins would not obstruct or alter existing view of scenic vistas. The project would include aboveground ancillary facilities associated with the basins. Thus, impacts would be less than significant.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts. As such, no impacts to scenic vistas can result.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The aesthetic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

The construction of the facilities proposed under this Project Category would require temporary ground-disturbance within existing treatment facilities. The presence of construction equipment and materials would be visible from public vantage points such as open space areas, sidewalks, and streets, but it would not permanently affect designated scenic views or vistas. Thus, impacts would be less than significant.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities. The upgrades would have a small footprint and would not substantially reduce the views in the area. Additionally, the additional facilities and structures required to implement the proposed upgrades would be consistent with that which exists at present at the project sites. Therefore, it is anticipated that impacts to scenic vistas in the vicinity of these project sites would be less than significant.

Similar to upgrades and improvements to existing treatment facilities, groundwater treatment facilities at well sites would occur within a site containing one or more wells. As such, the addition of groundwater treatment facilities would be consistent with that which exists at present at the well sites. Furthermore, the addition of groundwater treatment facilities at well sites upgrades would have a small footprint and would not substantially reduce the views in the area. Therefore, it is anticipated that impacts to scenic vistas in the vicinity of these project sites would be less than significant.

The location for regional groundwater treatment facilities and groundwater treatment facilities near well sites is presently unknown. Groundwater treatment facilities near well sites would occupy an area of about 0.5 acre to 2 acres, and would not consist of high-profile structures that would impede views. Much like a booster pump station, this type of facility would individually have a small footprint, be low profile, and be no taller than a residential home. Therefore, it is anticipated that impacts to scenic vistas in the vicinity of these project sites would be less than significant.

A regional groundwater treatment facility would occupy a space of no more than 20 acres, and would be visually comparable to a small warehouse structure, with various tanks and ancillary components that may or may not be enclosed within a structure. Given that the locations for facilities of this type are unknown, it is not known whether such a facility would cause a significant impact to a scenic vista. As such, mitigation to ensure that further CEQA analysis is completed prior to implementation of this type of project shall be implemented, and is provided below.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

AES-1: ***Proposed facilities shall be designed in accordance with local design standards and integrated with local surroundings. Landscaping shall be installed in conformance with local landscaping design guidelines as appropriate to screen views of new facilities and to integrate facilities with surrounding areas.***

AES-2: ***The Mills Wetland Storage Basin Project shall be designed to include landscaping commensurate with the existing pastoral setting that exists at this site at present.***

AES-3: ***Future regional groundwater treatment facilities and other proposed facilities defined within the OBMPU at unknown locations shall either (1) Be located outside of scenic viewsheds identified in the General Plan or Municipal Code corresponding to a proposed location for a future facility, or (2) Undergo subsequent CEQA documentation to assess potential impacts from locating a future facility in an area that may contain scenic resources.***

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure (MM) **AES-1** would ensure that the proposed facilities' contribution to cumulative scenic vista impacts would be reduced to less than cumulatively considerable by meeting the local design and landscape standards. Furthermore, MM **AES-2** would ensure that the pastoral setting that presently exists at the Mills Wetland site is not lost due to implementation of the proposed storage basin project; this will reduce scenic vista impacts to a level of less than significant. The implementation of MM **AES-3** will ensure that impacts to scenic resources from the implementation of future regional groundwater treatment facility projects will be avoided or assessed further in future CEQA documentation.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are roadways classified as eligible for state scenic highway status within the Chino Basin; however, there are no officially designated scenic highways. Eligible state scenic highways include: State Route (SR) 142 south of SR 71 and SR 71 south of SR 83 (Caltrans, 2016). The most significant visual resources are the hills and mountains surrounding the Chino Basin and the pastoral landscape that occurs in the southern portion of the Chino Basin. The activity with the highest potential to conflict with local agency design guidelines is construction disturbance of the landscape. Such disturbance can be reduced to an acceptable level by landscaping or revegetating disturbed areas (pipelines, recharge basins, structural developments, composting facilities, and above ground wastewater treatment facilities) either with landscaping that is consistent with local design guidelines or with native vegetation consistent with that which occurs naturally in the area.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, though in most cases, the area a well would occupy would be about 10 feet by 10 feet; therefore, it is anticipated that the majority of the proposed wells would individually have small footprints and be low profile. Furthermore, the proposed extensometers would be installed within wells, and as such would not occupy

any greater space than identified above, and the proposed flow meters would be located at or below ground level within streams and channels to monitor surface water. Though the precise location for future wells is presently unknown, these facilities will be located within the Chino Basin, which, as stated above, does not contain any designated State scenic highways. As such, the development of the facilities included in this Project Category would have no potential to impact scenic resources within a State scenic highway corridor. However, given that the locations for the proposed wells are largely unknown, mitigation is required to ensure that: (1) Should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, and (2) The specific location selected for a well shall avoid rock outcroppings and other scenic resources. With the implementation of mitigation identified below, impacts to scenic resources would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Conveyance pipelines would be placed underground and would not be visible once construction is complete. Though the precise location for conveyance facilities is presently unknown, these facilities will all be located below ground, and will be located within the Chino Basin, which, as stated above, does not contain any designated State scenic highways. Therefore, the development of conveyance facilities would have no potential to impact scenic resources within a State scenic highway corridor. It is anticipated that the majority of the proposed ancillary facilities would individually have small footprints. However, given that the locations of such facilities are presently unknown, it is possible that the development of ancillary facilities may impact other scenic resources such as rock outcroppings or trees. As such, mitigation is provided to ensure that: (1) Should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, and (2) The specific location selected for ancillary facilities shall avoid rock outcroppings and other scenic resources or shall require a subsequent CEQA determination. With the implementation of mitigation identified below, impacts to scenic resources would be less than significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Facilities located within existing storage basins at existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would be consistent with the existing setting. Storage basins are typically flat, below the ground surface, earthen excavations with berms. The development of such facilities would have no potential to impact scenic resources within a State scenic highway corridor because no designated State scenic highways exist within Chino Basin. Based on the location of the new storage basins and improvements to existing storage basins within existing facilities, impacts to scenic resources are anticipated to be less than significant. However, mitigation is provided to minimize impacts to any trees located within these sites that may require removal.

The construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites would, like those at existing facilities, be located within the Chino Basin, which, as stated above, does not contain any designated State scenic highways. Therefore, the development of new storage facilities would have no potential to impact scenic resources within a State scenic highway corridor. Given that the location for the new storage basins are presently known, a site reconnaissance has determined that no scenic resources exist within these known sites. However, given that the locations of the remaining facilities within this Project Category are presently unknown, it is possible

that the development of storage facilities may impact other scenic resources such as rock outcroppings or trees. As such, mitigation is provided to ensure that: (1) Should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, and (2) The specific location selected for a storage facility shall avoid rock outcroppings and other scenic resources or shall require a subsequent CEQA determination. With the implementation of mitigation identified below, impacts to scenic resources would be less than significant.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts other than the facilities discussed in the preceding text which are intended to support this expansion. As such, no impacts to scenic resources can result.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The aesthetic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities, and as such, these sites are not anticipated to contain significant scenic resources. Therefore, impacts to scenic resources from implementation of upgrades and improvements to existing facilities would be less than significant.

Similar to upgrades and improvements to existing treatment facilities, groundwater treatment facilities at well sites would typically occur within a site containing one or more wells. As such, the addition of groundwater treatment facilities would be consistent with that which exists at present at the well sites, and as such, these sites are not anticipated to contain significant scenic resources. Therefore, impacts to scenic resources from implementation of improvements to existing or construction of new groundwater treatment facilities at existing well sites would be less than significant.

The location for regional groundwater treatment facilities and groundwater treatment facilities near well sites is presently unknown. Groundwater treatment facilities near well sites would occupy an area of about 0.5 acre to 2 acres, and would not typically consist of high-profile structures that would impede views. A regional groundwater treatment facility would occupy a space of no more than 20 acres, and would be visually comparable to a small warehouse structure, with various tanks and ancillary components that may or may not be enclosed within a structure. Given that the locations for facilities of this type are unknown, it is not known whether such treatment facilities would cause a significant impact to scenic resources. As such, mitigation is provided to ensure that: (1) Should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, and (2) The specific location selected for a treatment facility shall avoid rock outcroppings and other scenic resources or shall require a subsequent CEQA determination. With the implementation of mitigation identified below, impacts to scenic resources would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

AES-4: Should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, municipal code, or other local regulations. If no tree ordinance exists within the local jurisdiction, and a project will remove healthy trees as defined by a qualified arborist, (1) the implementing agency

shall replace all trees removed at a 1:1 ratio, and (2) The specific location selected for a well shall avoid rock outcroppings and other scenic resources. If this cannot be accomplished a second tier CEQA evaluation shall be completed.

AES-5: ***Future proposed facilities defined within the OBMPU at unknown locations shall either (1) Be located within sites that avoid rock outcroppings and other scenic resources, or (2) Undergo subsequent CEQA documentation to assess potential impacts from locating a future facility in an area that may contain scenic resources.***

Level of Significance After Mitigation: Less Than Significant.

The implementation of Mitigation Measure (MM) **AES-4** would ensure that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a level of less than significant. Furthermore, MM **AES-5** would ensure that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof.

c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?

Though the presence of agriculture is still prevalent within parts of the Chino Basin, the overall Chino Basin would be characterized as "an urbanized area." As such, the following will evaluate whether the project will conflict with applicable zoning or other regulations governing scenic quality.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, though in most cases, the area a well would occupy would be about 10 feet by 10 feet; therefore, it is anticipated that the majority of the proposed wells would individually have small footprints and be low profile. Furthermore, the proposed extensometers would be installed within wells, and as such would not occupy any greater space than identified above, and the proposed flow meters would be located at or below ground level within streams and channels to monitor surface water. Though the precise location for future wells is presently unknown, the facilities under this Project Category will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code, and to ensure that the proposed wells will conform with design requirements established by local jurisdictions.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Conveyance pipelines would be placed underground and would not be visible once construction is complete. Though the precise location for conveyance facilities is presently unknown, these facilities will all be located below ground, and as such, will have no potential to conflict with applicable zoning or other regulations governing scenic quality.

It is anticipated that the majority of the proposed ancillary facilities would individually have small footprints. Though the locations of such facilities are presently unknown, the proposed ancillary facilities will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code,

and to ensure that the proposed ancillary facilities will conform with design requirements established by local jurisdictions.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Facilities located within existing storage basins at existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would be consistent with the existing setting. Storage basins are typically flat, below the ground surface, earthen excavations with berms. Further development of storage basins at established sites, which are typically developed at grade, would have no potential to conflict with applicable zoning or other regulations governing scenic quality.

The construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code, and to ensure that the proposed storage basins, flood MAR facilities, and MS4 facilities will conform with design requirements established by local jurisdictions.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts, and as such would have no potential to conflict with applicable zoning or other regulations governing scenic quality.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The aesthetic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities, and as such, would be consistent with the existing setting. Further development within these existing treatment facilities would have no potential to conflict with applicable zoning or other regulations governing scenic quality.

Similar to upgrades and improvements to existing treatment facilities, groundwater treatment facilities at well sites would occur within a site containing one or more wells. As such, the addition of groundwater treatment facilities would be consistent with that which exists at present at the well sites, and as such, further development at these sites is not anticipated to result in a conflict with applicable zoning or other regulations governing scenic quality.

The location for regional groundwater treatment facilities and groundwater treatment facilities near well sites is presently unknown. Groundwater treatment facilities near well sites would occupy an area of about 0.5 acre to 2 acres, and would not consist of high-profile structures that would impede views. A regional groundwater treatment facility would occupy a space of no more than 20 acres, and would be visually comparable to a small warehouse structure, with various tanks and ancillary components that may or may not be enclosed within a structure. Given that the locations for facilities of this type are unknown, the proposed ancillary facilities will be required to comply with the local jurisdiction zoning codes and any other

regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code, and to ensure that the proposed groundwater treatment facilities will conform with design requirements established by local jurisdictions.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

AES-6: OBMPU facility implementation will conform with design requirements established in the local jurisdiction planning documents, including but not limited to the applicable zoning code, except where such requirements conflict with the purpose or function of such facilities.

AES-7: When OBMPU above ground facilities are constructed in the future, the local agency design guidelines for the project site shall be followed to the extent that they do not conflict with the engineering and budget constraints established for the facility.

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure (MM) **AES-6** would ensure compliance with the applicable zoning code. Furthermore, MM **AES-7** would ensure that future facilities will conform with design requirements established by local jurisdictions.

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, though in most cases, the area a well would occupy would be about 10 feet by 10 feet; therefore, it is anticipated that the majority of the proposed wells would individually have small footprints and be low profile. Furthermore, the proposed extensometers would be installed within wells, and as such would not occupy any greater space than identified above, and the proposed flow meters would be located at or below ground level within streams and channels to monitor surface water. Though the precise location for future wells is presently unknown, the facilities under this Project Category will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code, and to ensure that the proposed wells will conform with design requirements established by local jurisdictions.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

The conveyance systems would not require nighttime lighting because they would be placed belowground. As a result, there would be no new sources of lighting as a result of conveyance facilities. No impacts related to light and glare would occur.

The ancillary facilities may include nighttime security lighting mounted to the buildings and/or structures. These new sources of lighting could result in significant light intrusion impacts onto adjacent land uses. The

proposed ancillary facilities would not include aboveground structures that would include uninterrupted expanses of glass or other highly-reflective construction material. Water storage reservoirs could be a source of glare due to highly reflective materials. Therefore, mitigation is provided below to minimize lighting and glare impacts related to ancillary facilities.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Storage basins located within existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would be consistent with the existing setting. Additional nighttime security lighting could be included with at these existing facilities; however, due to these facilities being located on relatively flat terrain, potential lighting impacts would be less than significant. The potential for glare from proposed storage basins containing water to affect specific residences and/or viewsheds for short periods of time is low and would not introduce substantial new sources of glare, and is therefore, less than significant.

Similar to the construction of storage basins within existing facilities, the construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites may also require additional nighttime security lighting; however, because these facilities will be located on relatively flat terrain, potential lighting impacts would be less than significant. The potential for glare from proposed storage basins containing water to affect specific residences and/or viewsheds for short periods of time is low and would not introduce substantial new sources of glare, and is therefore, less than significant.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts, and as such would have no potential to result in any light or glare impacts.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The aesthetic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities that contain lighting. The facilities are also located within an urban area developed with residential and commercial uses. Implementation of the proposed improvements could result in new exterior nighttime lighting for operational and security purposes within the existing treatment facilities. The increase in lighting within existing treatment facilities could result in spill over lighting onto residential and commercial uses. Therefore, mitigation to address the increased lighting is provided below.

Similar to upgrades and improvements to existing treatment facilities, groundwater treatment facilities at well sites would occur within a site containing one or more wells. Groundwater treatment facilities at well sites will have additional lighting beyond that which currently exists at each well site, and therefore to protect nearby light sensitive land uses from direct light and glare from new lighting, mitigation to address the increased lighting is provided below.

The proposed new regional groundwater treatment facilities and groundwater treatment facilities near well sites would require additional lighting. These facilities are not of a type that would be constructed within materials that would cause substantial glare, and as such no impacts are anticipated thereof. New exterior nighttime lighting for operational and security purposes is anticipated as a result of the development of these projects. The increase in lighting that would result from new regional groundwater treatment facilities and groundwater treatment facilities near well sites could result in spill over lighting onto residential and commercial uses. Therefore, mitigation to address the increased lighting is provided below.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

AES-8: ***Future OBMPU projects shall implement the following:***

- ***Use of low-pressure sodium lights where security needs require such lighting to minimize impacts of glare; Projects within a 45-mile radius of the Mount Palomar Observatory and located within Riverside County must adhere to special standards set by the County of Riverside relating to the use of low-pressure sodium lights.***
- ***The height of lighting fixtures shall be lowered to the lowest level consistent with the purpose of the lighting to reduce unwanted illumination.***
- ***Directing light and shielding shall be used to minimize off-site illumination.***
- ***No light shall be allowed to intrude into sensitive light receptor areas.***

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure (MM) **AES-8** would ensure that light and glare impacts from future structures associated with the OBMPU are minimized to a level of less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☒	☐	☐
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☒	☐	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☒	☐	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

SUBSTANTIATION

This section describes the environmental setting for agriculture and forestry resources, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed OBMPU, and mitigation measures to reduce those impacts to less than significant where required. Much of the information presented below is abstracted from the 2017 Facilities Masters Plan Program Environmental Impact Report with appropriate updates.

II.1 Environmental Setting

Regional Agriculture

According to the County's *2017 San Bernardino County Annual Crop Report 2017*, San Bernardino County had approximately 1,429,360 acres of non-irrigated and irrigated important farmlands in 2017, but has continued to see a decline in farmlands over the years adjacent to existing urban areas. Specifically, San

Bernardino County experienced significant urban growth since 2010, ranking tenth in the state for urban growth. Approximately 1,440 acres have been converted from agricultural to nonagricultural uses in San Bernardino County between 2010 and 2012. However, in 2017 San Bernardino County had 1,429,360 acres of irrigated and non-irrigated important farmland, for an increase of 42,025 acres over 2016.

According to the *2017 Annual Crop Report for San Bernardino County*, the gross value of agricultural production in San Bernardino County for 2017 totaled approximately $465 million, which equates to an increase of about 1.8 percent over 2016 production, primarily due to an increase in acreage used for livestock and poultry and nursery products. Despite continued conversion of agricultural land in the County to business and residential development, agriculture is still an integral component of the economy in San Bernardino County. Of this $465 million total, $366,013,000, or almost 80 percent of the agricultural value was produced in the southern portion of the Chino Basin.

The Chino Basin is located within the southwestern portion of the county, within an area historically containing significant agricultural resources; primarily dairy ranches located in the Chino, Chino Hills, and south Ontario areas of the Basin. Some of the historic dairy and agricultural operations in the Chino Basin have been converted to urban uses during the housing and industrial warehousing construction boom in the early part of this decade. **Figure II-1** shows the agriculture and forest land zones within San Bernardino County.

There are several parcels of land designated by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the southern portion of the Chino Basin, particularly in the southern portions of Ontario and Chino. Most of the Prime Farmland is located within the City of Chino, the City of Ontario, and Prado Regional Park area, which is located in the southwestern portion of the program area. California Department of Conservation (DOC) Important Farmland designations within the service area are shown on **Figure II-2**. Note the sparsity of important agricultural lands within the northern portion of the Chino Basin, north of the 60 Freeway.

Forestry

The San Bernardino National Forest is located just north of Upland, Rancho Cucamonga, Fontana, and portions of the unincorporated area San Bernardino County. The Chino Basin borders the San Bernardino National Forest, but it does not overlap with the National Forest (see Figure II-1). Public Resources Code (PRC) para. 12220(g) defines “Forest Land” as “land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Under this definition certain woodland areas within the Prado Basin may qualify as “forest land.”

II.2 Regulatory Framework

State

California Farmland Mapping and Monitoring Program

The California Department of Conservation, under the Division of Land Resource Protection, has established the Farmland Mapping and Monitoring Program (FMMP). The FMMP monitors the conversion of the state’s farmland to and from agricultural use. The map series identifies eight classifications and uses a minimum mapping unit size of 10 acres. The FMMP also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The FMMP maintains an inventory of state agricultural land and updates its “Important Farmland Series Maps” every two years (DOC, 2016b). Important farmlands are divided into the following five categories based on their suitability for agriculture:

Prime Farmland. Prime Farmland is land with the best combination of physical and chemical characteristics able to sustain long-term production of agricultural crops. This land has produced irrigated crops at sometime within the four years prior to the mapping date.

Farmland of Statewide Importance. Farmland of Statewide Importance is land that meets the criteria for Prime Farmland but with minor shortcomings such as greater slopes or lesser soil moisture capacity.

Unique Farmland. Unique Farmland has even lesser quality soils and produces the state's leading agricultural crops. This land is usually irrigated, but also includes non-irrigated orchards and vineyards.

Farmland of Local Importance. Farmland of Local Importance is land that is important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

Grazing Land. Grazing Land is land on which the existing vegetation is suited to the grazing of livestock.

Williamson Act
The California Land Conservation Act of 1965, also known as the Williamson Act, is designed to preserve agricultural and open space lands by discouraging their premature and unnecessary conversion to urban uses. Williamson Act contracts, also known as agricultural preserves, create an arrangement whereby private landowner's contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. The Chino Basin has no County Williamson Act contracts in place (DOC, 2016).

California Public Resources Code Section 12220(g)
The California Public Resources Code defines "forest land" under section 12220(g) as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Projects are subject to this code if there are any potentially significant changes to existing areas zoned as forest land.

California Public Resources Code Section 4526
The California Public Resources Code defines "timberland" as land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others. Projects may have significant impacts to timberland if the project conflicts with existing zoning.

California Government Code Section 51104(g)
The California Government Code defines "timberland production zone" under Section 51104(g) as an area which has been zoned pursuant to Sections 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h) of the Government Code 51104. Projects may significantly impact timberland resources if the project conflicts with existing areas zoned for timberland production.

California Land Evaluation and Site Assessment Model
The Land Evaluation and Site Assessment (LESA) is a point-based approach for rating the relative importance of agricultural land based upon specific measurable features.

The California LESA Model was developed to provide lead agencies with an optional methodology to ensure that potentially significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process (Public Resources Code Section 21095), including in CEQA reviews.

The California Agricultural LESA Model evaluates measures of soil resource quality, a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, the factors are rated, weighted, and combined, resulting in a single numeric score. The

project score becomes the basis for making a determination of a project's potential significance (DOC, 2016).

Local

The Chino Basin area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. The County of San Bernardino, City of Chino, and City of Ontario contain goals and policies regarding farmland preservation.

San Bernardino County General Plan
The General Plan identifies areas of prime and non-prime agricultural soils and operations to establish areas where agriculture and compatible uses may coexist with development, identified as Agriculture Land Use Zoning Districts, which include the following (County of San Bernardino, 2007):

- Areas with limited infrastructure facilities and where limited public improvements will be planned or developed in the next 20 years.

The Conservation Element of the San Bernardino General Plan includes the following goal and policy regarding agriculture that may be applicable to all project activities within the Chino Basin.

Goal CO 6: The County will balance the productivity and conservation of soil resources.

Policy CO 6.1: Protect prime agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and non-agricultural land development.

City of Chino General Plan, Open Space and Conservation Element
The City of Chino Open Space and Conservation Element includes the following goal and objectives regarding agriculture that may be applicable to all program activities within the IEUA service area:

Goal OSC-2: Connect Chino's residents to historic agricultural uses and support appropriate ongoing agricultural uses.

Objective OSC-2.1: Support links to Chino's agricultural history.
Objective OSC-2.2: Preserve and protect the remaining agricultural land in Chino.
Objective OSC-2.3: Minimize conflicts between agricultural and urban uses.

City of Ontario, Biological, Mineral, and Agricultural Resources Element
The City of Ontario, Biological, Mineral, and Agricultural Resources Element includes the following goal and policy regarding agriculture that may be applicable to all program activities within the IEUA service area:

Goal ER5: Protected high value habitat and farming and mineral resource extraction activities that are compatible with adjacent development.

Policy ER5-4: *Transition of Farms.* We protect both existing farms and sensitive uses around them as agricultural areas transition to urban uses.

Significance Criteria
The criteria used to determine the significance of impacts related to Agricultural and Forestry resources are based on Appendix G of the *CEQA Guidelines*. The proposed program would result in a significant impact to Agricultural and Forestry resources if it would:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract;

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));
d. Result in the loss of forest land or conversion of forest land to non-forest use.
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use; or

A discussion of the impacts and mitigation measures for the proposed program are presented below.

II.3 Impacts Discussion

a. Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The Chino Basin area historically contains significant agricultural resources; primarily dairy ranches and vegetable farms located in the southwestern portion of the County of San Bernardino. There are several areas of land designated by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Chino Basin area which includes portions of Riverside County (see Figures II-2 and II-3). Most of the important farmland in the Chino Basin is located within the City of Chino, the City of Ontario, and Prado Regional Park area, which is located in the southern portion of the program area. General Plan Land Use Maps for all cities will be provided in Attachment 1.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This project category includes development of ASR, injection, pumping, groundwater level and water quality monitoring wells; associated well housing, as well as monitoring devices such as flow meters and extensometers. These wells would be installed throughout the Chino Basin, but with an emphasis on new facilities north of State Highway 60.

With slightly less than 200 wells envisioned over the next 30 years to support the OBMPU and an estimated one-half acre of disturbance for each new well, approximately 100 acres of future disturbance will result from implementing these new facilities. Those new facilities located north of State Highway (SH) 60 will not cause the loss of any important farmland. Those located south of SH 60 have a potential to cause the loss of some important farmland soil resources. However, these well sites and support facilities are rarely required to be installed at a specific location, so mitigation is available to minimize future Category 1 facility impacts to such resources in the southern portion of the Basin.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of an estimated 550,000 LF of new pipelines, booster pump stations, reservoirs, and supporting equipment. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas. Again, all Project Category 2 facilities north of SH 60 will not cause the loss of or adverse impact to important farmland resources. Most of the new facilities south of the SH 60 are also expected to be installed within public ROWs. In addition, in most cases water wells can be moved short distances to avoid conflicts with site specific resources, which can usually allow avoidance of significant farmland/soil resources. However, in the southern portion of the Basin some conveyance facilities and support equipment may be required to be located within important farmland areas resulting in a potentially significant impact to such resources. Where this occurs mitigation will be implemented to avoid or compensate for such impacts.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8-9)
This category includes the construction of 310 acres of new storage basins, including new basins and modifications/improvements to existing basins. It includes the use of up to 200 acres of agricultural land to support flood MAR facilities, new MS-4-compliance facilities and expansion of the maximum storage space (safe storage capacity) to be used in the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between

this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

As indicated in the preceding Project Category discussions, all Project Category 3 facilities north of SH 60 will not cause the loss of or adverse impact to important farmland resources. In contrast several of the proposed storage basin facilities will be located in the southern Chino Basin (south of SH 60) and will be located within important farmland areas resulting in a potentially significant impact to such farmland resources. This includes several hundred acres of important farmland shown on Figure II-2 on Chino Institute for Men (CIM) property; farmland also occurs adjacent to the Lower Cucamonga Creek Basins; and farmland occurs in the vicinity of the proposed Mill Creek basin. Within existing basins, modifications will not adversely impact important farmlands. To offset the impacts to important farmland in the southern Chino Basin which may remove more than 100 acres of important farmland from production, projects can compensate for such impacts to farmland resources by participating in important farmland mitigation banks, either ones created in the local area or mitigation banks established in other areas of California. Mitigation is provided below to accomplish this.

The flooding of existing agricultural fields can be managed in a manner that can enhances agricultural activity, not cause adverse impacts. This can be done by using agricultural lands during periods of non-production (winter) and ensuring that the MAR activities do not diminish the quality of existing farmland productiveness. Mitigation is provided below to accomplish this.

Regarding other Category 3 projects, the increase in storage in the Chino Basin is not forecast to cause any adverse impact to important farmland either directly (such as removal from production) or indirectly through enhancing land values that could cause the transition of important farmland to other uses. Regarding MS-4 compliance facilities, such facilities are typically associated with managing surface runoff from urban development, not agricultural land, and implementation of programs to enhance MS4 facilities is not forecast to adversely impact any important farmland resources.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category include: upgrades at IEUA's existing Water Recycling Plants (WRPs, discussed in detail in IEUA's 2017 FMP PEIR); a new advanced water treatment plant; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters, new groundwater treatment facilities at or near existing well sites and at regionally located sites; and improvements to existing groundwater treatment facilities.

Again, all Project Category 4 facilities north of SH 60 will not cause the loss of or adverse impact to important farmland resources. Most of the new Category 4 facilities south of the SH 60 are also expected to be installed within disturbed areas that support existing public facilities, such as existing Desalter sites or existing well sites. If a regional water treatment facility must be constructed south of SH 60, it could impact important farmland. Mitigation is provided below to address any Category 4 facilities either through avoidance of important farmlands during site selection or through compensatory mitigation. Where this occurs, the mitigation will be implemented to avoid or compensate for such impacts.

Combined Project Categories
Proposed facilities could potentially be constructed on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (important farmland). Construction and operation of ancillary facilities could convert this land to non-agricultural use. Therefore, impacts would be potentially significant for all four Project Categories.

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

AGF-1 For all proposed facilities in the southern portion of the Chino Basin (south of SH 60), the potential for impact to important farmlands shall be determined prior to final site

election. If important farmland cannot be avoided and individually exceeds 5 acres or cumulatively exceeds 10 acres of important farmland lost to agricultural production over the life of the program, the agency implementing the project shall purchase compensatory mitigation in the form of comparable important farmland permanently conserved in either a local or State-approved important farmland mitigation bank at a mitigation ratio of 1:1. The acquisition of this compensatory mitigation shall be completed within one year of initiating construction of the proposed facility and verification shall be documented with the Chino Basin Watermaster.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis
The cumulative analysis for impacts to agriculturally important farmland resources involves the compilation of acreage all projects that occur within the southern portion of the Chino Basin by the Chino Basin Watermaster. Because agricultural land designated as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is limited and undergoing reduction within the Chino Basin, the loss of more than 10 acres over the life of the program in this area would be considered a significant cumulative impact. The proposed OBMPU projects that remove more than a cumulative 10 acres of important farmlands within the Chino Basin are potentially significant and impacts to important farmland greater than 10 acres would be considered cumulatively considerable.

*Cumulative Measure: Implementation of Mitigation Measure **AGF-1** is required.*

Level of Significance After Mitigation: Less than Significant

The implementation of Mitigation Measure (MM) **AGF-1** would ensure the proposed facilities' contribution to project specific or cumulative farmland impacts would be reduced to less than cumulatively considerable through implementation of MM **AGF-1**. If there is a determination of significance, then the implementing agency will either relocate and avoid the impact, or offset the loss by acquiring agricultural land conservation credits at a minimum ratio of 1:1.

b. Conflict with existing zoning for agricultural use or a Williamson Act contract?

All Project Categories
Based on the data available from the counties and the DOC, there is no land within the Chino Basin under Williamson Act Contract. Therefore, none of the facilities and operations proposed under the OBMPU program elements have a potential to adversely impact such land.

The same circumstance exists for the six cities that no longer include any designated agricultural land. The proposed project cannot conflict with exist land use designations. On the other hand, there are five agencies, the two counties and the cities of Chino, Chino Hills and Eastvale that still have some land assigned agricultural designations. The critical issue for such designated land is whether such designated land constitutes "important farmlands" in contrast to low value (from an agricultural perspective) agricultural land, such as grazing land. Where future OBMPU water facilities or operations are proposed for implementation, a potential does exist for impact to important farmlands that are coincidentally. To mitigate potential impacts to high value agricultural land (important farmland), the following mitigation measure shall be implemented.

Combined Project Categories
Proposed facilities could potentially be constructed on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (important farmland). Construction and operation of ancillary facilities could convert this land to non-agricultural use. Therefore, impacts would be potentially significant for all four Project Categories.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

AGF-2 ***For all proposed facilities in the southern portion of the Chino Basin (south of SH 60), the potential for impact to important farmlands shall be determined prior to final site election. If important farmland cannot be avoided and individually exceeds 5 acres or cumulatively exceeds 10 acres of important farmland lost to agricultural production over the life of the program, the agency implementing the project shall relocate and avoid the site, or alternatively the agency shall conduct a California Land Evaluation and Assessment (LESA) model evaluation. If the evaluation determines the loss of important farmland will occur, the agency shall purchase compensatory mitigation in the form of comparable important farmland permanently conserved in either a local or State-approved important farmland mitigation bank at a mitigation ratio of 1:1. The acquisition of this compensatory mitigation shall be completed within one year of initiating construction of the proposed facility and verification shall be documented with the Chino Basin Watermaster.***

Level of Significance After Mitigation: Less than Significant

The implementation of Mitigation Measure **AGF-2** includes the need to conduct a LESA Model if a facility is proposed on land designated as important farmland. If there is a determination that the loss of farmland is significant based on the LESA Model, the implementing agency would offset the loss by acquiring agricultural land conservation credits at a minimum ratio of 1:1 so that potential impacts to land zoned for agriculture would be reduced to less than significant.

Cumulative Impact Analysis

The cumulative analysis for determining conflicts between proposed projects and agricultural zoning and Williamson Act Contracts, involves the implementation of OBMPU facilities. ice area. Because land zoned for agriculture is limited within the Chino Basin, the loss of any of more than 10 acres of important farmland in the area would be considered a significant cumulative impact. Thus, cumulative impacts to agricultural zones are cumulatively considerable.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of Mitigation Measure **AGF-2** is required.*

Level of Significance After Mitigation: Less than Significant

The implementation of Mitigation Measure **AGF-2** would ensure the proposed facilities' contribution to cumulative impacts on important farmland zoned for agriculture would be reduced to less than cumulatively considerable by using the LESA Model to determine if a significant farmland impact would occur. If there is a determination of significance, then the implementing agency will offset the loss by acquiring agricultural land conservation credits at a minimum ratio of 1:1.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

The Chino Basin does not include zoning designations for forest land, timberland, or timberland zoned Timberland Production. The project area borders the San Bernardino National Forest, but it does not overlap with the Chino Basin boundaries.

Combined Project Categories

Level of Significance Before Mitigation: No Potential for Significant Impact

With no acreage designated for timberland development in the Chino Basin by any of the local jurisdictions, no potential exists to adversely impact timberland through conflicts with such land use designation.

Mitigation Measures: None required.

Cumulative Impact Analysis
The proposed projects would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production; and therefore, would not contribute to any cumulative effect on forest or timberland.

Level of Significance Before Mitigation: No Impact

Cumulative Measures: None Required

Level of Significance After Mitigation: No Impact

d. Result in the loss of forest land or conversion of forest land to non-forest use?

The southern-most portion of the Chino Basin overlaps with riparian woodland areas along the Santa Ana River; Chino Creek; and Mill Creek; and in the Prado Basin. Certain areas of these riparian woodlands may qualify as forest land based on the definition cited at the beginning of this section of the Initial Study. Other than these specific areas, no contiguous area of forest land occur in the Chino Basin. Further, no jurisdictions have designated areas within their jurisdiction with zoning designations for forest land. The Chino Basin area borders the San Bernardino National Forest, but it does not overlap with the Basin itself.

Combined Project Categories
Some of the OBMPU facilities, particularly monitoring wells, other wells, and the proposed Mill Creek water storage basin could impact riparian woodland that might qualify as "forest land." Projects in the remainder of the Basin would not result in the loss of forest land or conversion of forest land to non-forest use, and therefore, would not contribute to any cumulative effect on forest or timberland losses from OBMPU implementation.

Level of Significance Before Mitigation: Potentially Significant Impact

Mitigation Measures:

AGF-3 ***For all proposed facilities that may impact riparian woodland/forest land in the portion of the Chino Basin (SH 60), the potential for impact forest land shall be determined prior to final site election. If important forest land cannot be avoided and permanently will exceed 5 acres in area, the agency implementing the project shall relocate and avoid the site, or alternatively the agency shall conduct an evaluation to determine if it qualifies with the State definition of "forest land." If the evaluation determines the permanent loss of important forestland will occur, the agency shall purchase compensatory mitigation in the form of comparable forest land permanently conserved in either a local or State-approved important forest land mitigation bank at a mitigation ratio of 1:1. Alternatively, the agency may carry out a forest land creation program at a 1:1 ratio for comparable woodland. The acquisition or creation of this compensatory mitigation shall be completed/initiated within one year of initiating construction of the proposed facility and verification shall be documented with the Chino Basin Watermaster.***

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis
The Prado Basin contains several hundred acres of riparian woodland that may qualify as "forest land." The proposed projects could result in the conversion of limited areas in the Prado Basin to support OBMPU project categories of uses. It is not possible to quantify the extent of impacts at this stage of the review

because many site locations have not yet been identified. Therefore, in a manner similar to the site selection and compensation procedure established for important farmland impacts and for analysis purposes, any loss of riparian woodland/forest land would be considered significant if it exceeds five acres total. Note that such woodland is being considered here not for its wetland values, but for its "forest land" impacts. The following mitigation measure shall be implemented to reduce riparian woodland/forest land impacts to a less than significant impact.

*Cumulative Measure: Implementation of Mitigation Measure **AGF-3** is required.*

Level of Significance After Mitigation: Less Than Significant

For all projects implemented in the Chino Basin that actually impact "forest land/riparian woodland" the mitigation shall be required when five acres or more of such woodland is impacted in support of OBMPU projects.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion to forest land to non-forest use?

With the exceptions of impacts to Williamson Act lands, lands zone for agriculture and property zoned for forest land, a limited potential has been identified to convert agricultural land and forest land to water management uses from implementing the OBMPU Program Elements (Project Categories) in the Chino Basin.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: For all Project Categories (1-4) mitigation measures **AGF-1, AGF-2,** and **AGF-3** can be implemented to reduce potentially significant adverse impacts to agricultural, forest, and timber resources to a less than significant impact level.

Level of Significance After Mitigation: Less Than Significant

The implementation of each mitigation involves avoidance as the first mitigation approach, but provides contingency measures to address impacts that cannot fully avoid these resources. Two of the mitigation measures require tests of onsite resources (the LESA Model or an evaluation to determine whether woodlands qualify as "forest land") to determine whether they qualify as resources of sufficient importance that would require mitigation of potential impacts.

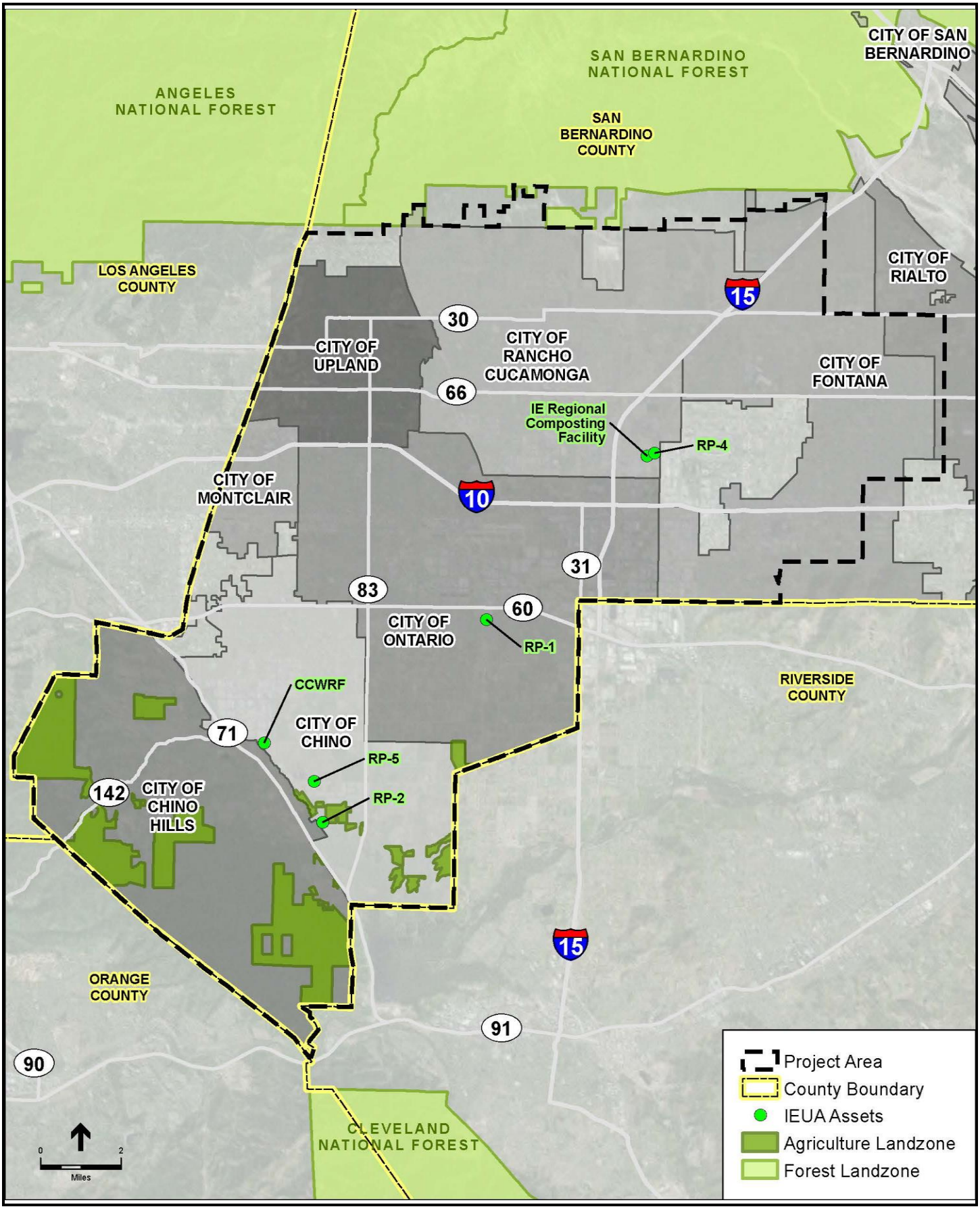
Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of Mitigation Measures **AGF-1** and **AGF-2**, and **AGF-3** is required.*

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measures **AGF-1** and **AGF-2**, and **AGF-3** would ensure the proposed facilities' contribution to cumulative impacts from converting existing farmland or forest land to a non-agricultural use or non-forest use would be reduced to less than a cumulatively considerable impact.

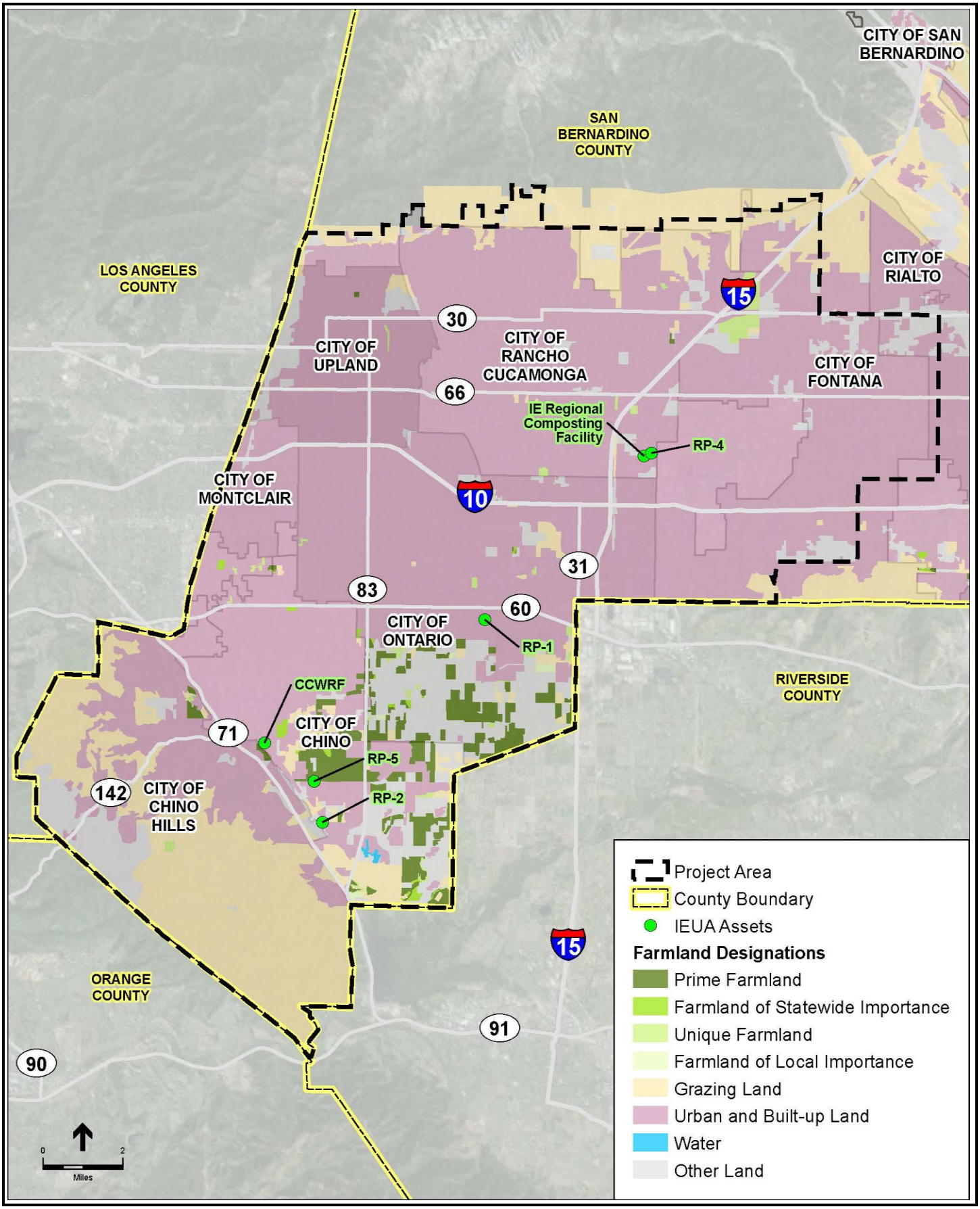


SOURCE: IEUA Facilities Master Plan PEIR, December 2016

FIGURE II-1

Tom Dodson & Associates
Environmental Consultants

Agriculture and Forest Land Zones



SOURCE: IEUA Facilities Master Plan PEIR, December 2016

FIGURE II-2

Tom Dodson & Associates
Environmental Consultants

FMMP Farmland Designations

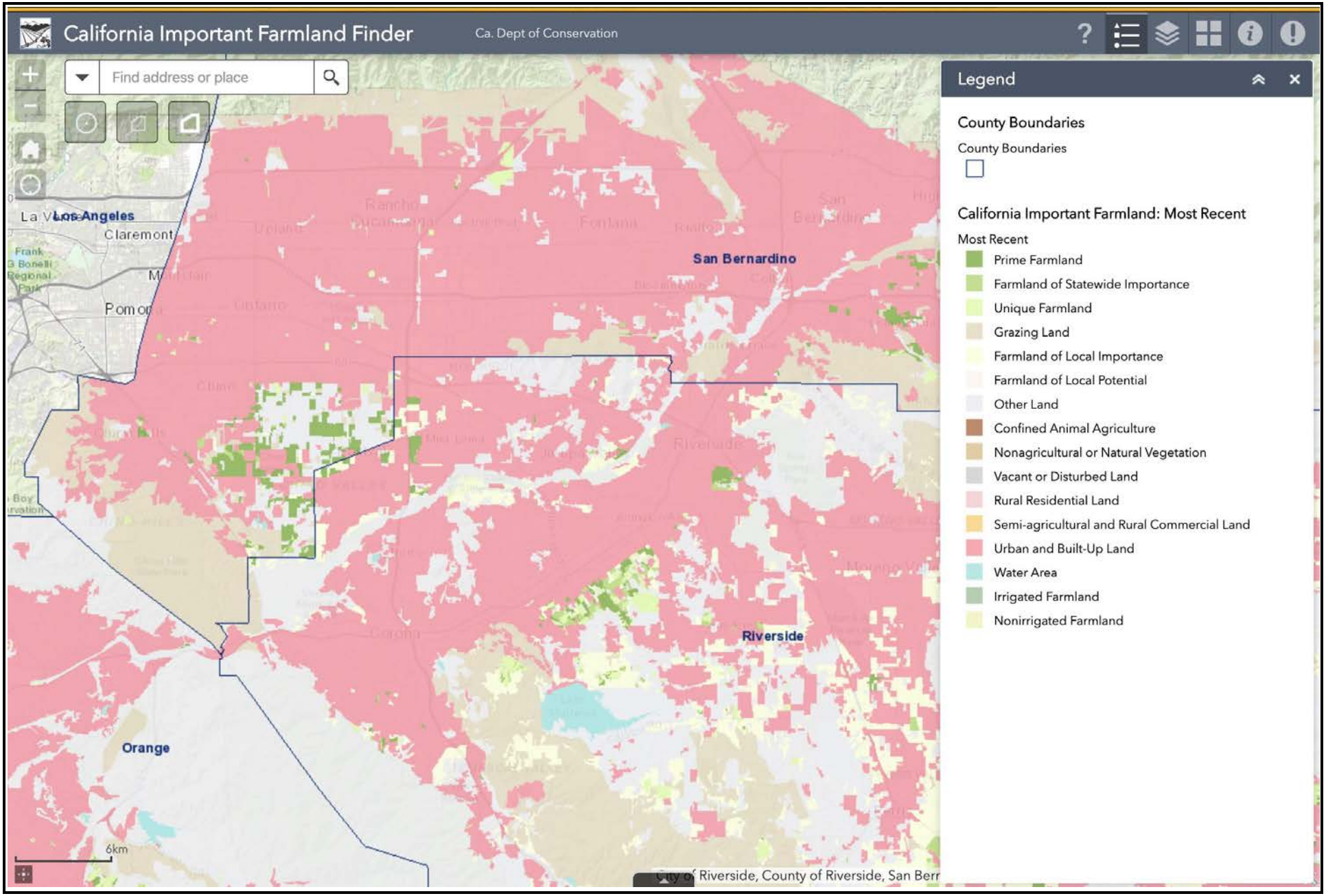


FIGURE II-3

Tom Dodson & Associates
Environmental Consultants

Farmland Map

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☒	☐	☐	☐

SUBSTANTIATION:

a. *Potentially Significant Impact* – Cumulatively, the facilities proposed by the OBMPU may result in construction related and operational air emissions. These emissions may exceed applicable thresholds for air quality thereby conflicting with the applicable air quality plan. This issue will be further evaluated in the Environmental Impact Report (EIR).

b. *Potentially Significant Impact* – Cumulatively, the facilities proposed by the OBMPU may result in construction-related fugitive dust and equipment emissions. Operation of the facilities proposed as part of the OBMPU would likely result in increased emissions of air pollutants. These issues will be further evaluated in the EIR.

c. *Potentially Significant Impact* – Construction and operational activities may expose sensitive receptors to air pollution in substantial concentrations. The facilities proposed as part of the OBMPU would likely result increased air emissions associated with diesel particulate matter and other pollutants. These issues will be further evaluated in the EIR.

d. *Potentially Significant Impact* – Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The OBMPU proposed facilities that may generate substantial odors or other emissions. These issues will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒	☐	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☒	☐	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☒	☐	☐	☐

SUBSTANTIATION:

a-f. *Potentially Significant Impact* – Cumulatively, the facilities proposed by the OBMPU may result in impacts to biological resources. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this topic will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☒	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☒	☐	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☒	☐	☐	☐

SUBSTANTIATION

a-c. *Potentially Significant Impact* – Cumulatively, the facilities proposed by the OBMPU may result in impacts to cultural resources. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this topic will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. ENERGY: Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations?	☒	☐	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☒	☐	☐	☐

SUBSTANTIATION

a&b. *Potentially Significant Impact* – Cumulatively, the energy required for construction and operational activities associated with the facilities proposed by the OBMPU may result in significant impacts under this category. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this topic will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GEOLOGY AND SOILS: Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☒	☐	☐
(ii) Strong seismic ground shaking?	☐	☒	☐	☐
(iii) Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
(iv) Landslides?	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite land-slide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☐

SUBSTANTIATION

VII.1 Environmental Setting

Regional Geology

According to the California Geologic Survey (CGS) Division of the California Department of Conservation (DOC), the Chino Basin is part of a large and broad alluvial-filled plain situated between the San Gabriel Mountains to the north (Transverse Ranges) and the elevated Perris Block to the south (Peninsular Ranges). The surrounding mountains and bedrock hills were uplifted by tectonic compression and faulting during the Quaternary Period, and sediments were eroded and washed-out of the mountains by streams and deposited in the low-lying depressions on the Perris Block to form the groundwater reservoirs of the Chino Basin and its neighboring groundwater basins. Major faults in the area—the Cucamonga Fault Zone, the Rialto-Colton Fault, the Red Hill-Etiwanda Avenue Fault, the San Jose Fault, Central Ave Fault, and the Chino Fault—are at least partly responsible for the uplift of the surrounding mountains and the depression

of the basin. These faults are significant in that they are known barriers to groundwater flow within the alluvial aquifer-system(s) and define some of the external boundaries of the basins by influencing the magnitude and direction of groundwater flow.

Quaternary alluvial deposits and recent soils comprise the majority of the stratigraphy of the County. Other strata may include Tertiary marine and non-marine non-sedimentary and volcanic units; Mesozoic marine sedimentary; metasedimentary, metavolcanic and plutonic rocks, Paleozoic sedimentary and meta-sedimentary units; and Precambrian igneous and metamorphic rocks (IEUA, 2000).

Topography

The Chino Basin is located in southern California within the west end of San Bernardino Valley; just east of Los Angeles County, northeast of Orange County, and north of the Riverside County boundary lines. There are three primary physiographic regions within San Bernardino County: Valley, Mountain and Desert regions. The Chino Basin lies within the Valley Region which consists of the area south of the San Gabriel and San Bernardino Mountains and includes the Upper Santa Ana Valley and Chino Hills.

The service area consists primarily of the Chino Basin which is an alluvial valley that is relatively flat from east to west, sloping north to south at a one to two percent grade. Basin elevation ranges from 2,000 feet adjacent to the San Gabriel Foothills to approximately 500 feet near Prado Dam. The Chino Basin is bordered to the north by the Cucamonga Basin; to the east by the Rialto-Colton Basin and the Jurupa Mountains; to the south by the Santa Ana River and the Temescal Basin; and to the west by the Chino Hills, Puente Hills and the Six Basins Basin (IEUA, 2000).

Seismic Hazards

The high population density compared to the Mountain and Desert regions coupled with the presence of the San Andreas, San Jacinto, and the Cucamonga faults and close proximity to other major faults make the Valley Region of the County have a greater risk for populations and structures to be exposed to potential geological hazards (County of San Bernardino, 2007b).

There are three active faults (Elsinore [Chino] Fault Zone, Red Hill-Etiwanda Avenue Fault Zone, and Sierra Madre Fault Zone) within the Chino Basin. There are additional active or potentially active faults outside of the Chino Basin and within or near the County with the potential to create a magnitude earthquake of 3.7 or greater up to approximately magnitude 7.5-8.0. There is also an extensive history of large, damaging earthquakes occurring within the County ranging from the 1812 Wrightwood earthquake (7.5 magnitude) to the 1999 Hector Mine earthquake (7.1 magnitude). In addition to strong ground shaking from earthquakes on faults located within the region, large earthquakes on faults near the County boundaries also have and will impact property within the County. Many of the other potential geologic hazards in the region are associated with earthquake activity including surface fault rupture, flooding due to potential dam failure, soil liquefaction, and seismically induced landslides. Surface fault rupture can directly impact properties traversed by or adjacent to an active fault. The other seismic hazards may be triggered by earthquakes up to several tens of kilometers from a site (County of San Bernardino, 2007b).

Surface Fault Rupture

Seismically-induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude and nature of fault rupture can vary for different faults, or even along different strands of the same fault. Ground rupture is considered more likely along active faults. Site locations for the proposed projects within the OBMPU may be within an Alquist-Priolo Earthquake Fault Zone, as designated by the Alquist-Priolo Earthquake Fault Zoning Act (DOC, 2010). Active faults within the Chino Basin are shown on Exhibit 1. According to the Riverside County General Plan, the portion of the Chino Basin that is located in Riverside County does not overlie any Alquist-Priolo special studies zones.

Ground Shaking

According to the DOC's Earthquake Shaking Potential for California map (DOC, 2008), the Chino Basin is within an area subject to high frequency shaking potential. High frequency shaking areas are in regions near major, active faults and will on average experience stronger earthquake ground shaking more

frequently. This intense shaking can damage strong, modern buildings (DOC, 2008). Ground shaking intensity varies depending on the overall earthquake magnitude, distance to the fault, focus of earthquake energy, and type of geologic materials underlying an area. The Modified Mercalli Intensity (MMI) scale is commonly used to express earthquake effects due to ground shaking because it expresses ground shaking relative to actual physical effects observed by people during a seismic event. MMI values range from I (earthquake not felt) through a scale of increasing intensities to XII (nearly total damage). Earthquakes on the various active and potentially active fault systems within and near the Chino Basin can produce a wide range of ground shaking intensities.

Liquefaction and Landslide Hazards

Soil liquefaction is a phenomenon whereby unconsolidated and/or near saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in the temporary fluid-like behavior of the soil. During liquefaction, soils lose strength and ground failure may occur. Secondary ground failures associated with liquefaction include lateral spreading or flowing of stream banks or fills, sand boils, and subsidence. Areas characterized by water-saturated, cohesionless, and granular soils are most susceptible to liquefaction and usually at depths of less than 50 feet, especially in areas with a shallow water table. The groundwater table can fluctuate greatly in association with groundwater recharge activities, both natural and artificial. During years of high groundwater recharge, the groundwater table could potentially be shallow enough to present a liquefaction hazard in the areas of the existing recharge basins. Portions of the service area are within liquefiable zones as discussed in the General Plans for the cities and County.

Landslides are the down-slope displacement of rock, soils and debris. The susceptibility of land (slope) failure is dependent on slope and geological formations and influenced by levels of rainfall, excavation, or seismic activities. Steep slopes and downslope creep of surface materials characterize landslide-susceptible areas. The southwestern portion of the Chino Basin is located within landslide hazard zones, as defined in the Seismic Hazard Zones map for the County (DOC, 2015). Landslides and mudflow hazards exist throughout the County, on steep hillsides and in creek and streambed areas. These can be triggered by earthquakes, heavy rain events, and other causes. Specifically, Chino Hills is underlain by landslide-prone marine rocks, presenting the greatest potential slope stability problem in the service area (County of San Bernardino, 2007a).

Soils

Soils within the Valley Region generally include deep well-drained sands, sandy loams, silty loams on level alluvial basins and fans; and shallow to deep, well to excessively drained, sandy loams on foothills and upland areas (IEUA, 2000). The soils present within the service area vary slightly in physical properties but share similar characteristics. Soils within the southwestern portion of San Bernardino County (including the Chino Basin) are presented in Table VII-1 below.

Subsidence

Subsidence of the ground surface can occur under static conditions (i.e., due to consolidation settlement from overlying load or long-term groundwater extraction) but can also be accelerated and accentuated by earthquakes and tectonic activity. Subsidence of loose, unconsolidated soils generally occurs slowly, but can cause significant structural damage.

San Bernardino County has undergone tectonic activity, including the uplifting of the San Bernardino Mountains in relation to the Valley Region. This activity has raised some portions of the Earth's crust, while others have subsided. This tectonic subsidence is of concern during very large earthquakes. Furthermore, subsidence caused by groundwater withdrawal is of concern to alluvial valleys of San Bernardino County. The entire alluvial valley area in southwestern San Bernardino County, primarily the Chino area, has experienced subsidence from groundwater withdrawal. Subsidence from 0.8 to 5.8 feet is possible in these areas (County of San Bernardino, 2007a).

Table VII-1
SOILS WITHIN SOUTHWESTERN SAN BERNARDINO COUNTY

Soil Type	Acres
Alo clay, 15 to 30 percent slopes	3.2
Calleguas clay loam, 50 to 75 percent slopes, eroded	10.5
Soper gravelly loam, 30 to 50 percent slopes	31.8
Alo clay, 30 to 50 percent slopes, warm MAAT, MLRA 20	956.0
Chino silt loam	7,840.2
Chualar clay loam, 0 to 2 percent slopes	871.0
Chualar clay loam, 2 to 9 percent slopes	2,706.2
Chualar clay loam, 9 to 15 percent slopes	1,132.7
Cieneba sandy loam, 9 to 15 percent slopes	430.7
Cieneba-Friant sandy loams complex	1,124.9
Cieneba-Rock outcrop complex, 30 to 50 percent slopes, MLRA 20	16,535.3
Crafton-Rock outcrop complex, eroded	761.3
Delhi fine sand	22,344.7
Fontana clay loam, 15 to 30 percent slopes	2,067.3
Fontana clay loam, 30 to 50 percent slopes	9,715.9
Friant-Rock outcrop complex	1,309.7
Garretson very fine sandy loam, 2 to 9 percent slopes	479.3
Gaviota-Rock outcrop complex	5,248.7
Quarries and Pits soils	872.1
Grangeville fine sandy loam	7,763.9
Grangeville fine sandy loam, saline-alkali	1,155.1
Greenfield sandy loam, 2 to 9 percent slopes	7,651.3
Greenfield fine sandy loam, 9 to 15 percent slopes	630.7

Source: NRCS, 2016

Erosion

Soil erosion is the detachment and movement of soil materials through natural processes or human activities. Natural processes include water, landslide, fire, flood, and wind. Man-made causes could include irresponsible grading and other construction practices, use of off-road vehicles, and other indiscriminate disruptions of soil. Wind is the primary cause of erosion in San Bernardino County. In the Valley Region, especially at the base of mountains and foothills like Chino Hills and northern Rancho Cucamonga, wind is more severe, and therefore, erosion is more prevalent. According to the San Bernardino County General Plan, severe erosion can be a problem anywhere in the County, especially when precipitation and/or wind combine with uncovered soil (County of San Bernardino, 2007a).

Expansive Soils

Expansive soils contain significant amounts of clay particles that have the ability to give up water (shrink) or take on water (swell). When these soils swell, the change in volume can exert significant pressures on loads that are placed on them, such as loads resulting from building and structure foundations or

underground utilities, and can result in structural distress and/or damage. Often, grading, site preparations, and backfill operations associated with subsurface structures can eliminate the potential for expansion. Linear extensibility and plasticity are used to describe the shrink-swell potential of soils. If linear extensibility is greater than 3 percent (classified as Moderate potential), shrinking and swelling can cause damage to buildings, roads, and other structures (NRCS, 2014). Most of the Chino Basin is comprised of old alluvial fans and valley deposits, which vary in consistency but are not typically expansive. However, soils within clay-rich units with moderate to high shrink-swell potential are located throughout the Chino Basin.

VII.2 Impact Discussion

Would the project:

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Given that the locations of the proposed wells and monitoring devices are presently unknown, it is possible that any of the future wells and monitoring devices could be located within an area delineated as an Alquist-Priolo Earthquake Fault Zone. There are three faults delineated on the Alquist-Priolo Earthquake Fault Zoning Map within and adjacent to the Chino Basin: the Elsinore Fault Zone (Chino Fault), which crosses the western boundary of the Chino Basin; the Red Hill-Etiwanda Avenue Fault, which traverses the northern boundary of the Chino Basin; and, a segment of the Sierra Madre Fault Zone, Cucamonga Section passes through the northwestern portion of the Chino Basin. The flow meters will be located within surface water, and are small devices; no structures will be developed in association with these flow meters and as such no risk of loss, injury, or death associated with being located within or near an active fault zone is anticipated to occur. The extensometers will be located within wells, and the proposed wells may be housed within a small structure. As such, because the locations for future wells and extensometers are unknown at this time, there is the potential for projects to be constructed and operated within an Alquist-Priolo Fault Zone. Projects proposed under this Project Category operated within these zones could expose structures to potential substantial adverse effects; therefore, mitigation is required to minimize impacts under this issue through ensuring that new facilities are located outside of delineated fault zones, or if located within a fault zone are analyzed thoroughly through a site specific geotechnical report with specific design recommendations or through a second tier CEQA evaluation.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

As mentioned in Project Category 1, the Elsinore, Red Hill, and Sierra Madre Faults are each delineated as being located within Alquist-Priolo Earthquake Fault Zones. Underground pipelines are not typically susceptible to severe damage from fault rupture, depending on the severity of a seismic event. However, because not all proposed projects locations are determined at this time, there is the potential for projects to be constructed and operated within an Alquist-Priolo Fault Zone. Facilities operated within these zones could expose conveyance and ancillary facilities to potential substantial adverse effects; therefore, therefore, mitigation is required to minimize impacts under this issue through ensuring that new facilities are located outside of delineated fault zones, or if located within a fault zone are analyzed thoroughly

through a site specific geotechnical report with specific design recommendations or through a second tier CEQA evaluation.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The storage facilities proposed under this project category would not include any aboveground, habitable structures. The ancillary facilities required to implement these projects are discussed under Project Category 2 above. Given that the proposed storage facilities will be developed at or below grade, and do not require any above ground structures, or are at known locations outside of the Alquist-Priolo Earthquake Fault Zones, no risk of loss, injury, or death associated with being located within or near an active fault zone is anticipated to occur.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no risk of loss, injury, or death associated with being located within or near an active fault zone is anticipated to occur as a result of this proposed safe storage capacity expansion.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters) would occur within developed sites already containing desalter or water treatment facilities; none of these sites is located within an Alquist Priolo Earthquake Fault Zone. Therefore, the risk of the project exposing people or structures to loss, injury, or death involving rupture of an active earthquake fault would be less than significant.

The proposed groundwater treatment facilities at well sites, existing groundwater treatment facilities (the precise location of existing groundwater treatment facilities have not been mapped), regional groundwater treatment facilities and groundwater treatment facilities near well sites would occur at locations which are presently unknown. Because not all proposed projects locations are determined at this time, there is the potential for projects to be constructed and operated within an Alquist-Priolo Fault Zone. Projects proposed as part of this Project Category operated within these zones could expose structures to potential substantial adverse effects; therefore, mitigation is required to minimize impacts under this issue through ensuring that new facilities are located outside of delineated fault zones, or if located within a fault zone are analyzed thoroughly through a site specific geotechnical report with specific design recommendations or through a second tier CEQA evaluation.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

GEO-1: ***If a specific project is proposed within a designated Alquist-Priolo Fault Zone, the facility shall be relocated, if possible. If relocation is not possible, the project shall be designed in accordance with the CBC and according to the recommendations generated by a project specific geotechnical study. If the project specific geotechnical study cannot mitigate potential seismic related impacts, then a second tier CEQA evaluation shall be completed.***

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure (MM) **GEO-1** would ensure new facilities are located outside of delineated fault zones, or otherwise minimize impacts if located within a fault zone.

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
(ii) Strong seismic ground shaking?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

As addressed under issue a(i) above, the Chino Basin is located within a region that is seismically active. In the event of an earthquake in Southern California, some seismic ground shaking would likely be experienced in the project area sometime during the operational life of the proposed wells and monitoring devices. As stated under issue a(i) above, the flow meters will be located within surface water, and are small devices; no structures will be developed in association with these flow meters and as such no risk of loss, injury, or death associated with seismic ground shaking is anticipated to occur. The extensometers will be located within wells, and the proposed wells may each be housed within a small structure. Ground shaking could result in structural damage to new facilities, which in turn could affect operation of well and extensometer related systems. Therefore, structural and mechanical failure of facilities onset by seismic ground shaking could potentially threaten the safety of on-site workers.

The structural elements of facilities proposed under this Project Category would undergo appropriate design-level geotechnical evaluations prior to final design and construction as required to comply with the CBC. The geotechnical engineer, as a registered professional with the State of California, is required to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care required for projects in the San Bernardino County area. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799), and the Codes of Professional Conduct, as administered by the California Board of Professional Engineers and Land Surveyors, provides the basis for regulating and enforcing engineering practice in California. Compliance with these construction and building safety design standards would reduce potential impacts associated with ground shaking to a level of less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

As addressed under issue a(i) above, the Chino Basin is located within a region that is seismically active. In the event of an earthquake in Southern California, some seismic ground shaking would likely be experienced in the project area sometime during the operational life of the proposed wells and monitoring devices. Underground pipelines are not typically susceptible to severe damage from seismic ground shaking, and furthermore are subject to industry standards that will minimize the potential risk of damage

or pipeline rupture. However, the facilities under this Project Category include ancillary facilities that may be above ground, habitable structures. The primary and secondary effects of ground shaking could damage structural foundations, distort or break pipelines and other water conveyance structures, and cause structural failure.

The structural elements of conveyance and associated ancillary facilities proposed under this Project Category would undergo appropriate design-level geotechnical evaluations prior to final design and construction as required to comply with the CBC. The geotechnical engineer, as a registered professional with the State of California, is required to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care required for projects in the San Bernardino County area. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799), and the Codes of Professional Conduct, as administered by the California Board of Professional Engineers and Land Surveyors, provides the basis for regulating and enforcing engineering practice in California. In addition, the pipelines would be constructed according to industry standards using American Water Works Association (AWWA) guidelines. Compliance with these construction and building safety design standards would reduce potential impacts associated with ground shaking to a level of less than significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

As discussed under issue a(i) above, the storage facilities proposed under this project category would not include any aboveground, habitable structures. The ancillary facilities required to implement these projects are discussed under Project Category 2 above. Given that the proposed storage facilities will be developed at or below grade, and do not require any habitable structures, there is no risk of the development of storage basins directly or indirectly causing potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, there is no risk of expansion of the safe storage capacity directly or indirectly causing potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

As addressed under issue a(i) above, the Chino Basin is located within a region that is seismically active. In the event of an earthquake in Southern California, some seismic ground shaking would likely be experienced in the project area sometime during the operational life of the upgrades and improvements to existing treatment facilities, and to new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Ground shaking could result in structural damage to new facilities, which in turn could affect operation of related systems. Some of the

proposed facilities are non-habitable or will only require visits on an as-needed basis; however, the existing treatment plants, and the proposed regional groundwater treatment plant require full time employees on-site. Therefore, structural and mechanical failure of facilities onset by seismic ground shaking could potentially threaten the safety of on-site workers.

The structural elements of facilities proposed under this Project Category would undergo appropriate design-level geotechnical evaluations prior to final design and construction as required to comply with the CBC. Compliance with the construction and building safety design standards addressed under Project Category's 1 and 2 would reduce potential impacts associated with ground shaking to a level of less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
(iii) Seismic-related ground failure, including liquefaction?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Given that the locations of the proposed wells and monitoring devices are presently unknown, it is possible that any of the future wells and monitoring devices could be located within an area with a high potential for liquefaction. The flow meters will be located within surface water, and are small devices; no structures will be developed in association with these flow meters and as such no risk of loss, injury, or death associated liquefaction is anticipated to occur. The extensometers will be located within wells, and the proposed wells may be housed within a small structure. As such, because the locations for future wells and extensometers are unknown at this time, there is the potential for projects to be constructed and operated within an area with a high potential for liquefaction. The proposed wells located on or in soils with a moderate to high potential for liquefaction could experience damage or failure as a result of liquefaction. Therefore, adverse effects involving liquefaction would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that new wells are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Given that the locations of the proposed conveyance systems and ancillary facilities are presently unknown, it is possible that any of the conveyance systems and ancillary facilities could be located within an area with a high potential for liquefaction. As described in the Setting above, there are areas within the Chino Basin with a high potential for liquefaction. The pipelines and/or ancillary facilities located on or in soils with a moderate to high potential for liquefaction could experience damage or failure as a result of liquefaction. Therefore, mitigation is required to minimize impacts under this issue through ensuring that conveyance and ancillary facilities are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The storage facilities proposed under this project category would not include any aboveground, habitable structures. The ancillary facilities required to implement these projects are discussed under Project Category 2 above. However, given that the proposed storage basins may require a seal to retain the water, there is a potential for such facilities to be located on or in soils with a moderate to high potential for liquefaction, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that new storage basins are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no risk of loss, injury, or death associated with liquefaction is anticipated to occur as a result of this proposed safe storage capacity expansion.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters) would occur within developed sites already containing desalter or water treatment facilities; none of these existing facilities is located on soils susceptible to liquefaction.

The proposed groundwater treatment facilities at well sites, existing groundwater treatment facilities (the precise locations of existing groundwater treatment facilities have not been mapped), regional groundwater treatment facilities and groundwater treatment facilities near well sites would occur at locations which are presently unknown. As such, there is a potential for such facilities to be located on or in soils with a moderate to high potential for liquefaction, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that the treatment facilities under this Project Category are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

GEO-2: ***Prior to construction of each improvement, a design-level geotechnical investigation, including collection of site-specific subsurface data if appropriate, shall be completed. The geotechnical evaluation shall identify all potential seismic hazards including fault rupture, and characterize the soil profiles, including liquefaction potential, expansive soil potential, subsidence, and landslide potential. The geotechnical investigation shall***

recommend site-specific design criteria to mitigate for seismic and non-seismic hazards, such as special foundations and structural setbacks, and these recommendations shall be incorporated into the design of individual proposed projects.

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure (MM) **GEO-2** would reduce the potential impacts from liquefaction and landslide hazards through a design level geotechnical investigation with implementation of specific design recommendations.

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
(iv) Landslides?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Landslides and mudflow hazards exist throughout the Chino Basin on steep hillsides and in creek and streambed areas. Given that the locations of the proposed wells and monitoring devices are presently unknown, it is possible that any of the future wells and monitoring devices could be located within an area with a high potential for landslide. The flow meters will be located within surface water, and are small devices; no structures will be developed in association with these flow meters and as such no risk of loss, injury, or death associated landslide is anticipated to occur. The extensometers will be located within wells, and the proposed wells may be housed within a small structure. The proposed wells could experience damage or failure as a result of a landslide. Therefore, adverse effects involving landslide would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that new wells are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Landslides and mudflow hazards exist throughout the Chino Basin on steep hillsides and in creek and streambed areas. Given that the locations of the proposed conveyance systems and ancillary facilities are presently unknown, it is possible that any of the conveyance systems and ancillary facilities could be located within an area susceptible to landslides. The proposed conveyance and ancillary facilities could experience damage or failure as a result of a landslide. Therefore, adverse effects involving landslide would be potentially significant. Therefore, mitigation is required to minimize impacts under this issue through ensuring that conveyance and ancillary facilities are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The storage facilities proposed under this project category would not include any aboveground, habitable structures. The ancillary facilities required to implement these projects are discussed under Project Category 2 above. However, given that the proposed storage basins may require a seal to retain the water, there is a potential for those facilities to be constructed in areas susceptible to landslides, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that new storage basins are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no risk of loss, injury, or death associated with landslides is anticipated to occur as a result of this proposed safe storage capacity expansion.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters) would occur within developed sites already containing desalter or water treatment facilities; none of these existing facilities is located in an area susceptible to landslide.

Landslides and mudflow hazards exist throughout the Chino Basin on steep hillsides and in creek and streambed areas. The proposed groundwater treatment facilities at well sites, existing groundwater treatment facilities (the precise locations of existing groundwater treatment facilities have not been mapped), regional groundwater treatment facilities and groundwater treatment facilities near well sites would occur at locations which are presently unknown. As such, there is a potential for such facilities to be to be constructed in areas susceptible to landslides, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that the treatment facilities under this Project Category are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Refer to Mitigation Measure **GEO-2**, above.

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure (MM) **GEO-2** would reduce the potential impacts from liquefaction and landslide hazards through a design level geotechnical investigation with implementation of specific design recommendations.

b. Result in substantial soil erosion or the loss of topsoil?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Construction activities for proposed well development projects such as excavation and grading could result in soil erosion during rain or high wind events. Flow meters will be located within surface water, and are small devices that would not require grading or excavation to place. These devices would require a few trips to each site, which may result in some ground disturbance, but this would be temporary and would not occur on a frequent basis. Development of the proposed wells would result in construction activities that would need to comply with South Coast Air Quality Management District (SCAQMD) Rule 403 for dust control that would ensure the prevention and/or management of wind erosion and subsequent topsoil loss. Compliance with SCAQMD Rule 403 would ensure that construction activities that generate wind-induced soil erosion are below significance thresholds.

As stated in the project description, well development is anticipated to occur within sites that would disturb less than half an acre, and as such no Storm Water Pollution Prevention Plan (SWPPP) would be required. However, in order to prevent erosion associated with runoff from construction sites for each proposed project, the implementing agency will abide by best management practices (BMPs) to ensure that the discharge of storm runoff from construction sites does not cause erosion downstream to the discharge point. The implementation of BMPs will be enforced through mitigation identified below. Additionally, for these well development projects, which are anticipated to be less than one acre in size, compliance with minimum BMPs, as specified by the San Bernardino County MS4 Permit (SARWQCB, 2016) that includes each of the seven cities within the Chino Basin as co-permittees, shall include erosion and sediment control BMPs for the construction site. Adherence to these conditions and the mitigation provided below would ensure that potential soil erosion and loss of topsoil impacts would be minimized to less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Construction activities for proposed conveyance and ancillary facility projects such as excavation and grading could result in soil erosion during rain or high wind events. As stated above, development of the proposed wells would result in construction activities that would need to comply with SCAQMD Rule 403 for dust control that would ensure the prevention and/or management of wind erosion and subsequent topsoil loss. Compliance with SCAQMD Rule 403 would ensure that construction activities that generate wind-induced soil erosion are below significance thresholds.

To prevent erosion associated with runoff from construction sites for each proposed project, the implementing agency would be required to prepare and implement a SWPPP in accordance with the requirements of the statewide Construction General Permit (CGP) (State Water Resources Control Board [SWRCB] Water Quality Order 2009-0009-DWQ). The SWPPP would identify best management practices (BMPs) to control erosion, sedimentation, and hazardous materials potentially released from construction sites into surface waters. Compliance with the CGP, required SWPPP, and identified BMPs would ensure soil erosion and loss of topsoil impacts would be reduced to a level of less than significant.

As stated above, should an individual proposed project result in disturbance of less than one acre during construction activities, then the CGP would not apply to the particular project. In order to prevent erosion associated with runoff from construction sites for each proposed project, the implementing agency will abide by BMPs to ensure that the discharge of storm runoff from construction sites does not cause erosion downstream to the discharge point. The implementation of BMPs will be enforced through mitigation identified below. Additionally, for conveyance and ancillary facility projects that are less than one acre in size, compliance with minimum BMPs, as specified by the San Bernardino County MS4 Permit (SARWQCB, 2016) that includes each of the seven cities within the Chino Basin as co-permittees, shall include erosion and sediment control BMPs for the construction site. Adherence to these conditions and the mitigation provided below would ensure that potential soil erosion and loss of topsoil impacts would be minimized to less than significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts related to soil erosion and the loss of topsoil from construction of storage basins and recharge facilities are anticipated to be the same as that which is discussed under Project Categories 1 and 2 above.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no soil erosion or loss of topsoil are anticipated.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Impacts related to soil erosion and the loss of topsoil from construction of desalters and water treatment facilities are anticipated to be the same as that which is discussed under Project Categories 1, 2, and 3 above.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

GEO-3: ***For each well development or other OBMPU projects that is less than one acre in size requiring ground disturbing activities such as grading, the Implementing Agency shall identify best management practices (BMPs, such as hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from the construction site does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.***

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **GEO-3** would ensure that the proposed facilities associated with the OBMPU that are less than one acre in size would not exacerbate conditions related to erosion associated with runoff from construction sites through the implementation of BMPs.

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Non-seismically induced geologic hazards such as landslides, subsidence, lateral spreading, settlement, and slope failure can be caused by unstable soils, which occur within the Chino Basin area. Soil instability from landslides, subsidence, lateral spreading, settlement, and slope failure can cause collapse of structures. Given that the locations of the proposed wells and monitoring devices are presently unknown, it is possible that any of the future wells could be located within a site with unstable soils; furthermore, groundwater pumping facilities could cause aquifer system compaction and land subsidence, which is known to occur within the Chino Basin. The flow meters are small devices that will be located on the wellhead; as such soil stability is not of a concern for these devices. The extensometers will be located within monitoring wells, and the proposed monitoring wells may be housed within a small structure. The proposed wells located on or in unstable soils could experience damage or failure as a result. Additionally, subsidence and collapse could damage the proposed facilities and affect the safety of on-site or visiting employees. Therefore, adverse effects involving unstable soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that new wells are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Non-seismically induced geologic hazards such as landslides, subsidence, lateral spreading, settlement, and slope failure can be caused by unstable soils, which occur within the Chino Basin area. Soil instability from landslides, subsidence, lateral spreading, settlement, and slope failure can cause collapse of structures. Given that the locations of the conveyance and ancillary facilities are presently unknown, it is possible that any of the future conveyance and ancillary facilities could be located within a site with unstable soils. The proposed conveyance and ancillary facilities located on or in unstable soils could experience damage or failure as a result. Additionally, subsidence and collapse could damage the proposed facilities and affect the safety of on-site or visiting employees. Therefore, adverse effects involving unstable soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that conveyance and ancillary facilities are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Non-seismically induced geologic hazards such as landslides, subsidence, lateral spreading, settlement, and slope failure can be caused by unstable soils, which occur within the Chino Basin area. The storage facilities proposed under this project category would not include any aboveground, habitable structures. The ancillary facilities required to implement these projects are discussed under Project Category 2 above. However, given that the proposed storage basins may require a seal to retain the water, there is a potential for such facilities to be located on unstable soils, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that new storage basins are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no impacts related to soil instability are anticipated to occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Non-seismically induced geologic hazards such as landslides, subsidence, lateral spreading, settlement, and slope failure can be caused by unstable soils, which occur within the Chino Basin area. Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters), proposed groundwater treatment facilities at well sites, existing groundwater treatment facilities (the precise locations of existing groundwater treatment facilities have not been mapped), regional groundwater treatment facilities and groundwater treatment facilities may involve groundwater pumping facilities that could cause aquifer system compaction and land subsidence. However, the overall OBMPU facilities are, when combined, intended to minimize the potential for land subsidence that is known to occur within the Chino Basin. Construction and operation of the proposed facilities would not cause subsidence; rather, proposed facilities, though not anticipated to be affected by historic subsidence, could be exposed to future subsidence and collapse risk due to the circumstances known to exist within the treatment facility locations. As such, there is a potential for such facilities to be located on unstable soils, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that the treatment facilities under this Project Category are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Refer to MM **GEO-2**, above.

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **GEO-2** would reduce the potential impacts related to unstable soils through a design level geotechnical investigation with implementation of specific design recommendations for future OBMPU projects.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

When expansive soils swell, the change in volume can exert significant pressures on loads that are placed on them, such as loads resulting from structure foundations or underground utilities, and can result in structural distress and/or damage. Most of the Chino Basin is comprised of old alluvial fans and valley deposits, which vary in consistency. As stated above, soils throughout the project area mainly consist of sandy loams that show little change with moisture variation, and thus do not typically exhibit expansive soil characteristics. The specific soil properties of a site can vary on a small scale, and may include

undetermined areas that exhibit expansive properties. Given that the location of well development sites and extensometers will be located within wells, there is a potential that such facilities could be installed within a site containing expansive soils. The flow meters are small devices that will be located within surface water; as such the presence of expansive soils is not of a concern for these devices. Therefore, adverse effects involving expansive soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that new wells are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Proposed pipelines would be installed belowground; soils with expansive characteristics could exert pressure on the pipelines during times of saturation, potentially threatening pipeline stability. Similar to Project Category 1 facilities, the foundation of the ancillary facilities could also be damaged by expansive soils. Identified soil types within the Chino Basin area do not have expansive soil characteristics since they do not have a large amount of clay (expansive soils are typically of a clay type); however, specific sites could have undetected expansive characteristics. Therefore, adverse effects involving expansive soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that conveyance and ancillary facilities are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Proposed recharge basins and wells could saturate soils and create expansive soil characteristics that did not exist previously. The storage facilities proposed under this project category would not include any aboveground, habitable structures. The ancillary facilities required to implement these projects are discussed under Project Category 2 above. However, given that the proposed storage basins may require a seal to retain the water, there is a potential for such facilities to be located on expansive soils, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that new storage basins are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no impacts related to expansive soils are anticipated to occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

As stated above, soils throughout the project area mainly consist of sandy loams that show little change with moisture variation, and thus do not typically exhibit expansive soil characteristics. Therefore, the project facilities would be located in areas of low soil expansion potential. However, the specific soil properties of a site can vary on a small scale, and may include undetermined areas that exhibit expansive properties. The presence of expansive soils at the existing treatment facility sites could decrease the structural stability of the proposed project facilities, which could result in structural or operational failure of these facilities and or threaten the health and safety of on-site workers. Such impacts are considered potentially significant. Therefore, mitigation is required to minimize impacts under this issue through ensuring that the treatment facilities under this Project Category are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Refer to MM **GEO-2**, above.

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **GEO-2** would reduce the potential impacts related to expansive soils through a design level geotechnical investigation with implementation of specific design recommendations for future OBMPU projects.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
Implementation of proposed well development and monitoring devices associated with the OBMPU would not require the use of septic systems. There is no planned use of on-site septic systems for the proposed OBMPU projects proposed under this Project Category. Therefore, no impact would occur related to soil suitability for septic systems.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
Implementation of proposed conveyance and ancillary facilities would not include facilities that would require the use of septic systems. The majority of facilities would be upgrades to existing infrastructure, wells, pipelines, and other water conveyance facilities that do not require septic systems. There is no planned use of on-site septic systems for the proposed project facilities. Therefore, no impact would occur related to soil suitability for septic systems.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
Impacts would be the same as Project Category 1 and 2.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
Impacts would be the same as Project Categories 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: No Impact

Mitigation Measures: None required.

Level of Significance After Mitigation: No Impact

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The General Plans for the cities and unincorporated portions within the Chino Basin indicate that some portions of the Chino Basin areas are highly sensitive for paleontological resources. Since the proposed project is at the programmatic level, specific locations for the proposed wells have not been have yet to be determined. As such, impacts to specific paleontological resources are speculative. Previously unknown and unrecorded paleontological resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique paleontological resources are uncovered during excavation or construction, significant impacts could occur. Therefore, mitigation will be implemented that would require site-specific studies to identify potentially significant paleontological resources. Additional studies would minimize potential impacts to paleontological resources.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts would be the same as Project Category 1 and 2.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Impacts would be the same as Project Category 1-3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

GEO-4: For project-level development involving ground disturbance, a qualified paleontologist shall be retained to determine the necessity of conducting a study of the project area(s) based on the potential sensitivity of the project site for paleontological resources. If

deemed necessary, the paleontologist shall conduct a paleontological resources inventory designed to identify potentially significant resources. The paleontological resources inventory would consist of: a paleontological resource records search to be conducted at the San Bernardino County Museum and/or other appropriate facilities; a field survey or monitoring where deemed appropriate by the paleontologist; and recordation of all identified paleontological resources.

Level of Significance Before Mitigation: Less Than Significant

The implementation of Mitigation Measure **GEO-4** would require a site-specific study to identify potentially significant paleontological resources, which would minimize potential impacts to paleontological resources.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

SUBSTANTIATION

a&b. *Potentially Significant Impact* – Cumulatively, the facilities proposed by the OBMPU may result in construction related and operational greenhouse gas (GHG) emissions. These emissions may exceed applicable thresholds for GHG emissions or otherwise conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This issue will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☒	☐	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☒	☐	☐

SUBSTANTIATION

This section describes and evaluates issues related to hazards and hazardous materials within the Chino Basin. Discussed are the physical and regulatory settings, the baseline for determining environmental impacts, the criteria used for determining the significance of environmental impacts, and potential impacts and appropriate mitigation measures associated with implementation of the OBMPU. Much of the information below is based on the 2016 IEUA Facilities Master Plan Final Environmental Impact Report (SCH#2016061064), February 2017 prepared by ESA (2017 FMP EIR).

IX.1 Environmental Setting

Introduction

The term “hazardous materials” refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such, or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases). The term “hazardous material” is defined as any material that, because of quantity, concentration,

or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.[32]

In some cases, past industrial or commercial activities on a site or an accidental spill could have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater contamination. Hazardous materials may also be present in building materials and released during building demolition activities. If improperly handled, hazardous materials can cause health hazards when released to the soil, groundwater, or air. Individuals are typically exposed to hazardous materials through inhalation or bodily contact. Exposure can come as a result of an accidental release during transportation, storage, or handling of hazardous materials. Disturbance of subsurface soil during construction can also lead to exposure of workers or the public from stockpiling, handling, or transportation of soils contaminated by hazardous materials from previous spills or leaks.

Chino Basin Service Area

This section describes the existing conditions of the Chino Basin (where the OBMPU will be implemented) with respect to hazards and hazardous materials. It discusses the potential to encounter hazardous materials in soil and/or groundwater in this area, potential fire hazards, and potential hazards related to proximity to schools and airports.

Hazardous Building Materials

Hazardous materials, such as asbestos-containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyls (PCBs), may be contained in building materials and released during demolition activities. The likelihood of hazardous materials in building components can be generally assessed based on the age of the structures, as these materials were phased out of use during the 1970s and 1980's. Any structures proposed for demolition in support of the OBMPU Program Elements will require evaluation of the date of construction and possible inspections by qualified professional to determine presence of ACM, LBP or PCB.

Asbestos Potential

Asbestos is a naturally-occurring fibrous material that was used as a fireproofing and insulating agent in building construction before such uses were banned by the U.S. Environmental Protection Agency (U.S. EPA) in the 1970's, although some nonfriable[33] use of asbestos in roofing materials still exists. The presence of asbestos can be found in such materials as ducting insulation, wallboard, shingles, ceiling tiles, floor tiles, insulation, plaster, floor backing, lining for piping, and many other building materials. ACMs are considered both a hazardous air pollutant and a human health hazard. The risk to human health is from inhalation of airborne asbestos, which commonly occurs when ACMs are disturbed during demolition and renovation activities.

Lead Potential

Lead and lead compounds can be found in many types of paint. In 1978, the Consumer Product Safety Commission set the allowable lead levels in paint at 0.06 percent by weight in a dry film of newly applied paint. Lead dust is of special concern, because the smaller particles are more easily absorbed by the body. Common methods of paint removal, such as sanding, scraping, and burning, create excessive amounts of dust. Lead based paints are considered likely present in buildings constructed prior to 1960, and potentially present in buildings built prior to 1978.

PCBs Potential

PCBs are organic oils that were formerly placed in many types of electrical equipment, such as transformers and capacitors, primarily as electrical insulators. They may also be found in hydraulic fluid used for hoists, elevators, etc. Years after widespread and commonplace installation, it was discovered that exposure to PCBs may cause various health effects and that PCBs are highly persistent in the environment. The EPA

[32] State of California Health and Safety Code Chapter 6.95, Section 25501(p).
[33] Nonfriable asbestos refers to ACMs that contain asbestos fibers in a solid matrix that does not allow for them to be easily released.

has listed these substances as carcinogens. PCBs were banned from use in electrical capacitors, electrical transformers, vacuum pumps, and gas turbines in 1979.

Household Hazardous Materials
Household hazardous waste is generated at a place of residence, as defined in Section 25218.1 (e) of the California Health and Safety Code. Examples of common household hazardous wastes include antifreeze, household batteries, compressed gas cylinders, television/computer monitors, consumer electronic devices, home-generated sharps (e.g., needles, syringes, and lancets), oil-based paints, latex paints, motor oil, used oil filters, rodent poison, asbestos, gasoline, fluorescent lamps, partially used aerosol containers, and weed killers (CIWMB, 2002). A household hazardous waste collection facility is commonly operated by local public agencies or their contractors for the purposes of collecting, handling, treating, storing, recycling, or disposing of household hazardous wastes (Health and Safety Code Section 2518.1 (f)). A household hazardous waste collection facility may also accept wastes from small businesses that are conditionally exempt generators, defined as a small business that generates no more than 100 kilograms of hazardous waste per month.

The Valley region of San Bernardino County has multiple hazardous waste collection centers for permanent household hazardous waste located in the City of Chino, Upland, Ontario, and Rancho Cucamonga. Most facilities accept items such as lawn and garden care products, paint and paint-related products, automotive fluids and batteries, beauty products and medicines, household cleaners, electronic waste, and other common household hazardous wastes (SBCFD, 2016).

Hazardous Materials in Soil and Groundwater
Human activities have caused a variety of contamination within the Chino Basin. Historically, most cities within the region contained agricultural lands that utilized pesticides which may have contaminated soils throughout the project area. Several of the project areas envisioned for future OBMPU facilities may occupy agricultural areas where pesticide and herbicide use were once common. Soils in such areas can retain residual concentrations of such materials that may exceed significance thresholds. Future excavations in such areas may requires special management, disposal, or blending with clean soils to reduce concentrations to acceptable levels. Furthermore, airports, gas stations, landfills, and other industrial facilities have resulted in contamination of groundwater. Groundwater plumes exist throughout the Chino Basin but are primarily concentrated around southern Ontario and Chino (SWRCB, 2016).

To assess the potential for contamination in soil and groundwater within the project area an environmental database review was conducted to identify environmental cases,[34] permitted hazardous materials uses,[35] and spill sites.[36] California Government Code Section 65962.5 requires state and local agencies to compile and update, at least annually, lists of hazardous waste sites and facilities. While Government Code Section 65962.5 makes reference to a "list", commonly referred to as the Cortese List, this information is currently available from the following online data resources (California Environmental Protection Agency [CalEPA], 2016):

- State Water Resources Control Board (SWRCB) GeoTracker database, and
- California Department of Toxic Substances Control (DTSC) EnviroStor database.

Information regarding the potential presence of subsurface contamination within the Chino Basin is discussed below. Identified sites include the following types of environmental cases:

EnviroStor Certified/Operation & Maintenance: These are former industrial manufacturing facilities. Following environmental cleanup, residual contamination remains in soil and/or groundwater. The DTSC

[34] Environmental cases are those sites that are suspected of releasing hazardous substances or have had cause for hazardous substances investigations and are identified on regulatory agency lists.
[35] Permitted hazardous materials uses are facilities that use hazardous materials or handle hazardous wastes that operate under appropriate permits and comply with current hazardous materials and hazardous waste regulations.
[36] Spill sites are locations where a spill has been reported to the State or federal regulatory agencies. Such spills do not always involve a release of hazardous materials.

has determined that contamination is not a threat to human health or the environment if undisturbed; however, land use restrictions apply to any subsurface excavation.

EnviroStor DTSC Sites: The DTSC oversees cleanup at facilities with a variety of environmental concerns. It also identifies facilities for further investigation based on their past or present uses, which could have caused hazardous materials releases.

GeoTracker LUST Cleanup Sites: Leaking Underground Storage Tank (LUST) sites are typically listed as a result of a release of petroleum hydrocarbons such as diesel, gasoline, motor oil and waste oil. A few sites are listed because of releases of dry-cleaning solvents. Open cases may be in the site assessment phase to investigate the extent of known releases or undergoing active remediation of groundwater contamination.

Table IX-1 shows the hazardous waste site type and number of hazardous waste sites found within the Chino Basin area.

Table IX-1
LISTED SITES WITHIN THE PROJECT AREA

Hazardous Waste Site Type	Number of Sites
EnviroStor DTSC Cleanup Sites	99
GeoTracker LUST Cleanup Sites	23
EnviroStor Cleanup Program Sites	26
EnviroStor Land Disposal Sites	8
Geo Tracker DTSC Hazardous Waste Permit Sites	15
Total	171 sites
SOURCE: EnviroStor, GeoTracker, 2016	

Below is a list and brief description of hazardous materials release sites in the Chino Basin that have affected soil and/or groundwater. Exhibit shows the location of contamination plumes resulting from past industrial activities in the service area (Chino Basin Watermaster, 2013a).

Active Sites

Chino Airport

The Chino Airport is located at 7000 Merrill Avenue in the city of Chino. This site has been the subject of ongoing site assessments and clean ups under regulatory oversight of the Regional Water Quality Control Board (RWQCB) since 1990. This site is not on the national priorities list. From the early 1940s until 1948, the airport was used for flight training and aircraft storage. Since then, activities at this site included modification of military aircraft, crop dusting, aircraft engine-repair, painting, striping and washing, dispensing of fire-retardant chemicals and general aircraft maintenance. The primary chemicals of concern in the groundwater at the site are trichloroethene, 1,2,3-trichloropropane, cis-1,2-dichloroethene, 1,2-dichlorothethane, and 1,1-dichloroethene. Offsite plume characterization field activities were initiated in 2007. The depth of groundwater ranged from 25 to 50 feet below ground surface (bgs), with the depth to water decreasing toward the south. Since the 2007 investigation, groundwater monitoring wells have been installed throughout the site for sampling. Groundwater is pumped in this area by production wells and used for agricultural supply, industrial supply and municipal water supply. The drinking water supply is of primary concern (SWRCB, 2015a).

GE Engine Services Test Cell Facility

The GE Engine Services is located at 2264 E. Avion Place in the city of Ontario. This site has been the subject of ongoing site assessments and clean ups under regulatory oversight of the DTSC and RWQCB since 2013, but is not listed on the National Priorities List. General Electric (GE) has operated a jet engine

facility at this site from 1956 to the present where both commercial and military engines are tested. About 6,000 gallons of hazardous waste were disposed of in dry wells. There is an estimated 600 cubic yards of waste and contaminated spill on the site. Results of preliminary investigation in 1987 indicated the presence of 1,1,1-trichlorethane (TCA), tetrachlorethene (PCE), chloroform, naphthalene, 2-methylnaphthalene, and volatile aromatics (xylene, toluene, ethylbenzene) in soils near the dry wells. As a result, chemical contaminants affected the groundwater, and a plume extends in a southwesterly direction to Grove Avenue. Concentrations of volatile organic compounds (VOCs) in shallow soils in areas at the site have reached acceptable closure levels. In April 2015, RWQCB stated that soil is no longer a source of the releases to groundwater. DTSC will proceed with the Land Use Covenant (LUC) to complete the site soil vapor remediation (DTSC, 2007a).

GE Flatiron Facility

The GE Flatiron is located at 234 Main Street in Ontario. The site has been the subject of ongoing site assessments and clean ups under regulatory oversight of the RWQCB. The site is listed as an Open Cleanup Program Site undergoing remediation. This flatiron facility operated from 1927 to 1982. Since 1982, the property has been owned by Ontario Business Park and has been occupied by commercial and light industrial uses. Soil and groundwater beneath the facility has been contaminated. The depth of groundwater beneath the site is from 200 to 380 feet. The contaminants present in the groundwater are TCE, PCE, and chromium (Cr). The groundwater contaminate plume extended over 1/2- mile in width and approximately 1.5 miles in length in the southwesterly direction along the groundwater flow path. The contaminants present in soil are: PCE, TCE, Cr, total xylenes, toluene, ethylbenzene, 1,1,1- trichloroethene, and 1,1,2-trichloroethane. In December of 2009, a total of 2,406 pounds of VOCs (primarily TCE) and 769 pounds of chromium were removed and treated (SWRCB, 2015b).

Kaiser Steel Site

The Kaiser Steel site is located at 9400 Cherry Avenue in Fontana. Site assessments have been ongoing since 2012 by the RWQCB and the DTSC. This site is not on the national priorities list. Kaiser Steel is the result of merging four different Kaiser Steel Sites. The original Kaiser Steel Mill was located on approximately 1,200 acres in Fontana. The facility was a former integrated steel production plant that the Kaiser Steel Corporation owned and operated from approximately 1942 to 1983. Following shutdown, portions of the original Kaiser property were sold or otherwise transferred. The Department became aware of the potential presence of hazardous waste in 1985, when asbestos and liquids from a benzol production area were released during demolition of onsite structures. The asbestos was removed and is no longer of concern. In August 1988, and January 1989, Preliminary Assessment/Site Inspection Reports (PA/SI) were completed in an effort to identify areas of contamination. Of the 32 areas investigated, 12 were identified as requiring no further action and 20 were recommended for remedial investigation. Through further testing, constituents of concern detected at the sites included metals, petroleum, Polychlorinated Biphenyls (PCBs), Polycyclic Aromatic Hydrocarbons (PAHS), radioactive isotopes, and VOCs such as benzene and toluene. The past uses of the sites that caused groundwater contamination include: hazardous waste treatment, landfill and construction, metal plating and manufacturing, sewage and waste treatment, sewage treatment ponds, and wastewater ponds. Groundwater contamination is currently being monitored (DTSC, 2007b).

Milliken Sanitary Landfill (MSL)

The Milliken Landfill is located at 2050 South Milliken Avenue in Ontario and has been undergoing monitoring as of 2014 by the RWQCB. The MSL is owned and operated by the County of San Bernardino Solid Waste Management Division. The total area of the MSL is 196 acres of which 140 acres were used for waste disposal. MSL has an estimated in-place volume of 25 million cubic yards of solid waste and cover material. MSL was operated as a Class III Sanitary Landfill from 1956 to March 1999. The landfill is undergoing corrective action, however recent monitoring has shown decreases of contaminant levels in soil and no statistical anomalies were identified for metals or VOCs. The majority of the monitoring wells have become dry and over the last two years, increasing trends are noted for most inorganics in samples. As of 2014, VOCs remain below state water drinking standards (SWRCB, 2015c).

Algar Manufacturing Company Inc.

The Algar Manufacturing Company, a Cleanup Program Site, is located at 724 Bon View in Ontario and has been under investigation by the RWQCB since 2000. In 1981, the City of Ontario inspectors conducted

an inspection of the property in response to a complaint about heavy accumulation of oil throughout the interior of the buildings. Several building alterations and additions, which were completed without proper permits, including oil tanks installed below the floor of one building. In 1992 a site investigation selected soil samples for volatile organic compounds VOCs and TPH. The highest concentration of tetrachloroethylene (24,000,000 parts per billion (ppb)) was detected in soil samples collected from 25 feet bgs. Groundwater contamination levels remain above the drinking water supply standard (SWRCB, 2015d).

Upland Landfill
The Upland landfill is located off Campus Avenue between 14th and 15th street in Upland and has been under investigation by the RWQCB since 1982. The inactive landfill is located on the site of a former gravel quarry. The landfill is bisected by the West Cucamonga storm drain which is now lined with concrete where surface runoff empties into the drain. Ponding was evident for 6 to 8 years. VOCs, PCE, TCE and chlorides have been suspected of contaminating the groundwater that is used for multiple uses including drinking water and other domestic uses (SWRCB, 2015e).

Foss Brothers Dairy
The Foss Brothers Dairy is located at 6641 Riverside Drive in Chino. The Dairy consists of a retail commercial dairy market and parking areas. In March 2003, a 500-gallon underground gasoline storage tank was removed from the site. Soil sampling after tank removal identified a significant release of petroleum hydrocarbons from the tank system. The primary contaminate of concern is gasoline. Traces of these hydrocarbons affect the aquifer used for drinking water supply (SWRCB, 2015f).

Van Hofwegen Dairy
The Van Hofwegen Dairy is located fairly close to the Foss Brothers Dairy at 15913 S. Mountain Avenue in Chino. The RWQCB has been remediating the site since 2006. May of 1999 was when petroleum hydrocarbons were first detected in the soil and groundwater at the site. Primary contaminants of concern are gasoline, MTBE, TBA, and other fuel oxygenates that effect the aquifer used for the drinking water supply (SWRCB, 2015g).

South Archibald TCE Plume
The South Archibald TCE Plume is located south of the Ontario Airport between E. Riverside Drive and S. Archibald Avenue in Ontario. This plume of groundwater is contaminated by VOCs, Nitrates and TCE (SWRCB, 2015h).

Sensitive Receptors
Preschools, schools, daycare centers, nursing homes, and hospitals are considered sensitive receptors for hazardous material issues because children and the elderly are more susceptible than adults to the effects of many hazardous materials. There are numerous sensitive receptors throughout the Chino Basin and there is the potential for many sensitive receptors to be within 0.25 miles of existing and proposed future OBMPU facilities.

Wildland Fire Hazards
California Department of Forestry and Fire Protection (CAL FIRE) maps the Fire Hazard Severity Zones (FHSZ) for the cities within the Chino Basin. The FHSZ are based on an evaluation of fuels, topography, dwelling density, weather, infrastructure, building materials, brush clearance, and fire history (CAL FIRE, 2007). The Chino Basin contains moderate, high, and very high fire severity zones shown on **Figure IX-1 through IX-4** shows the fire hazard severity zones (FHSZ)within the project area (CAL FIRE, 2008).

Airports
There are three public airports within the Chino Basin, including the Chino Airport, the Ontario International Airport, and the Cable Airport, listed in **Table IX-2** below.

Table IX-2
AIRPORTS WITHIN THE CHINO BASIN

Airport	Address
Chino Airport (CNO)	7000 Merrill Avenue Chino, CA 91710
LA/Ontario International Airport (ONT)	2500 East Airport Drive Ontario, CA 91761
Cable Airport (CCB)	1749 West 13th Street Upland, CA 91786
SOURCE: Toll Free Airline, 2016	

Schools
Based on a review of information on there are nine school districts that are within the Chino Basin, there are approximately 156 existing schools within the project area.

IX.2 Regulatory Framework

Hazards and hazardous materials are subject to numerous federal, state, and local laws and regulations intended to protect health, safety, and the environment. The U.S. Environmental Protection Agency (USEPA), DTSC, RWQCB, and County of San Bernardino are the primary agencies enforcing these regulations. Local regulatory agencies enforce many federal and State regulations through the Certified Unified Program Agency (CUPA) program. The San Bernardino County Fire Department is the lead agency for the investigation and cleanup of leaking underground storage tank sites. The RWQCB is the lead agency for other groundwater cases. The DTSC can be the lead agency for cases with no groundwater issues and is the lead agency for investigation and remediation of the hazardous sites discussed above.

Federal
Federal agencies with responsibility for hazardous materials management include the USEPA, Department of Labor (Federal Occupational Health and Safety Administration [OSHA]), and Department of Transportation (US DOT). Major federal laws and issue areas include the following statutes and regulations:

Resources Conservation and Recovery Act (RCRA) 42 USC 6901 et seq.
RCRA is the principal law governing the management and disposal of hazardous materials. RCRA is considered a “cradle to grave” statute for hazardous wastes in that it addresses all aspects of hazardous materials from creation to disposal. RCRA applies to this program because RCRA is used to define hazardous materials; offsite disposal facilities and the wastes each may accept are regulated under RCRA.

Emergency Planning and Community Right-to-Know Act (EPCRA from SARA Title III)
EPCRA improved community access to information regarding chemical hazards and facilitated the development of business chemical inventories and emergency response plans. EPCRA also established reporting obligations for facilities that store or manage specified chemicals. EPCRA applies to this program because contractors use hazardous materials (e.g., fuels, paints and thinners, solvents, etc.) would be required to prepare and implement written emergency response plans to properly manage hazardous materials and respond to accidental spills.

US DOT Hazardous Materials Transportation Act of 1975 (49 USC 5101)
US DOT, in conjunction with the USEPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to safe storage and transportation of hazardous materials. The Code of Federal Regulations (CFR) 49, 171–180, regulates the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials. This Act applies to this program because contractors will be required to comply with its storage and transportation requirements that would reduce the possibility of spills.

The Federal Motor Carrier Safety Administration (49 CFR Part 383-397)
The Federal Motor Carrier Safety Administration, a part of the US DOT, issues regulations concerning highway transportation of hazardous materials, the hazardous materials endorsement for a commercial

driver's license, highway hazardous material safety permits, and financial responsibility requirements for motor carriers of hazardous materials. This Act applies to this program because contractors would be required to comply with its storage and transportation requirements that would reduce the possibility of spills.

Occupational Safety and Health Administration (OSHA; 29 USC 15)
OSHA is the federal agency responsible for ensuring worker safety. These regulations provide standards for safe workplaces and work practices, including those relating to hazardous materials handling. OSHA applies to this program because contractors would be required to comply with its hazardous materials management and handling requirements that would reduce the possibility of spills.

Hazardous Materials Transport Act (49 USC 5101)
The U.S. Department of Transportation, in conjunction with the USEPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to transportation of hazardous materials. The Hazardous Materials Transportation Act of 1974 directs the U.S. Department of Transportation to establish criteria and regulations regarding the safe storage and transportation of hazardous materials. Code of Federal Regulations (CFR) 49, 171–180, regulates the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials. This Act applies to this program because contractors would be required to comply with its storage and transportation requirements that would reduce the possibility of spills.

Federal Regulation 49 Code of Federal Regulation Part 77
The Federal Aviation Administration (FAA) is the federal agency that identifies potential impacts related to air traffic and related safety hazards. The Federal Regulation 49 Code of Federal Regulation (CFR) Part 77 establishes standards and notification requirements for objects affecting navigable airspace. This notification serves as the basis for:

- Evaluating the effect of the proposed construction or alteration on operating procedures,
- Determining the potential hazardous effect of the proposed construction on air navigation,
- Identifying mitigating measures to enhance safe air navigation, and
- Charting of new objects.

FAA FAR Part 77 includes the establishment of imaginary surfaces (airspace that provides clearance of obstacles for runway operation) that allows the FAA to identify potential aeronautical hazards in advance, thus preventing or minimizing adverse impacts to the safe and efficient use of navigable airspace. The regulations identify three-dimensional imaginary surfaces through which no object should penetrate. Section 77.17 (Obstruction Standards) also states that an object would be an obstruction to air navigation if it is higher than 200 feet above ground level. Exceedance of 200 feet above ground level or the 100:1 imaginary surface requires notification to FAA (per FAR Part 77). An object that would be constructed or altered within the height restriction or imaginary surface area of the airport is not necessarily incompatible (ALUP, 2008), but would be subject to FAA notification and an FAA aeronautical study to determine whether the proposed structures would constitute a hazard to air navigation. This regulation would apply to the proposed program because the program area is within the air navigation area for the three airports listed in Table 3.7-2.

State
The primary state agencies with jurisdiction over hazardous chemical materials management are the DTSC and the Santa Ana RWQCB. Other state agencies involved in hazardous materials management are the Department of Industrial Relations (State OSHA implementation), State Office of Emergency Services (OES)—California Accidental Release Prevention (CalARP) implementation, California Air Resources Board (CARB), California Department of Transportation (Caltrans), State Office of Environmental Health Hazard Assessment (OEHHA—Proposition 65 implementation) and California Integrated Waste Management Board (CIWMB). Hazardous materials management laws in California include the following statutes and regulations promulgated thereunder:

Hazardous Waste Control Act (HWCA; California Health and Safety Code, Section 25100 et seq.)
The HWCA is the state equivalent of RCRA and regulates the generation, treatment, storage, and disposal of hazardous waste. This act implements the RCRA "cradle-to-grave" waste management system in California but is more stringent in its regulation of non-RCRA wastes, spent lubricating oil, small-quantity generators, transportation and permitting requirements, as well as in its penalties for violations.

California Accidental Release Prevention Program (CalARP)
The purpose of the CalARP is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. This is accomplished by requiring businesses that handle more than a threshold quantity of a regulated substance listed in the regulations to develop a Risk Management Plan (RMP). An RMP is a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. The RMP contains safety information, hazards review, operating procedures, training requirements, maintenance requirements, compliance audits, and incident investigation procedures (CalOES, 2016).

California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act)
The Business Plan Act requires preparation of hazardous materials business plans and disclosure of hazardous materials inventories, including an inventory of hazardous materials handled, plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the state. Local agencies are responsible for administering these regulations.

Several state agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety, including the California Environmental Protection Agency (CalEPA) and the California Emergency Management Agency. The California Highway Patrol and Caltrans enforce regulations specifically related to the transport of hazardous materials. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roadways.

The Business Plan Act applies to this program because contractors will be required to comply with its handling, storage, and transportation requirements that would reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

Health and Safety Code, Section 2550 et seq.
This code and the related regulations in 19 California Code of Regulations (CCR) 2620, et seq., require local governments to regulate local business storage of hazardous materials in excess of certain quantities. The law also requires that entities storing hazardous materials be prepared to respond to releases. Those using and storing hazardous materials are required to submit a Hazardous Materials Business Plan (HMBP) to their local CUPA and to report releases to their CUPA and the State Office of Emergency Services. This code would apply to the program because the contractors would be required to prepare a HMBP that would provide procedures for the safe handling, storage, and transportation of hazardous materials.

California Division of Occupational Safety and Health (Cal/OSHA)
Cal/OSHA is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many entities to prepare injury and illness prevention plans and chemical hygiene plans, and provides specific regulations to limit exposure of construction workers to lead. OSHA applies to this program because contractors will be required to comply with its handling and use requirements that would increase worker safety and reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

Health and Safety Code, Section 25270, Aboveground Petroleum Storage Act
Health and Safety Code Sections 25270 to 25270.13 applies to facilities that operate a petroleum aboveground storage tank with a capacity greater than 660 gallons or combined aboveground storage tanks capacity greater than 1,320 gallons or oil-filled equipment where there is a reasonable possibility that the tank(s) or equipment may discharge oil in "harmful quantities" into navigable waters or adjoining shore lands. If a facility falls under these criteria, it must prepare a Spill Prevention Control and Countermeasure (SPCC) Plan.

Government Code Section 65962.5, Cortese List
The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List" (after the Legislator who authored and enacted the legislation). The list, or a site's presence on the list, has bearing on the local permitting process, as well on compliance with CEQA. The list is developed with input from the State Department of Health Services, State Water Resources Control Board, California Integrated Waste Management Board, and DTSC. At a minimum, at least annually, the DTSC Control shall submit to the Secretary for Environmental Protection a list of the following:

1. All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.
2. All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code.
3. All information received by the DTSC pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposals on public land.
4. All sites listed pursuant to Section 25356 of the Health and Safety Code
5. All sites included in the Abandoned Site Assessment Program.
6. All underground storage tanks for which an unauthorized release report is filed pursuant to Section 25295 of the Health and Safety Code.
7. All solid waste disposal facilities from which there is a migration of hazardous waste and for which a California regional water quality control board has notified the Department of Toxic Substances Control pursuant to subdivision (e) of Section 13273 of the Water Code.
8. All cease and desist orders issued after January 1, 1986, pursuant to Section 13301 of the Water Code, and all cleanup or abatement orders issued after January 1, 1986, pursuant to Section 13304 of the Water Code, that concern the discharge of wastes that are hazardous materials.
9. All solid waste disposal facilities from which there is a known migration of hazardous waste.

The Secretary for Environmental Protection shall consolidate the information submitted pursuant to this section and distribute it in a timely fashion to each city and county in which sites on the lists are located. The Secretary shall distribute the information to any other person upon request. The Secretary may charge a reasonable fee to persons requesting the information, other than cities, counties, or cities and counties, to cover the cost of developing, maintaining, and reproducing and distributing the information. The Cortese List applies to this program because there are sites on the Cortese List within the Chino Basin

Utility Notification Requirements
Title 8, Section1541 of the CCR requires excavators to determine the approximate locations of subsurface utility installations (e.g., sewer, telephone, fuel, electric, water lines, or any other subsurface installations that may reasonably be encountered during excavation work) prior to opening an excavation. The California Government Code (Section 4216 et seq.) requires owners and operators of underground utilities to become members of and participate in a regional notification center. According to Section 4216.1, operators of subsurface installations who are members or participate and share in the costs of a regional notification center are in compliance with this section of the code. Underground Services Alert of Southern California (known as DigAlert) receives planned excavation reports from public and private excavators and transmits those reports to all participating members of DigAlert that may have underground facilities at the location of excavation. Members will mark or stake their facilities, provide information, or give clearance to dig (DigAlert 2014). This requirement would apply to this program because any excavation would be required to identify underground utilities before excavation.

Local

Certified Unified Program Agency (CUPA)
In 1993, Senate Bill (SB) 1082 was passed by the State Legislature to streamline the permitting process for those businesses that use, store, or manufacture hazardous materials. The passage of SB 1082 provided for the designation of a CUPA that would be responsible for the permitting process and collection of fees. The CUPA would be responsible for implementing at the local level the Unified Program, which serves to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for the following environmental and emergency management programs:

- Hazardous Waste
- Hazardous Materials Business Plan
- California Accidental Release Prevention Program
- Underground Hazardous Materials Storage Tanks
- Aboveground Petroleum Storage Tanks / Spill Prevention Control & Countermeasure Plans
- Hazardous Waste Generator and On-Site Hazardous Waste Treatment (tiered permitting) Programs

In the County of San Bernardino, the Hazardous Materials Division of the San Bernardino County Fire Department is designated as the CUPA responsible for implementing the above-listed program elements. The laws and regulations that established these programs require that businesses that use or store certain quantities of hazardous materials and submit a Hazardous Materials Business Plan (HMBP) that describes the hazardous materials usage, storage, and disposal to the CUPA. The contractors constructing the specific project and IEUA as the operator of the facility would be required to prepare and implement an HMBP.

San Bernardino County Emergency Operations Plan
The Emergency Management Program of San Bernardino County is governed and coordinated by the San Bernardino County Fire Department, Office of Emergency Services. The National Response Framework (NRF), National Incident Management System (NIMS), the Standardized Emergency Management System (SEMS) and the State of California Emergency Operations Plan provide planning and policy guidance to counties and local entities. These documents support the foundation for the County's Emergency Operations Plan (EOP), an all-hazard plan describing how the County will organize and respond to incidents. It is based on and compatible with the laws, regulations, plans, and policies listed above. The EOP describes how various agencies and organizations in the County will coordinate resources and activities with other Federal, State, County, local, and private-sector partners (County Fire Department Office of Emergency Services, 2013).

Multi-Jurisdictional Hazard Mitigation Plan (HMP)
The MJHMP is reviewed, monitored, and updated to reflect changing conditions and new information every five (5) years. The updated San Bernardino County Unincorporated Area MJHMP was approved by FEMA. The MJHMP presents updated information regarding hazards being faced by the County, the San Bernardino County Fire Protection District, the San Bernardino County Flood Control District, Big Bear Valley Recreation and Parks District, Bloomington Recreation and Parks District (Districts), and those Board-governed Special Districts administered by the San Bernardino County Special Districts Department. The Plan also presents mitigation measures to help reduce consequences from hazards, and outreach/education efforts within the unincorporated area of the County since 2005 (San Bernardino County, 2011).

San Bernardino County Fire Department
The Chino Basin receives fire and emergency response services from the San Bernardino County Fire Department (SBCFD). The SBCFD is responsible, on both the city and county level, for enforcing the State regulations governing hazardous waste generators, hazardous waste storage, and underground storage tanks, including inspections and enforcement. The SBCFD also regulates the use, storage, and disposal of

hazardous materials in San Bernardino County by issuing permits, monitoring regulatory compliance, investigating complaints, and other enforcement activities.
In addition to providing fire protection and emergency services, the SBCFD regulates the use and storage of hazardous materials for the County and provides emergency response in the event of accidental release of hazardous materials.

The SBCFD also administers the local Fire Code which incorporates articles of the Uniform Fire Code (UFC). The UFC is a model code, setting construction standards for buildings and associated fixtures, in order to prevent or mitigate hazards resulting from fire or explosion. The SBCFD reviews technical aspects of hazardous waste site cleanups, and oversees remediation of certain contaminated sites resulting from leaking underground storage tanks. The SBCFD is also responsible for providing technical assistance to public and private entities which seek to minimize the generation of hazardous waste.

Hazardous Materials Fire Code Requirements
As the CUPA, the SBCFD enforces the hazardous materials-related standards of the California Fire Code, including requirements for signage of hazardous materials storage areas, storage of flammable materials, secondary containment for storage containers, and separation of incompatible chemicals.

IX.3 Impact Analysis

Significance Criteria
The criteria used to determine the significance of impacts related to hazards and hazardous materials are based on Appendix G of the *CEQA Guidelines*. The proposed program would result in a significant impact with respect to hazards or hazardous materials if the program would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

A discussion of the impacts and mitigation measures for the proposed project are presented below.

Methodology
This analysis focuses on the potential to encounter hazardous substances in soil and groundwater during construction and is based on regulatory database searches. The analysis also addresses the potential for the OBMPU projects to release hazardous materials during construction and operation, interfere with an adopted emergency response plan or emergency evacuation plan, and create fire hazards. Each potential impact is assessed in terms of the applicable regulatory requirements, and mitigation measures are identified as appropriate.

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This project category includes development of ASR, injection, pumping, groundwater level, and water quality monitoring wells; associated well housing and monitoring devices such as flow meters and extensometers; and their operation. These wells would be installed throughout the Chino Basin, but with an emphasis on new well facilities north of State Highway 60 (SH 60).

In most instances these facilities do not involve the routine transport, use, or disposal of hazardous materials. However, in certain instances hazardous materials are used routinely in support of drilling wells, groundwater production operations and related treatment operations, and thus, some activities in support of Project Category 1 may generate routine transport of hazardous materials. Construction activities would be required for the installation of proposed improvement upgrades at the existing treatment plant facilities. Construction activities required for implementation of the facilities would potentially involve drilling, trenching, excavation, grading, and other ground-disturbing activities. The anticipated construction activities described above would temporarily require the transport, use, and disposal of hazardous materials including gasoline, diesel fuel, hydraulic fluids, paint, and other similarly related materials. Operational activities could require the installation of treatment facilities that use chemicals to ensure that recovered water from ASR wells

Although all stakeholders are required to manage both use of and disposal of hazardous or toxic materials in accordance with existing laws and regulations, the OBMP PEIR included five mitigation measures and the implementation of these measures can ensure that the use and generation of hazardous substances in support of Category 1 projects does not pose a significant hazard to workers, adjacent land uses and the environment. These mitigation measures (4.10-1 through and 4.10-5) will be applied to these future OBMPU projects. These measures have been re-numbered to be consistent with the topical numbering contained in this Initial Study.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of an estimated 550,000 LF of new pipelines, booster pump stations, reservoirs, and supporting equipment. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs. Installation of these facilities can require delivery of hazardous materials (such as petroleum products) to support their installation. Long term operation of such facilities can require small quantities of hazardous materials, but typically only minimal quantities to keep equipment operating safely and efficiently.

Impacts would be the same as Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5,8-9)
This category includes the construction of up to 310 acres of storage basins, including new basins and modifications/improvements to existing basins. It includes the use of up to 200 acres of agricultural land to support flood MAR facilities, new MS-4-compliance facilities and expansion of the maximum storage space (safe storage capacity) to be used in the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Installation of these facilities can require delivery of hazardous materials (such as petroleum products) to support their installation. Long term operation of such facilities can require small quantities of hazardous materials, but typically only minimal quantities to keep equipment operating safely and efficiently. The expansion of water storage in the Chino Basin has a potential to adversely impact known contamination

plumes and unknown vadose zone contamination. These issues are addressed in the Hydrology & Water Quality Section, Section X in relation to increase groundwater storage.

Also, based on experience with existing recharge basins, all new surface water bodies associated with new storage basins and recharge facilities will require management of insects, primarily midges. This can be accomplished with a mix of insect control activities, but most often includes some use of pesticides. The use of pesticides, which are typically hazardous materials (poisons), is controlled through cooperation with those County agencies assigned the responsibility for controlling vectors, such as mosquitos. Mitigation is provided below to address management of pesticide use to minimize hazards for groundwater recharge activities and the environment surrounding the recharge basins and future surface storage facilities.

Other than the use of pesticides to control vectors, impacts would be the same as Project Categories 1 and 2.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category include: upgrades at IEUA's existing Water Recycling Plants (WRPs, discussed in detail in IEUA's 2017 FMP PEIR); a new advanced water treatment plant; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters, new groundwater treatment facilities at or near existing well sites and at regionally located sites; and improvements to existing groundwater treatment facilities.

Installation of these facilities can require delivery of hazardous materials (such as petroleum products) to support their installation. Long-term operation of such facilities as WRPs or advanced water treatment plants can require modest quantities of hazardous materials, such as chemicals like chlorine (commonly in the form of sodium hypochlorite) to treat recycled water or potable water sources prior to distribution. The mitigation measures identified for Project Categories 1, 2, and 3 also apply to Category 4 projects.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant Impact

Mitigation Measures:

HAZ-1: ***For OBMPU facilities that handle hazardous materials or generate hazardous waste, the Business Plan prepared and submitted to the county or local city shall incorporate best management practices designed to minimize the potential for accidental release of such chemicals. The facility managers shall implement these measures to reduce the potential for accidental releases of hazardous materials or wastes***

HAZ-2: ***The business plan shall assess the potential accidental release scenarios and identify the equipment and response capabilities required to provide immediate containment, control and collection of any released material. Adequate funding shall be provided to acquire the necessary equipment, train personnel in responses and to obtain sufficient resources to control and prevent the spread of any accidentally released hazardous or toxic materials.***

HAZ-3: ***For the storage of any acutely hazardous material at an OBMPU facility, such as chlorine gas, modeling of pathways of release and potential exposure of the public to any released material shall be completed and specific measures, such as secondary containment, shall be implemented to ensure that sensitive receptors will not be exposed to significant health threats based on the toxic substance involved.***

HAZ-4: ***All hazardous contaminated material shall be delivered to a licensed treatment, disposal or recycling facility that has the appropriate systems to manage the contaminated material without significant impact on the environment***

HAZ-5: ***Before determining that an area contaminated as a result of an accidental release is fully remediated, specific thresholds of acceptable clean-up shall be established and sufficient samples shall be taken within the contaminated area to verify that these clean-up thresholds have been met.***

HAZ-6: ***Vector management plans shall be prepared and use of pesticides shall be reviewed and coordinated with the West Valley Mosquito and Vector Control District for approval prior to implementing vector control at any of the new or expanded storage basins. All pesticides shall be applied in accordance with State and label requirements to minimize potential for residual concentrations that may be considered adverse to public health and water quality.***

Level of Significance After Mitigation: Less than Significant

Cumulative Impact Analysis
The Chino Basin project area is largely urbanized with residential, commercial and industrial uses in most areas except southern Chino and Ontario and Prado Basin. As the project area continues to develop, the addition of more development could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. However, all cumulative development would be subject to federal, State, and local regulations related to the routine transportation, use, storage, and disposal of hazardous materials. Since the proposed OBMPU projects would result in less than significant impacts related to the routine handling, use or disposal of hazardous materials, the projects' contributions to such impacts would be potentially cumulatively considerable and therefore, would result in a significant cumulative impact.

*Cumulative Measures: Mitigation measures **HAZ-1** through **HAZ-6** are required to minimize cumulative impacts.*

Level of Significance After Mitigation: Less than Significant

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This project category includes development of ASR, injection, pumping, groundwater level, and water quality monitoring wells; associated well housing and monitoring devices such as flow meters and extensometers; and their operation. These wells would be installed throughout the Chino Basin, but with an emphasis on new ASR well facilities north of State Highway 60 (SH 60).

Construction activities associated with implementation of the proposed Category 1 facilities could create hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials used in construction activities and equipment. The construction activities would involve the use of adhesives, solvents, paints, thinners, petroleum products and other chemicals. Cal/OSHA regulations provide for the proper labeling, storage, and handling of hazardous materials to reduce the potential harmful health effects that could result from worker exposure to hazardous materials. If not properly handled; however, accidental release of these substances could expose construction workers, degrade soils, or become entrained in stormwater runoff, resulting in adverse effects on the public or the environment. Agencies implementing Category 1 projects are required to comply with all relevant and applicable federal, state and local laws and regulations that pertain to the accidental release of hazardous materials during construction of proposed facilities such as Health and Safety Code, Section 2550 et seq. Compliance with all applicable federal, state and local regulations can reduce potential impacts to the public or the environment regarding accidental release of hazardous materials to less than significant impact, but a contingency mitigation measure is provided to ensure accidental releases and any related contamination do not significantly affect the environment at facility locations.

Where structures may need to be demolished such structures would need appropriate abatement of identified asbestos prior to demolition. Federal and state regulations govern the demolition of structures where materials containing lead and asbestos are present. ACMs are regulated both as a hazardous air pollutant under the Clean Air Act and as a potential worker safety hazard under the authority of Cal OSHA. These requirements include SCAQMD Rules and Regulations pertaining to asbestos abatement (including Rule 1403); Construction Safety Orders 1529 (pertaining to asbestos) and 1532.1 (pertaining to lead) from CCR Title 8; CFR Title 40, Part 61, Subpart M (pertaining to asbestos); and lead exposure guidelines provided by the U.S. Department of Housing and Urban Development (HUD). Asbestos and lead abatement must be performed and monitored by contractors with appropriate certifications from the California Department of Health Services.

In addition, Cal/OSHA has regulations concerning the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs. All demolition that could result in the release of lead and/or asbestos would be conducted according to Cal/OSHA standards. Adherence to existing regulations and the mitigation measure provided below would ensure that potential impacts related to ACMs and LMPs would be less than significant.

The use of hazardous materials and substances during construction would be subject to the federal, state, and local health and safety requirements for the handling, storage, transportation, and disposal of hazardous materials, summarized in the Regulatory Framework. With compliance with these regulations, hazardous material impacts related to construction activities would be less than significant.

Operation
Operation of the proposed facilities could include the storage and use of chemicals. Any storage tanks would be designed in accordance with the applicable hazardous materials storage regulations for long-term use summarized in the Regulatory Framework. The delivery and disposal of chemicals to and from water and wastewater treatment facility sites would occur in full accordance with all applicable federal, state, and local regulations.

As noted in the Regulatory Framework, an HMBP must be prepared and implemented for the proposed facility upgrades as required by the County of San Bernardino CUPA. The HMBP would minimize hazards to human health and the environment from fires, explosions, or an accidental release of hazardous materials into air, soil, surface water, or groundwater. Compliance with all applicable federal, state and local regulations regarding the handling, storage, transportation, and disposal of hazardous materials, and preparation and implementation of the HMBP would reduce potential impacts to the public, employees, or the environment related to the transport, use, or disposal of hazardous materials to a less than significant impact.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of an estimated 550,000 LF of new pipelines, booster pump stations, reservoirs, and supporting equipment. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs. Installation of these facilities can require delivery of hazardous materials (such as petroleum products) to support their installation. Long term operation of such facilities can require small quantities of hazardous materials, but typically only minimal quantities to keep equipment operating safely and efficiently.

Construction
Construction impacts would be the same as Project Category 1. Compliance with all applicable federal, state and local regulations regarding the handling, storage, transportation, and disposal of hazardous materials, and preparation and implementation of the mitigation measure HAZ-7 would reduce potential

impacts to the public, employees, or the environment related to the transport, use, or disposal of hazardous materials to a less than significant impact.

Operation
Operation of the proposed conveyance and ancillary facilities would consist of facilities designed to store, transport and discharge water. Hazardous materials would not be associated with the regular operation of these facilities. Therefore, operational impacts would be less than significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This category includes the construction of up to 310 acres of storage basins, including new basins and modifications/improvements to existing basins. It includes the use of up to 200 acres of agricultural land to support flood MAR facilities, new MS-4-compliance facilities and expansion of the maximum storage space (safe storage capacity) to be used in the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts would generally be the same as Project Categories 1 and 2. The primary differences are the major construction effort for the new basins (larger than most facilities required to support the OBMPU), and the flood MAR facilities and MS4 facilities (where the Watermaster's role will be secondary to that of the cities and counties due to these agencies holding the MS4 permits from the Regional Board) may be located in proximity to schools. The cities and counties must be approached by the Watermaster or stakeholders to identify any specific role they can play in enhancing onsite surface runoff management, particularly onsite recharge at a MAR facility or MS4 facility(ies). At this time, it is not possible to identify specific improvements that may be feasible to enhance this role.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category include: upgrades at IEUA's existing Water Recycling Plants (WRPs, discussed in detail in IEUA's 2017 FMP PEIR); a new advanced water treatment plant; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters, new groundwater treatment facilities at or near existing well sites and at regionally located sites; and improvements to existing groundwater treatment facilities.

All of the above facilities (except the new advanced water treatment plant) are proposed to be implemented at existing facilities or disturbed locations. Most of these locations are not near existing schools, but where such proximity may occur, the impacts will be comparable to Categories 1 and 2.

Operations
Operation of the proposed conveyance and ancillary facilities would consist of facilities designed to store, transport and discharge water. Hazardous materials would not be associated with the regular operation of these facilities. Therefore, operational impacts would be less than significant.

Combined Project Categories
Accidental release of hazardous materials could occur during routine transport, disposal, or use, and could potentially injure construction workers, contaminate soil, and/or affect nearby groundwater or surface water bodies. Future project proponents would be required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the transport, storage, and use of hazardous materials during construction and operation of all proposed facilities. Compliance with these laws and implementation of the following mitigation measure would minimize the potential hazard to the public or environment due to accidental release. Potential accidental hazard impacts would be less than significant.

Mitigation Measures:

HAZ-7: All accidental spills or discharge of hazardous material during construction activities shall be reported to the County Fire Department and shall be remediated in compliance

with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility. This measure shall be incorporated into the SWPPP prepared or each future facility developed under the OBMPU PEIR. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.

Level of Significance After Mitigation: Less Than Significant

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This project category includes development of ASR, injection, pumping, groundwater level, and water quality monitoring wells; associated well housing and monitoring devices such as flow meters and extensometers; and their operation. These wells would be installed throughout the Chino Basin, but with an emphasis on new ASR well facilities north of State Highway 60 (SH 60).

Due to the potentially extensive nature of facilities associated with implementing the proposed wells and ancillary equipment, it is possible that construction of proposed facilities would occur within one-quarter mile of a school. Construction activities would use limited quantities of hazardous materials, such as gasoline and diesel fuel. As a general rule, well and ancillary facility construction activities do not require any acutely hazardous materials. Additionally, a project proponent is required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the release of hazardous materials during construction of proposed facilities. Compliance with all applicable federal, state and local regulations and mitigation measure **HAZ-7** would reduce potential impacts to the public or the environment regarding hazardous waste discharges or emissions within one-quarter mile of a school during construction. Impacts would be less than significant.

Operation of the proposed projects would consist of facilities designed to produce, store and move water into and out of the groundwater aquifer. With two exceptions, hazardous materials would not be associated with the regular operation of Category 1 facilities, and no hazardous materials would be emitted or handled within one-quarter mile of a school. One exception is if during extractions from the Chino Basin, owners of wells choose to treat the groundwater with chlorine for delivery of the groundwater as potable water. This is most commonly carried out by dosing the extracted water with sodium hypochlorite, a diluted hazardous material. This material would not enter the atmosphere and in the quantities and form used, would not pose a significant hazard for students that may be attending a nearby school. The other material is petroleum product used to support pump stations. In both cases, the established handling protocols would cause no significant operational impacts for category 1 facilities.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of an estimated 550,000 LF of new pipelines, booster pump stations, reservoirs, and supporting equipment. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs.

Due to the potentially extensive nature of facilities associated with implementing the proposed pipelines and ancillary facilities, it is possible that construction of proposed facilities would occur within one-quarter mile of a school. Construction activities would use limited quantities of hazardous materials during construction of pipelines and ancillary facilities, such as gasoline and diesel fuel. Additionally, future project proponents are required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the release of hazardous materials during construction of proposed facilities. Compliance with all applicable federal, state and local regulations and mitigation measure **HAZ-7** would

reduce potential impacts to the public or the environment regarding hazardous waste emissions within one-quarter mile of a school. Impacts would be less than significant.

Operation of the proposed Category 2 projects would consist of facilities designed to store, convey, and discharge water. Therefore, hazardous materials would not be associated with the regular operation of the facilities, and no hazardous materials would be emitted or handled within one-quarter mile of a school. The one exception to this could be pump stations with backup generators that would require fuels for operation. Future project proponents are required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the release of hazardous materials during operation of proposed facilities. Compliance with all applicable federal, state and local regulations and mitigation measure **HAZ-7** would reduce potential impacts to the public or the environment regarding hazardous waste emissions within one-quarter mile of a school during operations. Impacts would be less than significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This category includes the construction of up to 310 acres of storage basins, including new basins and modifications/improvements to existing basins. It includes the use of up to 200 acres of agricultural land to support flood MAR facilities, new MS-4-compliance facilities and expansion of the maximum storage space (safe storage capacity) to be used in the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Construction

The construction of storage basins will occur in areas not located within ¼ mile of any existing schools. Therefore, no adverse impacts under this issue category will occur. Some of the existing recharge facilities, and future recharge facilities (ASR wells), may occur within ¼ mile of a school. The construction activity impacts at such facilities will be comparable to the impacts under Category 1 and 2 facilities. For the flood MAR and MS4 projects the specific location of such facilities is not yet defined, so such facilities could be located near a school. However, minimal construction activities would be expected for such facilities and the impacts would be comparable to the impacts under Category 1 and 2 facilities. Finally, the use of groundwater storage capacity up to 1,000,000 af has no potential to directly create any school hazards, other than some of the support facilities, such as ASR wells addressed under Category 1 facilities.

Operations

Operation of the proposed storage basins, recharge facilities and storage band facilities would consist of facilities designed to store, recharge and use storage space in the Chino Basin aquifer. Hazardous materials would not be associated with the regular operation of these facilities. Therefore, operational impacts would be less than significant.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category include: upgrades at IEUA's existing Water Recycling Plants (WRPs, discussed in detail in IEUA's 2017 FMP PEIR); a new advanced water treatment plant; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters, new groundwater treatment facilities at or near existing well sites and at regionally located sites; and improvements to existing groundwater treatment facilities.

Construction

All of the above facilities (except the new advanced water treatment plant) are proposed to be implemented at existing facilities or disturbed locations. Most of these locations are not near existing schools, but because of construction activities at these locations hazardous materials are likely to be used. Where such proximity to schools may occur, the impacts will be comparable to Categories 1 and 2.

Operations
Most of these locations are not near existing schools, but because of treatment processes at these locations hazardous materials will be used. Where such proximity may occur, the impacts will be comparable to Categories 1 and 2.

Combined Project Categories
It is possible for many of the above facilities to be constructed within one quarter-mile of a school. Because construction activities would use limited quantities of hazardous materials and are required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the release of hazardous materials during construction, impacts would be less than significant. Furthermore, hazardous materials would be associated with the regular operation of the facilities within one-quarter mile of a school. Because operation activities would use limited quantities of hazardous materials and are required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the release of hazardous materials during use, impacts would be less than significant. Therefore, there would be no significant operational impacts.

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures: Mitigation measure **HAZ-7** is required to minimize project impacts.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis
*Cumulative Measures: Mitigation measure **HAZ-7** is required to minimize project impacts. Cumulative projects should implement comparable mitigation measures, but IEUA and Watermaster can only impose and monitor mitigation measures for OBMPU projects.*

Level of Significance After Mitigation: Less Than Significant

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This project category includes development of ASR, injection, pumping, groundwater level, and water quality monitoring wells; associated well housing and monitoring devices such as flow meters and extensometers; and their operation. These wells would be installed throughout the Chino Basin, but with an emphasis on new ASR well facilities north of State Highway 60 (SH 60).

The hazardous sites analysis undertaken for this program, including records search on the SWRCB GeoTracker and the DTSC EnviroStor databases, revealed multiple listed and active sites within the Chino Basin, however there are no hazardous waste sites identified within or adjacent to the IEUA treatment facilities' sites. Within the Chino Basin the contaminated locations can be divided into two categories. First, there are known surface contaminated sites of which there are more than 100 locations and which are generally limited in area. Second, there are larger legacy contamination sites that have cause extensive groundwater contamination plumes, such as he GE Flatiron plume. These larger known contaminated areas are not being evaluated in this section of the Initial Study. They will be evaluated in the Program Environmental Impact Report (PEIR) under the Hydrology and Water Quality section because of the potential for future OBMPU activities to cause significant adverse impacts to these contaminated areas.

Regarding the smaller, discrete surface contamination sites, the lack of specific locations for future wells, and ancillary facilities makes it infeasible at this time to forecast potential conflicts or impacts between Category 1 uses and possible adverse impacts associated with contaminated sites. Therefore, mitigation will be implemented to prevent future site-specific conflicts or impacts between Category 1 facilities and such sites. Two mitigation measures (**HAZ-8** and **HAZ-9**) will be implemented to ensure that Category 1 facilities are not located on contaminated sites. These measures can be readily implemented since the

Category 1 sites ae small (typically 0.5 acre or less) and with rare exceptions need not be located at a specific site.

Occasionally, a project that involves subsurface excavation or exploration may encounter an unknown contaminated site. Once encountered there are existing protocols to address such contamination in the regulations. However, the mitigation measure **HAZ-9** shall be implemented to ensure such contamination does not cause harm to employees or the surrounding environment.

With implementation of mitigation measures, potential conflicts with contaminated sites can be reduced to a less than significant impact level for future OBMPU facilities.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of an estimated 550,000 LF of new pipelines, booster pump stations, reservoirs, and supporting equipment. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs.

The hazardous sites analysis undertaken for this project, including records search on the SWRCB GeoTracker and the DTSC EnviroStor databases, revealed multiple listed and active sites within the Chino Basin. The proposed projects would include construction of pipelines and ancillary facilities throughout the Chino Basin. During project construction, it is possible that contaminated soil and/or groundwater could be encountered during excavation, thereby posing a health threat to construction workers, the public, and the environment. In addition to implementing mitigation measures **HAZ-8** and **HAZ-9**, which address avoiding known contaminated sites and encounters with unknown contamination, notification of regulatory agencies and following their guidance can ensure OBMPU facilities will have a less than significant conflict with contaminated sites.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This category includes the construction of up to 310 acres of storage basins, including new basins and modifications/improvements to existing basins. It includes the use of up to 200 acres of agricultural land to support flood MAR facilities, new MS-4-compliance facilities and expansion of the maximum storage space (safe storage capacity) to be used in the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts would be the same as Project Categories 1 and 2. Therefore, construction and operation of storage basins, recharge facilities and the storage bands would not result in a significant hazard to the public or environment with implementation of measures **HAZ-8** and **HAZ-9**.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category include: upgrades at IEUA's existing Water Recycling Plants (WRPs, discussed in detail in IEUA's 2017 FMP PEIR); a new advanced water treatment plant; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters, new groundwater treatment facilities at or near existing well sites and at regionally located sites; and improvements to existing groundwater treatment facilities.

Aside from the proposed advanced wastewater treatment plant, the existing desalter sites, IEUA's WRPs, and the WFA Agua de Lejos Treatment Plant do not have any known contaminated locations within their boundaries. Therefore, modifications to these facilities in support of the OBMPU pose no potential for adverse impacts to employees or environment. This finding is generally valid for individual well sites where new water treatment facilities may be installed. With regard to the advanced water treatment facility, impacts would be the same as Project Categories 1 and 2. Therefore, construction and operation of this

type of facility would not result in a significant hazard to the public or environment with implementation of measures **HAZ-8** and **HAZ-9**.

Combined Project Categories
During project construction, it is possible that contaminated soil and/or groundwater could be encountered during excavation, thereby posing a health threat to construction workers, the public, and the environment. Impacts would be potentially significant.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

HAZ-8: ***Prior to final site selection for future OBMPU facilities, the implementing agency shall obtain a Phase I Environmental Site Assessment (ESA)for the selected site. If a site contains contamination the agency shall either avoid the site by selecting an alternative location or shall remove any contamination (remediate) at the site to a level of concentration that eliminates hazard to employees working at the site and that will not conflict with the installation and future operation of the facility. For sites located on agricultural land, this can include soil contaminated with unacceptable concentrations of pesticides or herbicides that shall be remediated through removal or blending to reduce concentrations below thresholds of significance established for the particular pesticide or herbicide.***

HAZ-9: ***Should an unknown contaminated site be encountered during construction of OBMPU facilities, all work in the immediate area shall cease; the type of contamination and its extent shall be determined; and the local CUPA or other regulatory agencies (such as the DTSC or Regional Board) shall be notified. Based on investigations of the contamination, the site may be closed and avoided or the contaminant(s) shall be remediated to a threshold acceptable to the CUPA or other regulatory agency threshold and any contaminated soil or other material shall be delivered to an authorized treatment or disposal site.***

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measures **HAZ-8** and **HAZ-9**would require site-specific studies to identify known hazardous materials risks or the potential for risk related to hazardous materials. These studies would identify recommendations and cleanup measures to reduce risk to the public and the environment from development on hazardous materials sites. Implementation of Mitigation Measures **HAZ-8** and **HAZ-9** would reduce potential impacts to construction workers and the public from exposure to unknown affected soils. Therefore, impacts to the public or the environment related to hazardous materials sites would be less than significant.

Cumulative Impact Analysis
The Chino Basin is largely urbanized with residential, commercial and industrial development. As the region continues to develop, the addition of developments could be located on sites that are included on a list of hazardous materials sites and as a result, could create significant hazards to the public or the environment. Since the proposed OBMPU projects could be constructed on current hazardous material sites or unknown contaminated sites, impacts would be cumulatively considerable and therefore, would result in a potentially significant cumulative impact.

*Cumulative Measures: Mitigation measures **HAZ-8** and **HAZ-9** are required to minimize project impacts.*

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measures **HAZ-8** and **HAZ-9** would ensure that the proposed facilities' contribution to cumulative development on hazardous materials sites would be reduced to less than

cumulatively considerable by requiring site-specific studies to identify known hazardous materials risks or the potential for risks related to hazardous materials and affected soils and groundwater. These studies would include recommendations and cleanup measures to reduce risk to the public and the environment from development on contaminated sites. Implementation of Mitigation Measure **HAZ-8** and **HAZ-9** would reduce potential impacts to construction workers and the public from exposure to unknown affected soils.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

The following three airports are located within the Chino Basin boundaries: Chino Airport, LA/Ontario International Airport, and Cable Airport in Upland. There are no private airstrips located within the Chino Basin.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This project category includes development of ASR, injection, pumping, groundwater level, and water quality monitoring wells; associated well housing and monitoring devices such as flow meters and extensometers; and their operation. These wells would be installed throughout the Chino Basin, but with an emphasis on new ASR well facilities north of State Highway 60 (SH 60).

Category 1 facilities are all low to the ground and any small structures would be uninhabited. Although no specific Category 1 facilities are specifically proposed within any airport safety zone or flight paths, the ASR wells, that are proposed to be located north of SH60 could be installed within the Ontario Airport's safety zone and flight path, excluding of course the runway protection zone. Other wells and ancillary facilities could be installed in similar areas at Chino and Cable Airports. Although OBMP Category 1 facilities would not pose any specific conflict with any public airport operations, mitigation is provided to ensure airport operators have an opportunity to participate in a decision to locate OBMP facilities within safety zone or flight paths. With implementation of mitigation measure **HAZ-10**, conflicts between OBMPU Category 1 facilities and airports can be reduced to a less than significant impact level.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of an estimated 550,000 LF of new pipelines, booster pump stations, reservoirs, and supporting equipment. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs.

Pipelines are anticipated to be constructed below the ground surface within existing public rights-of-way, and no impacts would occur. Furthermore, all Project Category 2 facilities would be unmanned and therefore would not put any workers at risk. However, some ancillary facilities' locations (for reservoirs and booster pumps) have not yet been determined, and therefore, have the potential to be within an airport land use planning area. Ancillary facilities could result in a safety hazard to airport flight patterns, light, or navigation. Therefore, potential airport hazard impacts could be potentially significant. Implementation of Mitigation Measure HAZ-10 can ensure that Category 2 facilities will not conflict with airport operations.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This category includes the construction of up to 310 acres of storage basins, including new basins and modifications/improvements to existing basins. It includes the use of up to 200 acres of agricultural land to support flood MAR facilities, new MS-4-compliance facilities and expansion of the maximum storage space (safe storage capacity) to be used in the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

All three types of Category 3 facilities occur at ground level or below in the case of the storage bands below the ground surface. With the following exception these Category 3 facilities have no potential conflicts with airports or airport operations. The proposed storage basin at CIM could create a potential conflict due to attraction of water birds, particularly during the annual migration seasons (fall and spring). It should be noted that geese commonly utilize the existing CIM property for layover and feeding under present conditions. Based on the final site selected for the proposed CIM storage basin, the implementing agency shall implement Mitigation Measure HAZ-10. Regardless, if a bird strike conflict with flight paths from Chino Airport is identified, the implementing agency shall develop and implement a bird management program for the storage basin in conjunction with the Chino Airport managers. Implementation of HAZ-10 can reduce potential conflicts to a less than significant impact level.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category include: upgrades at IEUA's existing Water Recycling Plants (WRPs, discussed in detail in IEUA's 2017 FMP PEIR); a new advanced water treatment plant; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters, new groundwater treatment facilities at or near existing well sites and at regionally located sites; and improvements to existing groundwater treatment facilities.

Chino Airport

The City of Chino Airport is located at the northeast corner of Euclid Avenue and Kimball Avenue in the City of Chino. RP-2 is located within the Chino Airport Safety Zone II, or Referral Area "B". This area is made up of a departure zone but does not fall within the runway protection zone (RPZ), which would put construction workers or operational employees at most risk. Furthermore, RP-5 and the CCWRF are located in the Chino Airport Safety Zone III, or Referral Area "C"; the threat of aircraft accidents in this area is below that of the other referral areas. Some of the proposed OBMPU facilities would be located within the Chino Airport land use planning area; however, all IEUA existing facilities are located in zones that do not substantially expose short-term construction workers or long-term employees to risks. Potential conflicts with Chino Airport are considered to be less than significant.

LA/Ontario International Airport

The City of Ontario International Airport is located approximately 1.7 miles north of RP-1 and not within any airport safety zones or flight paths. Improvements at RP-1 would not result in any safety hazards for people residing or working in the project area. Therefore, impacts would be less than significant.

Cable Airport

There are no Project Category 4 projects proposed near the Cable Airport. The existing treatment facilities and associated projects are located within the City of Chino, Ontario, and Rancho Cucamonga. The closest IEUA treatment facility is RP-1 located approximately 7.5 miles southeast in Ontario. No proposed projects within existing treatment facilities would be located within two miles of the Cable Airport, therefore there would be no impacts associated with safety hazards for people working at the treatment facilities.

The only facility with some flexibility of location under Category 4 is the new advanced water treatment facility. This facility could be located adjacent to an existing IEUA WRP or another as yet unidentified location. Based on discussions with the Watermaster, the most likely location for this facility is in the northern portion of the Chino Basin in order to minimize energy costs related to delivery of the advanced treated water to water users. However, if a location within a safety zone is required compliance with HAZ-10 can reduce potential environmental impacts to a less than significant level.

Combined Project Categories

Most proposed projects' locations have not yet been determined, and therefore, have the potential to be within an airport land use plan, which in turn could result in a safety hazard to airport flight patterns, light, or navigation. Therefore, potential airport hazard impacts could be potentially significant.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

HAZ-10: ***Prior to finalizing sit selection of an OBMPU facility with an airport safety zone, input from the affected airport management entity shall solicited. For projects within airport safety zones, facility design shall follow the guidelines of the appropriate airport land use plan to the extent feasible. If legitimate safety hazards are identified, the implementing agency shall relocate the facility outside the area of conflict if feasible, or if the site is deemed essential, the implementing agency shall propose an alternative design that reduces any conflict to a less than significant level of conflict. As an example, a pump station or reservoir could be installed below ground instead of above ground.***

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **HAZ-10** would ensure compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies to ensure safety for people residing or working within the project area. Implementation of Mitigation Measure **HAZ-10** would reduce potential impacts from development within an airport safety zone to a less than significant impact.

Cumulative Impact Analysis

*Cumulative Measures: Implementation of Mitigation Measure **HAZ-10** is required.*

Level of Significance After Mitigation: Less Than Significant

Implementation of Mitigation Measure **HAZ-10** would ensure that the proposed facilities' contribution to cumulative safety impacts from development within airport safety zones would be reduced to less than cumulatively considerable by requiring compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The highly urbanized portion of the Chino Basin and the Prado Wetlands have been designated by the Cal Fire as less than high or very high fire hazard severity zones. This is shown on the attached wildland fire Fire Hazard Severity Zone maps. Figures IX-1 through IX-4 show the fire hazard zones in the relevant portions of San Bernardino and Riverside Counties that encompass the Chino Basin. Almost all "high" or "severe" wildland fire hazard areas are located on the edges of the Chino Basin, or adjacent to isolated hills (Jurupa Hills) that interrupt the slope of the Chino Basin alluvial fan. As described below both the unmanned infrastructure proposed by the OBMPU and the location of this infrastructure occur in areas with at most moderated wildland fire hazards.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This project category includes development of ASR, injection, pumping, groundwater level, and water quality monitoring wells; associated well housing and monitoring devices such as flow meters and extensometers; and their operation. These wells would be installed throughout the Chino Basin, but with an emphasis on new ASR well facilities north of State Highway 60 (SH 60).

All project facilities under Category 1 would be contained within the boundaries of their specific sites which would not include any roadways. Project-related vehicles would not block existing street access to the sites project sites. Therefore, no impacts related to an emergency evacuation plans would occur from installation and operation of Category 1 OBMP facilities.

Operation of the proposed facilities would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The facilities all consist of wells and ancillary infrastructure which, during operation, would not interfere with traffic flows. However, aboveground facilities would require

periodic maintenance. Maintenance activities would be random and require minimal trips that would not significantly impact the surrounding roadways. Impacts related to an adopted emergency plan would be considered less than significant during operation.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of an estimated 550,000 LF of new pipelines, booster pump stations, reservoirs, and supporting equipment. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs.

The construction of the pipelines and aboveground facility installations would require construction along or in public roadways and could interfere with an adopted emergency response plan or emergency evacuation plan. All proposed pipelines are proposed to be constructed within public rights-of-way. This construction activity, and other anticipated construction activity associated with conveyance systems, could potentially block access to roadways and driveways for emergency vehicles. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts could be potentially significant. Mitigation measure **HAZ-11** below would be required.

Following construction, operation of the pipelines would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan as they would be located underground. Aboveground ancillary facilities would require periodic maintenance. Maintenance activities would require minimal trips and would not significantly impact the surrounding roadways. Impacts related to an adopted emergency plan would be considered less than significant during operation.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This category includes the construction of up to 310 acres of storage basins, including new basins and modifications/improvements to existing basins. It includes the use of up to 200 acres of agricultural land to support flood MAR facilities, new MS-4-compliance facilities and expansion of the maximum storage space (safe storage capacity) to be used in the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The proposed storage basins, recharge facilities and storage bands would not impair implementation of or physically interfere with adopted emergency response plans or emergency evacuation plans. There would be no installation of pipelines or other facilities within rights-of-way surrounding the project sites, making the possibility of interfering with evacuation routes highly unlikely. Deepening existing basins and creation of new storage basins along with drilling of wells would require additional truck haul trips to transport construction and debris materials to and from project sites; however, the proposed project would not impact the roadway in a way that would impede emergency evacuations. The truck trips would not require closure of any roadways and would only temporary slow traffic near project sites. All project facilities would be contained within the boundaries of the project sites, and project-related vehicles would not block existing street access to the sites. Therefore, no impacts related to an emergency evacuation plan would occur.

Operation of the proposed facilities would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The facilities consist of groundwater storage, recharge and extraction infrastructure which, during operation, would not interfere with traffic flows. However, aboveground ancillary facilities and wells would require periodic maintenance and/or monitoring. Maintenance activities would require minimal trips and would not significantly impact the surrounding roadways. Impacts related to an adopted emergency plan would be considered less than significant during operation.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category include: upgrades at IEUA's existing Water Recycling Plants (WRPs, discussed in detail in IEUA's 2017 FMP PEIR); a new advanced water treatment plant; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters, new groundwater treatment facilities at or near existing well sites and at regionally located sites; and improvements to existing groundwater treatment facilities.

The proposed desalters and water treatment facilities would not impair implementation of or physically interfere with adopted emergency response plans or emergency evacuation plans. There would be no installation of pipelines or other facilities within rights-of-way surrounding the project sites, making the possibility of interfering with evacuation routes highly unlikely. The truck trips associated with construction activities at the WRPs and Desalters would not require closure of any roadways and would only temporary slow traffic near project sites. All project facilities would be contained within the boundaries of the project sites, and project-related vehicles would not block existing street access to the sites. Therefore, no impacts related to an emergency evacuation plan would occur.

Operation of the proposed facilities would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The facilities consist of wastewater, desalting, and water treatment infrastructure which, during operation, would not interfere with traffic flows. However, aboveground ancillary facilities and wells would require periodic maintenance and/or monitoring. Maintenance activities would require minimal trips and would not significantly impact the surrounding roadways. Impacts related to an adopted emergency plan would be considered less than significant during operation.

Combined Project Categories
Project Category 2 proposed pipelines would be constructed within public rights-of-way. This construction activity, and other anticipated construction activity associated with conveyance systems, could potentially block access to roadways and driveways for emergency vehicles. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be potentially significant.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

***HAZ-11**: **Prior to initiating construction of proposed facilities, the implementing agency shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches and identification of alternate routing around construction zones. In addition, police, fire, and other emergency service providers shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. The implementing agency shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan, and are reviewed and approved by the local agency with authority over the roadways**.*

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **HAZ-11** would require the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to emergency access. Therefore, potential significant impacts to emergency access would be reduced to less than significant.

Cumulative Impact Analysis
The Chino Basin is largely urbanized with residential, commercial and industrial development. As the area continues to develop, the addition of more development could impair implementation of or physically

interfere with an adopted emergency response plans or emergency evacuation plans by constructing facilities within public rights-of-way. Since the proposed OBMPU pipelines would be constructed within public rights-of-way, impacts would be cumulatively considerable and therefore, would result in a potentially significant cumulative impact.

*Cumulative Measures: Implementation of Mitigation Measure **HAZ-11** is required.*

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **HAZ-11** would ensure that the proposed facilities' contribution to cumulative emergency access impacts would be reduced to less than cumulatively considerable by requiring the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to emergency access.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This project category includes development of ASR, injection, pumping, groundwater level, and water quality monitoring wells; associated well housing and monitoring devices such as flow meters and extensometers; and their operation. These wells would be installed throughout the Chino Basin, but with an emphasis on new ASR well facilities north of State Highway 60 (SH 60).

Proposed Project Category 1 projects would generally not expose people or structures to a significant risk of loss, injury or death involving wildland fires. The use of spark-producing construction machinery within a fire risk area could create hazardous fire conditions and expose people or structures to wildfire risks. Where thee well or ancillary facilities are located on built up land with some open space. CAL FIRE designates all areas immediately within or surrounding these areas as "Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ). However, if Category 1 infrastructure must be installed within high or severe fire hazard areas, a potential exists to cause a significant wildfire hazard. Mitigation measure **HAZ-12** is required to address this circumstance.

During operation, the proposed facilities would function to pump and distribute water throughout the Chino Basin, and these facilities would not be constructed of flammable materials or involve any spark-producing activities, or human occupancy. Operational impacts of the proposed plan facilities would be less than significant with no mitigation.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
The proposed pipelines and ancillary facilities would be constructed primarily within paved roadway rights-of-way. CAL FIRE designates most of the areas within the Chino Basin as Non-VHFHSZs but some VHFHSZs are in Chino Hills, Upland, Rancho Cucamonga, and Fontana, and Jurupa Hills primarily around foothills containing wildlands near the boundaries of the Basin. Because not all of the ancillary facilities' locations are not determined at this time, there is a potential for facilities to be located within or near wildland areas with high fire risk. The use of spark-producing construction machinery within a fire risk area could create hazardous fire conditions and expose construction workers to wildfire risks. Impacts would be potentially significant, unless mitigation measure **HAZ-12** is implemented.

During operation, the proposed facilities would distribute recycled, imported, and treated water throughout the project area, and these facilities would not be constructed of flammable materials or involve any spark-producing activities. However, many of the ancillary facilities will be supplied and operate on electricity. Therefore, mitigation Measure **HAZ-12** shall be implemented for these facilities in high and very high fire severity zones. All ancillary facilities such as pump stations would be unmanned and would only require routine maintenance, therefore, no people would be exposed to a significant risk involving wildland fires. Operational impacts of the proposed plan facilities would be less than significant with implementation of mitigation measure **HAZ-12**.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This category includes the construction of up to 310 acres of storage basins, including new basins and modifications/improvements to existing basins. It includes the use of up to 200 acres of agricultural land to support flood MAR facilities, new MS-4-compliance facilities and expansion of the maximum storage space (safe storage capacity) to be used in the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts would be the same as Project Categories 1 and 2.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category include: upgrades at IEUA's existing Water Recycling Plants (WRPs, discussed in detail in IEUA's 2017 FMP PEIR); a new advanced water treatment plant; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters, new groundwater treatment facilities at or near existing well sites and at regionally located sites; and improvements to existing groundwater treatment facilities.

The desalters and WRPs already exist and are not within high or very high wildfire hazard zones. It is possible that a new advanced water treatment facility could be located in the northern portion of the Chino Basin in a high or very high wildfire hazard zone. Therefore, mitigation measure **HAZ-12** will be required to reduce potential wildfire fire hazard impacts to a less than significant impact level.

Combined Project Categories
Some proposed projects' locations are not determined at this time, and therefore, there would be potential for facilities to be located within or near a wildland area with high fire risk. Impacts would be potentially significant.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

HAZ-12: ***During construction of facilities located in areas designated as High or Very High Fire Hazard Severity Zones (VHFHSZs) by CAL FIRE, fire hazard reduction measures shall be implemented and incorporated into a fire management plan for the proposed facility. These measures shall address all staging areas, welding areas, or areas slated for development that are planned to use spark-producing equipment. These areas shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that includes a spark arrestor shall be equipped with a spark arrestor in good working order. During the construction of the project facilities, all vehicles and crews working at the project site to have access to functional fire extinguishers at all times. In addition, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. This plan shall be reviewed by CAL FIRE and approved prior to construction within high and very high severity zones and implemented once approved. The fire management plan shall also include sufficient defensible space or other measures at a facility site located in a high or very high fire severity area to minimize fire damage to a level acceptable to CAL FIRE.***

Furthermore, the Counties of Riverside and San Bernardino require businesses that use or store certain quantities of hazardous materials and submit a Hazardous Materials Business Plan (HMBP) that describes the hazardous materials usage, storage, and disposal to the Certified Unified Program Agency (CUPA). Further OBMPU facilities that meet these criteria must prepare an HMBP pursuant to the applicable local agency.

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **HAZ-12** would ensure implementation of fire hazard reduction measures during construction in areas designated as VHFHSZs to reduce the potential for wildfire impacts on people or structures to a less than significant impact. Operational impacts would also be reduced to a less than significant impact.

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more development could expose people or structures to a significant risk of loss, injury or death involving wildland fires. Since there would be potential for OBMPU projects to be located within or adjacent to areas with high wildland fire risks, impacts would be cumulatively considerable and therefore, would result in a potentially significant cumulative impact.

*Cumulative Measures: Mitigation measure **HAZ-12** is required to minimize project impacts.*

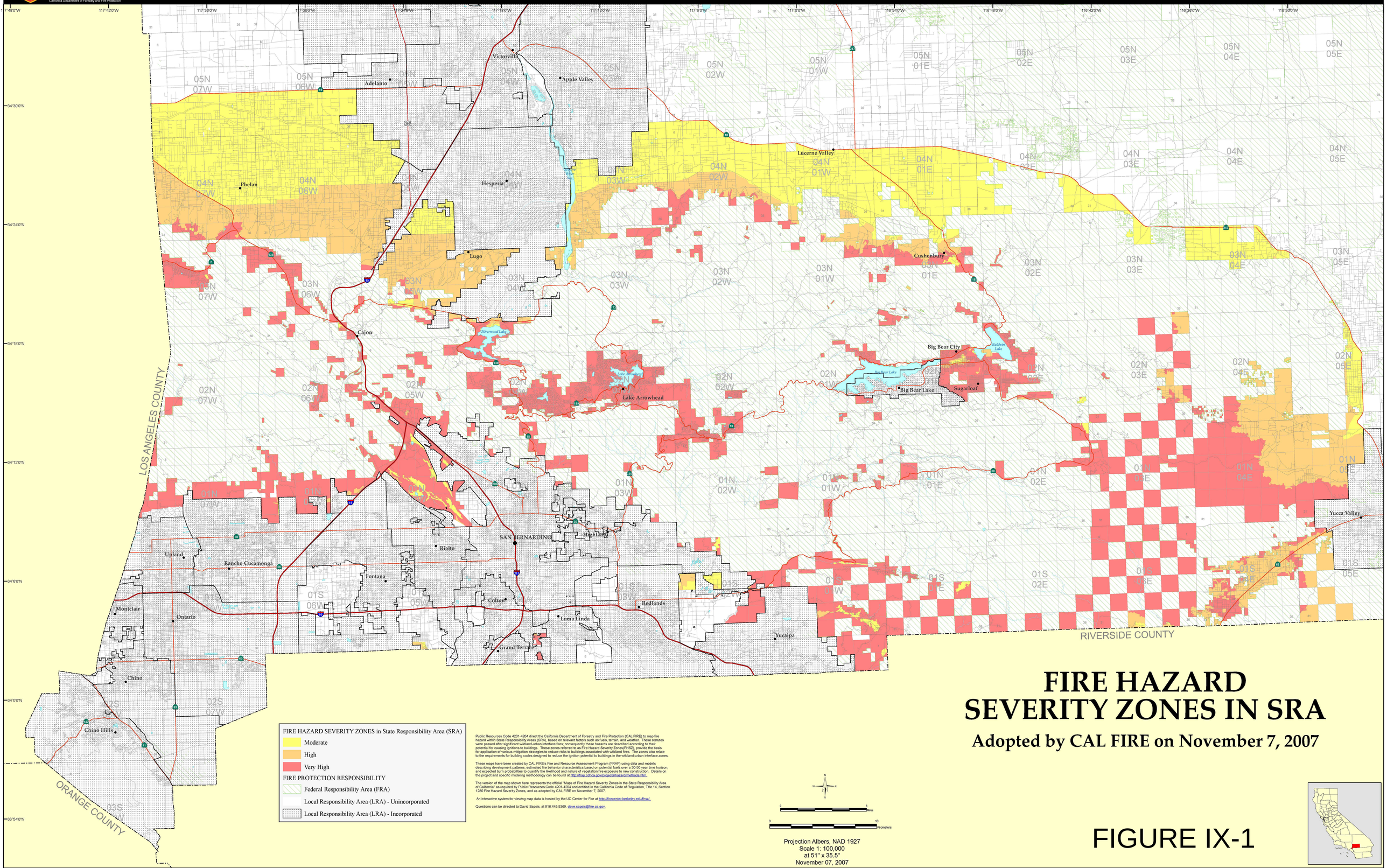
Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **HAZ-12** would ensure that the proposed facilities' contribution to cumulative impacts related to wildfires would be reduced to less than cumulatively considerable by implementing fire hazard reduction measures during construction and operations in areas designated as VHFHSZs to reduce the potential for wildfire impacts on people or structures.

SW San Bernardino County

CAL FIRE SINCE 1885

FRAP
Fire and Resource Assessment Program
California Department of Forestry and Fire Protection



FIRE HAZARD SEVERITY ZONES in State Responsibility Area (SRA)

- Moderate
- High
- Very High

FIRE PROTECTION RESPONSIBILITY

- Federal Responsibility Area (FRA)
- Local Responsibility Area (LRA) - Unincorporated
- Local Responsibility Area (LRA) - Incorporated

Public Resources Code 4201-4204 direct the California Department of Forestry and Fire Protection (CAL FIRE) to map fire hazard within State Responsibility Areas (SRA), based on relevant factors such as fuels, terrain, and weather. These statutes were passed after significant wildland-urban interface fires, consequently these hazards are described according to their potential for causing ignitions to buildings. These zones referred to as Fire Hazard Severity Zones(FHSZ), provide the basis for application of various mitigation strategies to reduce risks to buildings associated with wildland fires. The zones also relate to the requirements for building codes designed to reduce the ignition potential to buildings in the wildland-urban interface zones.

These maps have been created by CAL FIRE's Fire and Resource Assessment Program (FRAP) using data and models describing development patterns, estimated fire behavior characteristics based on potential fuels over a 30-50 year time horizon, and expected burn probabilities to quantify the likelihood and nature of vegetation fire exposure to new construction. Details on the project and specific modeling methodology can be found at http://frap.cdf.ca.gov/projects/hazard/methods.htm.

The version of the map shown here represents the official "Maps of Fire Hazard Severity Zones in the State Responsibility Area of California" as required by Public Resources Code 4201-4204 and entitled in the California Code of Regulation, Title 14, Section 1280 Fire Hazard Severity Zones, and as adopted by CAL FIRE on November 7, 2007.

An interactive system for viewing map data is hosted by the UC Center for Fire at http://firecenter.berkeley.edu/frap/.

Questions can be directed to David Sapsis, at 916.445.5369, dave.sapsis@fire.ca.gov.

0 5 Miles
0 10 Kilometers

Projection Albers, NAD 1927
Scale 1: 100,000
at 51" x 35.5"
November 07, 2007

FIRE HAZARD SEVERITY ZONES IN SRA

Adopted by CAL FIRE on November 7, 2007

FIGURE IX-1

The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.

Obtain FRAP maps, data, metadata and publications on the Internet at http://frap.cdf.ca.gov
For more information, contact CAL FIRE-FRAP, PO Box 944246, Sacramento, CA 94244-2460, (916) 327-3939.

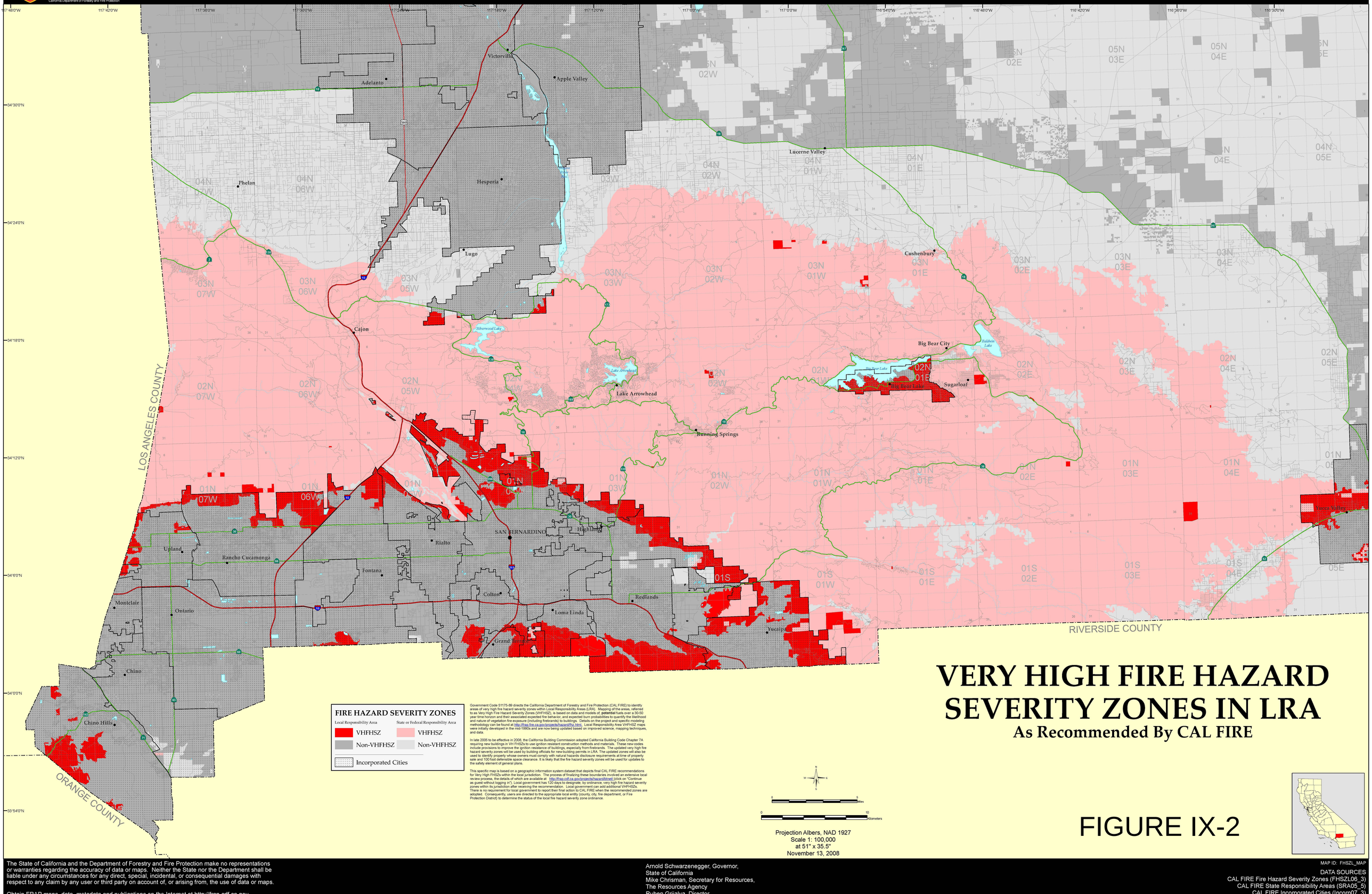
Arnold Schwarzenegger, Governor,
State of California
Mike Chrisman, Secretary for Resources,
The Resources Agency
Ruben Grijalva, Director,
Department of Forestry and Fire Protection

MAP ID: FHSZS_MAP

DATA SOURCES
CAL FIRE Fire Hazard Severity Zones (FHSZS06_3)
CAL FIRE State Responsibility Areas (SRA05_5)
CAL FIRE Incorporated Cities (Incorp07_3)
PLSS (1:100,000 USGS, Land Grants with CAL FIRE grid)

SW San Bernardino County

CAL FIRE SINCE 1885
FRAP
Fire and Resource Assessment Program
California Department of Forestry and Fire Protection



VERY HIGH FIRE HAZARD SEVERITY ZONES IN LRA

As Recommended By CAL FIRE

FIRE HAZARD SEVERITY ZONES

Local Responsibility Area	State or Federal Responsibility Area
VHFHSZ	VHFHSZ
Non-VHFHSZ	Non-VHFHSZ
Incorporated Cities	

Government Code 51175-89 directs the California Department of Forestry and Fire Protection (CAL FIRE) to identify areas of very high fire hazard severity zones within Local Responsibility Areas (LRA). Mapping of the areas, referred to as Very High Fire Hazard Severity Zones (VHFHSZ), is based on data and models of, **potential** fuels over a 30-50 year time horizon and their associated expected fire behavior, and expected burn probabilities to quantify the likelihood and nature of vegetation fire exposure (including firebrands) to buildings. Details on the project and specific modeling methodology can be found at http://frap.fire.ca.gov/projects/hazard/fhz.htm. Local Responsibility Area VHFHSZ maps were initially developed in the mid-1990s and are now being updated based on improved science, mapping techniques, and data.

In late 2005 to be effective in 2008, the California Building Commission adopted California Building Code Chapter 7A requiring new buildings in VH FHSZs to use ignition resistant construction methods and materials. These new codes include provisions to improve the ignition resistance of buildings, especially from firebrands. The updated very high fire hazard severity zones will be used by building officials for new building permits in LRA. The updated zones will also be used to identify property whose owners must comply with natural hazards disclosure requirements at time of property sale and 100-foot defensible space clearance. It is likely that the fire hazard severity zones will be used for updates to the safety element of general plans.

This specific map is based on a geographic information system dataset that depicts final CAL FIRE recommendations for Very High FHSZs within the local jurisdiction. The process of finalizing these boundaries involved an extensive local review process, the details of which are available at http://frap.cdf.ca.gov/projects/hazard/lrhwr/ (click on "Continue as guest without logging in"). Local government has 120 days to designate, by ordinance, very high fire hazard severity zones within its jurisdiction after receiving the recommendation. Local government can add additional VHFHSZs. There is no requirement for local government to report their final action to CAL FIRE when the recommended zones are adopted. Consequently, users are directed to the appropriate local entity (county, city, fire department, or Fire Protection District) to determine the status of the local fire hazard severity zone ordinance.

Projection Albers, NAD 1927
Scale 1: 100,000
at 51" x 35.5"
November 13, 2008

FIGURE IX-2

The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.

Obtain FRAP maps, data, metadata and publications on the Internet at http://frap.cdf.ca.gov
For more information, contact CAL FIRE-FRAP, PO Box 944246, Sacramento, CA 94244-2460, (916) 327-3939.

Arnold Schwarzenegger, Governor,
State of California
Mike Chrisman, Secretary for Resources,
The Resources Agency
Ruben Grijalva, Director,
Department of Forestry and Fire Protection

MAP ID: FHSZL_MAP

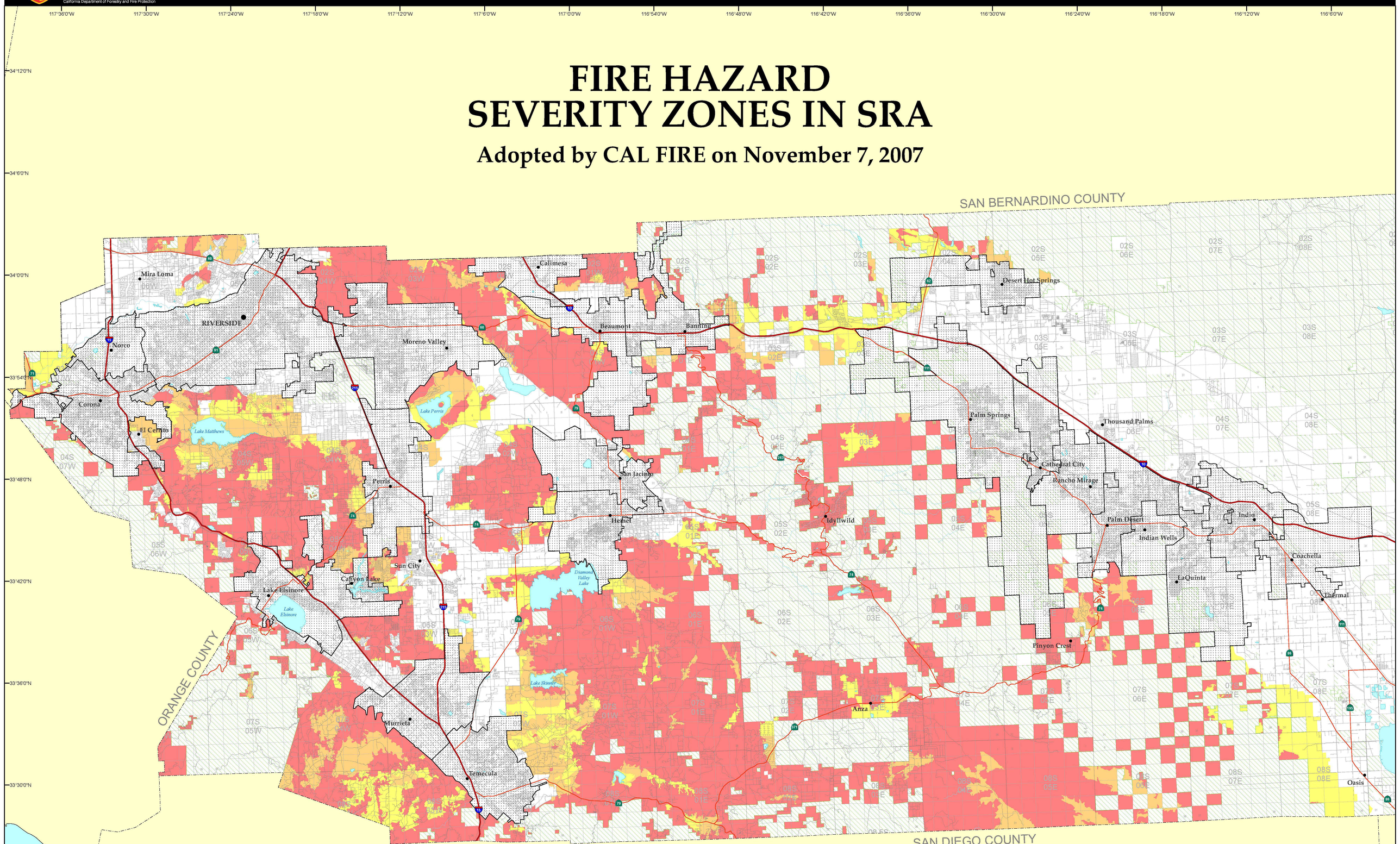
DATA SOURCES
CAL FIRE Fire Hazard Severity Zones (FHSZL06_3)
CAL FIRE State Responsibility Areas (SRA05_5)
CAL FIRE Incorporated Cities (Incorp07_3)
PLSS (1:100,000 USGS, Land Grants with CAL FIRE grid)

WESTERN RIVERSIDE COUNTY

Fire and Resource Assessment Program
California Department of Forestry and Fire Protection

FIRE HAZARD SEVERITY ZONES IN SRA

Adopted by CAL FIRE on November 7, 2007



FIRE HAZARD SEVERITY ZONES in State Responsibility Area (SRA)
- Moderate
- High
- Very High

FIRE PROTECTION RESPONSIBILITY
- Federal Responsibility Area (FRA)
- Local Responsibility Area (LRA) - Unincorporated
- Local Responsibility Area (LRA) - Incorporated

Public Resources Code 4201-4204 direct the California Department of Forestry and Fire Protection (CAL FIRE) to map fire hazard within State Responsibility Areas (SRA), based on relevant factors such as fuels, terrain, and weather. These statutes were passed after significant wildland-urban interface fires; consequently these hazards are described according to their potential for causing ignitions to buildings. These zones referred to as Fire Hazard Severity Zones(FHSZ), provide the basis for application of various mitigation strategies to reduce risks to buildings associated with wildland fires. The zones also relate to the requirements for building codes designed to reduce the ignition potential to buildings in the wildland-urban interface zones.

These maps have been created by CAL FIRE's Fire and Resource Assessment Program (FRAP) using data and models describing development patterns, estimated fire behavior characteristics based on potential fuels over a 30-50 year time horizon, and expected burn probabilities to quantify the likelihood and nature of vegetation fire exposure to new construction. Details on the project and specific modeling methodology can be found at http://frap.cdf.ca.gov/projects/hazard/methods.htm.

The version of the map shown here represents the official "Maps of Fire Hazard Severity Zones in the State Responsibility Area of California" as required by Public Resources Code 4201-4204 and entitled in the California Code of Regulation, Title 14, Section 1280 Fire Hazard Severity Zones, and as adopted by CAL FIRE on November 7, 2007.

An interactive system for viewing map data is hosted by the UC Center for Fire at http://firecenter.berkeley.edu/fhsz/.

Questions can be directed to David Sapsis, at 916.445.5369, dave.sapsis@fire.ca.gov.

0 5 Miles
0 10 Kilometers

Projection Albers, NAD 1927
Scale 1: 150,000
at 40" x 34"
November 07, 2007

FIGURE IX-3

The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.

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For more information, contact CAL FIRE-FRAP, PO Box 944246, Sacramento, CA 94244-2460, (916) 327-3939.

Arnold Schwarzenegger, Governor,
State of California
Mike Chrisman, Secretary for Resources,
The Resources Agency
Ruben Grijalva, Director,
Department of Forestry and Fire Protection

MAP ID: FHSZS_MAP

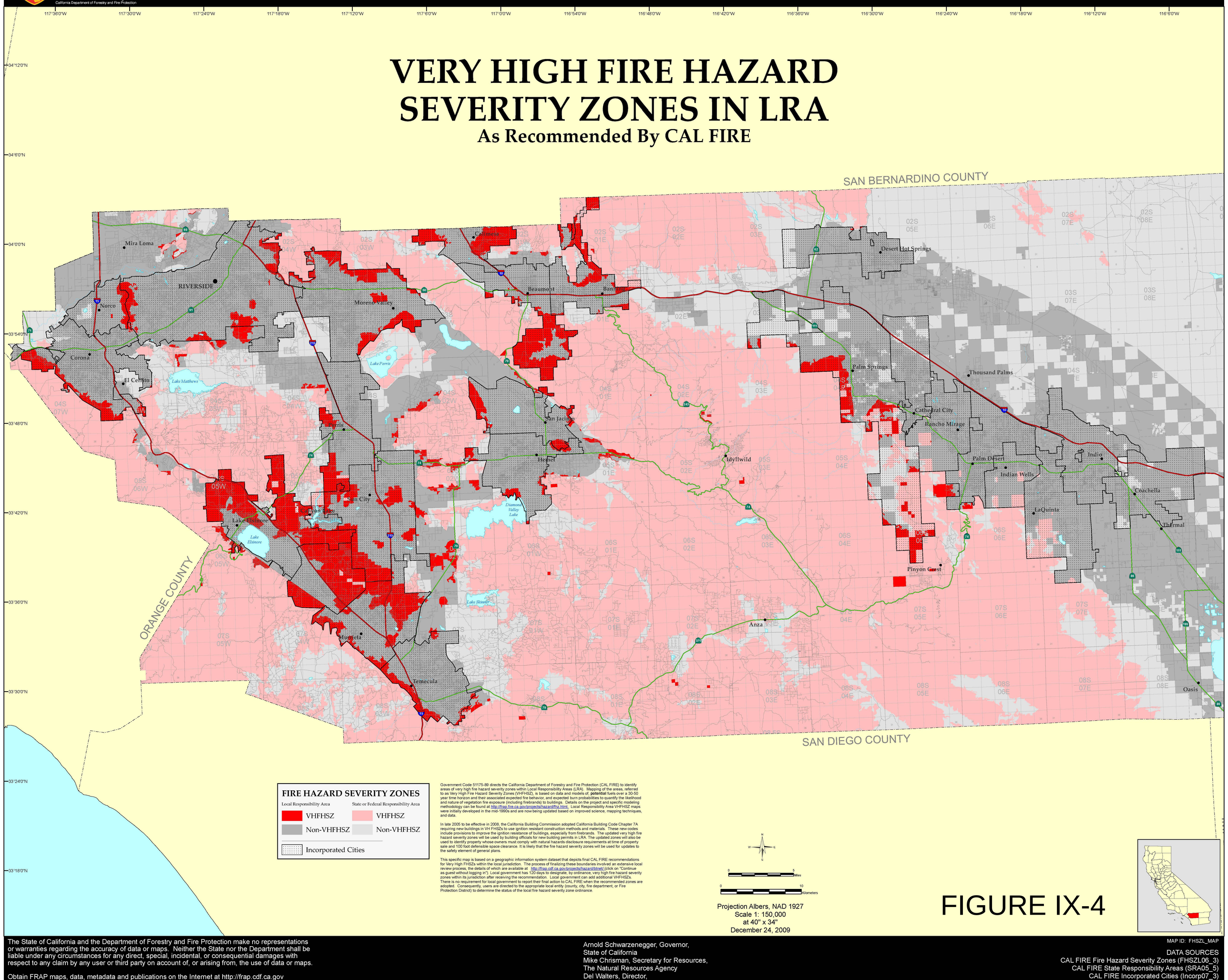
DATA SOURCES
CAL FIRE Fire Hazard Severity Zones (FHSZS06_3)
CAL FIRE State Responsibility Areas (SRA05_5)
CAL FIRE Incorporated Cities (Incorp07_3)
PLSS (1:100,000 USGS, Land Grants with CAL FIRE grid)

WESTERN RIVERSIDE COUNTY

Fire and Resource Assessment Program
California Department of Forestry and Fire Protection

VERY HIGH FIRE HAZARD SEVERITY ZONES IN LRA

As Recommended By CAL FIRE



FIRE HAZARD SEVERITY ZONES

Local Responsibility Area	State or Federal Responsibility Area
VHFHSZ	VHFHSZ
Non-VHFHSZ	Non-VHFHSZ
Incorporated Cities	

Government Code 51175-89 directs the California Department of Forestry and Fire Protection (CAL FIRE) to identify areas of very high fire hazard severity zones within Local Responsibility Areas (LRA). Mapping of the areas, referred to as Very High Fire Hazard Severity Zones (VHFHSZ), is based on data and models of, **potential** fuels over a 30-50 year time horizon and their associated expected fire behavior, and expected burn probabilities to quantify the likelihood and nature of vegetation fire exposure (including firebrands) to buildings. Details on the project and specific modeling methodology can be found at http://frap.fire.ca.gov/projects/hazard/fhz.html. Local Responsibility Area VHFHSZ maps were initially developed in the mid-1990s and are now being updated based on improved science, mapping techniques, and data.

In late 2005 to be effective in 2008, the California Building Commission adopted California Building Code Chapter 7A requiring new buildings in VH FHSZs to use ignition resistant construction methods and materials. These new codes include provisions to improve the ignition resistance of buildings, especially from firebrands. The updated very high fire hazard severity zones will be used by building officials for new building permits in LRA. The updated zones will also be used to identify property whose owners must comply with natural hazards disclosure requirements at time of property sale and 100 foot defensible space clearance. It is likely that the fire hazard severity zones will be used for updates to the safety element of general plans.

This specific map is based on a geographic information system dataset that depicts final CAL FIRE recommendations for Very High FHSZs within the local jurisdiction. The process of finalizing these boundaries involved an extensive local review process, the details of which are available at http://frap.cdf.ca.gov/projects/hazard/btnet/ (click on "Continue as guest without logging in"). Local government has 120 days to designate, by ordinance, very high fire hazard severity zones within its jurisdiction after receiving the recommendation. Local government can add additional VHFHSZs. There is no requirement for local government to report their final action to CAL FIRE when the recommended zones are adopted. Consequently, users are directed to the appropriate local entity (county, city, fire department, or Fire Protection District) to determine the status of the local fire hazard severity zone ordinance.

0 5 Miles
0 10 Kilometers

Projection Albers, NAD 1927
Scale 1: 150,000
at 40" x 34"
December 24, 2009

FIGURE IX-4

The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.

Obtain FRAP maps, data, metadata and publications on the Internet at http://frap.cdf.ca.gov
For more information, contact CAL FIRE-FRAP, PO Box 944246, Sacramento, CA 94244-2460, (916) 327-3939.

Arnold Schwarzenegger, Governor,
State of California
Mike Chrisman, Secretary for Resources,
The Natural Resources Agency
Del Walters, Director,
Department of Forestry and Fire Protection

MAP ID: FHSZL_MAP

DATA SOURCES
CAL FIRE Fire Hazard Severity Zones (FHSZL06_3)
CAL FIRE State Responsibility Areas (SRA05_5)
CAL FIRE Incorporated Cities (Incorp07_3)
PLSS (1:100,000 USGS, Land Grants with CAL FIRE grid)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☒	☐	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	☒	☐	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation onsite or offsite?	☒	☐	☐	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?	☒	☐	☐	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? or,	☒	☐	☐	☐
(iv) impede or redirect flood flows?	☒	☐	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☒	☐	☐	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☒	☐	☐	☐

SUBSTANTIATION

a-e. *Potentially Significant Impact* – Cumulatively, given that the proposed project involves the management of the Chino Groundwater Basin, the hydrology and water quality impacts related to the implementation of the OBMPU and associated facilities may be significant. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this topic will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☒	☐	☐

SUBSTANTIATION

XI.1 Environmental Setting

The Chino Basin is one of the largest groundwater basins in Southern California and has an estimated unused storage capacity of over 1,000,000 acre-feet. The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin consists of an alluvial valley that is relatively flat from east to west, sloping from north to south at a one to two percent grade. Basin elevation ranges from about 2,000 feet adjacent to the San Gabriel foothills to about 500 feet near Prado Dam.

The Chino Basin includes the following incorporated cities: Chino, Chino Hills, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, and Upland. The Basin includes limited areas of unincorporated Riverside and San Bernardino Counties.

Land Use Designations by County and City

San Bernardino County

The County General Plan establishes 18 land use designations within 51,766 acres of the Valley Region. Nearly half, or 24,241 acres, of the Valley's 51,766 acres of unincorporated acreage is devoted to residential uses (County of San Bernardino, 2007). Land use designations within the Valley Region of the General Plan are provided in **Table XI-1** below.

Although San Bernardino County is the largest county in the contiguous United States, approximately 81 percent of the total, (10.5 million acres) are outside of the County jurisdiction. Approximately 6 million acres of federal public lands managed by the Bureau of Land Management, U.S. Forest Service, and 1.9 million acres are owned by the United States Department of Defense. Of the remaining 19 percent of the County's total land area, approximately 4 percent lies within 24 incorporated cities. Fifteen percent (about 1.9 million acres) is entirely under County jurisdiction. While the County influences a certain degree of development activity within these cities (primarily administrative buildings, criminal justice facilities, and certain limited infrastructure, including County-maintained roads and flood control facilities), the City Councils of these 24 cities directly regulate land use and planning therein (County of San Bernardino, 2007).

Table XI-1
COUNTY OF SAN BERNARDINO LAND USE DESIGNATIONS
IN THE VALLEY REGION PLANNING AREA

Land Use Designation	Acres
Residential	24,241
Commercial	2,155
Industrial	5,155
Agriculture	938

Land Use Designation	Acres
Resource Conservation	1,769
Floodway	5,281
Specific Plan	1,600
Institutional	2,875
Planned Development	7,216
Other	536
TOTAL	51,766
SOURCE: County of San Bernardino, 2007	

Riverside County

Compared to eastern Riverside County, the western portion of the county contains the greatest concentration of population and has experienced the greatest growth pressures. The majority of this population is concentrated in the incorporated cities of Corona, Riverside, Beaumont, Banning, Norco, Lake Elsinore, Perris, Hemet, San Jacinto, Moreno Valley, Calimesa, Canyon Lake, Murrieta, and Temecula.

The General Plan Land Use Map consists of five broad Foundation Component land uses: Agriculture, Rural, Rural Community, Open Space, and Community Development. Each of these is subdivided into more detailed land use designations at the area plan level. The Unincorporated Riverside County Cumulative Acreage Summary Table (**Table XI-2**) presents an itemized acreage summary for each General Plan Foundation Component. As shown on **Table XI-2**, the Rural, Agricultural, Rural Community and Open Space General Plan Foundation Component-designated lands account for 94% of the entire unincorporated area, with the remaining 7% devoted to urbanized uses, roadways, and Indian lands. Approximately 83% of the area in western Riverside County is designated for Agricultural, Rural, Rural Community, or Open Space uses, while these uses make up over 96% of the land in the eastern half of the county.

Table XI-1
COUNTY OF RIVERSIDE LAND USE DESIGNATIONS

Land Use Designation	Western County Area Plans Acreage	Total County Acreage
Agriculture	28,552	184,835
Rural	251,711	291,565
Rural Community	63,999	68,078
Open Space	659,418	3,288,199
Community Development	103,575	164,247
Other	79,087	109,540
TOTAL	**1,186,342**	**4,106,464**

SOURCE: County of San Bernardino, 2007
[1] Includes Indian Lands and Major Roadways. Does not include Cities and March JPA within Riverside County

Chino

The City of Chino Hills is known for its rural atmosphere and its 3,000 acres of open space, 43 parks, 39 miles of recreational trails, and community buildings. Historically, the City's primary land use was open space with some scattered rural residential ranches. Much of the natural habitat of the area is preserved within the City of Chino Hills State Park, which is now the largest State Park in California located amongst an urban setting. In the late 1970s, development pressures gradually started moving to the City. Residential development and communities were clustered and concentrated in order to protect as much open space

as possible and most commercial development was placed along the State Route 71 corridor (City of Chino Hills, 2016).

Table XI-3
CITY OF CHINO LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	5,949
Open Space (including Agriculture)	6,134
Commercial	883
Industrial	3,082
Other (including Public; Public Schools; Mixed Use; Airport-Related; and Community Core)	1,695
TOTAL	**17,743**
SOURCE: City of Chino, 2010	

Chino Hills

According to the City of Chino Hills *General Plan, Land Use Element*, much of the land in the City designated for development has been built. The majority of vacant land that remains consists of hillside properties and natural resource areas. Future development of residential uses will depend on regional transit links along major arterials (City of Chino Hills, 2016). Land use designations for the City of Chino Hills are identified in the Chino Hills General Plan and included below in **Table XI-4**.

Table XI-4
CITY OF CHINO HILLS LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	12,536
Commercial	1,403
Open Space	12,181
Institutional/Public Facility	633
Mixed Use	46
TOTAL	**26,799**[a]
[a] The City's total area, including properties with Land Use Designations and right-of-way, is 28,736 acres (or approximately 45 square miles). Public and private streets and State Route 71 are not provided with a Land Use Designation and are not included within the Total Acreages. In addition, public and private right-of-way occupies an additional 1,937 acres within the City's boundaries that are not included in the Total Acreage. SOURCE: City of Chino Hills, 2015.	

Eastvale

A decade ago, the Eastvale area existed as part of the larger Chino Dairy area, a world-famous concentration of dairies that at its height contained some 400 dairies and thousands of dairy cows. Eastvale, located in Riverside County, is part of the small portion of the former dairy area that was outside of San Bernardino County and therefore not subject to the long-term protection offered by the San Bernardino County Agricultural Preserve. Riverside County facilitated development of Eastvale with the adoption of the Eastvale Area Plan in 2003. A part of the Riverside County General Plan, the Eastvale Area Plan established the plan for land uses that is basically reflected in the development in place today. Existing (2011) land uses in the Planning Area are summarized in **Table IX-5** below, which addresses existing land uses by percentage of area within the City.

Table XI-5
CITY OF EASTVALE LAND USE DESIGNATIONS

Land Use Designation	Percentage of Acreage within the City
Residential (8-14 dwelling units (du)/acre)	5%
Residential (5-8 du/acre)	3%
Residential (2-5 du/acre)	50%
Residential (0.5-acre minimum lot)	4%
Conservation	10%
Open Space Recreation	4%
Agriculture	1%
Water	4%
Light Industrial	8%
Business Park	5%
Commercial Retail	3%
Public Facilities	1%
Freeway	2%
SOURCE: City of Eastvale, 2012	

Fontana

The City of Fontana was a rural and diversified farming community in the early 1900s and throughout the century shifted into a population-dense manufacturing center. The City is known by its early steel mill operations during World War II and was the region's leading producer of steel and steel-related products. The City's suburban location near Interstates 10, 15, and 210, along with the Union Pacific Railroad and other rail transportation corridors allow for a commuting option for citizens of surrounding areas (City of Fontana, 2016).

The City of Fontana is now a major Inland Empire hub of warehousing and distribution centers. Industrial and trucking-based land uses prosper and the City also contains a large portion of retailer and small businesses (City of Fontana, 2016). Warehouses, distribution centers, and heavy industrial uses are concentrated in the City's southern half adjacent to the Interstate 10 corridor.

Along with the commuter population, a range of residential land uses have developed within the City. Single and multi-family neighborhoods are located primarily within the center of the City along with commercial land uses. Newer residential units are being developed along the northern edge of the City and a large portion of the land is undeveloped as a mix of planned communities and job centers (City of Fontana, 2003). Land use designations for the City of Fontana are identified in the Fontana General Plan and included below in **Table XI-6**.

Table XI-6
CITY OF FONTANA LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	16,620
Commercial	2,440
Regional Mixed	761
Industrial	8,144
Public Facilities	1,056

Land Use Designation	Acres
Recreation Facilities	928
Public Utility Corridors	1,109
Open Space	1,568
Freeway	814
TOTAL	**33,440**
SOURCE: City of Fontana, 2003	

Jurupa Valley

In 2017, the young city is experiencing significant residential and industrial growth and has a mix of medium- and low-density residential development, equestrian and agricultural activities, and a mix of retail commercial, office, and industrial uses. In particular, the City is experiencing significant development interest for more industrial warehousing, and the Inland Empire's booming transportation/logistics industry has resulted in industrial and warehouse uses encroaching into historically residential and rural neighborhoods. This trend may have limited opportunities for development in the retail commercial, office, and job-rich manufacturing sectors.

Table XI-7 below shows the City's General Plan Land Uses, which are organized around 23 land use designations and 11 land use overlays.

Table XI-7
CITY OF JURUPA VALLEY LAND USE DESIGNATIONS

Land Use Designations	Acres
Rural Residential	103.6
Estate Residential	338.5
Very Low Density Residential	97.4
Low Density Residential	7,062.2
Medium Density Residential	3,901.1
Medium-High Density Residential	793.0
High Density Residential	292.9
Very High Density Residential	88.8
Highest Density Residential	212.0
Commercial Retail	1,105.7
Commercial Tourist	122.6
Commercial Neighborhood	43.3
Commercial Office	14.9
Business Park	673.8
Business Park Specific Plan	514.4
Light Industrial	3,076.8
Heavy Industrial	736.9
Open Space-Recreation	1,452.2
Open Space-Rural	1,131.6
Open Space-Conservation	683.5
Open Space-Conservation Habitat	971.1
Open Space-Mineral Resources	300.7

Land Use Designations	Acres
Open Space-Water	884.1
Railroad	168.5
Roadways/other	2,549.7
Public Facility/Institutional	527.0
TOTAL	**27,846.3**
SOURCE: City of Jurupa Valley, 2017	

Montclair

The City of Montclair was once a greenbelt of citrus groves located between the agricultural communities of Pomona and Ontario (City of Montclair, 2016). Currently, the City is primarily made up of residential land uses, intermixed with commercial development around Montclair Plaza, the Entertainment Plaza, and auto dealerships. The City contains very little open space and agriculture (City of Montclair, 1999).

The City is well known for its close proximity to private universities and colleges, including the prestigious Claremont Colleges, State universities, and several community colleges (City of Montclair, 2016). These educational institutions made the area a prime location for residential development. Additionally, the City is near Interstate 10, which allows for commuter access from Los Angeles County and other portions of the Inland Empire. Land use designations for the City of Montclair are identified in the Montclair General Plan and included below in **Table XI-8**.

Table XI-8
CITY OF MONTCLAIR LAND USE DESIGNATIONS

Land Use Designations	Acres
Residential	2,064
Senior Housing (S)	20
Office-Professional	20
Commercial	607
Business Park	230
Industrial Park	308
Limited Manufacturing	75
Public/ Quasi-Public	272
Neighborhood Park	49
Conservation Basin	82
Community Plan Area	160
Planned/Development Area	72
Medical Center	20
Freeway & Railroad Right-of-ways	159
TOTAL	**4,148**
SOURCE: City of Montclair, 1999	

Ontario

Similar to other cities within the program area, the City of Ontario was first developed as an agricultural community, largely but not exclusively devoted to citrus. Since World War II, the city has become much more diversified and now reflects an industrial and manufacturing economy. The City is well provided with major transportation corridors including railroads and freeways, along with the well-known Ontario

International Airport (City of Ontario, 2016). The primary land use within the City is residential, closely followed by industrial uses.

The area of the City located northwest of Interstate 10 is an older and more historic area that is characterized by residential and industrial land uses. The airport areas northeast of State Route 60 contains a large area of hospitality, industrial, warehousing, and distribution uses. The portion of the City south of State Route 60 is characterized by residential and planned-residential communities and retail oriented commercial centers (City of Ontario, 2010). Land use designations for the City of Ontario are identified in the City's General Plan and included below in **Table XI-9**.

Table XI-9
CITY OF ONTARIO LAND USE DESIGNATIONS

Land Use Designations	Acres
Residential	13,408.31
Commercial	2,745.5
Industrial	8,923.75
Government/Institutions	909.35
Utilities	448.51
Urban Mixed	1,140.7
Transportation	2,361.34
Open Space/Parks	1,975.1
TOTAL	**31,912.56**
SOURCE: City of Ontario, 2010; San Bernardino Association of Governments, 2013.	

Pomona

Pomona's land uses are arranged in an overall pattern typical of the City's age, topography, and western U.S. location. The City's relatively uniform topography with few physical constraints has allowed for a relatively uniform street grid with residential neighborhoods and commercial corridors radiating from the traditional mixed-use Downtown core. Residential neighborhoods located farther from Downtown and along the hillsides to the north and south were built later in the 20th century and are more consistently residential in use. At the western and eastern edges of the City, large industrial areas have developed with access to railway and major roadway arteries. Although Pomona is characterized by a diverse range of land uses, almost half of the City's land area (48%) is devoted to public uses including parks, dedicated open spaces, schools and community facilities as well as streets and other rights-of-way. The remaining land containing private development is composed primarily of housing, which accounts for 35% of the City's land area. Less predominant in terms of land area are industrial (8%), commercial (4%) and office (1%) uses. Vacant lands comprise 4% of the City's land area and are located throughout the City, particularly in the older areas and in the industrial districts.

Table XI-10
CITY OF POMONA LAND USE DESIGNATIONS

Land Use Designation	Percentage of Acreage within the City
Residential	35%
Streets and Other Right-of-Way	24%
Public Lands	24%
Vacant Land	4%
Industrial	8%

Land Use Designation	Percentage of Acreage within the City
Commercial	4%
Professional Office	1%
SOURCE: City of Pomona, 2014	

Rancho Cucamonga

The City of Rancho Cucamonga is predominantly a residential community that is largely built-out. Commercial centers and industrial land uses are primarily clustered along Foothill Boulevard, Base Line Road, and several other major roadways. The northern edge of the City is dominated by open space and hillside terrain (Rancho Cucamonga, 2010).

The residential character of Rancho Cucamonga can be described as primarily low- density and consisting of high-quality, stable neighborhoods. Most residential uses located in the northern areas include large lot, detached homes. Commercial uses vary greatly, from regional shopping centers to smaller neighborhood retail stores. Industrial uses range from heavy industrial such as Tamco Steel and Mission Foods, to warehouses, distribution centers, and light industrial that include business parks and office uses. Most of the industrial uses are located south of Foothill Boulevard, with the heavy industrial uses located on both sides of I-15 (Rancho Cucamonga, 2010). Land use designations for the City of Rancho Cucamonga identified in the City's General Plan and included below in **Table XI-11**.

Table XI-11
CITY OF RANCHO CUCAMONGA LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	10,435
Commercial	660
Mixed Use	702
Industrial	3,203
Public Facilities	3,104
Schools	536
Parks	347
Open Space and Conservation	1,893
Vacant	5,671
TOTAL	26,551
SOURCE: City of Rancho Cucamonga, 2010	

Upland

The City of Upland was once dominated by citrus groves. It is located at the foot of the San Gabriel Mountains and is known for preserving a small-town character while being a medium-sized city. The City is located directly east of the Los Angeles Metropolitan area and has attracted many commuters due to easy access to Interstate 10 and 210. The City's economic anchors are the downtown area, San Antonio Hospital, and Cable Airport. Planning efforts such as revitalizing the City's historic downtown area, protection of historic buildings, and strengthening of local business, support the integrity of the City's character. In recent years, the City developed planning efforts of becoming more economically diverse by shifting planned land uses from residential development to industrial and commercial uses (City of Upland, 2015). Land use designations for the City of Upland identified in the City's General Plan and included below in **Table XI-12**.

Table XI-12
CITY OF UPLAND LAND USE DESIGNATION

Land Use Designations	Acres
Residential	5,797.01
Commercial	1442.09
Industrial	1,234.69
Government/Institutions	333.96
Transportation	327.2
Open Space/Parks	666.15
Utilities	179.39
TOTAL	**9,980.49**
SOURCE: City of Upland, 2015; San Bernardino Association of Governments, 2013.	

Regional Plans

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the federally mandated Metropolitan Planning Organization representing six counties: Los Angeles, Imperial, Orange, Riverside, San Bernardino, and Ventura. The SCAG Regional Comprehensive Plan addresses important regional issues such as housing, traffic/transportation, water, and air quality and serves as an advisory planning document to support and encourage local agencies in their planning efforts.

San Bernardino Associated Governments

San Bernardino Associated Governments (SANBAG) is the council of governments and transportation planning agency for San Bernardino County. SANBAG is responsible for cooperative regional planning and furthering an efficient multi-modal transportation system countywide. SANBAG serves the 2.1 million residents of San Bernardino County.

As the County Transportation Commission, SANBAG supports freeway construction projects, regional and local road improvements, train and bus transportation, railroad crossings, call boxes, ridesharing, congestion management efforts and long-term planning studies.

Airport Land Use Compatibility Plans

The California State Legislature enacted airport land use planning laws which are intended to:

- Provide for the orderly development of each public use airport in the State and the area surrounding these airports so as to promote the overall goals and objectives of the California airport noise standards adopted pursuant to Section 21669 and to prevent the creation of new noise and safety problems; and
- Protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses.

The general mechanism that the statutes provided for compliance with the airport planning laws is for counties to establish an airport land use compatibility plan (ALUCP). The purpose of an ALUCP is to effectively identify areas, located outside of the airport proper, which would be influenced by the future operations of the airport. Planning boundaries are established on the perimeters of these areas, which are plotted, by applying the specific operational criteria of the airport, to various planning models that have been primarily developed by the FAA.

There are several airports within San Bernardino County and 15 airport land use compatibility plans for airports serving San Bernardino County. The three public airports within the program area include Chino Airport, the LA/Ontario International Airport, and the Cable Airport, all of which have ALUCPs (County of San Bernardino, 2016).

XI.2 Impact Discussion

The precise design, location and configuration of facilities associates with each OBMPU project have not yet been finalized and are subject to adjustment based on future circumstances. Proposed facilities include aboveground structures such as groundwater treatment plants, treatment and desalter expansions, pump stations, storage reservoirs, wellheads, and portions of storage basins. Other facilities would be located underground or within surface flows, such as pipelines, monitoring devices, and wells. Land use impacts associated with underground structures would be short-term and would only occur during the construction phase of project implementation. Long-term land use impacts would be associated with aboveground structures.

The San Bernardino County General Plan states that:
Having a current and forward-looking general plan will:

- *Ensure adequate infrastructure services and community facilities to support projected growth in the County; and*
- *Ensure timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of current and future*

Furthermore, the San Bernardino County General Plan states the following goals:

GOAL CI 11. The County will coordinate and cooperate with governmental agencies at all levels to ensure safe, reliable, and high-quality water supply for all residents and ensure prevention of surface and ground water pollution. County residents.

GOAL CI 12. The County will ensure adequate wastewater collection, treatment, and disposal consistent with the protection of public health and water quality.

The statements and goals outlined above, which can be found in the San Bernardino County General Plan, are echoed throughout the General Plans that pertain to the area within which the Chino Basin is located, and as discussed under XI. Environmental Setting above. Therefore, the General Plans that pertain to the area within which the Chino Basin is located support the provision of adequate infrastructure, such as that which is proposed by the OBMPU.

Would the project:

a. Physically divide an established community?

The project does not propose any action that could physically divide an established community. The physical division of an established community generally refers to the construction of features such as an interstate highway, railroad tracks, or permanent removal of a means of access, such as a local road or bridge that would impact mobility within an existing community or between a community and outlying area.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The exact locations of the proposed wells and monitoring devices have not yet been determined; however, there are no features of these wells and monitoring devices that would create a barrier or physically divide

an established community, particularly given the small area (a half acre or less) required to implement the facilities proposed as part of this Project Category. No impacts are anticipated.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Proposed conveyance system pipelines and ancillary facilities are anticipated to be constructed primarily within existing public rights-of-way. Once linear pipelines are constructed, some ancillary facilities could be located aboveground within close proximity to the public rights-of-way. The exact locations of the ancillary facilities have not yet been determined; however, there are no features of these ancillary facilities, such as pump stations and reservoir tanks, that would create a barrier or physically divide an established community, particularly given that in many communities, ancillary facilities such as steel or concrete reservoirs are integrated into the landscape unobtrusively. As such, no impacts are anticipated.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The potential to physically divide an established community related to the development of new and improvement of existing storage basins at existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would be minimal because these sites are currently developed and the addition of water storage facilities would be consistent with the existing uses. As such, no impacts are anticipated.

The construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites would be developed at either known sites that have not been developed, or at sites for which the location has not been determined; however, there are no features of these storage basins, MS4 facilities, and flood MAR facilities that in and of themselves would create a barrier or physically divide an established community. Therefore, no impacts are anticipated.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any large, visible above ground impacts. As such, no potential to physically divide an established community exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities. There are no features of the treatment facility upgrades that would create a barrier or physically divide an established community. Aboveground facilities would be integrated into the existing urban/industrial character surrounding a treatment plant. As such, there would be no impact.

Similar to upgrades and improvements to existing treatment facilities, groundwater treatment facilities at well sites would occur within a site containing one or more wells. As such, the addition of groundwater treatment facilities would be consistent with that which exists at present at the well sites, and would have no potential to physically divide an established community.

The exact locations of the proposed groundwater treatment facilities (regional and near well sites) have not yet been determined; however, there are no features of these treatment facilities that would create a barrier or physically divide an established community. No impacts are anticipated.

Combined Project Categories

Level of Significance Before Mitigation: No Impact

Mitigation Measures: None Required.

Level of Significance After Mitigation: No Impact.

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

As stated in the Introduction under XII. Impact Discussion above, the Cities and Counties that overlap with the Chino Basin area have adopted General Plans that support the provision of adequate infrastructure, such as that which is proposed by the OBMPU.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, though in most cases, the area a well would occupy would be about 10 feet by 10 feet. The proposed extensometers would be installed within wells, and as such would not occupy any greater space than identified above, and the proposed flow meters would be located at or below ground level within streams and channels to monitor surface water, and therefore would have no potential to conflict with land use designation. Because the precise location for future wells is presently unknown, wells may be developed across other designated land uses. Per Government Code Section 53091, building ordinances of local cities or counties do not apply to the location or construction of facilities for the projection, generation, storage, treatment, or transmission of water or wastewater. Therefore, any project facilities that conflict with local General Plan land use designations would not be subject to a conditional use permit or general plan amendment. The Watermaster or Implementing Agency would determine the most suitable locations to place facilities, taking into consideration surrounding land uses. The Watermaster or Implementing Agency would coordinate directly with local agencies with jurisdiction to ensure compatibility with existing adjacent land uses. Mitigation is provided below to minimize land use incompatibilities (such as lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible and would not conflict with land use designations or be incompatible with neighboring land uses. In addition, underground pipelines, once constructed would not pose long-term incompatibility with land uses. Some pipelines and ancillary facilities may be installed across other designated land uses, though there is a potential for the implementing Agency to use existing structures for proposed ancillary

facilities. Per Government Code Section 53091, building ordinances of local cities or counties do not apply to the location or construction of facilities for the projection, generation, storage, treatment, or transmission of water or wastewater. Therefore, any project facilities that conflict with local General Plan land use designations would not be subject to a conditional use permit or general plan amendment. The Watermaster or Implementing Agency would determine the most suitable locations to place facilities, taking into consideration surrounding land uses. The Watermaster or Implementing Agency would coordinate directly with local agencies with jurisdiction to ensure compatibility with existing adjacent land uses. Mitigation is provided below to minimize land use incompatibilities (such as lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Facilities located within existing storage basins at existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would be consistent with the existing land uses. All storage basin improvements would be consistent with the character of the facilities on site and would not substantially alter the existing character of the facilities. Furthermore, per Government Code Section 53091, building ordinances of local cities or counties do not apply to the location or construction of facilities for the projection, generation, storage, treatment, or transmission of water or wastewater. As such, there is a less than significant potential to conflict with land use designations or existing neighborhood land uses.

The construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites would be developed at either known sites that have not been developed, or at sites for which the location has not been determined. Impacts to new storage basins, MS4 facilities, and flood MAR facilities at new sites would be the same as Project Category 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts other than the facilities discussed in the preceding text which are intended to support this expansion. As such, no impacts to land use can occur from these facilities.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The impacts to land use related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) and groundwater treatment facilities at well sites would occur within developed sites already containing desalter, water treatment facilities or wells, and as such, treatment facility upgrades would be located within existing sites designated for this use. All facility upgrades and improvements would be consistent with the character of the existing facility and would not substantially alter the existing character of the facilities. As such, there would be no conflicts with land use designations or existing neighborhood land uses.

The location for regional groundwater treatment facilities and groundwater treatment facilities near well sites is presently unknown. Groundwater treatment facilities near well sites would occupy an area of about

0.5 acre to 2 acres. Impacts to regional groundwater treatment facilities and groundwater treatment facilities near well sites would be the same as Project Category 2 and 3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

LU-1: ***Following selection of sites for future OBMPU-related facilities, each site and associated facility shall be evaluated for potential incompatibility with adjacent existing or proposed land uses. Where future facility operations can create significant incompatibilities (lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses, an alternative site shall be selected, or subsequent CEQA documentation shall be prepared that identifies the specific measures that will be utilized to reduce potential incompatible activities or effects to below significance thresholds established in the general plan for the jurisdiction where the facility will be located.***

Level of Significance After Mitigation: Less Than Significant Impact

Mitigation measure **LU-1** would ensure that the facilities associated with the OBMPU are developed in appropriate areas, and conform with the surrounding land uses or are developed to minimize conflicts with adjacent land uses. This measure will minimize impacts below significance thresholds.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☒	☐	☐
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☒	☐	☐

SUBSTANTIATION:

XII.1 Environmental Setting

Mineral Resources

Minerals are naturally occurring chemical elements or compounds, or groups of elements or compounds that were not formed by organisms. Naturally occurring concentrations of minerals in the earth's crust are known as mineral deposits. Mineral resources are mineral deposits from which the economic extraction of a commodity (such as gold or copper) is currently potentially feasible. In addition to metallic minerals, materials used for construction (e.g., sand and aggregate), industrial and chemical processes (e.g., salt), and fuel (e.g., crude oil) are considered mineral resources in California.

In accordance with the Surface Mining and Reclamation Act of 1975, the California Department of Conservation, Division of Mines and Geology, currently known as the California Geological Survey (CGS), has mapped nonfuel mineral resources of the State to show where economically significant mineral deposits are either present or likely to occur based on the best available scientific data. These resources have been mapped using the California Mineral Land Classification System, which includes the following Mineral Resource Zones (MRZs):[37]

- MRZ-1: Areas where the available geologic information indicates no significant mineral deposits or a minimal likelihood of significant mineral deposits.
- MRZ-2a: Areas where the available geologic information indicates that there are significant mineral deposits.
- MRZ-2b: Areas where the available geologic information indicates that there is a likelihood of significant mineral deposits.
- MRZ-3a: Areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined.
- MRZ-4: Areas where there is not enough information available to determine the presence or absence of mineral deposits.

Mineral deposits in the Chino Basin area important to many industries, including construction, transportation and chemical processing. The value of mineral deposits within the Chino Basin area is enhanced by their close proximity to urban areas. However, these mineral deposits are endangered by the same urbanization that enhances their value. The only significant mineral resources that occur within or near the project area are limestone, sand and gravel, crushed rock and rip rap. The location of these resources is primarily in the Jurupa and Pedley Hills, and also near the Santa Ana River.

The non-renewable characteristic of mineral deposits necessitates the careful and efficient development of mineral resources, in order to prevent the unnecessary waste of these deposits due to careless exploitation and uncontrolled urbanization. Management of these mineral resources will protect not only future development of mineral deposit areas, but will also guide the exploitation of mineral deposits so that adverse impacts caused by mineral extraction will be reduced or eliminated.

[37] County of Riverside General Plan, 2015

The Department of Conservation identifies large areas of the Chino Basin as MRZ-3 with localized areas designated as MRZ-1 and MRZ-2. MRZ-3 designations are in the cities of Chino and most portions of Ontario and Jurupa Valley. Most of the MRZ-3 areas contain construction aggregate deposits, the significance of which cannot be evaluated from preliminary data. MRZ-2 areas are located within the cities of Upland, Montclair, Rancho Cucamonga, small portions of Jurupa Valley, and some northern portions of Fontana in areas are located in the City of Fontana North of the Interstate 10 Freeway, and in areas surrounding the San Antonio Creek as it flows through the Chino Basin. Currently, there are no active mining activities within the City of Montclair because past mining activities have left several large pits in Montclair and Upland, which are now being used for flood control and water conservation purposes.[38]

MRZ-1 designations occur in a small portion of eastern Jurupa Valley, southern areas of Chino and in the City of Chino Hills.[39] The MRZ-1 area located in the City of Chino is comprised primarily by shale, siltstone, carbonates and chlorite schist. These materials are considered unsuitable for use as aggregate. Fine grained sedimentary deposits also exist in this zone which are also unsuitable for use as aggregate.[40]

XII.2 Impact Discussion

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Implementation of the proposed well development and monitoring devices would not interfere with the exploitation of mineral resources. As stated under XII Environmental Setting above, much of the Chino Basin has been urbanized, resulting in very few areas containing mineral resources that are not utilized for mining activities. The flow meters will be located within surface water, and as such would not result in the loss of available known mineral resources. The proposed wells will be located within sites less than one half acre in size, and as such, are not anticipated to interfere with the exploitation of mineral resources. Many wells can be located within mineral extraction facilities with no conflict to the mining operations. Therefore, implementation of improvements within Project Category 1 would not result in the loss of availability mineral resource that would be of value to the region and residents of the state. Impacts would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Implementation of the proposed conveyance facilities would be located within existing rights-of-way that would not include areas actively being excavated or prevent areas from being accessed for future extraction of mineral resources. The proposed ancillary facilities such as pump stations and reservoirs are not anticipated to require a large footprint, such that ancillary facility projects would interfere with the exploitation of mineral resources. Therefore, implementation of improvements within Project Category 2 would not result in the loss of availability mineral resource that would be of value to the region and residents of the state. Impacts would be less than significant.

[38] City of Montclair General Plan, 1999
[39] Department of Conservation, https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc
[40] City of Chino General Plan

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Proposed storage basins will be located within sites that have been identified. None of these sites contains mineral resources.[41] Flood MAR facilities and new MS4 compliance projects may have a large footprint though would not include any ancillary facility that would be large enough to interfere with the exploration of future mineral resources. However, if Flood MAR facilities or new MS4 compliance projects were to be implemented within a mineral resource zone, there is a nominal potential for future groundwater treatment facilities to be located within a site containing mineral resources, which could result in the loss of available mineral resources. As such, mitigation is required in order to minimize potential impacts thereof.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no loss of mineral resources is anticipated.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

The proposed upgrades to the WFA Agua de Lejos Treatment Plant and to the Chino Desalters, new groundwater treatment facilities at well sites and improvements to existing groundwater treatment facilities would occur within developed sites containing infrastructure pertaining to the treatment of water or wastewater. Regionally significant mineral resources are not known to occur within the existing treatment facilities. Therefore, the proposed upgrades would not prevent the future availability of a known regionally-significant mineral resource to be obtained in other portions of the Chino Basin.

The proposed new groundwater treatment facilities near well sites and at regionally located sites may have a large footprint, particularly regional groundwater treatment facilities. Given that there are a few important mineral resources zones located within Chino Basin, there is a nominal potential for future groundwater treatment facilities to be located within a site containing mineral resources, which could result in the loss of available mineral resources. As such, mitigation is required in order to minimize potential impacts thereof.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

MR-1: ***For each new groundwater treatment facility (regionally located or near existing well sites), Flood MAR facility, and MS4 compliance site, the Implementing Agency shall locate these facilities outside of sites designated for the extraction of or as containing significant mineral resources (such as, located within MRZ-2 zones) or otherwise***

[41] https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps

identified by the local jurisdiction as containing important mineral resources (such as, designated by the local general plan as being located within a mineral extraction related land use). Where it is not feasible to locate such facilities outside of sites designated for mineral resources, a subsequent CEQA documentation shall be prepared that identifies specific measures that compensates for the loss of mineral resources.

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **MR-1** would ensure that the proposed facilities associated with the OBMPU would not result in significant loss of mineral resources through either relocation, or compensation for development proposed to be located within an area containing significant mineral resources.

b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

As outlined in the preceding documentation for the OBMP, including the Peace II Draft SEIR and the original OBMP PEIR, the only significant mineral resources that occur within or near the project area are limestone, sand and gravel, crushed rock and rip rap. The location of these resources is primarily in the Jurupa and Pedley Hills, and also near the Santa Ana River. At the project specific level, the facilities associated with the OBMPU, such as wells, monitoring devices, and other facilities outlined in the remaining Project Categories may have a very small impact on mineral resources. Many of the new treatment facilities, wells, and conveyance facilities will be installed within the footprints of existing water utilities sites, or will otherwise be located within areas either already developed with residential, commercial, industrial or open space uses. Projects in these types of locations would have no potential to adversely impact mineral resources because the resources would already be covered with facilities that would make recovery unlikely, and because mineral resource recovery is generally not a compatible land use adjacent to residential, commercial. Facilities such as wells would not be large enough to interfere with locally important mineral resources recovery sites. As such, impacts would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts are the same as those identified under Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

At the project specific level, the facilities associated with the OBMPU, such as storage basins and recharge facilities outlined in the remaining Project Categories may have a very small impact on mineral resources. Many of the new treatment facilities, wells, and conveyance facilities will be installed within the footprints of

existing water utilities sites, or will otherwise be located within areas either already developed with residential, commercial, industrial or open space uses. The proposed storage basins will be located at sites that do not contain locally or regionally important mineral resources. However, the precise locations for the flood MAR facilities and new MS4-compliance facilities are presently unknown. Projects in these types of locations would have no potential to adversely impact mineral resources because the resources would already be covered with facilities that would make recovery unlikely, and because mineral resource recovery is generally not a compatible land use adjacent to residential, commercial. Facilities such as w flood MAR facilities and new MS4-compliance facilities would be large enough to interfere with locally important mineral resources recovery sites, should these facilities be located within such sites. As such, mitigation is required to minimize potential impacts below significance thresholds. Therefore, the installation and operation of OPBMPU facilities has little potential to have a direct adverse impact on mineral resources, unless the parcel(s) selected for such facilities are within an active mining area or are designated for recovery of mineral resources. Implementation of mitigation measure **MR-1** is sufficient to reduce the potential for impacts to mineral resources to a less than significant level.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. Increasing the safe yield of the Chino Basin, enhancing water quality through treatment and dilution and the provision of adequate waste treatment and reuse have no identifiable potential to cause or contribute to a transition of land with mineral resources to urban uses. As such, no impacts related to locally important mineral resources are anticipated to occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Impacts are the same as those identified under Project Category 3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Refer to MM **MR-1**, above.

Level of Significance After Mitigation: Less Than Significant

Implementation of mitigation measure **MR-1** is sufficient to reduce the potential for impacts to mineral resources to a less than significant level through either relocation, or compensation for development proposed to be located within an area containing significant mineral resources.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of a project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☒	☐	☐

SUBSTANTIATION

XIII.1 Environmental Setting

Noise Rating Terminology

A-weighted decibels (dBA, a measure of sound energy) are the most common units used for measuring the loudness of a noise source/event. The human ear has different sensitivity to different frequencies of sound (noise). A-weighting is an attempt to give the noise monitor the same frequency sensitivity as the human ear. Technically, it is the measurement of the energy being received when listening to (or monitoring) a source of noise. For example, the loudness of a highway may be 65 dBA when measured 50 feet away. The sound decreases (less energy is received by the ear) as one moves away from the source, and the same highway would have a noise level of about 62 dBA at 100 feet. The relationship between how one perceives a sound and the actual sound energy emitted by the source of noise is very complex. However, a good rule of thumb is that if a noise increases 10 dBA, its apparent loudness will double. Therefore, a noise that is 70 dBA will appear twice as loud as a 60 dBA noise.

A number of noise rating scales using A-weighted decibels are used in California for land use compatibility assessment and are described as follows:

- The Equivalent Noise Level (Leq) scale represents the energy average noise level over a sample period of time. It represents the average decibel sound level that would contain the same amount of energy as a fluctuating sound level over the sample time period.
- The Day-Night Noise Level (Ldn) scale represents a time weighted 24-hour average noise level based on the A-weighted decibel scale. Time weighted refers to the fact that noise which occurs during certain sensitive time periods (such as at night) is penalized for occurring at these times. For the Ldn scale, the nighttime period (10 p.m. and 7 a.m.) noises are penalized by 10 dBA.
- The Community Noise Equivalent Level (CNEL) scale is similar to the Ldn scale except that it includes an additional 5 dBA penalty for the evening time period (7 p.m. to 10 p.m.). Both noise rating scales are used by the local jurisdictions and the State in evaluating transportation noise, including airports and roadways.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dBA for hard sites and 7.5 dBA for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise

from the source. Soft sites have an absorptive ground surface such as soft dirt, grass or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement (Caltrans, 2009).

Fundamentals of Vibration

Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by vibration of room surfaces is called structure borne noises. Sources of groundborne vibrations include natural phenomena (e.g. earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g. explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous or transient. Vibration is often described in units of velocity (inches per second), and discussed in decibel (VdB) units in order to compress the range of numbers required to describe vibration. Vibration impacts related to human development are generally associated with activities such as train operations, construction, and heavy truck movements.

The FTA assessment states that in contrast to airborne noise, ground-borne vibration is not a common environmental problem. Although the motion of the ground may be noticeable to people outside structures, without the effects associated with the shaking of a structure, the motion does not provoke the same adverse human reaction to people outside. Within structures, the effects of ground-borne vibration include noticeable movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. FTA assessment further states that it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. However, some common sources of vibration are trains, trucks on rough roads, and construction activities, such as blasting, pile driving, and heavy earth-moving equipment. The Federal Transit Association (FTA) guidelines identify a level of 80 VdB for sensitive land uses. This threshold provides a basis for determining the relative significance of potential Project related vibration impacts.

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others because of the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, hotels, schools, day care centers, rest homes, and hospitals are generally more sensitive to noise than commercial and industrial land uses. There are numerous sensitive receptors throughout the Chino Basin and there is the potential for many sensitive receptors to be within 500 feet of OBMPU proposed facilities.

Noise Standards and Criteria

Noise rating scales, noise standards, community noise assessment criteria and noise mitigation measures are discussed below to provide a brief overview of how noise is evaluated and to explain the noise standards used in the Noise Elements Participating Jurisdiction's within the Project Area. This information is needed in order to understand the existing background noise conditions in the project area.

The CNEL scale is used as the criterion for assessing the compatibility of residential land uses with transportation-related noise sources by utilizing an interior and exterior noise standard. Typical noise standards within the local jurisdiction's general plans in the Chino Basin encourage interior noise standards of 45 dBA CNEL and an exterior standard of 60-65 dBA CNEL. The local jurisdictions use land use planning decisions relative to chronic noise exposure. An annual average noise level in excess of 60-65 dB CNEL is considered an excessive exterior exposure for most residential or other noise sensitive uses, unless mitigation is implemented to achieve this level where feasible. CNEL can be expressed as a daily average or as an annual average exposure to smooth out any day to day variations in noise generation.

Although CNEL is considered when using an annual average noise exposure such as along roadways or adjacent to airports, it is also calculated over a 24-hour period. Levels above 60-65 dB CNEL are considered intrusive for outdoor recreation, relaxation or normal conversation. Such intrusion could be considered an environmentally adverse impact even if no long-term noise incompatibility is created by the noise source. Environmental studies often use a change in the noise level by some given increment as a

criterion for potential impact significance. A change of 3 dBA in noise from a semi-continuous source, such as a roadway, is often defined as a perceptible, but non-significant increase. Changes of 5 dBA are commonly designated as "clearly noticeable" and may be considered a significant change in the background noise level.

Sources of noise can be divided into transportation sources and non-transportation sources. The existing noise environment within the Chino Basin is dominated primarily by transportation-related noise sources. These noise sources include traffic noise from nearby roadways, from adjacent railroad lines and the several airports within the project area, including Cable Airport, Chino Airport, Ontario Airport, and Rialto Municipal Airport. Secondary non-transportation noise sources include industrial activity, mining, music, amplified sound and activities on private property. For example, existing industrial activity noise is audible around the California Steel Plant in Fontana in the vicinity of this site from normal operation. Regardless, the predominant noise sources are those transportation related activities. Noise thresholds applied by the various agencies located within the Chino Basin are, in and of themselves, cumulative impact thresholds. As such, a significant impact may occur if the noise thresholds of an agency are exceeded.

San Bernardino County Development Code

Noise. Section 83.01.080 of the County of San Bernardino Development Code establishes standards concerning acceptable noise levels for both noise sensitive land uses and for noise generating land uses.

C. Noise standards for stationary noise sources.

1. **Noise standards.** The following describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties.

Table 83-2: Noise Standards for Stationary Sources

Affected Land Uses (Receiving Noise)	7 a.m. -10 p.m. Leq dB(A)	10 p.m. – 7 a.m. Leq dB(A)
Residential	55	45
Professional Services	55	55
Other Commercial	60	60
Industrial	70	70
SOURCE: San Bernardino County Development Code, Table 83-2, February 2009.		

2. **Noise limit categories.** No person shall operate or cause to be operated a source of sound at a location or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by the person, which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following:
   a. The noise standard for the receiving land use as specified in Subsection B (Noise impacted areas), above, for a cumulative period of more than 30 minutes in any hour.
   b. The noise standard plus 5 dB(A) for a cumulative period of more than 15 minutes in any hour.
   c. The noise standard plus 10 dB(A) for a cumulative period of more than five minutes in any hour.
   d. The noise standard plus 15 dB(A) for a cumulative period of more than one minute in any hour.
   e. The noise standard plus 20 dB(A) for any period of time.

D. Noise standards for adjacent mobile noise sources. Noise from mobile sources may affect adjacent properties adversely. When it does, the noise shall be mitigated for any new development to a level that shall not exceed the standards described in the following **Table**.

Table 83-3: Noise Standards for Adjacent Mobile Noise Sources

Land Use		LDN (or CNEL) dB(A)	
Categories	**Uses**	**Interior[1]**	**Exterior[2]**
Residential	Single and multi-family, duplex, mobile homes	45	60[3]
Commercial	Hotel, motel, transient housing	45	60[3]
	Commercial retail, bank, restaurant	50	N/A
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	N/A
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	N/A	65

Notes:
(1) The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors.
(2) The outdoor environment shall be limited to:
- Hospital/office building patios
- Hotel and motel recreation areas
- Mobile home parks
- Multi-family private patios or balconies
- Park picnic areas
- Private yard of single-family dwellings
- School playgrounds

(3) An exterior noise level of up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.
SOURCE: San Bernardino County Development Code, Table 83-3, February 2009.

E. **Increases in allowable noise levels.** If the measured ambient level exceeds any of the first four noise limit categories in Subsection (d)(2), above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category in Subsection (d)(2), above, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

F. **Reductions in allowable noise levels.** If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in Table 83-2 (Noise Standards for Stationary Noise Sources) shall be reduced by 5 dB(A).

G. **Exempt noise.** The following sources of noise shall be exempt from the regulations of this Section:
1. Motor vehicles not under the control of the commercial or industrial use.
2. Emergency equipment, vehicles, and devices.
3. Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

Vibration

A. **Vibration standard.** No ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity greater than or equal to two-tenths (0.2) inches per second measured at or beyond the lot line.

B. **Vibration measurement.** Vibration velocity shall be measured with a seismograph or other instrument capable of measuring and recording displacement and frequency, particle velocity, or acceleration. Readings shall be made at points of maximum vibration along any lot line next to a parcel within a residential, commercial and industrial land use zoning district.

C. Exempt vibrations. The following sources of vibration shall be exempt from the regulations of this Section.

1. Motor vehicles not under the control of the subject use.
2. Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

County of Riverside Code of Ordinances

The following are policies within the Code of Ordinances of the County of San Bernardino that may be applicable to program construction activities taking place within the County:

9.52.020 - Exemptions.

Sound emanating from the following sources is exempt from the provisions of this chapter:

A. Facilities owned or operated by or for a governmental agency;
B. Capital improvement projects of a governmental agency;

9.52.040 - General sound level standards.

No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in Table 1.

TABLE 1. SOUND LEVEL STANDARDS (dB Lmax)

General Plan Foundation Component		Maximum Decibel Level		
Land Use Designation General Plan	**Land Use Designation Name**	**Density**	**7:00 a.m.—10:00 p.m.**	**10:00 p.m.—7:00 a.m.**
Community development				
EDR	Estate density residential	2 acres	55	45
VLDR	Very low-density residential	1 acre	55	45
LDR	Low-density residential	½ acre	55	45
MDR	Medium-density residential	2—5	55	45
MHDR	Medium high-density residential	5—8	55	45
HDR	High-density residential	8—14	55	45
VHDR	Very high-density residential	14—20	55	45
H'TDR	Highest density residential	20+	55	45
CR	Retail commercial		65	55
CO	Office commercial		65	55
CT	Tourist commercial		65	55
CC	Community center		65	55
LI	Light industrial		75	55
HI	Heavy industrial		75	75
BP	Business park		65	45
PF	Public facility		65	45
SP	Specific plan-residential		55	45
	Specific plan-commercial		65	55
	Specific plan-light industrial		75	55
	Specific plan-heavy industrial		75	75
Rural community				
EDR	Estate density residential	2 acres	55	45
VLDR	Very low-density residential	1 acre	55	45

General Plan Foundation Component		Maximum Decibel Level		
Land Use Designation General Plan	**Land Use Designation Name**	**Density**	**7:00 a.m.— 10:00 p.m.**	**10:00 p.m.— 7:00 a.m.**
LDR	Low-density residential	½ acre	55	45
Rural				
RR	Rural residential	5 acres	45	45
RM	Rural mountainous	10 acres	45	45
RD	Rural desert	10 acres	45	45
Agriculture				
AG	Agriculture	10 acres	45	45
Open space				
C	Conservation		45	45
CH	Conservation habitat		45	45
REC	Recreation		45	45
RUR	Rural	20 acres	45	45
W	Watershed		45	45
MR	Mineral resources		75	45

9.52.060 - Special sound sources standards.
The general sound level standards set forth in Section 9.52.040 of this chapter apply to sound emanating from all sources, including the following special sound sources, and the person creating, or allowing the creation of, the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards, the failure to comply with which constitutes separate violations of this chapter:

B. Power Tools and Equipment. No person shall operate any power tools or equipment between the hours of ten p.m. and eight a.m. such that the power tools or equipment are audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. No person shall operate any power tools or equipment at any other time such that the power tools or equipment are audible to the human ear at a distance greater than one hundred (100) feet from the power tools or equipment.

9.52.070 - Exceptions.
Exceptions may be requested from the standards set forth in Section 9.52.040 or 9.52.060 of this chapter and may be characterized as construction-related, single-event or continuous-events exceptions.

A. Application and Processing.
1. Construction-Related Exceptions. An application for a construction-related exception shall be made to and considered by the director of building and safety on forms provided by the building and safety department and shall be accompanied by the appropriate filing fee. No public hearing is required.

City of Chino Municipal Code
The following are policies within the Municipal Code of the City of Chino that may be applicable to program construction activities taking place within the City:

Chapter 9.40 Noise
9.40.030- Designated Noise Zones
The properties hereinafter described are assigned to the following noise zones:

- Noise Zone I: All single-, double- and multiple-family residential properties.
- Noise Zone II: All commercial properties.
- Noise Zone III: All manufacturing or industrial properties.
  (Ord. 95-10 § 1 (part), 1995.)

These criteria are given in terms of allowable noise levels for a given period of time at the residential property boundary. Higher noise levels are permitted during the day (seven a.m. to ten p.m.) than the night (ten p.m. to seven a.m.). The table below shows the acceptable levels at residential land uses during the daytime and nighttime.

Maximum Time of Exposure	Noise	Time Frame	
Metric	**Noise Level Not to Exceed**	**7 am -10 pm**	**10 pm -7am**
30 min/hr	L50	55 dBA	50 dBA
15 min/hr	L25	60 dBA	55 dBA
5 min/hr	L8.3	65 dBA	60 dBA
1 min/hr	L1.7	70 dBA	65 dBA
Any period of time	Lmax	75 dBA	70 dBA

9.40.060- Special Provisions

D. Noise sources associated with or vibration created by construction, repair, remodeling or grading of any real property or during authorized seismic surveys, provided said activities do not take place outside the hours for construction as defined in Section 15.44.030 of this code, and provided the noise standard of sixty-five dBA plus the limits specified in Section 9.40.040(B) as measured on residential property and any vibration created does not endanger the public health, welfare and safety

City of Chino Hills Municipal Code
The following are policies within the Municipal Code of the City of Chino Hills that may be applicable to program construction activities taking place within the City:

16.48.020 - Noise

B. Noise Standards.

1. The Noise standards contained in Table N-1 “Noise /Land Use Compatibility Matrix" in the Noise Element of the General Plan shall apply to land uses Citywide and shall be used to define acceptable and unacceptable Noise levels.
2. No person shall operate or cause to be operated any source of sound at any location or allow the creation of any Noise on property owned, leased, occupied or otherwise controlled by such person, which causes the Noise level, when measured on any other property, either incorporated or unincorporated, to exceed:
   a) The "Zone C" Noise standard for that receiving land use specified in Table N-1 of the General Plan Noise Element for a cumulative period of more than thirty (30) minutes in any hour; or
   b) The Noise standard plus 5 dBA for a cumulative period of more than five minutes in any hour; or
   c) The Noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour; or
   d) The Noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; or
   e) The Noise standard plus 20 dBA for any period of time.

Table 7.1: Land Use/Noise Compatibility Matrix

Land Use Categories		CNEL	
Categories	**Compatible Uses**	**Interior**	**Exterior**
Residential	Single-Family, Duplex, Multiple-Family	45	65
	Mobile Homes		65
Commercial	Hotel, Motel, Transient, Lodging	45	65
	Commercial, Retail, Bank, Restaurant, Health clubs	55	
	Office Buildings, Research and Development, Professional Offices	50	
	Amphitheater, Concert Hall, Auditorium, Meeting Hall, Movie Theater	45	
	Gym (multi-purpose)	50	
	Manufacturing, Warehousing, Wholesale, Utilities	65	
Open Space	Parks		65
Institutional/ Public Facility	Hospital, Schools, Classrooms	45	65
	Churches, Libraries	45	
SOURCE: City of Chino Hills, Noise Element, 2015			

City of Eastvale
The City of Eastvale has adopted the same ordinances outlined under the County of Riverside Code of Ordinances, above.

City of Fontana Municipal Code
The following are policies within the Municipal Code of the City of Fontana that may be applicable to program construction activities taking place within the City:

Sec. 30-259 – Performance Standards

(a) Noise levels. No person shall create or cause to be created any sound which exceeds the noise levels in this section as measured at the property line of any residentially zoned property:
(1) The noise level between 7:00 a.m. and 10:00 p.m. shall not exceed 65 db(A).
(2) The noise level between 10:00 p.m. and 7:00 a.m. shall not exceed 70 db(A).

(b) Noise measurements. Noise shall be measured with a sound level meter that meets the standards of the American National Standards Institute (ANSI) Section SI4-1979, Type 1 or Type 2. Noise levels shall be measured using the "A" weighted sound pressure level scale in decibels (reference pressure = 20 micronewtons per meter squared).

(c) Vibration. No person shall create or cause to be created any activity which causes a vibration which can be felt beyond the property line of any residentially zoned property with or without the aid of an instrument.

City of Jurupa Valley Municipal Code
The City of Jurupa Valley has adopted the same ordinances outlined under the County of Riverside Code of Ordinances, above.

City of Montclair Municipal Code
The following are policies within the Municipal Code of the City of Montclair that may be applicable to program construction activities taking place within the City:

6.12.040 - Base ambient exterior noise levels.
All ambient noise measurements shall commence at the base ambient noise levels in decibels within the respective times and zones as follows:

Zone	Time	Decibels
Residential	10:00 p.m.—7:00 am.	45 dB(A)
Residential	7:00 a.m.—10:00 p.m.	55 dB(A)
Commercial	10:00 p.m.—7:00 a.m.	55 dB(A)
Zone	**Time**	**Decibels**
Commercial	7:00 a.m.—10:00 p.m.	65 dB(A)
Industrial	10:00 p.m.—7:00 am.	60 dB(A)
Industrial	7:00 a.m.—10:00 p.m.	70 dB(A)

6.12.050 - Maximum residential/ nonresidential noise levels.
It is unlawful for any person within any zone to create any noise or allow the creation of any noise on the property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level, when measured on the exterior of the property, to exceed the base ambient noise level as adjusted below:

Noise Level	Maximum Duration Period
Exceeded Level (BANL)	30 minutes in any hour
5—9 dB(A)	above BANL 15 minutes in any hour
10—14 dB(A)	above BANL 5 minutes in any hour
15—16 dB(A)	above BANL 1 minute in any hour
16 dB(A) or greater above BANL	Not permitted

6.12.060 - Exemptions.

D. Noise sources associated with construction, repair, remodeling or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on any given day and provided that the Building Official determines that the public health and safety will not be impaired. Industrial or commercial construction or public improvements, not otherwise feasible except between these hours, may be approved on a limited, short-term basis, subject to the approval of the Director of Community Development. (Ord. 99-791 Exhibit A (part); prior code § 5-4.07)

City of Ontario Municipal Code
The following are policies within the Municipal Code of the City of Ontario that may be applicable to program construction activities taking place within the City:

Sec. 5-29.04. Exterior noise standards

(a) The following exterior noise standards, unless otherwise specifically indicated, shall apply to all properties within a designated noise zone.

Allowable Exterior Noise Level (1)		Allowed Equivalent Noise Level, Leq. (2)	
Noise Zone	**Type of Land Use**	**7 a.m. to 10 p.m.**	**10 p.m. to 7 a.m.**
I	Single-Family Residential	65 dBA	45 dBA
II	Multi-Family Residential, Mobile Home Parks	65 dBA	50 dBA
III	Commercial Property	65 dBA	60 dBA
IV	Residential Portion of Mixed Use	70 dBA	70 dBA
V	Manufacturing and Industrial, Other Uses	70 dBA	70 dBA

(1) If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.

(2) Measurements for compliance are made on the affected property pursuant to § 5-29.15.

(e) If the measurement location is on a boundary between two (2) different noise zones, the lower noise level standard applicable to the noise zone shall apply. (§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.09. Construction activity noise regulations.

(a) No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.

(b) No landowner, construction company owner, contractor, subcontractor, or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment or machine in violation of the provisions of this section.

(c) Exceptions.

1. The provisions of this section shall not apply to emergency construction work performed by a private party when authorized by the City Manager or his or her designee;
2. The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the City, or its employees, contractors or agents, unless:
   i. The City Manager or a department head determines that the maintenance, repair or improvement is immediately necessary to maintain public services,
   ii. The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or
   iii. The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes construction during hours of the day that would otherwise be prohibited pursuant to this section; and
3. Any construction that complies with the noise limits specified in §§ 5-29.04 or 5-29.05. (§ 2, Ord. 2888, eff. March 6, 2008)

City of Rancho Cucamonga Municipal Code

The following are policies within the Municipal Code of the City of Rancho Cucamonga that may be applicable to program construction activities taking place within the City:

Sec. 17.66.050. - Noise standards.

C. Exterior noise standards.

1. It shall be unlawful for any person at any location within the city to create any noise or allow the creation of any noise on the property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on the property line of any other property to exceed the basic noise level as adjusted below:
   a. Basic noise level for a cumulative period of not more than 15 minutes in any one hour; or
   b. Basic noise level plus five dBA for a cumulative period of not more than ten minutes in any one hour; or
   c. Basic noise level plus 14 dBA for a cumulative period of not more than five minutes in any one hour; or
   d. Basic noise level plus 15 dBA at any time.
2. If the measurement location is a boundary between two different noise zones, the lower noise level standard shall apply.

3. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the noise is in operation shall be compared directly to the allowable noise level standards as specified respective to the measurement's location, designated land use, and for the time of day the noise level is measured. The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the planning director for the purpose of establishing the existing ambient noise level at the measurement location.

D. Special Exclusions

4. Noise sources associated with, or vibration created by, construction, repair, remodeling, or grading of any real property or during authorized seismic surveys, provided said activities:
   a. When adjacent to a residential land use, school, church or similar type of use, the noise generating activity does not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday, and provided noise levels created do not exceed the noise standard of 65 dBA when measured at the adjacent property line.
   b. When adjacent to a commercial or industrial use, the noise generating activity does not take place between the hours of 10:00 p.m. and 6:00 a.m. on weekdays, including Saturday and Sunday, and provided noise levels created do not exceed the noise standards of 70 dBA at the when measured at the adjacent property line.

F. Residential noise standards.

Table 17.66.050-1 Residential Noise Limits

Location of Measurement	Maximum Allowable	
	10:00 p.m. to 7:00 a.m.	7:00 a.m. to 10:00 p.m.
Exterior	60 dBA	65dBA
Interior	45 dBA	50dBA

City of Upland Municipal Code

The following are policies within the Municipal Code of the City of Upland that may be applicable to program construction activities taking place within the City:

9.40.040 Base ambient noise level.

All ambient noise measurements shall commence at the base ambient noise levels in decibels within the respective times and zones as follows:

Decibels	Time	Zone Use
45 dB(A)	10:00 p.m.—7:00 a.m.	Residential
55 dB(A)	7:00 a.m.—10:00 p.m.	Residential
65 dB(A)	Anytime	Uses not specified
75 dB(A)	Anytime	Industrial and commercial

Actual decibel measurements exceeding the above levels at the times and within the zones corresponding thereto shall be employed as the base ambient noise level referred to in this chapter. Otherwise, no ambient noise shall be deemed to be less than the above specified levels. (Prior code § 5400.500)

9.40.070 Maximum residential noise levels.
Exterior noise shall be measured on the exterior of any residential property, and no noise level shall exceed the following for the duration periods specified:

Noise Level Exceeded	Maximum Duration Period
Base ambient noise level (BANL)	30 minutes in any hour
5 dB(A) above BANL	15 minutes in any hour
10 dB(A) above BANL	5 minutes in any hour
15 dB(A) above BANL	1 minute in any hour
20 d(B)(A) above BANL	Not permitted

(Prior code § 5400.800)

Noise Criteria
The *CEQA Guidelines* do not define the levels at which permanent and temporary increases in ambient noise are considered "substantial." Therefore, with regard to determining whether the project would result in a permanent and/or temporary increase in ambient noise levels in the project vicinity, the significance of the proposed project's noise impacts can be determined by comparing estimated project-related noise levels to existing baseline (no-project) noise levels to assess the magnitude of increase in ambient noise levels. Generally speaking, the average healthy ear can barely perceive a noise level change of 3 dBA. A change from 3 to 5 dBA may be noticed by some individuals who are sensitive to changes in noise. A 5 dBA increase is readily noticeable, while the human ear perceives a 10 dBA increase as a doubling of sound. Thus, for the purpose of conducting a conservative analysis, an increase in the noise environment of 5 dBA or greater at an off-site sensitive receptor during project-related construction activities, which would be temporary and short-term, is considered to constitute a significant noise impact with regard to a temporary substantial increase in ambient noise levels.

With regard to determining noise impacts associated with permanent increases in ambient noise levels generated from project operations, some guidance as to the significance of changes in ambient noise levels is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON), which assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a summary measure of the general adverse reaction of people to noise that generates speech interference, sleep disturbance, or interference with the desire for a tranquil environment. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been asserted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the L_{dn}, as shown in **Table XIII-1**.

Table XIII-1
MEASURES OF SUBSTANTIAL INCREASE FOR NOISE EXPOSURE

Ambient Noise Level without Project (L_{dn})	Significant Impact Assumed to Occur if the Project Increases Ambient Noise Levels By:
<60 dB	+ 5.0 dB or more
60-65 dB	+ 3.0 dB or more
>65 dB	+ 1.5 dB or more
SOURCE: Federal Interagency Committee on Noise (FICON), 1992.	

Based on the noise criteria presented in **Table XIII-1**, the proposed program, would result in a significant operational noise impact if a mobile noise source (e.g., project-related traffic on local roadways) or stationary noise source (e.g., new treatment system, pump stations, etc.) associated with the program

would result in increased noise levels of 1.5 dBA L_{dn} or more in an ambient noise environment greater than 65 dBA L_{dn}; or increased noise of 3 dBA L_{dn} or more in an ambient noise environment between 60 and 65 dBA L_{dn}; or increased noise of 5 dBA L_{dn} or more in an ambient environment of less than 60 dBA L_{dn}. The FICON thresholds are representative of noise increases from long-term (e.g., permanent) noise sources that could adversely affect sensitive receptors. The rationale for the **Table XIII-1** criteria is that as ambient noise levels increase, a small increase in decibel levels is sufficient to cause significant annoyance. The quieter the ambient noise level is, the more the noise can increase (in decibels) before it causes significant annoyance. Although an increase in the ambient noise environment may be significant based on the thresholds, if there are no sensitive receptors located in the vicinity of a project-related noise source that would be adversely impacted, then the noise would be deemed less than significant.

Vibration Criteria

The *CEQA Guidelines* also do not define the levels at which groundborne vibration or groundborne noises are considered "excessive." Thus, in terms of construction-related vibration impacts on buildings, the adopted guidelines/recommendations by the FTA to limit groundborne vibration based on the age and/or condition of the structures that are located in close proximity to construction activity are used in this analysis to evaluate potential groundborne vibration impacts. Based on the FTA criteria, construction impacts relative to groundborne vibration would be considered significant if any of the following were to occur:

- Project construction activities would cause a PPV groundborne vibration level to exceed 0.5 inches per second at a reinforced concrete, steel, or timber building;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.3 inches per second at any engineered concrete and masonry building;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.2 inches per second at any non-engineered timber and masonry buildings; or
- Project construction activities would cause a PPV ground-borne vibration level to exceed 0.12 inches per second at any buildings "extremely susceptible to vibration damage" (i.e., a historical building).

In terms of groundborne vibration impacts associated with human annoyance, this analysis uses the FTA's vibration impact thresholds for sensitive buildings, residences, and institutional land uses under conditions where there are an infrequent number of events per day. These thresholds are 65 VdB at buildings where vibration would interfere with interior operations, 80 VdB at residences and buildings where people normally sleep, and 83 VdB at other institutional buildings (FTA, 2006). The 65 VdB threshold applies to typical land uses where vibration would interfere with interior operations, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. The 80 VdB threshold applies to all residential land uses and any buildings where people sleep, such as hotels and hospitals. The 83 VdB threshold applies to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference.

XIII.2 Impact Discussion

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of a project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Implementation of the OBMPU would involve the installation of several new facilities related to the Program Elements. These facilities include wells, monitoring devices, conveyance pipelines, pump stations, reservoirs, storage basins, upgrades to treatment plants, new treatment plants, and new groundwater treatment facilities all within the Chino Basin.

The construction noise impacts associated with each individual OBMPU project would be short-term in length of time and limited to the period of time when construction activity is taking place for that particular upgrade or improvement. Construction activity noise levels at and near construction areas within the project area would fluctuate depending on the particular type, number, and duration of usage of various pieces of

construction equipment. Certain facilities may require the use of heavy construction equipment for activities such as site preparation, grading and excavation, trenching, installation of piping and equipment, paving, and assembly of structural elements and mechanical systems. Development activities could also involve the use of smaller power tools, generators, and other sources of noise. During each stage of development for each individual project, there would be a different mix of equipment operating and noise levels would vary based on the amount and type of equipment in operation and the location of the activity. Specific construction equipment lists, material lists, construction methods, construction schedules, and workforce details would be developed in the future as specific projects are planned and designed according to the Program Elements outlined in the OBMPU.

The USEPA has compiled data for outdoor noise levels for typical construction activities. These data are presented in **Table XIII-2**. The noise levels shown in **Table XIII-2** represent composite noise levels associated with typical construction activities, which takes both the number of pieces and spacing of heavy construction equipment that are typically used during each phase of construction. These noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 84 dBA Leq measured at 50 feet from the noise source to the receptor would reduce to 78 dBA Leq at 100 feet from the source to the receptor, and reduce by another 6 dBA Leq to 72 dBA Leq at 200 feet from the source to the receptor. **Table XIII-3** shows typical maximum and average noise levels produced by various types of construction equipment.

Table XIII-2
TYPICAL OUTDOOR CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level (dBA, $_{Leq}$)[a]
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

[a] Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.
SOURCE: USEPA, 1971.

The construction activities for each proposed OBMPU project could temporarily expose their respective existing off-site surrounding land uses to increased noise levels while construction activities are ongoing. As shown in **Table XIII-3**, excavation activities can typically generate noise levels of 89 dBA Leq at 50 feet from the construction noise source.

It should be noted that the construction noise impacts at existing off-site receptors would be dependent on various factors, including the amount of construction activity occurring on a given day, the distance between the construction activities and the off-site receptors, the presence of any existing structures that may act as noise barriers for the off-site receptors, and the existing ambient noise levels at the off-site receptor locations. Some of the construction activities associated with the proposed projects would also have relatively shorter durations and, consequently, less frequent noise impacts on nearby off-site uses. For instance, noise impacts from installation of new regional treatment facilities, would be of much longer duration than pipeline construction since the construction activities would physically progress along the length of the public right-of-way rather than remaining stationary at one location.

Table XII-3
NOISE LEVELS OF CONSTRUCTION EQUIPMENT AT
25, 50 AND 100 FEET (in dBA Leq) FROM THE SOURCE

Equipment	Noise Levels at 25 feet	Noise Levels at 50 feet	Noise Levels at 100 feet
Earthmoving			
Front Loader	85	79	73
Backhoes	86	80	74
Dozers	86	80	74
Tractors	86	80	74
Scrapers	91	85	79
Trucks	91	85	79
Material Handling			
Concrete Mixer	91	85	79
Concrete Pump	88	82	76
Crane	89	83	77
Derrick	94	88	82
Stationary Sources			
Pumps	82	79	70
Generator	84	78	72
Compressors	87	81	75
Other			
Saws	84	78	72
Vibrators	82	76	70

Source: U.S. Environmental Protection Agency "Noise"

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The installation of flow meters and extensometers would result in miniscule contributions to noise in the area through truck trips to each of the device installation points—the location for which are presently unknown. Additionally, on-going implementation of the OBMPU once the monitoring devices have been installed may require up to two truck trips to each device or surface water monitoring site per month. Noise exposure from the minimal truck trips required to implement the OBMPU would be below established standards for noise, and therefore, implementation of the flow meters associated with the OBMPU would have a less than significant potential to generate substantial temporary noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Construction
Construction of the proposed wells would involve 24-hour drilling activities for varying lengths of time depending on the depth to which each well must be drilled. The proposed wells would be implemented throughout the entire Chino Basin.

Given the urbanized environment of much of the Chino Basin area, many of the projects would be constructed in proximity or adjacent to existing land uses, including those that are noise-sensitive uses.

Thus, the construction and drilling activities that would occur as a result of well development associated within the OBMPU would expose existing land uses located in proximity to the proposed wells to increased temporary and intermittent noise levels that are substantially greater than existing ambient noise levels. Because not all locations of the projects are determined at this time, the construction noise standards and/or regulations that would apply to each of the projects would depend on the agency with jurisdiction over each project location. Noise during construction, depending upon the final location of facilities, may exceed local construction noise standards or violate local construction noise regulations, particularly given the continuous nature of well drilling. As a result, mitigation to address noise generated by construction activities is provided below.

Operation
The proposed wells have the potential to generate some operational noise due to operation of the well pumps required to operate the proposed wells or associated pump station. Given the urbanized environment of much of the Chino Basin area, the proposed well development could operate in proximity or adjacent to existing noise-sensitive land uses, such as residential uses, schools, hospitals, etc. The operation of the proposed wells could potentially expose the adjacent sensitive receptors to noise levels that exceed local established exterior noise standards. It is anticipated that the proposed pumps and other noise generating equipment would be designed to meet local nighttime ambient noise standards through enclosing such facilities in structures that would control noise, such that local sensitive receptors would not experience a substantial increase in noise; this will be enforced through the implementation of mitigation measures provided below.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Construction
Construction of conveyance and ancillary facilities would involve trenching for new pipelines and installation of supporting infrastructure to develop ancillary facilities such as reservoirs, booster pumps, etc. Construction of the proposed projects would occur intermittently over a 30-year horizon.

Given the urbanized environment of much of the Chino Basin area, many of the projects would be constructed in proximity or adjacent to existing land uses, including those that are noise-sensitive uses. In most cases, the construction of conveyance infrastructure along existing public rights-of-way would be located within 50 feet of nearby land uses, some of which may be sensitive land uses such as residences or churches. Thus, the construction activities that would occur as a result of implementation of facilities associated within the OBMPU would expose existing land uses located in proximity to the pipelines and ancillary facilities like pump stations to increased temporary and intermittent noise levels that are substantially greater than existing ambient noise levels. Because not all locations of the projects are determined at this time, the construction noise standards and/or regulations that would apply to each of the projects would depend on the agency with jurisdiction over each project location. Noise during construction, depending upon the final location of facilities, may exceed local construction noise standards or violate local construction noise regulations. As a result, mitigation to address noise generated by construction activities.

Operation
The proposed conveyance facilities proposed as part of the OBMPU would be located below ground and as such would not generate any operational noise. The aboveground facilities have the potential to generate some operational noise due to operation of mechanical equipment such as fans, pumps, air compressors, chillers, turbines, etc. Given the urbanized environment of much of the Chino Basin area, many of the aboveground facilities could operate in proximity or adjacent to existing noise-sensitive land uses, such as residential uses, schools, hospitals, etc. The operation of these facilities could potentially expose the adjacent sensitive receptors to noise levels that exceed local established exterior noise standards. Noise-generating equipment such as new above ground pump stations and other ancillary facilities must be designed to meet local nighttime ambient noise standards, such that local sensitive receptors would not

experience a substantial increase in noise, this will be enforced through the implementation of mitigation measures provided below.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Construction
Impacts would be the same as Project Categories 1 & 2.

Operation
Impacts would be the same as Project Categories 1 & 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any noise generating impacts other than the facilities discussed in the preceding text which are intended to support this expansion. As such, no impacts to noise can occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The noise impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Construction
Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities. Sensitive receptors are within 100 feet of the WFA Agua de Lejos Treatment Plant, while they are far removed from the easternmost of the Chino Desalters because it is surrounded by industrial and commercial uses. The westernmost Chino Desalter is also far removed from the nearest sensitive receptor as it is located less than a half-mile from the Chino Airport and is surrounded by industrial and agricultural uses. The proposed upgrades and improvements to existing facilities would result in construction activities that could expose existing land uses located in proximity to the proposed projects to increased temporary and intermittent noise levels that are substantially greater than existing ambient noise levels. The construction noise standards and/or regulations that would apply to existing facilities are the Cities of Upland, Jurupa Valley, and Chino. Noise during construction of treatment facilities may exceed local construction noise standards or violate local construction noise regulations; however, it is likely that construction at the Chino Desalters would not violate local construction noise standards due to the distance from these facilities to the nearest sensitive receptors. Impacts related to construction noise at the Agua de Lejos Treatment Plant, as well as impacts related to construction noise at new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities at would be the same as Project Categories 1, 2, & 3 due to the Plant's close proximity to sensitive receptors.

Operation
Once construction of the proposed treatment facility upgrades at each facility has been completed, the surrounding off-site land uses would be exposed to operational noise levels generated by the new aboveground facilities. Treatment facilities have the potential to generate the most operational noise due

to operation of heating, ventilating, and air conditioning (HVAC) equipment and other mechanical equipment such as fans, pumps, air compressors, chillers, turbines, etc. However, the new facilities would be designed to meet acoustic performance criteria that would comply with the local ambient noise standards at the facility fence-line for a stationary noise source, which will be enforced through mitigation.

For new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities, there is a potential for operational noise to exceed established standards, particularly given that the precise locations of these facilities are unknown. As such, operational impacts would be that same as Project Categories 1 & 2.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

NOI-1: ***The Watermaster and/or Implementing Agency shall implement the following measures during construction:***

- ***Include design measures where feasible to reduce the construction noise levels if necessary to comply with local noise ordinances. These measures may include, but are not limited to, the erection of noise barriers/curtains, use of advanced or state-of-the-art mufflers on construction equipment, and/or reduction in the amount of equipment that would operate concurrently at the construction site.***
- ***Place noise and groundborne vibration-generating construction activities whose specific location on a construction site may be flexible (e.g., operation of compressors and generators, cement mixing, general truck idling) as far as possible from the nearest noise- and vibration-sensitive land uses such as residences, schools, and hospitals.***
- ***Minimize the effects of equipment with the greatest peak noise generation potential via shrouding or shielding to the extent feasible. Examples include the use of drills, pavement breakers, and jackhammers.***
- ***Locate stationary construction noise sources as far from adjacent noise-sensitive receptors as possible, and require that these noise sources be muffled and enclosed within temporary sheds, insulation barriers if necessary to comply with local noise ordinances.***
- ***Provide noise shielding and muffling devices on construction equipment per the manufacturer's specifications.***
- ***If construction is to occur near a school, the construction contractor shall coordinate the with school administration in order to limit disturbance to the campus. Efforts to limit construction activities to non-school days shall be encouraged.***
- ***For major construction projects, identify a liaison for surrounding residents and property owners to contact with concerns regarding construction noise and vibration. The liaison's telephone number(s) shall be prominently displayed at construction locations.***
- ***For major construction projects, notify in writing all landowners and occupants of properties adjacent to the construction area of the anticipated construction schedule at least two weeks prior to groundbreaking.***
- ***Construction activities shall occur within the hours considered to be acceptable for construction by the applicable jurisdiction within which an individual project is constructed, except for activities, such as well drilling which are continuous, and for emergencies. Where no such restrictions are in place that limit hours of construction, construction shall be limited to the hours of 7 AM and 6 PM on weekdays, 8 AM and 5 PM on Saturdays, and at no time shall construction activities occur on Sundays or holidays, unless a declared emergency exists.***

NOI-2: ***The Watermaster and/or Implementing Agency shall require that all OBMPU-related aboveground facilities that include stationary noise generating equipment (such as emergency generators, blowers, pumps, motors, etc.) to minimize their audible noise levels by locating equipment away from noise-sensitive receptor areas, installing proper acoustical shielding for the equipment, and incorporating the use of parapets into building design to meet the applicable City or County noise level requirements at neighboring property lines.***

NOI-3: ***For construction activities during non-standard working hours or hours that are not exempt from compliance with applicable City or County noise ordinances (e.g., 24-hour well drilling), the Watermaster and/or Implementing Agency will secure a noise waiver from the appropriate jurisdiction if available.***

NOI-4: ***Injection and extraction wells shall be located as far from sensitive receptors as feasible. If new wells are to be constructed in the immediate vicinity of sensitive receptors, construction specification requirements shall include installation and maintenance of a temporary noise barrier (e.g. engineered sound wall or noise blanket) during 24-hour construction activities, to the extent feasible if necessary to comply with local noise ordinances. Specifications shall include use of appropriate materials that shall be installed to a height that intercepts the line of sight between the construction site and sensitive receptors in order to achieve maximum attenuation in an attempt to decrease construction area noise to as close as ambient noise levels as possible. Furthermore, where new wells are located adjacent to sensitive receptors, wells and any other associated noise generating facilities (i.e. associated treatment facilities, pumps, generators, etc.) shall be enclosed within a structure to attenuate noise to an acceptable level at the nearest sensitive receptor.***

Level of Significance After Mitigation: Less Than Significant

Mitigation measure **NOI-1** would require the following: all construction activities to be conducted in accordance with the applicable noise regulations and standards, the implementation of noise reduction devices and techniques during construction activities, limits construction hours, and advance notification of the surrounding noise-sensitive receptors to a construction site about upcoming construction activities and their hours of operation. This measure is anticipated to reduce the construction-related noise levels at nearby receptors to the maximum extent feasible, which is anticipated to be sufficient for the types of projects proposed as part of the OBMPU. Mitigation measure **NOI-2** will ensure that operational noise meets the applicable City or County noise level requirement, which will ensure that noise generating operational features at the proposed OBMPU facilities attenuate noise to a less than significant level. Mitigation Measure **NOI-3** ensure that construction activities outside of standard working hours secure a noise waiver, which will minimize conflicts with the applicable noise standards. Mitigation measure **NOI-4** will enforce noise minimizing techniques that will ensure that the proposed well developments will not result in excessive operation or construction related noise.

b. Generation of excessive groundborne vibration or groundborne noise levels?

Construction of the OBMPU projects would include activities such as grading, excavation, and drilling, which would have the potential to generate low levels of groundborne vibration. Persons residing and working in an area located in proximity to a construction site could be exposed to excessive groundborne vibration or groundborne noise levels related to construction activities. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Site ground vibrations from construction activities very rarely reach the levels that can damage structures, but they can be perceived in the detectable range and be felt in buildings very close to a construction site.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The installation of flow meters and extensometers would result in miniscule contributions to vibration in the area through truck trips to each of the device installation points—the location for which are presently unknown. Additionally, on-going implementation of the OBMPU once the monitoring devices have been installed may require up to two truck trips to each device or surface water monitoring site per month. Vibration exposure from the minimal truck trips required to implement the OBMPU would be well below established standards for vibration, and therefore, implementation of the flow meters associated with the OBMPU would have a less than significant potential to generate excessive groundborne vibration or groundborne noise.

Construction

As previously stated, the locations for the proposed wells are presently unknown. As such, there is a potential that the proposed wells could be located in close proximity to sensitive receptors. Construction of the proposed wells would involve 24-hour drilling activities for varying lengths of time depending on the depth in which each well must be drilled. The proposed wells would be implemented throughout the entire Chino Basin. Given the urbanized environment of much of the Chino Basin area, construction of a new well may have some potential to create vibration at the nearest sensitive receptor to a given well development site. Well drilling activities are anticipated to attenuate at the nearest sensitive receptor, however mitigation is provided below to minimize vibration to the greatest extent feasible. If removal of pavement is required, some jackhammer and loader activities may be necessary, but these activities do not typically generate enough vibration energy to adversely impact adjacent structures. Based on the type of equipment and construction activities required to install a well, the vibration impacts are forecast to be less than significant with implementation mitigation.

Operation

The proposed wells have a less than significant potential to generate operational vibration. Operational vibration is anticipated to be less than significant given that there are no large pieces of heavy machinery that would be required to operate the proposed wells.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Construction

Construction activities required for the proposed conveyance systems and ancillary facilities projects would have the potential to impact their respective nearby sensitive receptors. Given the urbanized environment of the Chino Basin, the potential exists for construction of a specific project to be located within 25 feet of an adjacent land use. Consequently, existing off-site receptors that are located immediately adjacent to a construction site could be exposed to excessive groundborne vibration levels. It is anticipated that construction of the proposed projects would employ conventional techniques and the equipment to be used would typically not cause excessive ground-borne vibration. The installation of pipelines could also require jack and bore construction, depending on the local geology and location of the OBMPU projects, which can result in vibration levels similar to well drilling operations. Where potential adjacent receptors are located less than 25 feet from a construction site that employs drilling, the vibration levels experienced by these receptors would be even greater.

As the specific locations for the proposed pump stations, reservoirs and other ancillary facilities are presently unknown, and given the short-term nature of construction events, it is anticipated that there would be an infrequent amount of vibration events per day at sensitive land use receptors resulting from project-related construction activities. However, depending on how close an actual receptor location is to a

construction site, and the type of building the receptor, it is possible that the vibration levels at a receptor location could exceed the FTA's vibration thresholds for building damage and human annoyance. As such, vibration impacts during construction associated with the proposed project on existing nearby receptors would require mitigation.

Operation
The proposed conveyance and ancillary facilities have a less than significant potential to generate operational vibration. Operational vibration is anticipated to be less than significant given that there are no large pieces of heavy machinery that would be required to operate the ancillary and conveyance facilities.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Construction
Construction activities required for the proposed storage basins and recharge facilities would have the potential to impact their respective nearby sensitive receptors. Given the urbanized environment of the Chino Basin, the potential exists for construction of a specific project to be located within a perceptible distance to the nearest sensitive receptor. Construction of new storage basins would require substantial earth moving activities that would result in groundborne vibration, and as stated above, could affect the nearest sensitive land use. Therefore, as discussed under Project Categories 1 and 2, construction impacts would require mitigation to minimize vibration impacts. Impacts would be the same as Project Category 2.

Operation
The proposed storage basins and recharge facilities would have a less than significant potential to generate operational vibration. Operational vibration is anticipated to be less than significant given that there are no large pieces of heavy machinery that would be required to operate the storage basins and recharge facilities.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts other than the facilities discussed in the preceding text which are intended to support this expansion. As such, no vibration related impacts can occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The noise impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Construction
Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities. Sensitive receptors are within 100 feet of the boundary of WFA Agua de Lejos Treatment Plant, while they are far removed from the easternmost of the Chino Desalters because it is surrounded by industrial and commercial uses. The westernmost Chino Desalter is also far removed from the nearest sensitive receptor as it is located less than a half-mile from the Chino Airport and is surrounded by industrial and agricultural uses. The proposed upgrades and improvements to existing

facilities would result in construction activities that could expose existing land uses located in proximity to the proposed projects to excessive vibration. The construction vibration standards and/or regulations that would apply to existing facilities are the Cities of Upland, Jurupa Valley, and Chino. Vibration during construction of treatment facilities may exceed local standards or violate local construction regulations governing vibration; however, construction at the Chino Desalters would not violate local construction vibration standards due to the distance from these facilities to the nearest sensitive receptors. Impacts related to construction-related vibration at the Agua de Lejos Treatment Plant, as well as impacts related to construction-related vibration at new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities at would be the same as Project Categories 1, 2, & 3 due to the Plant's close proximity to sensitive receptors.

Operation
The proposed improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would have a less than significant potential to generate operational vibration. Operational vibration is anticipated to be less than significant given that there are no large pieces of heavy machinery that would be required to operate these facilities.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

NOI-5: ***The Watermaster and/or Implementing Agency shall require the construction contractor(s) to implement the following measure:***

- ***Ensure that the operation of construction equipment that generates high levels of vibration including, but not limited to, large bulldozers, loaded trucks, pile-drivers, vibratory compactors, and drilling rigs, is minimized within 45 feet of existing residential structures and 35 feet of institutional structures (e.g., schools) during construction of the various OBMPU projects. Use of small rubber-tired bulldozers shall be enforced within these areas during grading operations to reduce vibration effects.***
- ***The construction contractor for any individual OBMPU project shall provide signs along the roadway identifying a phone number for adjacent property owners to contact with any complaint. During future construction activities for any individual OBMPU project with heavy equipment within 300 feet of occupied residences, vibration field tests shall be conducted at the property line near the nearest occupied residences. To the extent feasible, if vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold. These measures may include, but are not limited to the following: use different construction methods, slow down construction activity, or other mitigating measures to reduce vibration at the property from where the complaint was received.***

NOI-6: ***Where an OBMPU project would be constructed adjacent to an existing or potential historic building, the Watermaster and/or Implementing Agency shall require, through contract specifications, a certified structural engineer to be retained to submit evidence that the operation of vibration-generating equipment associated with the construction activities would not result in any structural damage to the adjacent historic building. Contract specifications shall be included in the construction documents for the applicable OBMPU project development.***

Level of Significance After Mitigation: Less Than Significant

Implementation of Mitigation Measure **NOI-5** would discourage the use of construction equipment that generates high levels of vibration within specific distances from existing land uses that are located near

active construction areas and would ensure vibration field testing and subsequent minimization near occupied residences. This will reduce the construction-related vibration levels experienced by these existing off-site land uses to a level of less than significant. Additionally, implementation of Mitigation Measure **NOI-6** would serve to ensure the safety of existing historic buildings by requiring a certified structural engineer to analyze and provide evidence that no structural damage would result at these buildings due to the project's construction activities. Although construction related vibration could be experienced for some specific locations, impacts would be limited in scope and scale and substantially avoided or minimized with implementation of the Mitigation Measures **NOI-5** and **NOI-6**; therefore, vibration impacts would be less than significant with mitigation.

c. *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

The following three airports are located within Chino Basin's boundaries: Chino Airport, LA/Ontario International Airport, and Cable Airport in Upland. There are no private airstrips located within the Chino Basin.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin; however, the location for these facilities are presently unknown. Given that there are several airports located within the Chino Basin, it is possible that wells and monitoring devices may be installed within 2 miles of an airport. It is not anticipated that any employees would be located at a given well site full time; maintenance and inspection of the proposed wells and monitoring devices would be minimal during project operations. However, it is possible that, during construction of proposed wells and visits to a well or monitoring device site that is located within 2 miles of an airport, employees could be exposed to excessive noise. Therefore, mitigation is provided below to ensure that any exposure to excessive noise is minimized.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. Proposed pipelines, pump stations, reservoirs, or other ancillary facilities could be constructed and operated within 2 miles of an airport. As with the proposed well development and monitoring devices under Project Category 1 above, these facilities would not require any employees would be located at a given site full time; maintenance and inspection of the proposed conveyance and ancillary facilities would be minimal during project operations. However, in order to protect employees visiting a site near an airport, mitigation is provided to below that would minimize exposure to excessive airport noise.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The following locations for proposed storage basins are located within 2 miles of an airport: Mills Pond (Chino Airport); and, Chino Institute for Men (directly adjacent to Chino Airport). The following locations for proposed storage basins are located more than 2 miles from an airport: Lower Cucamonga (more than 2 miles from Chino Airport and more than 3 miles from Ontario International Airport); Confluence Project (greater than 5 miles from the Chino Airport); Riverside Basin (greater than 2 miles from the Ontario

International Airport); Jurupa Basin (more than 3 miles from the Ontario International Airport); and Vulcan Basin (greater than 7 miles from the Ontario International Airport). During construction and operation at Mills Pond and the Chino Institute for Men storage basins, there is a potential for employees working at, visiting or maintaining the site to be exposed to excessive noise from nearby airports. The remaining facilities would have no potential to be exposed to excessive airport-related noise, given the distance from these proposed storage basins to the nearest airport. In order to protect employees visiting Mills Pond or the Chino Institute for Men storage basins, mitigation is provided below that would minimize exposure to excessive airport noise.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts other than the facilities discussed in the preceding text which are intended to support this expansion. As such, no impacts related to airport noise can occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The noise impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

The WFA Agua de Lejos Treatment Plant, and the westernmost Chino Desalter are located within 2 miles of an airport. The Agua de Lejos Treatment Plant is located less than one mile from Cable Airport; the westernmost Chino Desalter is located adjacent to Chino Airport. The easternmost Chino Desalter is located more than 4 miles from the Ontario International Airport. During construction and operation at the WFA Agua de Lejos Treatment Plant, and the westernmost Chino Desalter, there is a potential for full-time employees working at, visiting or maintaining the site to be exposed to excessive noise from nearby airports. The easternmost Chino Desalter would have no potential to be exposed to excessive airport-related noise, given the distance from these proposed storage basins to the nearest airport. In order to protect employees at the WFA Agua de Lejos Treatment Plant, and the westernmost Chino Desalter, mitigation is provided below that would minimize exposure to excessive airport noise. Impacts related to excessive airport noise at new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities at would be the same as Project Categories 1, 2, & 3 because the locations of these facilities are presently unknown, and may be within 2 miles of an airport.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

NOI-7: Where an OBMPU project would be constructed within 2 miles of a public airport, any new indoor facilities should be retrofitted to minimize noise to a level that is within OSHA's permissible exposure limit (PEL).[42] Employees working outside at an OBMPU project, either during construction or operation, shall be provided with ear protection to minimize noise to a level that is below OSHA's PEL to be utilized during periods of excessive noise caused by any aircraft overflights.

Level of Significance After Mitigation: Less Than Significant

Mitigation measure **NOI-7** would ensure that projects located in close proximity to the airport would minimize exposure of persons working at or visiting a site to excessive noise levels. Given that noise attenuates at a rate between 6 dBA for hard sites and 7.5 dBA for soft sites for each doubling of distance from the reference

[42] https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.95

measurement, it is anticipated that excessive noise generated by nearby airports will not result in significant impacts to persons working or residing in the vicinity of the proposed OBMPU projects.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☒	☐	☐

SUBSTANTIATION

XIV.1 Environmental Setting

As previously stated, the Chino Basin is one of the largest groundwater basins in Southern California and has an estimated unused storage capacity of over 1,000,000 acre-feet. The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin includes the following incorporated cities: Chino, Chino Hills, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, and Upland. The Basin includes limited areas of unincorporated Riverside and San Bernardino Counties.

Introduction: Regional Population & Housing

The Southern California Association of Governments (SCAG) forecasts three major growth indicators including population, households, and employment. These forecasts are provided in the regional transportation plans that are periodically updated by SCAG. The SCAG Local Profiles for each of the Cities (excluding unincorporated populations within the Counties) amounts to an estimated population within Chino Basin of 1,180,190 persons in 2018. It is assumed that the projected population of the San Bernardino County and Riverside County unincorporated areas within Chino Basin was 99,903 persons in 2010 when the US Census was taken.[43,44] The unincorporated Riverside County population within Chino Basin was 0.0028%[45] of the overall unincorporated Riverside County population in 2010, while the unincorporated San Bernardino County population within Chino Basin was 26.67%[46] of the overall unincorporated San Bernardino County population in 2010. In order to determine the 2018 unincorporated Riverside and San Bernardino County population within Chino Basin, these percentages were multiplied by the current SCAG Local Profile projections for each County. As such the projected population of the San Bernardino County and Riverside County unincorporated areas within Chino Basin was 83,130 persons in 2018.[47] Therefore, the approximate population within Chino Basin was 1,263,320 persons in 2018. This calculation varies slightly from the population data contained in the Project Description; however, the population data provided within this Chapter reflects research efforts to determine what portions of the Unincorporated areas of Riverside and San Bernardino Counties are located within the Basin, and furthermore, reflects the

[43] https://statisticalatlas.com/county-subdivision/California/San-Bernardino-County/San-Bernardino/Population#data-map/tract
[44] https://statisticalatlas.com/county-subdivision/California/Riverside-County/Jurupa/Population#figure/county-subdivision-in-riverside-area
[45] https://www.rivcoeda.org/Portals/0/BRG-PDFs/2.%20Demographics.pdf
[46] https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF
[47] https://www.scag.ca.gov/DataAndTools/Pages/LocalProfiles.aspx

population within the general areas in which OBMPU facilities are proposed to be developed. **Table XIV-1** below outlines the population projected by the SCAG 2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) within Chino Basin. The SCAG 2016-2040 RTP/SCS is a tool used as a guide for developing regional plans and strategies mandated by the federal and state governments.

Table XIV-1
SCAG POPULATION FORECAST

Cities/Counties	2018	2040
Chino	86,757	120,400
Chino Hills	83,159	94,900
Eastvale	64,854	65,400
Fontana	212,000	280,900
Jurupa Valley	106,054	114,500
Montclair	40,402	42,700
Ontario	177,589	258,600
Pomona	155,687	190,400
Rancho Cucamonga	176,671	204,300
Upland	77,017	81,700
Unincorporated Riverside County*	11	14
Unincorporated San Bernardino County*	83,119	91,772
TOTALS	1,263,320	1,546,086

Source: SCAG Local Profiles, 2019, https://www.scag.ca.gov/DataAndTools/Pages/LocalProfiles.aspx
SCAG 2016 RTP SCS Demographics and Growth Forecast
*within Chino Basin as discussed in the Introduction above.

Along with the projected population increases, there will be a corresponding increase in the estimated number of dwelling units within the project area. Based upon information contained within the SCAG 2016-2040 RTP/SCS, the estimated number of households in 2040 and 2012 are outlined below. By 2040, the number of households is anticipated to be approximately 981,989 dwelling units. **Table XIV-2** summarizes the expected dwelling units for the affected agencies based upon general plan data.

Table XIV-2
SCAG HOUSEHOLD FORECAST

Cities/Counties	2012	2040	Housing % increase 2018-2040
Chino	21,000	34,000	61.9%
Chino Hills	23,000	28,300	23.0%
Eastvale	14,100	16,500	17.0%
Fontana	49,600	74,000	49.2%
Jurupa Valley	25,000	30,400	21.6%
Montclair	9,600	11,600	20.8%
Ontario	45,100	75,300	67.0%
Pomona	38,600	51,100	32.4%
Rancho Cucamonga	55,400	73,100	31.9%
Upland	25,900	28,900	11.6%

Cities/Counties	2012	2040	Housing % increase 2018-2040
Unincorporated Riverside County*	3	5	66.7%
Unincorporated San Bernardino County*	25,123	29,684	18.2%
TOTALS	**718,126**	**981,989**	**36.7%**

Source: SCAG 2016 RTP SCS Demographics and Growth Forecast
*within Chino Basin as discussed in the Introduction above.

The SCAG region has returned to the pre-recession level of 8 million jobs in 2015 with a much lower unemployment rate of 6.6 percent in 2015 than in 2010 when the U.S. Census was taken. However, this level has reduced even further as of 2020: the unemployment rate was 3.7 percent in Riverside County, and 3.3 percent in San Bernardino County in January 2020.[48] As shown in **Table XVI-3**, employment is projected to increase by 53.6 percent over the next 20 years and is estimated to have total employment of 1,165,002 in the Chino Basin by the year 2040.

Table XIV-3
SCAG EMPLOYMENT FORECAST

Cities/Counties	2012	2040	
Chino	42,600	50,600	
Chino Hills	11,500	18,600	
Eastvale	4,300	9,800	
Fontana	47,000	70,800	
Jurupa Valley	24,500	36,600	
Montclair	16,500	19,000	
Ontario	103,300	175,400	
Pomona	55,100	67,200	
Rancho Cucamonga	69,900	104,600	
Upland	27,900	43,500	
Unincorporated Riverside County*	2	5	
Unincorporated San Bernardino County*	15,309	24,297	
TOTALS	**758,711**	**1,165,002**	**% Change: 53.6**

Source: SCAG 2016 RTP SCS Demographics and Growth Forecast
*within Chino Basin as discussed in the Introduction above.

XIV.2 Impact Discussion

The population growth forecasts presented above and associated occupancy of dwelling units required to support this population represent assumed growth with or without implementation of the OBMPU. Regional growth in southern California is driven by a combination of in-migration and recruitment (births over deaths) from the existing population. To understand the potential effect of the OBMPU on future growth and growth inducement within the Chino Basin area, it is necessary to understand the role that the OBMPU will play if it is implemented. The strategic drivers and trends that shaped the goals and implementation actions of the OBMP in the late 1990s have changed, and there are several drivers and trends in today's water management space that may challenge the ability of the Parties to protect their collective interests in the Chino Basin and their water supply reliability. Growth is one of the drivers shaping water and basin management. As urban land uses replace agricultural and vacant land uses, the water demands of the

[48] California Employment Development Department, Labor Market Information Division (LMID), https://www.labormarketinfo.edd.ca.gov/file/lfmonth/rive$pds.pdf

Chino Basin Parties are expected to increase. The following is discussed in the Project Description, but is included here to depict the growth in water demand that is anticipated to occur within the Chino Basin through 2040 as a result of population growth within the Basin. The table below summarizes the actual (2015) and projected water demands, water supply plans, and population through 2040. Total water demand is projected to grow from about 290,000 afy in 2015 to about 420,000 afy by 2040, an increase of about 130,000 afy. The projected growth in water demand through 2040 is driven by the Appropriative Pool Parties, some of which will serve new urban water demands created by the conversion of agricultural and vacant land uses to urban uses.

Table XVI-4
AGGREGATE WATER SUPPLY PLAN FOR WATERMASTER PARTIES: 2015 TO 2040[49]

Water source	2015 (Actual)	2020	2025	2030	2035	2040
Volume (af)						
Chino Basin Groundwater	148,467	139,236	144,314	151,525	164,317	173,522
Non-Chino Basin Groundwater	51,398	55,722	61,741	63,299	64,991	66,783
Local Surface Water	8,108	19,653	19,653	19,653	19,653	19,653
Imported Water from Metropolitan	53,784	90,444	97,657	103,684	105,152	111,036
Other Imported Water	8,861	9,484	10,095	10,975	11,000	11,000
Recycled Water for Direct Reuse	17,554	23,678	24,323	26,910	30,451	33,953
Total	**288,171**	**338,218**	**357,782**	**376,046**	**395,564**	**415,947**
Percentage						
Chino Basin Groundwater	52%	41%	40%	40%	42%	42%
Non-Chino Basin Groundwater	18%	16%	17%	17%	16%	16%
Local Surface Water	3%	6%	5%	5%	5%	5%
Imported Water from Metropolitan	19%	27%	27%	28%	27%	27%
Other Imported Water	3%	3%	3%	3%	3%	3%
Recycled Water for Direct Reuse	6%	7%	7%	7%	8%	8%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Population (million)*	1.95	2.07	2.21	2.38	2.57	2.73

*The population projection is based on the service area population of all Chino Basin Appropriative Pool agencies. For some Appropriative Pool agencies, the service areas expand outside of the Chino Basin.
The population data provided in the introduction to this Chapter provides a more accurate representation of the population within the Chino Basin than is listed in this table, and more accurately reflects the general areas OBMPU facilities are proposed to be developed.

The OBMPU is not intended to be directly involved in supplying municipal water supplies to customers. Thus, the Program and its implementation are one step removed from actual development and provisions of adequate water supplies in support of building-out each jurisdictions' general plan. Water does not serve as a constraint to growth and by planning and expanding water system infrastructure to meet this future demand, water purveyors are growth accommodating, not inducing growth. It is assumed that growth decisions have already been made by local agencies governing land use decisions, and that, furthermore, each individual water agency (listed under CEQA Responsible Agencies in the Project Description) within Chino Basin produces an Urban Water Management Program, which is prepared by a water purveyor to conduct long-term water supply and water resource planning and ensure reliability in water service sufficient to meet the needs of its customer base. As such, the OBMPU does not remove any existing constraint on future development, because Chino Basin water purveyors have alternative means to meet future water demands.

[49] Sourced from: WEI. (2019). *Final 2020 Storage Management Plan*. December 2019.

a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

As discussed in the introduction to the Impact Discussion above, inducement of growth is, in part, based on the ability to meet the water demands of a given area, in this case, the Chino Basin. Current water demands are estimated to be 338,218 afy. Future water demands are anticipated to reach 415,947 afy by 2040. As discussed under the Project Description, the projected growth in water demand through 2040 is driven by the Appropriative Pool Parties, some of which will serve new urban water demands created by the conversion of agricultural and vacant land uses to urban uses. The Cities and other water purveyors within the Chino Basin have evaluated water services requirements within their respective general plans based upon ultimate development (buildout) conditions. In addition, the water agencies within the Chino Basin have prepared Urban Water Management Plans, or otherwise prepared water supply plans, to assess the short-term and long-term water demands of their service areas. However, one of the goals of the OBMPU is "to encourage sustainable management of the Chino Basin to avoid Material Physical Injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin Parties." A second goal is "to increase the water supplies available for Chino Basin Parties and improve water supply reliability. This goal applies to Chino Basin groundwater and all other sources of water available for beneficial use." As such, the facilities proposed to be implemented by the OBMPU are intended to ensure water supply reliability for the water agencies utilizing groundwater from the Chino Basin. However, regardless of whether the OBMPU is implemented, individual water agencies have identified individual actions that they can implement to meet future water demands within the Chino Basin.

The OBMPU takes a more global approach to water demand and supply issues compared to the evaluations at a General Plan or Urban Water Management Plan level and looks toward providing more effective and efficient ways to protect the viability of the entire Basin. Furthermore, emphasis is placed upon programs such as recycling water and conveying recycled water, improving water quality, extraction of salts, storage of water, facilitating more efficient recharge, and expansion of safe storage capacity within the Basin. The OBMPU functions as one path of fulfilling the water supply demands outlined in local jurisdiction general plans and Urban Water Management Plans. As such, the OBMPU is growth accommodating as outlined above under Environmental Setting, but it does not in and of itself create opportunities for additional people to move to the region, nor to construct additional facilities beyond those previously under consideration to accommodate the population envisioned within the applicable general plan at buildout within each community located in the Chino Basin. Based on this analysis, there is a less than significant potential for implementation of the OBMPU to cause or contribute to significant adverse population growth inducement within the Chino Basin.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The proposed OBMPU does not include construction of new homes or businesses that would result in a direct increase in population of create a substantial number of new jobs that would result in new residents of the Chino Basin area. Construction of the proposed wells and installation of the proposed monitoring devices would require temporary employment. It is unknown whether these employees would be drawn from within or outside of the Chino Basin area; however, given the large area that makes up the Chino Basin, it is reasonable to assume that many employment opportunities would be filled by workers drawn from the Chino Basin area. Given that between 3.3 and 3.7 percent of the labor force within Chino Basin is unemployed, it is reasonable to assume that there are available workers for the construction activities associated with the proposed OBMPU improvements. As such, it is assumed that there would be an adequate number of workers within the Chino Basin that could be available for construction jobs and could commute to the temporary construction jobs rather than relocate and induce growth in the area.

Operation of the proposed wells and monitoring devices is not forecast to require more than 5 additional permanent employees; however, the overall OBMPU facilities outlined below in the remaining Project

Categories are anticipated to require 25 employees, for a total of 30 employees required for the overall facilities proposed as part of the OBMPU. These employees are expected to be drawn from existing population. This population increase is minimal and is within the population increase anticipated to occur within the Chino Basin of the 20- and 30-year horizon. Therefore, the implementation of the proposed facilities would result in less than significant impacts related to inducement of population growth.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts would be the same as described above for Project Category 1 and 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any large, visible above ground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially induce population growth exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities.

Impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, though in most cases, the area a well would occupy would be about 10 feet by 10 feet. The proposed extensometers would be installed within wells, and the proposed flow meters would be located at or below ground level within streams and channels to monitor surface water, and therefore would have no potential displace persons or housing. No housing is proposed to be displaced or eliminated by the proposed wells, particularly given the small footprint of wells. The goal of the project and the effect of the physical changes to the environment is to install infrastructure to enhance safe yield and water quality within the Chino Basin. However, given that the locations of the proposed wells are presently unknown, it is remotely possible that the development of specific facilities could adversely impact existing housing. A mitigation measure is outlined below to ensure that such an impact is fully mitigated. With implementation of this measure, the proposed project is not forecast to cause a significant displacement of existing housing or persons.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance and ancillary facilities would be implemented throughout the entire Chino Basin.

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible. However, given that the locations of the proposed conveyance and ancillary facilities are presently unknown, it is remotely possible that the development of specific facilities could adversely impact existing housing. As such, impacts under this Project Category are the same as those identified under Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Facilities located within existing storage basins at existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would occur within sites that do not contain housing or residents. As such, no potential exists for development at these sites to result in displacement of housing or persons.

The construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites would be developed at either known sites that have not been developed, or at sites for which the location has not been determined. Impacts to new storage basins, MS4 facilities, and flood MAR facilities at new sites would be the same as Project Category 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any large, visible above ground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to displace persons or housing exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The population and housing related impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) and groundwater treatment facilities at well sites would occur within developed sites already containing desalter, water treatment facilities or wells, and as such, treatment facility upgrades would be located within existing sites designated for this use. As such, no displacement of persons or housing would occur.

The location for regional groundwater treatment facilities and groundwater treatment facilities near well sites is presently unknown. Groundwater treatment facilities near well sites would occupy an area of about 0.5 acre to 2 acres. Impacts to regional groundwater treatment facilities and groundwater treatment facilities near well sites would be the same as Project Categories 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

POP-1: ***If future OBMPU facilities must be located on parcels occupied by existing housing, the proponent of the facility will ensure that short- and long-term housing of comparable quality and value are made available to the home owner(s) prior to initiating construction of the facility.***

Level of Significance After Mitigation: Less Than Significant

Mitigation measure **POP-1** would ensure that the facilities associated with the OBMPU that must be located on parcels containing housing would be minimized through the provision of short- and long-term housing of comparable quality, thereby minimizing impacts below significance thresholds.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☒	☐	☐
c) Schools?	☐	☐	☒	☐
d) Parks?	☐	☒	☐	☐
e) Other public facilities?	☐	☐	☒	☐

SUBSTANTIATION

XV.1 Environmental Setting

As previously stated, the Chino Basin is one of the largest groundwater basins in Southern California and has an estimated unused storage capacity of over 1,000,000 acre-feet. The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin includes the following incorporated cities: Chino, Chino Hills, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, and Upland. The Basin includes limited areas of unincorporated Riverside and San Bernardino Counties.

Fire/Emergency Protection Services

State

The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for fire protection within State Responsibility Areas (SRAs), including 31 million acres throughout California. In most cases, SRAs are protected directly by CAL FIRE. However, in some counties, such as San Bernardino County, fire protection within the SRA is provided by the county under contract with CAL FIRE (CAL FIRE, 2016). However, depending on the scale and circumstances of the fire, CAL FIRE responds with firefighting resources to assist the County (CAL FIRE, 2012). CAL FIRE serves the Chino Basin area with the Prado Station located at 14467 Central Avenue in Chino. There is a second CAL FIRE location—CAL FIRE West Riverside—within the Chino Basin area at 7545 Mission Boulevard, Jurupa Valley, CA 92509.

Local

San Bernardino County Fire Department

The San Bernardino County Fire Protection District is a community-based, all hazard emergency services provider. The San Bernardino County Fire Department (SBCFD) provides fire and emergency response services to more than 60 communities/cities and all unincorporated areas of the County. SBCFD's Office of Emergency Services (OES) serves as the Operational Area Lead Agency, coordinating the provision of emergency services with the 24 cities and towns in San Bernardino County.[50] SBCFD has 48 professionally staffed fire stations within its service area, 9 paid/volunteer fire station, and covers 19,200 square miles.[51]

[50] https://www.sbcfire.org/about/AboutSBCFire.aspx
[51] San Bernardino County Fire Annual Report (July 2018-June 2019):

There are 1,071 county fire personnel and 683 fire suppression personnel. Within the Chino Basin, the County serves the City of Fontana and the City of Upland, as well as unincorporated San Bernardino County. Stations within the Chino Basin service area are listed below in **Table XV-1**.

Table XV-1
SAN BERNARDINO COUNTY VALLEY DIVISION FIRE STATIONS

Station Name	Station Number	Full Address
Fontana	79	5075 Coyote Canyon Rd, Fontana, CA, 92336
Fontana	78	7110 Citrus Ave, Fontana, CA, 92335
Fontana	73	8143 Banana Ave, Fontana, CA 92335
Fontana	71	16980 Arrow Blvd, Fontana, CA, 92335
Fontana	72	15380 San Bernardino Ave, Fontana, CA, 92335
Fontana	74	11500 Live Oak Ave, Fontana, CA, 92335
Fontana	77	17459 Slover Ave, Fontana, CA, 92316
Upland	12	2413 N Euclid Ave, Upland, CA 91784
Upland	164	1825 N Campus Ave, Upland, CA 91784
Upland	161	475 N 2nd Ave, Upland, CA 91786
Upland	163	1350 N Benson Ave, Upland, CA 91786
SOURCE: SBCFD, 2020		

The San Bernardino County Fire Chief's Association compiled a *Fire and Rescue Mutual Aid Operational Plan* to integrate their operational plan as part of the current State of California Fire and Rescue Emergency Plan. The plan provides for the systematic mobilization, organization, and operation of fire and rescue resources within each zone of the County to mitigate effects of emergencies and disasters. The plan provides updated fire and rescue service inventory of personnel, apparatus, and equipment amongst all local, regional, and state fire officials. The Chino Basin is within Zone 1, West Valley, and within a small portion of Zone 2, East Valley. The plan indicates what fire agencies participate in each zone and what specialized equipment they have (County of San Bernardino, 2013a). The participating Fire Agencies within a Mutual Aid Agreement include:

Zone 1
- Chino Valley Fire District
- San Bernardino County Fire Department
- Chino Institute for Men Fire Department
- Chino Institute for Woman Fire Department
- Montclair Fire Department
- Mt. Baldy Fire Department Ontario Fire Department
- Rancho Cucamonga Fire Protection District Upland Fire Department
- Ontario International Airport Fire Department

Zone 2
- Fontana Fire Department (Contract with San Bernardino County Fire Department)
- San Bernardino County Fire Department

County of Riverside
Limited portions of Riverside County are within the Chino Basin area. The City of Jurupa Valley is served by the Riverside County Fire Department, as are the unincorporated communities of Riverside County

https://www.sbcfire.org/Portals/58/Documents/About/2018-19AnnualReport.pdf

located within and outside of the Chino Basin. In 2018, the Riverside County Fire Department responded to 165,989 incidents; the average number of daily calls was 454. The fire stations located within the Chino Basin are outlined under **Table XV-3** and **XV-4**, no other Riverside County Fire Department stations are located within Chino Basin.

Cities of Chino and Chino Hills

The Cities of Chino and Chino Hills are served by the Chino Valley Fire District (CVFD), which is located in the southwest region of San Bernardino County. The CVFD is not a City Department, but is a separate political agency with its own elected Board of Directors. The District's jurisdiction covers approximately 80 square miles in size and has an estimated population of 170,845. The Cities of Chino, Chino Hills, and surrounding unincorporated areas of San Bernardino County are served by the CVFD. The Chino Valley Fire District (CVFD) employs 140 professional firefighters. In 2018, personnel responded to over 12,200 emergency incidents. CVFD is made up of 7 stations, one administration building, and one training center, as listed in **Table XV-2**.[52]

Table XV-2
CHINO VALLEY FIRE DISTRICT FIRE STATIONS

Station Number/Facility	Full Address
Station 61	5078 Schaefer Avenue Chino, CA 91710
Station 62	5551 Butterfield Ranch Road Chino Hills, CA 91709
Station 63	7550 Kimball Ave Chino, CA 91710
Station 64	16231 Canon Lane Chino Hills, CA 91709
Station 65	12220 Ramona Avenue Chino, CA 91710
Station 66	13707 Peyton Avenue Chino Hills, CA 91709
Station 67	5980 Riverside Drive Chino, CA 91710
Administration Building	14011 City Center Drive Chino Hills, CA 91709
Training Center	5092 Schaefer Avenue Chino, CA 91710
SOURCE: CVFD, 2018	

City of Eastvale

The City of Eastvale, Riverside County Fire Department, Cal Fire have two Fire Stations, Station 27 and Station 31. The Eastvale Fire Department provides full service, municipal and wildland fire protection, pre-hospital emergency medical response by paramedics and EMT's, technical rescue services and response to hazardous materials discharges. About 83% of the 1400 incidents that are responded to in a year on average are medical emergencies and about 13% are fires. The other 4% of incidents include technical rescues and hazardous materials incidents.[53] **Table XV-3** outlines the location of the fire departments within the City of Eastvale.

Table XV-3
EASTVALE FIRE STATIONS

Station Number/Facility	Full Address
Station 27	7067 Hamner Avenue, Eastvale, CA 92880
Station 31	14491 Chandler Street, Eastvale, CA 92880
SOURCE: https://www.eastvaleca.gov/government/fire-services	

[52] Chino Valley Fire District Annual Report 2018 http://www.chinovalleyfire.org/DocumentCenter/View/1091/Annual-Report-2018
[53] https://www.eastvaleca.gov/government/fire-services

City of Fontana
Fire and emergency response services are provided to the City of Fontana from the Fontana Fire District (FFD). In July 2005, the San Bernardino County Board of Supervisors initiated the reorganization of its fire operations and filed an application with the San Bernardino Local Agency Formation Commission (LAFCO) to review and consider the reorganization of the SBCFD. The Fontana City Council proposed that a subsidiary fire district should be made for the City and that the Council would govern it. The City now contracts services to the SBCFD who serves Fontana's corporate limits and County areas within the City's sphere of influence. The FFD staffs about 33 employees and is comprised of 7 stations (listed above under **Table XV-1)**.

City of Jurupa Valley
The County of Riverside, through its cooperative agreement with Cal Fire, provides the City of Jurupa Valley with fire protection, hazardous materials mitigation, technical rescue response, fire marshal, emergency medical services, public service assists, and disaster preparedness and response.

Table XV-4
JURUPA VALLEY FIRE STATIONS

Station Number/Facility	Full Address
Cal Fire / Riverside County Fire Department Administrative Headquarters	210 W San Jacinto Avenue Perris, CA 92570
Glen Avon Fire Station 17	10500 San Sevaine Way Jurupa Valley, CA 91752
Pedley Fire Station 16	9270 Limonite Avenue Jurupa Valley, CA 92509
Rubidoux Fire Station (38)	5721 Mission Boulevard Jurupa Valley, CA 92509
West Riverside Fire Station 18	7545 Mission Boulevard Jurupa Valley, CA 92509
SOURCE: https://www.jurupavalley.org/212/Cal-Fire	

Cities of Montclair and Upland
Since the 1960's, the Montclair Fire Department has been participating in an "All Hazard" emergency aid system with surrounding communities through mutual-aid and automatic-aid agreements, such as the Consolidated Fire Agencies joint power agreement (JPA) known as CONFIRE. These aid agreements allow each fire agency to plan and prepare for large scale incidents that would otherwise deplete the local available emergency resources. In addition to the regionalization with the Upland Fire Department, the local aid agreements include the Chino Valley Fire District, Ontario Fire Department, Rancho Cucamonga Fire Protection District, San Bernardino County Fire Department, and the Los Angeles County Fire Department.

While fire and emergency services for the City of Montclair are provided by the Montclair Fire Department (MFD), and fire services in the City of Upland are provided by the Upland Fire (UFD), CONFIRE is responsible for regional fire services including oversight of both MFD and UFD.

The departments serve 22 square miles with a population of approximately 111,000. The MFD and UFD staff includes 85 full time personnel. The MFD operates two (Station 151 and 152) out of the seven total fire stations, providing 7-days week/24-hours day/365-days a year "all hazard" emergency services to the community. The Montclair Fire Department responded to 5,349 calls for service in 2015 and 5,515 in 2016.[54] The UFD provides basic life support services to its service area along with fire protection and prevention. There are three paramedic engines and one paramedic truck that is staffed and equipped to provide advanced life support services for medical response. The City of Upland also staffs a helicopter with a flight nurse. The UFD shares their personnel with MFD, as mentioned above, and operates out of five fire stations (listed above in **Table XV-1**) within the Chino Basin area. **Table XV-5** outlines fire stations within Montclair.

[54] https://www.cityofmontclair.org/city-government/fire-department/calls-for-service

Table XV-5
MONTCLAIR FIRE STATIONS

Station Number/Facility	Full Address
Station 151 (MFD)	8901 Monte Vista Avenue Montclair, CA 91763
Station 152 (MFD)	10825 Monte Vista Avenue Montclair, CA 91762
SOURCE: MFD, 2018	

City of Ontario

The Ontario Fire Department (OFD) works out of eight stations (Stations 1 through 8, listed below in **Table XV-6**) and all stations are comprised of eight, 4-man paramedic engines companies, and two 4-man truck companies. The department responds to more than 15,000 calls per year, serving and protecting a city population of approximately 173,000.[55] OFD employs 58 firefighter/paramedics and 66 firefighter/emergency medical technicians (EMTs). All eight fire engines are staffed with at least two firefighter/paramedics.

Table XV-6
ONTARIO FIRE STATIONS

Station Number/Facility	Full Address
Station 1	425 East B Street Ontario, CA 91764
Station 2	544 West Francis Street Ontario, CA 91762
Station 3	1408 East Francis Street Ontario, CA 91761
Station 4	1005 North Mountain Avenue Ontario, CA 91761
Station 5	1530 East Fourth Street Ontario, CA 91764
Station 6	2931 East Philadelphia Avenue Ontario, CA 91761
Station 7	4901 East Vanderbilt Street Ontario, CA 91761
Station 8	3429 East Shelby Street Ontario, CA 91761
SOURCE: Ontario Fire Department, 2019	

City of Pomona

The City of Pomona is served by the Los Angeles County Fire Department (LACFD). The LACFD serves more than 4.1 million residents and commercial business within 59 Cities along 72 miles of coastline, and all unincorporated areas within the County's 2,300 square miles. LACFD is one of the world's largest emergency service agencies, and also provides health, hazardous materials, and forestry services throughout the County.[56] **Table XV-7** outlines the LACFD located within the City of Pomona.

Table XV-7
POMONA FIRRE STATIONS

Station Number/Facility	Full Address
Station 181 (Division and Battalion Headquarter)	590 S. Park Avenue Pomona, CA 91766-3038
Station 182	1059 N. White Avenue Pomona, CA 91768-3038
Station 183	708 N. San Antonio Pomona 91767-4910
Station 184	1980 W. Orange Grove Pomona 91768-2046

[55] http://www.ontarioca.gov/fire
[56] https://www.fire.lacounty.gov/home/about-us/

Station Number/Facility	Full Address
Station 185	925 E. Lexington Pomona, 91766-5204
Station 186	280 E. Bonita Pomona, 91767-1924
Station 187	3325 Temple Avenue Pomona, 91768-3256
Station 188	18 A Village Loop Road Pomona, 91766-4811
Station 189 (open during LA County Fair)	1101 McKinley Avenue Pomona, 91768
SOURCE: https://www.ci.pomona.ca.us/index.php/fire-department-home	

City of Rancho Cucamonga

The City of Rancho Cucamonga is served by the Rancho Cucamonga Fire Protection District (RCFPD). The RCFPD serves a 50 square mile area that serves nearly 170,000 residents. There are over 120 full-time and part-time RCFPD employees. All firefighters are cross-trained firefighter/paramedics and firefighter/EMTs (City of Rancho Cucamonga, 2016). The RCFPD operates out of seven stations, within its jurisdiction, as listed below in **Table XV-8**.

Table XV-8
RANCHO CUCAMONGA FIRE STATIONS

Station Number/Facility	Full Address
Station 171	6627 Amethyst Street Rancho Cucamonga, CA 91737
Station 172	9612 San Bernardino Road Rancho Cucamonga, CA 91730
Station 173	12270 Fire House Court Rancho Cucamonga, CA 91739
Station 174	Jersey Boulevard Rancho Cucamonga, CA 91730
Station 175	11108 Banyan Street Rancho Cucamonga, CA 91737
Station 176	5840 East Avenue Rancho Cucamonga, CA 91739
Station 177	9270 Rancho Street Rancho Cucamonga, CA 91737
SOURCE: RCFFA, 2019	

Police Protection Services

State

The California Highway Patrol (CHP) is a law enforcement agency created in 1929 to provide uniform traffic law enforcement for the state of California. The CHP has jurisdiction over all Interstates and State Routes in the IEUA service area including: I-10, I-15, SR-60, SR-71, SR-142, SR-210, SR-83, and SR-66. The IEUA service area is served by the Inland Division, which has two facilities in the area. The Inland Communications Center (ICC) is located at 13892 Victoria Street in Fontana, CA 92336, and is the fourth largest CHP communications center with a complement of nearly 70 employees including 56 Public Safety Dispatchers. ICC serves the citizens of one of the fastest expanding areas of California answering approximately 55,000 calls for service each month.[57] The Rancho Cucamonga Station is located at 9530 Pittsburgh Avenue in Rancho Cucamonga, CA 91730, and patrols over 250 square miles of freeways and unincorporated roadways in and around the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, Upland, Mt. Baldy, and San Antonio Heights.

Local

San Bernardino County Sheriff's Department

The San Bernardino County Sheriff's Department (SBCSD), in collaboration with various cities and other agencies that have jurisdiction in the County, provides law enforcement services to the incorporated and

[57] https://www.chp.ca.gov/find-an-office/inland-division/offices/(818)-inland-empire-communications-center

the unincorporated communities in the County. Many cities have contracted police protection services to the SBCSD, including Chino Hills and Rancho Cucamonga. The personnel of the SBCSD provide law enforcement services to the County's citizens through 21 patrol stations and 18 specific divisions.

Riverside County Sheriff's Department
Riverside County is the 4th-largest of California's 58 counties in both population and sheer land mass. It has consistently been among the fastest growing counties in the country, serving across more than 7,200 square miles and policing 17 of the 28 cities in Riverside County. The Riverside Sheriff's Department is the 2nd-largest Sheriff's Office in California, managing five correctional facilities, Coroner-Public Administrator duties, and providing court services.[58] The Chino Basin area is served by the Jurupa Valley Station, which is commanded by a Captain and consists of a patrol function and an investigative function providing contract police services for the cities of Norco, **Eastvale and Jurupa Valley**, and for County unincorporated areas in its vicinity. The Jurupa Valley Station is located at 7477 Mission Boulevard, Jurupa Valley, CA 92509.

City of Chino
The Chino Police Department (CPD), located at 5450 Guardian Way, Chino, CA 91710, is comprised of more than 150 employees, both sworn and professional staff, and over 50 dedicated volunteers. CPD serves more than 85,000 residents within 30 square miles. The CPD handles over 9,600 calls for service each month and provides full-service operations in various divisions, such as: Patrol, Traffic Enforcement, Criminal Investigations, Special Enforcement Team, School Resource Officer, Crime Analysis, Communications, and Crime Prevention, amongst many others. As mentioned above, some portions of Chino are also served by the Chino Hills Station in contract with the SBCSD. [59]

City of Chino Hills
As mentioned above, the Chino Hills Police Department (CHPD) has been contracted with SBCSD since 1991. The city consists of approximately 46 square miles with a population of 76,000 people. The CHPD Station has 52 sworn personnel and 15 civilian personnel assigned. Deputies respond to over 36,000 calls for service per year in the city and have a large volunteer unit consisting of Citizens on Patrol, Explorer Post, and Reserve Deputy Sheriffs. The Chino Hills Station is located at 14077 Peyton Drive Chino Hills, CA 91709.

City of Fontana
The Fontana Police Department (FPD), located at 17005 Upland Avenue Fontana, CA 92335, currently staffs 188 sworn officers and serves approximately 42 square miles and over 200,000 people.[60] The FPD works with SBCSD in a combined effort to provide protection services for the 300 square mile area that also includes Bloomington, Rialto, and Lytle Creek. FPD deputies also team with the surrounding agencies of Rialto Police, Rancho Cucamonga Police, and Riverside County Sheriff Department.

City of Montclair
The Montclair Police Department (MPD) serves a 5.5 square mile community of approximately 37,000 residents. MPD staffs 60 sworn officers that offer specialized assignments such as a Detective Bureau, Narcotics Investigations Task Force, Motor Officer Program, and Technical Services. In addition to MPD's sworn force, the MPD employs 50 full and part-time civilian support personnel and 18 volunteers. Lead by the Chief of Police, MPD comprises three divisions: Administrative, Support Services, and Field Services, and is located at 4870 Arrow Highway Montclair, CA 91763.

City of Ontario
The Ontario Police Department (OPD) has three main service bureaus and employs 409 sworn and civilian positions, and K-9 units.[61] OPD has one main station, located at 2500 South Archibald Avenue Ontario, CA 91761, and one substation at the Ontario Mills Mall, located at 1 Mills Circle Ontario, CA 91764. In addition to serving the City of Ontario, the OPD participates in mutual aid agreements with different public agencies

[58] http://www.riversidesheriff.org/
[59] https://www.cityofchino.org/cms/One.aspx?portalId=10382662&pageId=11471216
[60] https://www.fontana.org/2509/About-Us
[61] https://www.ontarioca.gov/Police

to provide the optimum level of service during times of emergency. The OPD holds a mutual aid agreement with the SBCSD and various jurisdictions surrounding Ontario. The City of Ontario also participates in a statewide mutual aid program facilitated by the Governor's Office of Emergency Services (OES).

City of Pomona
The Police Department provides law enforcement services to the community which preserve and protect life and property; enforces city, county, state and federal statutes, ordinances and laws; investigates criminal activities; apprehends criminals and recovers stolen property; provides programs to educate the public in crime prevention, and processes all parking citations.[62] The Operations Division is the largest in the organization and is responsible for the field services provided to the City of Pomona by uniformed personnel. Specialized units within the Division including the K9 Unit, Youth Services Unit, SWAT team, Bike Patrol, and all augment Patrol Services. These units work together in an effort to reduce crime and increase service delivery with the ultimate goal of public safety in a city of an estimated 150,000 people in 24 square miles. Pomona is the fourth largest city by population in the County of Los Angeles. Patrol Services represent the primary function of the Police Department. This program has the responsibility of protecting life and property as well as maintaining law and order, preserving peace and security in the community, and positively impacting the quality of life for Pomona's residents. The Police Department is located at 490 W Mission Blvd, Pomona, CA 91766.

City of Rancho Cucamonga
As previously described, the Rancho Cucamonga Police Department (RCPD) contracts with the SBCSD to provide law enforcement services for the city. The SBCSD's 187 Sheriff's personnel serve Rancho Cucamonga citizens out of one main station, located at 10510 Civic Center Drive Rancho Cucamonga, CA 91730, and one sub-station in Victoria Gardens Shopping Center, located at 7743 Kew Avenue Rancho Cucamonga, CA 91739. The SBCSD serves a 38 square mile area with approximately 177,000 people. The RCPD also works in cooperation with the law enforcement agencies of neighboring cities and jurisdictions, as well as State and Federal agencies.[63]

City of Upland
The Upland Police Department (UPD) is comprised of three divisions and 70 sworn and professional personnel that work out of one station located at 1499 West Thirteenth Street Upland, CA 91786. UPD serves approximately 16 square miles and over 76,000 residents (United States Census Bureau, 2014). As mentioned above, some portions of Upland are also served by the SBCSD Chino Hills Station. UPD works with neighboring cities to provide 24 hours a day / 7 days a week protection services.

Schools

San Bernardino County Superintendent Schools
With a County-wide K-12 student population of approximately 406,069 students in the 2018-2019 school year, attending more than 543 schools (2017-2018), the San Bernardino County Superintendent of Schools (SBCSS) office, located at 601 North East Street San Bernardino, CA 92410, is a regional agency that provides vital and necessary service, leadership and advocacy to the 34 K-12 districts in the County.

The Chino Basin within San Bernardino County is made up of eight K-12 districts in total and has a student population of approximately 80,787 students that attend 156 schools (Education Data Partnership, 2020). **Table XV-9** shows the seven cities in the area, and school districts are associated with the cities, the number of schools in each district, and the total student population/enrollment.

[62] https://www.ci.pomona.ca.us/index.php/government/city-departments/police-department
[63] https://www.cityofrc.us/public-safety/police

Table XV-9
SAN BERNARDINO COUNTY AREA SCHOOL DISTRICTS

City	District	Number of Schools	Student Population (2017-2018)
Chino & Chino Hills	Chino Valley Unified School District	34	28,063
Fontana	Fontana Unified School District	44	36,335
Upland	Upland Unified School District	14	10,702
Montclair & Ontario	Chaffey Joint Union High School District Mountain View School District Ontario-Montclair School District	11 4 32	23,883 2,532 20,606
Rancho Cucamonga	Central School District Cucamonga School District	7 4	4,487 2,431
Total		**150**	**129,039**
SOURCE: Education Data Partnership, 2020. https://www.ed-data.org/district/San-Bernardino/San-Bernardino-County-Office-of-Education			

Los Angeles County Office of Education
With a County-wide K-12 student population of approximately 1,464,002 students in the 2018-2019 school year, attending more than 2,231 schools (2017-2018), the Los Angeles County Office of Education, located at 69300 Imperial Highway, Downey, CA 90242, is a regional agency that provides vital and necessary service, leadership and advocacy to the 89 K-12 districts in the County.

The Chino Basin within Los Angeles County is made up of one K-12 district in total and has a student population of approximately 23,185 students that attend 41 schools (Education Data Partnership, 2020). **Table XV-10** shows the seven cities in the area, and school districts are associated with the cities, the number of schools in each district, and the total student population/enrollment.

Table XV-10
LOS ANGELES COUNTY AREA SCHOOL DISTRICTS

City	District	Number of Schools	Student Population (2017-2018)
Pomona	Pomona Unified School District	41	23,185
SOURCE: Education Data Partnership, 2020. https://www.ed-data.org/district/Los-Angeles/Pomona-Unified			

Riverside County Office of Education
With a County-wide K-12 student population of approximately 428,494 students in the 2018-2019 school year, attending more than 488 schools (2017-2018), the Riverside County Office of Education in Riverside is located at 3939 Thirteenth St, Riverside, CA 92501, is a regional agency that provides vital and necessary service, leadership and advocacy to the 26 K-12 districts in the County.

The Chino Basin within Los Angeles County is made up of one K-12 district in total and has a student population of approximately 72,346 students that attend 77 schools (Education Data Partnership, 2020). **Table XV-11** shows the seven cities in the area, and school districts are associated with the cities, the number of schools in each district, and the total student population/enrollment.

Table XV-11
RIVERSIDE COUNTY AREA SCHOOL DISTRICTS

City	District	Number of Schools	Student Population (2017-2018)
Eastvale	Corona-Norco Unified School District	52	53,002
Jurupa Valley	Jurupa Unified Schools District	25	19,344
Total		**77**	**72,346**

SOURCE: Education Data Partnership, 2020.
https://www.ed-data.org/county/Riverside

Parks and Recreation

Federal Lands

Three national parks managed by the National Park Service are located within San Bernardino County and offer a variety of recreational opportunities to residents in the local area, including Death Valley National Park, Mojave National Preserve, and Joshua Tree National Park. None of these National Parks, however, lie within the Chino Basin.

Federal lands managed by the U.S. Forest Service including the Angeles and San Bernardino National Forests border the northern portion of the Chino Basin and offer a variety of recreational activities to local residents (County of San Bernardino General Plan). In addition, lands just south of the San Bernardino County line are managed by the Bureau of Land Management (BLM). However, none of these National Forest or BLM lands lies within the Chino Basin.

California State Parks and Recreation Department

The California State Parks and Recreation Department helps to preserve the state's biological diversity, protect its natural and cultural resources, and create opportunities for outdoor recreation. The Department manages several public parks within San Bernardino and Riverside Counties, but only one is included within the Chino Basin.

The Chino Hills State Park is located partially within the Chino Basin, off of SR-91 to Highway 71 North, and encompasses 12,452 acres consisting of oaks, sycamores, and rolling grassy hills that stretch approximately 31 miles from the Santa Ana Mountains to the Whittier Hills. Open year-round, the Chino Hills State Park allows for activities such as hiking, biking, horseback riding, and camping (County of San Bernardino General Plan).

San Bernardino County Regional Parks Department

The San Bernardino County Regional Parks Department manages and maintains nine regional parks throughout San Bernardino County totaling approximately 9,200 acres in diverse settings, including metropolitan areas, mountains, and deserts. Recreational opportunities found at these regional parks include lakes for fishing, sheltered group picnic facilities, RV and tent camping, and swim complexes with water slides, water play parks, and playgrounds (County of San Bernardino Regional Parks Department). The following two regional parks are located within the Chino Basin area.

The Cucamonga-Guasti Regional Park is located in the City of Ontario and provides 150 acres of outdoor recreation activities in an urban setting, with amenities including two lakes for fishing, a swim complex with water slides and a water play park, and picnic tables and group picnic shelters (County of San Bernardino Regional Parks Department).

Prado Regional Park is located in the Chino Valley basin in the southern portion of the IEUA service area. The park offers opportunities for fishing, camping, hiking, biking, disc golf, and picnicking. The park also features a meeting room, two golf courses, an Olympic shooting range, and opportunities for horseback riding and archery (County of San Bernardino Regional Parks Department).

Riverside County Regional Parks Department

The Riverside County Regional Park and Open-Space District (District) is dynamic and adjust to meet the needs of the county as a whole. Many programs are operated under the three bureaus which include: Parks & Resources, Planning & Development, and Business Services. The District is led by the General Manager/Parks Director and the executive team comprised of the Assistant Director and two Chiefs. The District's focus encompasses providing high-quality recreational opportunities and preserving important features of the County's natural, cultural, and historical heritage.[64]

Riverside County maintains 35 Regional Parks, encompassing roughly 23,317 acres. Other local parks fall under the jurisdiction of Riverside County Recreation and Park Districts and serve the following areas: the Beaumont-Cherry Valley area; the Coachella Valley; the Jurupa area; the Valleywide area incorporating the San Jacinto Valley, the Winchester area, the Menifee Valley, and the Anza Valley (Riverside County General Plan). Included as part of the District's facilities is the Jurupa Valley Boxing Club and the Rancho Jurupa Regional Sports Park, which is home to 32 acres of beautiful, lush, natural and synthetic turf fields. Comprised of four large marked and lighted synthetic turf fields, two large natural turf fields as well as nine smaller natural turf fields, the park is available by reservation for many outdoor activities.

City Recreation Departments

Chino

The Chino Community Services Department provides residents with a complete system of community and neighborhood parks, trails, facilities, and recreational opportunities. The Community Services Commission acts in an advisory capacity to the City Council and the Community Services Department on issues regarding recreation, human services, parks, and open space. The City of Chino strives to provide a variety of programs and services for individuals, families, youth, and seniors (50+) that include healthy lifestyle options, recreational and educational classes, counseling and prevention education, trips and tours, youth and adult sports, etc. Recreational centers within the City include the Neighborhood Activity Center, located at 5201 D Street, is designed to provide centralized recreation and Human Service programs for Chino residents; the Preserve Community Center is located at 15800 Main Street; and, the Carolyn Owens Community Center is located at 13201 Central Avenue.[65] In addition, there are 26 parks within the City of Chino.[66]

Chino Hills

The City of Chino Hills Recreation Division provides recreation activities to residents of the City of Chino Hills. The Parks and Recreation Commission is an advisory board to the City Council that consists of five members and advises the City Council on matters relating to acquisition, development, and maintenance of public parks, recreational facilities, and open space. There are approximately 44 parks and five community recreation facilities within the City of Chino Hills.

Eastvale

The City of Eastvale includes two different park districts located within the boundaries of the City: the Jurupa Community Services District (JCSD) and the Jurupa Area Recreation and Park District (JARPD). Residents that live west of Hamner Avenue within the City are part of the Jurupa Community Services District (JCSD).

JCSD provides park and recreation services as well as maintaining frontage landscaping and providing water, sewer and street lights for the City of Eastvale. The Parks and Recreation Department strives to provide the Eastvale community with the best possible programs, services, and special events. Awards and recognition from local, statewide, and national organizations assures residents they are receiving high-quality facilities and programs that meet the highest standards set forth by athletic, parks, and recreation professionals across the United States.[67] There are currently 13 parks in Eastvale with additional parks planned or in different stages of development. This accounts for approximately 250 acres of open space

[64] https://www.rivcoparks.org/about-us/
[65] https://www.cityofchino.org/residents/connection
[66] https://www.cityofchino.org/residents/parks
[67] https://www.jcsd.us/services/parks-and-recreation/about-the-parks-dept

in Eastvale. Currently there are approximately 50 recreation programs for families to choose from, which include recreational programming for off-track, before school, after school and Fun Fridays at three Elementary Schools in the Eastvale Area.[68]

There are four parks in Eastvale East of Hamner Avenue (between Hamner Ave. and the I-15 Freeway) that are part of the JARPD. The Board of Directors of the Jurupa Area Recreation and Park District are elected by Division to a four-year term. Each Director must live within the Division they represent.[69]

Fontana
The City of Fontana Community Services Department responds to the needs of the community through recreational, cultural, and other human services programs. The City of Fontana maintains over 40 parks, playgrounds, sports facilities, and other recreation facilitates in the community.[70]

Jurupa Valley
As stated under the Parks and Recreation discussion for Eastvale, the Jurupa Area Recreation and Park District (JARPD) was formed in 1984. Their charter states that their goal is "To provide parks and recreational facilities for current and future families in the 91752 and 92509 zip code areas." With the growth of the Jurupa area, JARPD has grown too. We currently offer a wide variety of year-round recreational opportunities at 30 different parks and other facilities throughout the Jurupa Valley area.[71]

Montclair
The City of Montclair Human Services Department provides services for the recreation center, youth center, and senior center, and the Parks Division of the Public Works Department provides maintenance of the parks. The Civic Center is located at 5201 Benito Street and contains a City Hall, Council Chambers, Youth Center, Skate Park, Community Center, Gym, Senior Center, Recreation Center, Library, South Conference Room, Technology Center, and Alma Hofman Park. The City Parks Division maintains 11 community and neighborhood parks that provide active and passive recreational opportunities such as ball fields, ball courts, playground equipment, picnic areas, and open grass areas.

Ontario
The City of Ontario Recreation and Community Services Department provides recreational, educational, and cultural activities to the community. The Recreation and Community Services Department provides services at community centers, parks and schools throughout the City of Ontario. The City provides 32 parks and 7 community centers and 3 dog parks support a variety of recreational opportunities to its residents.[72]

Pomona
The Community Services Department provides low-cost/free recreation programs for all ages, assists Pomona's Youth and Family Master Plan, coordinates rentals of city facilities (including community centers and picnic pavilions), and issues permits for special events and park usage. There are 27 parks within the City of Pomona, which include the following amenities: restrooms, parking, barbeque grills, picnic tables, drinking fountains, community centers, patios, playgrounds, baseball/softball fields, soccer fields, basketball courts, tennis courts, swimming pools, and concession stands.[73]

Rancho Cucamonga
The City of Rancho Cucamonga Park and Recreation Commission acts in an advisory capacity to the City Council with respect to park and recreation facilities and services. The City provides 30 parks, 7 recreation facilities, and 2 trails for various activities, including walking, running, biking, hiking, and horseback riding.[74]
Upland

[68] https://www.eastvaleca.gov/community/parks-and-recreation
[69] https://www.jarpd.org/about-us
[70] https://www.fontana.org/156/Facilities-Parks
[71] https://www.jurupavalley.org/242/Jurupa-Area-Recreation-Park-District-JAR
[72] https://www.ontarioca.gov/Parks
[73] https://www.ci.pomona.ca.us/index.php/residents/living/parks-recreation
[74] https://regis.maps.arcgis.com/apps/Shortlist/index.html?appid=8f5b91cb41df4bb48ba64231b319891d

The Community Services Department provides Upland citizens with quality services, recreational programs, and well-maintained parks. Within the Community Services Department, the Recreation Division provides recreational programs and community services and maintains first rate parks and recreational facilities. The Recreation Division is located at the Magnolia Recreation Center. The City provides 13 parks, with amenities such as amphitheaters, ballfields, barbeque areas, dog parks, fitness trails, picnic tables, playgrounds, skate parks, etc.

Library Services
Like parks, open space, recreational facilities and cultural opportunities, libraries contribute to the quality of life in a community. These community facilities can enhance a region's character as a good place to live and raise a family. In addition, a good library system contributes to the quality of educational opportunities in the area. Library facilities are provided throughout the Study Area by the cities and counties. Again, these are provided according to levels of service established through the respective jurisdictions General Plans.

XV.2 Impact Discussion

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a. Fire Protection?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The proposed OBMPU does not include construction of new homes or businesses that would result in a direct increase in population of create a substantial number of new jobs that would result in new residents of the Chino Basin area. Construction of the proposed wells and installation of the proposed monitoring devices would require temporary employment. It is unknown whether these employees would be drawn from within or outside of the Chino Basin area; however, as discussed under Population and Housing it is reasonable to assume that many employment opportunities would be filled by workers drawn from the Chino Basin area. This applies to the operation of the proposed wells and monitoring devices; operation of the proposed wells and monitoring devices is not forecast to require more than 5 additional permanent employees; however, the overall OBMPU facilities outlined below in the remaining Project Categories are anticipated to require 25 employees, for a total of 30 employees required for the overall facilities proposed as part of the OBMPU.

Operational activities associated with the proposed well development and monitoring devices could require fire department service in the unlikely event of a hazardous materials emergency or accident/medical emergency at a given site. However, should any treatment of the groundwater extracted by the proposed wells occur (addition of sodium hypochlorite, ammonia, etc.), a Hazardous Materials Business Plan (HMBP) may be required, though many of the water agencies within the Chino Basin have developed safety standards and operational procedures for safe transport and use of its operational and maintenance materials that are potentially hazardous, which comply with all federal, state and local regulations, thereby minimizing the potential for fire services. Although proposed well development may result in an additional demand on fire protection services, the implementation of the HMBP and/or continuation of adopted safety standards and procedures by agencies implementing the proposed OBMPU facilities would result in a nominal increase in service. Any OBMPU project requiring structures will be required to meet building codes, including those related to fire protection. The indirect increase in population and the use of hazardous materials associated with the well development would result in a nominal increase in fire

services. As a result, no new fire facilities would be required. Therefore, no environmental effects would occur because construction of a new fire facility would not be required.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

The implementation of the proposed pipelines and ancillary facilities would not result is a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of pipelines and ancillary facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for fire protection services. As a result, impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The implementation of the proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities would not result is a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for fire protection services. As a result, impacts would be the same as described above for Project Category 1 and 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any large, visible above ground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially impact fire protection services exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities.

Construction of the proposed improvements at the WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would require temporary employment to develop these facilities. It is unknown whether these employees would be drawn from within or outside of the Chino Basin area; however, as discussed under Population and Housing it is reasonable to assume that many employment opportunities would be filled by workers drawn from the Chino Basin area. This applies to the operation of the facilities outlined above; operation at new and existing facilities may require the employment of about 30 persons. Operational activities associated with the proposed facilities could require fire department service in the unlikely event of a hazardous materials emergency or accident/medical emergency at a given site. However, a HMBP may be required for new facilities, though, as stated above

under Project Category 1, many of the water agencies within the Chino Basin have developed safety standards and operational procedures for safe transport and use of its operational and maintenance materials that are potentially hazardous, which comply with all federal, state and local regulations, thereby minimizing the potential for fire services. Although the proposed desalter and water treatment facility projects may result in an additional demand on fire protection services, the implementation of the HMBP and/or continuation of adopted safety standards and procedures by agencies implementing the proposed OBMPU facilities would result in a nominal increase in service. Therefore, impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

b. Police Protection?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Similar to the discussion under Fire Protection above, the development of wells and monitoring devices will not cause a significant demand for police protection services. Implementation of the OBMPU will result in direct physical change to existing land uses within the Chino Basin which will facilitate indirect changes in land use by contributing to an adequate water supply to meet long-term, ultimate growth and development projections within the Study Area; however, it is not forecast to change land uses or otherwise create activities that can increase demand for additional police protection services beyond that which is anticipated in the jurisdiction's General Plans. Operation of the proposed wells and monitoring devices is not forecast to require more than 5 additional permanent employees; however, the overall OBMPU facilities outlined below in the remaining Project Categories are anticipated to require 25 employees, for a total of 30 employees required for the overall facilities proposed as part of the OBMPU. Operational activities associated with the proposed well development and monitoring devices could require police department service in the unlikely event of an emergency or trespass at a given site. However, it is anticipated that all sites containing facilities associated with the proposed OBMPU would be fenced, which would minimize the future need for police protection from trespass. The Chino Basin area is currently served by police departments and agencies under authority of the various jurisdictions that comprise the Chino Basin as discussed under Environmental Setting above. Overall levels of police service will be increased based upon the future population growth and demands of the local agencies within the Chino Basin. Though a significant demand for police protection services is anticipated, mitigation is proposed to address trespass issues.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance and ancillary facilities would be implemented throughout the entire Chino Basin.

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible. While pipelines would be located below ground, ancillary facilities would be installed above ground and would be fenced. As stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of pipelines and ancillary facilities. This nominal increase in potential new residents within the

Chino Basin may contribute to an increased demand for police protection services. As a result, impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The implementation of the proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities would not result is a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for police protection services. As a result, impacts would be the same as described above for Project Category 1 and 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any large, visible above ground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially impact police protection services exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The police related impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

The implementation of the proposed improvements at WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would not result is a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of the proposed improvements at the WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for police protection services. As a result, impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

PS-1: OBMPU facilities shall be fenced or otherwise have access controlled to prevent illegal trespass to attractive nuisances, such as construction sites or recharge sites.

Level of Significance After Mitigation: Less Than Significant

Implementation of Mitigation Measure **PS-1** above would minimize the potential for trespass that could exacerbate police protection services. As such, impacts are less than significant.

c. Schools?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Similar to the discussion under Fire and Police Protection above, the development of wells and monitoring devices will not cause a significant demand for schools. Implementation of the OBMPU will result in direct physical change to existing land uses within the Chino Basin which will facilitate indirect changes in land use by contributing to an adequate water supply to meet long-term, ultimate growth and development projections within the Study Area. Implementation of the OBMPU is not forecast to change existing land uses or increase either the number of residential units located within the Study Area or the number of students generated from the Study Area beyond that which is anticipated in the local agency general plans. Operation of the proposed wells and monitoring devices is not forecast to require more than 5 additional permanent employees; however, the overall OBMPU facilities outlined below in the remaining Project Categories are anticipated to require 25 employees, for a total of 30 employees required for the overall facilities proposed as part of the OBMPU. School districts in the Chino Basin have adopted classroom loading standards (number of students per classroom) and collect development fees per square foot of residential, commercial and industrial development. Because the proposed project is not forecast to change land uses, or create activities that can increase demand for additional school capacity beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development, no potential for adverse impacts to schools is identified. No mitigation is required for schools on behalf of OBMPU projects.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance and ancillary facilities would be implemented throughout the entire Chino Basin.

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible. While pipelines would be located below ground, ancillary facilities would be installed above ground and would be fenced. As stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of pipelines and ancillary facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for schools. As a result, impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The implementation of the proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities would not result is a substantial increase in

permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for schools. As a result, impacts would be the same as described above for Project Category 1 and 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any large, visible above ground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially impact schools and classroom capacities exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The schools related impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

The implementation of the proposed improvements at WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would not result is a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of the proposed improvements at the WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for schools. As a result, impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

d. Parks/Recreation?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The development of wells and monitoring devices will not cause a significant demand for parks and recreational facilities; however, there is a potential that a proposed well or other OBMPU related facility could be located within parks or facilities designated for residential use. Construction and staging areas may result in the temporary closure of parks or portions of parks. However, several parks in the Chino Basin area would be available for use. This increased use of other parks would be temporary, during construction only. Once construction is completed, parks would return to serve their original purpose, with only slightly less parkland area available for use. In addition to well development within existing parks, there is a potential for wells or other OBMPU facilities to be developed within a vacant site designated for park use, which would effectively minimize available designated parkland within the Chino Basin. As such, mitigation is

provided below to ensure that, for OBMPU facilities located within vacant land designated for park uses, or OBMPU facilities larger than one acre in size within existing park facilities, additional parkland is developed to supplement the loss of this parkland or recreation facility.

Once in operation, the proposed wells and monitoring devices would not directly increase the population as discussed under Police Protection, Fire Protection, and Schools, though there is a potential for this development to result in nominal indirect population growth. Overall demand for parks and recreation facilities will be increased based on the future population-based demands of the local agencies within the Chino Basin. The OBMPU is not anticipated to create activities that can increase demand for additional park and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through the mitigation provided below.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance and ancillary facilities would be implemented throughout the entire Chino Basin.

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible. While pipelines would be located below ground, ancillary facilities would be installed above ground and would be fenced. As stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of pipelines and ancillary facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for parks and recreation facilities. Furthermore, as discussed under Project Category 1 above, there is a potential for the development of OBMPU related facilities to impact the availability of parkland; mitigation is required to address this issue. As a result, impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The implementation of the proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities would not result is a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for parks and recreation facilities. Furthermore, as discussed under Project Category 1 above, there is a potential for the development of OBMPU related facilities to impact the availability of parkland; mitigation is required to address this issue. As a result, impacts would be the same as described above for Project Category 1 and 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any large, visible above ground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially impact parks or recreation facilities exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The park and recreation related impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

The implementation of the proposed improvements at WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would not result is a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of the proposed improvements at the WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for parks and recreation facilities. Furthermore, as discussed under Project Category 1 above, there is a potential for the development of OBMPU related facilities to impact the availability of parkland; mitigation is required to address this issue. As a result, impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

PS-2: ***OBMPU facilities proposed to be located within vacant parkland or OBMPU facilities proposed to be located within existing park or recreation facilities that would require more than one acre of disturbance shall be either (1) Relocated to avoid significant impacts to parkland or (2) Shall provide supplemental parkland within the corresponding jurisdiction equal or greater to the amount of parkland or recreation facilities lost as a result of implementation of the OBMPU facility.***

Level of Significance After Mitigation: Less Than Significant

Implementation of Mitigation Measure **PS-2** above would minimize the potential for loss of park or recreational facilities as a result of OBMPU projects located within facilities designated for such uses. As such, impacts are less than significant.

e. Other Public Services/Libraries?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Similar to the discussion under Fire and Police Protection services above, the development of wells and monitoring devices will not cause a significant demand for or increase in library services. Implementation of the OBMPU will result in direct physical change to existing land uses within the Chino Basin which will facilitate indirect changes in land use by contributing to an adequate water supply to meet long-term, ultimate growth and development projections within the Study Area; however, it is not forecast to change land uses or otherwise create activities that can increase demand for or increase in library services beyond

that which is anticipated in the jurisdiction's General Plans. Operation of the proposed wells and monitoring devices is not forecast to require more than 5 additional permanent employees; however, the overall OBMPU facilities outlined below in the remaining Project Categories are anticipated to require 25 employees, for a total of 30 employees required for the overall facilities proposed as part of the OBMPU. Implementation of the OBMPU will result in direct physical change to existing land uses within the Chino Basin which will facilitate indirect changes in land use by contributing to an adequate water supply to meet long-term, ultimate growth and development projections within the Study Area; however, it is not forecast to change land uses or otherwise create activities that can increase demand for additional library capacity services beyond that which is anticipated in local agency general plans. Libraries are currently provided by the Counties and local agencies under authority of the various jurisdictions that comprise the Chino Basin. OBMPU projects will not produce any direct demand for library capacity or contribute to indirect demand for such services. Mitigation is not required to reduce potential library capacity impacts to a level of less than significant since none is forecast to occur. Overall levels of library service will also be increased based upon the future population based the demands of the local agencies. No potential for any significant demand for library services is identified and no mitigation is required.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance and ancillary facilities would be implemented throughout the entire Chino Basin.

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible. While pipelines would be located below ground, ancillary facilities would be installed above ground and would be fenced. As stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of pipelines and ancillary facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for or increase in library services. As a result, impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The implementation of the proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities would not result is a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for or increase in library services. As a result, impacts would be the same as described above for Project Category 1 and 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any large, visible above ground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially impact library services exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR),

improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The library service-related impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

The implementation of the proposed improvements at WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would not result is a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of the proposed improvements at the WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for or increase in library services. As a result, impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☒	☐	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☒	☐	☐

SUBSTANTIATION

XVI.1 Environmental Setting

Please refer to the discussion under Parks and Recreation under Public Services XV.1 Environmental Setting for a description of the recreational facilities within the Chino Basin.

XVI.2 Impact Discussion

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Combined Project Categories
Please refer to the discussion under XV(d) above. Analysis that determined whether the OBMPU would increase the use of existing neighborhood and regional parks or other recreational facilities and physical deterioration thereof is provided under XV(d) above. The significance determination was less than significant with the implementation of Mitigation Measure **PS-2**.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: MM **PS-2,** repeated from Section XV, Public Services above, is required.

PS-2: ***OBMPU facilities proposed to be located within vacant parkland or OBMPU facilities proposed to be located within existing park or recreation facilities that would require more than one acre of disturbance shall be either (1) Relocated to avoid significant impacts to parkland or (2). Shall provide supplemental parkland within the corresponding jurisdiction equal or greater to the amount of parkland or recreation facilities lost as a result of implementation of the OBMPU facility.***

Level of Significance After Mitigation: Less Than Significant

Implementation of Mitigation Measure **PS-2** above would minimize the potential for loss of park or recreational facilities as a result of OBMPU projects located within facilities designated for such uses. As such, impacts are less than significant.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters

and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The development of wells and monitoring devices will not involve the construction or expansion of recreational facilities. There is a potential that a proposed well or other OBMPU related facility could be located within parks or facilities designated for residential use. Depending on the area required for the well development (anticipated to be less than 0.5 acre), an individual project could result in the removal of all or a portion of a park or recreational facility. The removal of a facility could require the construction of new park or recreational facilities elsewhere to accommodate for the loss of the existing recreational facility. As such, mitigation is required to ensure that, should loss of recreation or park facilities occur, replacement occurs resulting in impacts to recreational facilities are minimized.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Storage facilities within existing facilities and storage facilities at the known sites identified in the Project Description would have no potential to impact existing parks or recreational facilities necessitating construction or replacement because none of these sites contains park or recreational facilities.

For flood MAR facilities and new MS4-compliance facilities, impacts would be the same as described above for Project Category 1 and 2, because the location of such facilities is presently unknown.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any large, visible above ground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially impact parks or recreation facilities exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. The recreation related impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Improvements at the existing Chino Desalters, improvements to existing groundwater treatment facilities, and at the WFA Agua de Lejos Treatment Plant would occur within existing facilities, and as such, are not designated for park and/or recreation, and as such, would have no potential to impact existing parks or recreational facilities necessitating construction or replacement because none of these sites contains park or recreational facilities.

For new groundwater treatment facilities at or near well sites and at regionally located sites, impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: **PS-2** outlined under issue XV(d) above.

REC-1: The Watermaster or Implementing Agency shall prepare subsequent CEQA documentation for any Park or Recreation facilities required to be developed as part of implementation of mitigation measure PS-2—i.e., in the event an OBMPU Facility would be result in loss of parkland or recreation facilities.

Level of Significance After Mitigation: Less Than Significant

Implementation of Mitigation Measure **PS-2** above would minimize the potential for loss of park or recreational facilities as a result of OBMPU projects located within facilities designated for such uses. As such, impacts are less than significant. Implementation of Mitigation Measure **REC-1** would ensure that, should construction of recreation or park facilities be required as a part of the OBMPU, a subsequent CEQA determination will be prepared to ensure that impacts are appropriately assessed and mitigated.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. TRANSPORTATION: Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous inter-sections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☒	☐	☐

SUBSTANTIATION

This section describes the existing traffic and transportation system, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed OBMPU, and mitigation measures to reduce those impacts to a level of less than significant.

XVII.1 Circulation System Setting

The Chino Basin is located in southern California within the west end of San Bernardino Valley, just east of Los Angeles County, and northeast of Orange County. The Basin extends barely into the northwest of Riverside County, west of the Santa Ana River. The service area consists of about 250 square miles and includes the cities of Upland, Montclair, Ontario, Fontana, Chino, Chino Hills, and Rancho Cucamonga in San Bernardino County. Portions of the cities of Eastvale and Jurupa Valley are in the Chino Basin, as well as areas of unincorporated San Bernardino and Riverside Counties.

Freeways, arterial highways, and local streets serve as the dominant system of transportation within the Chino Basin. In addition to automobile travel, other transportation systems within the counties include mass transit (bus and passenger train systems), bicycle routes, rail service, pedestrian facilities networks and air transportation. The discussions in the following sections are generally focused on the regional transportation system but also include local transportation/circulation system elements in the Basin. The traffic analysis focuses on the unincorporated County and the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, Upland, Eastvale and Jurupa Hills.

The Chino Basin is primarily located in San Bernardino County which currently contains about 10,000 miles of roadways, which includes interstate freeways, U.S. highways, state highways and local roadways (County of San Bernardino, 2007b). The roadways described below (regional and local) are located within the San Bernardino Valley Region of the County, and many of the roadways extend into western Riverside County and the cities of Eastvale and Jurupa Valley. The roadways referenced in the following text could be affected by commute trips by facilities workers (construction and operations) and truck trips (construction and operations) associated with the proposed project.

Regional Roadways

Interstate 15 (I-15) – I-15 extends north from the San Diego metropolitan area through the western portions of San Bernardino and Riverside Counties and continues in a north-easterly direction to Las Vegas, Nevada and beyond.

Interstate 215 (I-215) – I-215 provides an alternative route to I-15 through San Bernardino County and Riverside County by splitting from I-15 near Devore and reconnecting with the I-15 south in the City of Murrieta.

Interstate 10 (I-10) – I-10 travels east-west across the southern edge of Valley Region in San Bernardino County. This facility provides access to Los Angeles to the west and Arizona and beyond to the east.

Interstate 210 (I-210) – I-210 begins at an interchange with the Golden State Freeway (I-5) in Los Angeles County and continues east across the Valley region to its current terminus at an interchange with the I-10 in Redlands, California.

State Route 60 (SR-60) – SR-60 is an east-west route that extends across the Chino Basin in both counties. SR-60 provides the Inland Empire with access to the Los Angeles metropolitan area to the west and Riverside County to the east.

State Route 83 (SR-83) – SR-83 is a north-south arterial that travels through the Valley Region of San Bernardino County. This roadway provides direct connections between The Foothill Freeway (I-210), Foothill Boulevard (SR-66), the San Bernardino Freeway (I-10), the Pomona Freeway (SR-60) and the Chino Valley Freeway (SR-71).

State Route 71 (SR-71) – SR-71 travels southeast from the I-10/I-210 Interchange in San Dimas to the Riverside Freeway (SR-91) in Corona. This facility serves as a major commuter route between the Inland Empire and Orange County.

State Route 66 (SR-66) – In San Bernardino County, SR-66 begins as Foothill Boulevard at the Los Angeles County line and is classified as a state highway (US 66/SR-66). It extends eastward through the cities of Upland, Rancho Cucamonga, unincorporated San Bernardino County, Fontana and Rialto.

Major Roadways

Basin – East/West Facilities

16th Street / Base Line Road – This primary two- to six-lane arterial extends across the entire Valley Region of San Bernardino County. It operates as an east-west connector for the cities of Upland, Rancho Cucamonga, Rialto, San Bernardino and Highland.

4th Street – This four- to six-lane roadway is located in the City of Ontario. It operates as a primary arterial and is a major east-west link across the city. This facility extends both to the east and west outside the City of Ontario as San Bernardino Avenue.

Arrow Route – This two- to four-lane roadway is a major connector that provides access to several communities within the Valley Region of San Bernardino County. It begins at the Los Angeles County line in Upland and extends through Rancho Cucamonga, unincorporated San Bernardino County, Fontana and ends in Rialto.

Edison Avenue – This four- to six-lane roadway begins just east of SR-71 in the city of Chino and extend eastward through the city of Ontario. It is classified as a primary arterial.

Grand Avenue – This four- to six-lane primary arterial extends from the boundary between the cities of Chino and Chino Hills westward through Chino Hills into Los Angeles County.

Highland Avenue – Highland Avenue passes through the cities of Rancho Cucamonga, Fontana, Rialto, San Bernardino and Highland. This two- to four-lane roadway originates as a secondary arterial at Amethyst Street in the City of Rancho Cucamonga and continues east to Milliken Avenue.

Merrill Avenue / Mill Street –This two- to four-lane secondary arterial originates at Cherry Avenue in unincorporated San Bernardino County west of the City of Fontana.

San Bernardino Avenue / 4th Street – This two- to four-lane roadway extends across a large portion of San Bernardino County and travels through the cities of Montclair, Ontario (as 4th Street), Rancho Cucamonga, unincorporated San Bernardino County, Fontana and Rialto before ending in the City of Colton.

Valley Boulevard – This four-lane primary arterial runs parallel to I-10 to the north. Beginning just east of Etiwanda Avenue, this roadway continues east through unincorporated San Bernardino County and the Cities of Fontana and Rialto before terminating at Mount Vernon Avenue in the City of Colton.

Mission Boulevard – This is a four-land primary arterial that extends across the Chino Basin from Pomona east through Jurupa Valley where it transitions to become Van Buren Avenue.

Riverside Drive – This roadway varies between a four- and two-lane arterial that extends across the Chino Basin from SH 71 on the west through Eastvale and Jurupa Valley, terminating at Etiwanda Avenue in the latter City.

Basin – North/South Facilities

Alder Avenue – Alder Avenue is a two- to four-lane north-south connector that provides access along the eastern boundary of the City of Fontana. This facility is a secondary arterial that extends from Baseline Road to San Bernardino Avenue. Continuing south into unincorporated San Bernardino County, this roadway becomes a residential street.

Archibald Avenue – This four- to six-lane primary arterial extends from Hillside Road in the City of Rancho Cucamonga, through the City of Ontario and into Riverside County. This facility is a major north-south corridor across San Bernardino County that provides access to both I-210, I-10 and SR-60 as well as Ontario International Airport.

Central Avenue – This four- to six-lane roadway travels through the cities of Upland, unincorporated San Bernardino County, Montclair and Chino along the western edge of San Bernardino County. Beginning at Foothill Boulevard just south of Cable Airport, this facility provides a north-south connection between I-10, SR-60 and SR-71.

Cherry Avenue – This four- to six-lane roadway is located almost entirely within the City of Fontana with a portion travelling through unincorporated San Bernardino County. This roadway extends from north of I-15 south to Slover Avenue as a primary arterial. From Slover Avenue to Mulberry Avenue, it is reduced to a secondary arterial. This facility provides a connection between I-210 and I-10 and the I-10 to SH 60.

Citrus Avenue – Citrus Avenue is a two- to four-lane roadway located in the City of Fontana that extends from just south of I-15 at Duncan Canyon Road to Slover Avenue as a primary arterial. From Slover Avenue, this roadway becomes a secondary arterial and continues to Jurupa Avenue.

Etiwanda Avenue – Etiwanda Avenue is a four- to six-lane primary arterial located in the cities of Rancho Cucamonga, Ontario, Fontana and unincorporated San Bernardino County. This roadway provides direct access to I-10 and SR-60 in Riverside County.

Grove Avenue – This roadway is a four-lane secondary arterial that extends from Foothill Boulevard in the City of Upland south to the Chino Airport in the City of Ontario. South of the airport, it continues to Pine Avenue in unincorporated San Bernardino County.

Haven Avenue – Haven Avenue is a four- to eight-lane primary arterial located in the City of Rancho Cucamonga and extending through the City of Ontario. This roadway provides direct access to I-210, I-10 and SR-60.

Monte Vista Avenue – Monte Vista Avenue is a four- to six-lane roadway that begins at SR-210 in Los Angeles County and travels south through the cities of Montclair and Chino. Between I-210 and I-10, this roadway is classified as a primary arterial.

Mountain Avenue – The northern terminus of this two- to six-lane roadway is with Mt. Baldy Road at the Los Angeles County line. From here, Mountain Avenue crosses a portion of unincorporated San Bernardino County and the cities of Upland and Ontario before ending at Edison Avenue in the City of Chino. This facility is classified as a primary arterial except for the segment between 19th Street and 16th Street, which is classified as a state highway (SR-30).

Sierra Avenue – Sierra Avenue is a two- to six-lane major north-south corridor through the Valley Region of San Bernardino County. This roadway begins just north of I-15 in the extreme northern portion of the City of Fontana. It is a primary arterial and has interchanges with I-15, I-210 and I-10 before it terminates just southeast of Armstrong Road in Riverside County.

Public Transportation

The public transit agencies that serve the Valley Region of the County include Omnitrans, Foothill Transit Agency, Valley Transportation Service, which is specifically dedicated to improving mobility for senior, disabled and low-income residents within San Bernardino Valley (SANBAG, 2016a), and the Riverside Transit Authority bus system in Riverside County. These public transit agencies provide bus services with a wide variety of bus routes across the county, as well as into adjacent jurisdictions. In addition to the local transit agencies, Greyhound offers regional and nationwide bus service to County residents with seven stations located throughout the county boundaries and offers connections to location such as Los Angeles, Las Vegas and Phoenix. SANBAG also operates two programs for individuals and one for employers through which commuters can receive financial incentives by participating in a rideshare program. Metrolink provides east-west passenger train service in the Valley Region, with both at-grade and grade-separated crossings of the tracks that are approximately midway between I-10 and I-210.

Bicycle and Pedestrian Transportation

The County's existing bicycle and pedestrian facilities are outlined in the Non-Motorized Transportation Plan (NMTP) prepared by SANBAG in 2015. The NMTP outlines the type of bicycle and pedestrian facilities that currently exist within the county, as well as includes planning efforts and recommendations for future facilities. In regards to bicycle facilities, the County includes three classes of bikeways: Class I (Shared Use Path or Bike Path), Class II (Designated Bike Lane), and Class III (Designated Bike Route). While there are numerous bikeways of all three classes across the County, the NMTP designates trails that bicyclists can utilize, which includes the Pacific Electric Trail, Santa Ana River Trail, Flood Control Channels, Power Line Corridors, Cajon Pass Connector – Route 66 Heritage Trail, and Orange Blossom Rail Trail. In regards to pedestrian facilities, there are many designated trails and sidewalk systems that can be utilized by pedestrians within the County.

Truck Routes

Cities often develop a truck route plan, which designates truck routes to provide contractors with the preferred travel roadways to and from connecting local roadways. For example, the cities of Upland, Rancho Cucamonga, Fontana, Montclair, Ontario and Chino have such plans.

XVII.2 Regulatory Framework

State

California Department of Transportation

California Department of Transportation (Caltrans) is responsible for planning, designing, building, operating, and maintaining California's transportation system. Caltrans sets standards, policies, and strategic plans that aim to do the following: 1) provide the safest transportation system for users and workers; 2) maximize transportation system performance and accessibility; 3) efficiently deliver quality transportation projects and services; 4) preserve and enhance California's resources and assets; and 5) promote quality service. Caltrans has the discretionary authority to issue special permits for the use of State

highways for other than normal transportation purposes. Caltrans also reviews all requests from utility companies, developers, volunteers, nonprofit organizations, and others desiring to conduct various activities within the State Highway right-of-way.

The following Caltrans regulations apply to potential transportation and traffic impacts associated with the proposed project.

California Vehicle Code (CVC), division 15, chapters 1 through 5 (Size, Weight, and Load). Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.

California Street and Highway Code Sections 660-711. Caltrans encroachment regulations would apply to construction of the proposed pipelines within and immediately adjacent to roadways, as well as the transportation of construction crews and construction equipment throughout the project area. Caltrans requires that permits be obtained for transportation of oversized loads, certain materials, and construction-related traffic disturbance.

Regional

Southern California Association of Governments
The Southern California Association of Governments (SCAG) is the designated Metropolitan Planning Organization for Imperial, Los Angeles, Orange, Riverside, Ventura and San Bernardino Counties. On April 7, 2016, SCAG adopted its 2016 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). The 2016 RTP/SCS presents the transportation vision for the SCAG region through the year 2040 and provides a long-term investment framework for addressing the region's transportation and related challenges. The 2016 RTP/SCS focuses on maintaining and improving the transportation system through a balanced approach and considers economic, environmental, public health, improved coordination between land-use decisions and transportation investments, and strategic expansion of the system to accommodate future growth (SCAG, 2016).

San Bernardino Associated Governments
San Bernardino Associated Governments (SANBAG) is the council of governments and transportation planning agency for San Bernardino County. SANBAG is responsible for cooperative regional planning and furthering an efficient multi-modal transportation system countywide. SANBAG serves the 2.1 million residents of San Bernardino County.

As the County Transportation Commission, SANBAG supports freeway construction projects, regional and local road improvements, train and bus transportation, railroad crossings, call boxes, ridesharing, congestion management efforts and long-term planning studies. SANBAG administers Measure I, the half-cent transportation sales tax approved by county voters in 1989 (SANBAG, 2015).

San Bernardino County Congestion Management Program
The San Bernardino County Congestion Management Program (CMP) was created in June 1990 as a provision of Proposition 111 (SANBAG, 2016b). Under this proposition, urbanized areas with populations of more than 50,000 residents would be required to undertake a congestion management program that was adopted by a designated Congestion Management Agency (CMA); SANBAG is the designated CMA for San Bernardino County as appointed by the County Board of Supervisors.

The CMP's level of service (LOS) standard requires all designated CMP segments to operate at LOS E or better, with the exception of the following roadways within the project area, for which the standard is LOS F:

A. Freeways
   I-10 Westbound, Milliken Avenue to Central Avenue
   I-10 Westbound, Waterman Avenue to Eastbound SR-30
   I-10 Eastbound, Central Avenue to Milliken Avenue
   I-10 Eastbound, Northbound I-15 to Southbound I-15
   I-10 Eastbound, Southbound Waterman Avenue to California Street

SR-60 Westbound, Milliken Avenue to Central Avenue
SR-60 Eastbound, Central Avenue to Milliken Avenue
I-215 Northbound, Inland Center Drive to SR-30 / Highland Avenue

B. Valley East/West Arterial Segments
Foothill Boulevard between Mountain Avenue and Archibald Avenue

C. Valley North/South Arterial Segments
Citrus Avenue between Slover Avenue and Valley Boulevard
Cedar Avenue between Slover Avenue and Valley Boulevard
Mountain View Avenue between Barton Road and Redlands Boulevard
Mountain Avenue between Mission Boulevard and Holt Avenue

Southern California Regional Rail Authority
The Southern California Regional Rail Authority (SCCRA) is a regional Joint Powers Authority. Its purpose is to plan, design, construct, operate, and maintain regional commuter rail lines serving the counties of Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The SCRRA consists of the five county transportation agencies identified above, including the San Bernardino Associated Governments. SCRRA operates on conventional railroad track and right-of-way (ROW), which are owned either by one of the county transportation agencies or by a private freight railroad company that has conveyed operating rights to SCRRA. The design, operation, and maintenance of the SCRRA system are governed by Federal Railroad Administration (FRA) regulations and California Public Utilities Commission (CPUC) General Orders (GOs) (SCRRA, 2014)

County and City Land Use Regulations and Ordinances
Local regulations and ordinances vary widely in the Chino Basin. Traffic-related policies included in General Plans typically concern traffic resulting from project operation rather than project construction. However, some local jurisdictions incorporate restrictions to their General Plans that pertain to construction activities in or through their jurisdictional areas, such as assigning truck traffic routes or requiring the development of Traffic Control Plans.

XVII.3 Impacts and Mitigation Measures

Significance Criteria
For the purposes of this EIR and consistent with Appendix G of the *CEQA Guidelines*, the proposed project would have a significant impact on transportation if it would:

a. Conflict with an applicable plan, ordinance or policy establishing measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit; (see Impact 3.14-1 below)
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards and travel demand measures, or other standards established by the county congestion management agency for designated road or highways; (see discussion immediately below)
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risk; (see discussion immediately below and see Impact 3.7-5 in Section 3.7, Hazards and Hazardous Materials)
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); (see Impact 3.14-2 below)
e. Result in inadequate emergency access; or (see Impact 3.14-3 below)
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance of safety of such facilities. (see discussion immediately below)

The following discussion of environmental impacts is limited to those potential impacts that could result in some level of potentially significant environmental change to the transportation/circulation system, as defined by CEQA. The project would not cause substantial long-term/on-going effects because project facilities, once constructed, would only require maintenance activities similar to those that occur under existing conditions and the increase in employees due to the implementation of the OBMPU is forecast to result in less than an estimated 50 new employees.

The duration of the potential significant impacts would be limited to the period of time needed to construct a project. Therefore, level-of-service standards and a congestion management program, which are intended to monitor and address long-term traffic impacts resulting from future development, do not apply to temporary impacts associated with construction activities (bullet 2 above). In addition, because the project does not include any modifications to air flights, there would not be an increase in air traffic. However, there could be OBMPU projects located within an airport safety zone that could result in safety risks as discussed in Section IX, Hazards and Hazardous Materials (bullet 3 above). Also, implementation of the proposed master plan would not directly or indirectly eliminate existing or planned alternative transportation corridors or facilities (bicycle paths, lanes, bus turnouts, etc.), include changes in policies or programs that support alternative transportation, or construct permanent above ground facilities in locations in which future alternative transportation facilities are planned (bullet 6 above). Therefore, no impact would occur under these three categories, and these categories are not discussed further within this section.

Methodology

This section assesses the transportation impacts that could result from the implementation of the OBMPU Program Elements over the next 30 years (2020 through 2050). Because of the geographic scale of the Chino Basin and the as-yet-undetermined locations of many facilities/projects, this impact assessment was conducted at a programmatic level. Assumptions regarding the types of equipment and vehicles, and the types of roads used for workers to commute to and from work sites and for trucks to haul materials were used to assess the overall significance of program impacts. It is assumed that supplemental project-level analysis of transportation-related impacts (e.g., traffic safety analysis of heavy vehicles travelling on, and turning onto and off of, local roads) would be required for site-specific facilities prior to commencement of construction activity.

Impacts Discussion

a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The proposed program would construct and operate facilities identified in the OBMPU. Implementation of actions under this program would require the construction and maintenance of various facilities. Based on the typical sizing for such facilities, the proposed project may potentially introduce congestion and delays for traffic flow on area roadways. Increased traffic would be generated primarily by construction workers commuting to and from the facility work sites, and by trucks hauling materials and equipment to and from the sites. Construction equipment would be delivered to, and removed from, each site as needed; i.e., the movement of equipment would not occur on a daily basis. Note also that these project impacts to the area circulation system will occur sporadically over the 30-year period of OBMPU implementation.

The construction traffic impacts associated with each individual facility would be short-term in nature and limited to the period of time when construction activity is taking place for that particular facility. The primary off-site impacts resulting from the movement of construction trucks would include a short-term and intermittent reduction of roadway capacities due to the slower movements and larger turning radii of the trucks compared to passenger vehicles. Drivers could experience delays if they were travelling behind a heavy truck. The added traffic would be most apparent on local two-lane roadways. Although project-related traffic would be temporary, supplemental project-level analysis of potential site-specific impacts could determine that addition of project-generated traffic would be considered substantial in relation to traffic flow conditions on local roadways. The potential impacts resulting from the implementation of the OBMPU projects are described below by project category and the combination of all four project categories.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This project category includes development of ASR, injection, pumping, groundwater level, and water quality monitoring wells; associated well housing and monitoring devices such as flow meters and extensometers; and their operation. These wells would be installed throughout the Chino Basin, but with an emphasis on new well facilities north of State Highway 60 (SH 60). Also, all of the wells and support facilities will be installed outside of road rights-of-way (ROWs) so there would be minimal conflict between Category 1 facility construction activities and roadway operations, including bicycle paths and sidewalks.

The construction of the proposed well and ancillary facilities would require a maximum of 10 workers per day, generating about 15 one-way vehicle trips (assuming each worker commuted in their own private vehicle). It is estimated that a maximum of two haul trucks and one 22 vendor truck would be needed each day, generating up to three one-way truck trips per day. The well drilling or ancillary facility construction workers associated with Category 1 activities are expected to arrive at and depart from the work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that would provide access to the locations of the wells or ancillary facilities. For this program-level assessment, this impact is considered to be less than significant. This is because even when large truck trips are assigned a passenger car equivalent (PCE) of three trips, the total number of all trips per day would be less than 50 trips for Category 1 facilities.

Once installed, Category 1 facilities may require future maintenance visits (one trip per week estimated) or future repairs which would not normally require implementation of measure TRAN-1 because Category 1 facilities will rarely encroach into ROWs. This operational impact is considered a less than significant impact to traffic flow or the circulation system without mitigation.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of an estimated 550,000 LF of new pipelines, booster pump stations, reservoirs, and supporting equipment. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs.

Improvements to conveyance systems and ancillary facilities include but are not limited to: installation of new pipelines, rehabilitation of old pipelines, pump stations, lift stations, emergency generators, meters, electrical, system improvements, tanks, and discharge relocations. The proposed improvements to conveyance systems and ancillary facilities would be implemented throughout the entire Chino Basin.

The construction of the proposed conveyance systems and ancillary facilities would require a maximum of 74 workers per day, generating about 148 one-way vehicle trips (assuming each worker commuted in their own private vehicle. It is estimated that up to 3 haul trucks and 23 vendor trucks would be needed each day, generating up to 52 one-way truck trips per day. The construction workers are expected to arrive at and depart from each day's work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that provide access to the locations of the pipeline corridors.

In addition to the increased traffic on area roadways, the installation of new pipelines and rehabilitation of old pipelines would temporarily reduce the capacity of roadways along the pipeline alignment(s) due to open-trenching within existing roadway ROWs and the resulting temporary lane closures on the affected roadways. The impact of the lane closures would vary based on the number of lanes needed to be closed (a function of pipeline diameter and trench width) and the width (number of lanes) of the affected roads. Multi-lane roads (four or more lanes) would be better able to accommodate two-way traffic than two-lane roadways. Two-lane roads would likely require active traffic control (flaggers) to allow alternate one-way traffic flow on the available road width, and could possibly require full road closure (with detour routing around the construction work zone). For this program-level assessment, this impact is considered potentially significant.

Mitigation measure **TRAN-1**—addressed below—would be required to reduce potential impacts to traffic and transportation conditions Implementation of this measure, in conjunction with the temporary character of the construction impacts, is considered sufficient to ensure adequate flow of traffic in a safe manner for Category 2 facility installation.

Once installed, Category 2 facilities may require future maintenance visits (one trip per week estimated) or future repairs which could require implementation of measure **TRAN-1** if repairs require more than a few hours. This operational impact is considered a less than significant impact to traffic flow or the circulation system with mitigation.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5,8-9)
This category includes the construction of up to 310 acres of storage basins, including new basins and modifications/improvements to existing basins. It includes the use of up to 200 acres of agricultural land to support flood MAR facilities, new MS-4-compliance facilities and expansion of the maximum storage space (safe storage capacity) to be used in the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The storage basins, recharge facilities, storage bands, flood MAR facilities and most of the MS4 facilities will be located on land outside of road ROWs. Some MS4 facilities may be installed in roadways (such as drainage inlets on roadways that require treatment systems), but these MS4 facilities offer little potential to support surface water recharge. Similar to Category 1 such facilities have little potential to directly impact roadways and related traffic. However, indirectly the construction of Category 3 facilities (particularly the storage basins) may generate sufficient traffic during construction to affect local roadways, such as Central Avenue, El Prado Road or Kimball Avenue that could provide access to a CIM storage basin site.

The construction of new storage basins or expansion of existing storage basins, construction of new recharge basins may require a maximum of 54 workers, generating about 108 one-way vehicle trips (assuming each worker commuted in their own private vehicle). It is estimated that up to 201 haul trucks and 5 vendor trucks would be needed each day, generating up to 412 one-way truck trips per day. The construction workers are expected to arrive at and depart from each day's work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that provide access to the locations of the pipeline corridors. For this program-level assessment, this impact is considered potentially significant and would require implementation of measure **TRAN-1**.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category include: upgrades at IEUA's existing Water Recycling Plants (WRPs, discussed in detail in IEUA's 2017 FMP PEIR); a new advanced water treatment plant; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters, new groundwater treatment facilities at or near existing well sites and at regionally located sites; and improvements to existing groundwater treatment facilities.

These improvements would be installed at facilities throughout the Chino Basin. All improvements and support facilities will be installed outside of road rights-of-way (ROWs) on existing sites, or in the case of a new advanced water treatment facility at a new location, but still out of public roadway alignments. Thus, there would be minimal conflict between Category 4 facility construction activities and roadway operations, including bicycle paths and sidewalks.

The construction of the proposed improvements and new advance water facility would require a maximum of 50 workers per day, generating about 100 one-way vehicle trips (assuming each worker commuted in their own private vehicle). It is estimated that up to 3 haul trucks and 15 vendor trucks would be needed each day, generating up to 18 one-way truck trips per day. The construction workers are expected to arrive at and depart from each day's work sites during a one-hour period at the start and end of the work day,

respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that provide access to the locations of the pipeline corridors. For this program-level assessment, this impact is considered to be less than significant. This is because even when large truck trips are assigned a passenger car equivalent (PCE) of three trips, the total number of all trips per day would be about than 54 trips for Category 4 facilities.

Once construction is completed, Category 4 facilities will either continue modified operations, or in the case of a new advanced water treatment require a new employee base. Overall changes in traffic due to these OBMPU facilities would not make any major changes in traffic during operations. This potential operational impact is considered a less than significant impact to traffic flow or the circulation system without mitigation.

Combined Project Categories Impact

The implementation of improvements proposed in Project Categories 1 through 4 could occur concurrently. Based on a conservative assumption that the maximum trips by project category occur concurrently, there would be a maximum of several hundred one-way vehicle trips per day by construction workers and a maximum of several hundred one-way truck trips per day. As stated above, the construction workers are expected to arrive at and depart from the work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that provide access to the locations of the treatment facilities. For this program-level assessment, this combined impact is considered potentially significant.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Project Category 1: Less Than Significant

Project Category 2: Implementation of Mitigation Measure **TRAN-1** is required to achieve a less than significant impact.

TRAN-1: ***For projects that may affect traffic flow along existing roadways, the implementing agency shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:***

- ***Develop circulation and detour plans, if necessary, to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.***
- ***To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.***
- ***Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.***
- ***For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls.***
- ***Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.***

Project Category 3: Implementation of Mitigation Measure **TRAN-1** is required to achieve a less than significant impact.

Project Category 4: Less Than Significant

*Combined Project Categories: Implementation of Mitigation Measure **TRAN-1** is required. Less than significant impact without mitigation.*

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **TRAN-1** would reduce the project's potential construction traffic impacts to less than significant. Mitigation Measure **TRAN-1** would require all construction activities to be conducted in accordance with an approved construction traffic control plan, which would serve to reduce the construction-related traffic impacts to the maximum extent feasible. Thus, through the environmental review and development permit process, subsequent project-specific analysis would be needed to determine specific required elements of the traffic control plans.

Cumulative Impact Analysis
The Chino Basin is largely urbanized with residential, commercial and industrial development. As the Chino Basin continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the project area. This substantial increase from cumulative development is expected to result in significant cumulative impacts on the existing transportation systems. Because the construction activities associated with the OBMPU projects would increase construction traffic on the area roadways and potentially cause significant impacts, the OBMPU projects' contribution to cumulative impacts on roadways would be cumulatively considerable and a potential significant cumulative impact would occur.

*Cumulative Measures: Implementation of Mitigation Measure **TRAN-1** is required.*

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **TRAN-1** would reduce the project's contribution to potential construction traffic impacts to less than significant. The above measure would require all construction activities to be conducted in accordance with an approved construction traffic control plan, which would serve to reduce the construction-related traffic impacts to the maximum extent feasible. Thus, through the environmental review and development permit process, subsequent project-specific analysis would be needed to determine specific required elements of the traffic control plans.

b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Vehicle miles traveled (VMT) in support of infrastructure construction and operation over the next 30 years will be responsive to the need for travel during both construction and operations. Unlike a development project, traffic in support of OBMPU facilities will be sporadic (construction and operations) and based on demand, not discretional travel associated with a residence. Extraneous travel is not forecast to be carried out in support of OBMPU infrastructure facilities during either construction or operations. Therefore, future implementation of the OBMPU has no potential to conflict with or be inconsistent with State CEQA Guidelines Section 15064.3, Subdivision 3.

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Note that no operational traffic or circulation system impacts due to any design features have been identified for the four project categories evaluated under the OBMPU.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
Category 1 project construction would not alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features. Also, although construction of the wells and monitoring devices could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways, the change to the mix of vehicles would stop when project construction is completed. The potential conflicts between construction trucks and

automobiles on local roadways are considered a less than significant impact through implementation of measure **TRAN-1**.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
Category 2 project construction would not alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features. Also, although construction of the conveyance systems and ancillary facilities could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways, the change to the mix of vehicles would stop when Project construction is completed. The potential conflicts between construction activities and automobiles on local roadways are considered a less than significant impact through implementation of measure **TRAN-1.**

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5,8-9)
Category 3 project construction would not alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features. Also, although construction of the groundwater recharge and extraction facilities could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways that change to the mix of vehicles would stop when Project construction is completed. The potential conflicts between construction trucks and automobiles on local roadway are considered a less than significant impact through implementation of measure **TRAN-1**.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
Category 4 project construction would not alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features. Also, although construction of the groundwater recharge and extraction facilities could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways that change to the mix of vehicles would stop when Project construction is completed. The potential conflicts between construction trucks and automobiles on local roadway are considered a less than significant impact through implementation of measure **TRAN-1**.

Combined Project Categories
The combination of proposed construction under Project Categories 1, 2, 3 and 4 could exacerbate the traffic hazard impacts along roadways. These impacts could be considered potentially significant but reduced to a less than significant impact level through implementation of measure **TRAN-1**.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Project Category 1: Implementation of Mitigation Measure **TRAN-1** is required to achieve a less than significant impact.

Project Category 2: Implementation of Mitigation Measure **TRAN-1** is required to achieve a less than significant impact.

Project Category 3: Implementation of Mitigation Measure **TRAN-1** is required to achieve a less than significant impact.

Project Category 4: Implementation of Mitigation Measure **TRAN-1** is required to achieve a less than significant impact.

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **TRAN-1** would reduce the project's contribution to potential construction traffic hazard impacts to less than significant. The above measure would reduce traffic hazards by requiring all construction activities to be conducted in accordance with an approved construction traffic

control plan. Thus, through the environmental review and development permit process, subsequent project-specific analysis would be needed to determine specific required elements of the traffic control plans.

Cumulative Impact Analysis
The Chino Basin service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the service area. This increase in cumulative traffic volumes could result in significant hazard impacts. Because the proposed construction activities associated with the OBMPU projects could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways, potential conflicts between construction trucks and automobiles could result in significant traffic hazard impacts. Therefore, the project's contribution to cumulative traffic hazard impacts would be considered cumulatively considerable and result in a significant cumulative impact.

Cumulative Measures: *Implementation of Mitigation Measure **TRAN-1** is required to achieve a less than significant impact.*

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **TRAN-1** would reduce the project's contribution to potential construction traffic hazard impacts to less than significant. The above measure would reduce traffic hazards by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan. Thus, through the environmental review and development permit process, subsequent project-specific analysis would be needed to determine specific required elements of the traffic control plans.

d. Result in inadequate emergency access?

Please refer to the discussion under emergency evacuation routes under Section 9 Hazards and Hazardous Materials for a discussion of potential impacts to emergency access issues.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
Construction trucks generated by installation of wells and monitoring devices the treatment facility upgrades would interact with other vehicles on project area roadways, including emergency vehicles, but would not alter the physical configuration of the existing roadway network serving the area. While individual emergency vehicles could be slowed if travelling behind a slow-moving truck, per vehicle code requirements, vehicles must yield to emergency vehicles using a siren and red lights. Because the wells and monitoring devices would be installed outside of road ROWs, lane closures for these facilities are not expected to be required. Therefore, access impacts to emergency vehicles are considered to be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
Construction trucks generated by the conveyance systems and ancillary facilities would interact with other vehicles on project area roadways, including emergency vehicles, but would not alter the physical configuration of the existing roadway network serving the area. While individual emergency vehicles could be slowed if travelling behind a slow-moving truck, per vehicle code requirements, vehicles must yield to emergency vehicles using a siren and red lights. Construction vehicles travelling along the roadways are expected to result in a less than significant impact on emergency access similar to Project Category 1.

Because the proposed pipelines and some of the ancillary facilities could require the closure of lanes during construction activities, potential access impacts on emergency vehicles could occur. These potential impacts are considered a less than significant impact through implementation of measure **TRAN-1**.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5,8-9)
Construction trucks generated by the Category 3 facility construction would interact with other vehicles on project area roadways, including emergency vehicles, but would not alter the physical configuration of the existing roadway network serving the area. While individual emergency vehicles could be slowed if

travelling behind a slow-moving truck, per vehicle code requirements, vehicles must yield to emergency vehicles using a siren and red lights. Construction vehicles travelling along the roadways are expected to result in a less than significant impact on emergency access similar to Project Category 1. Because the proposed implementation of some of the Category 3 facilities could generate substantial traffic during construction activities, potential access impacts on emergency vehicles could occur. These potential impacts are considered a less than significant impact through implementation of measure **TRAN-1**.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
Category 4 project construction would not alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features. Also, although construction of the groundwater recharge and extraction facilities could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with emergency vehicle responses that change to the mix of vehicles would stop when Project construction is completed. The potential conflicts between construction trucks and emergency vehicles on local roadways are considered a less than significant impact through implementation of measure **TRAN-1**.

Combined Project Categories
For reasons described above, the combination of improvements proposed in Project Categories 2, and 3 would have similar less than significant impacts on emergency vehicle access from construction vehicles travelling on the roadways. However, the implementation of facilities that are part of Project Categories 2 and 3 could require the closure of lanes during construction activities. Lane closures could result in potential access impacts on emergency vehicles. These potential impacts are considered a less than significant impact through implementation of measure **TRAN-1**.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Project Category 1: Less Than Significant

Project Category 2: Implementation of Mitigation Measure **TRAN-1** is required to achieve a less than significant impact.

Project Category 3: Implementation of Mitigation Measure **TRAN-1** is required to achieve a less than significant impact.

*Project Category 4: I*mplementation of Mitigation Measure **TRAN-1** is required to achieve a less than significant impact

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **TRAN-1** would reduce the project's potential construction impacts on emergency access to a less than significant impact. The above measure would reduce impacts on emergency access by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan and require coordination of timing, location, and duration of construction activities with emergency services such as police and fire.

Cumulative Impact Analysis
The Chino Basin is largely urbanized with residential, commercial and industrial development. As the continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the service area. Cumulative construction activities are expected to increase construction vehicles travelling on the roadways. While individual emergency vehicles could be slowed if travelling behind a slow-moving truck, per vehicle code requirements, vehicles must yield to emergency vehicles using a siren and red lights. Cumulative construction vehicles travelling along the roadways are expected to result in a less than significant impact on emergency access.

The implementation of some of the cumulative projects within the Chino Basin could result in lane closures during construction activities. Lane closures due to cumulative construction activities could result in potential access impacts on emergency vehicles. These potential cumulative impacts are considered significant. Because the construction activities associated with some of the OBMPU projects could result in lane closures, the project's contribution to cumulative impacts on emergency access is considered cumulatively considerable and a significant cumulative impact.

Cumulative Measures: Implementation of Mitigation Measure **TRAN-1** is required.

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **TRAN-1** would reduce the project's cumulative contribution to potential construction impacts on emergency access to a less than significant impact. The above measure would reduce impacts on emergency access by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan and require coordination of timing, location, and duration of construction activities with emergency services such as police and fire.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial change in the significance of tribal cultural resources, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to the California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☒	☐	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in sub-division (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☒	☐	☐	☐

SUBSTANTIATION

a&b. *Potentially Significant Impact* – Cumulatively, the facilities proposed by the OBMPU may result in impacts to tribal cultural resources. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this topic will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIX. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☒	☐	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☒	☐	☐	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☒	☐	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☒	☐	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☒	☐	☐

SUBSTANTIATION:

XIX.1 Environmental Setting

Of the issues covered under the Utilities topic, water supply and extension of infrastructure will be carried over to the Focused PEIR because these topics may be significant. As such, these topics will not be discussed as part of the Environmental Setting in this Initial Study.

Wastewater and Water Treatment Facilities

There are several wastewater providers within the Chino Basin, though the provider with the largest service area is the Inland Empire Utilities Agency (IEUA), which has constructed a Regional Sewerage System within its service area to collect, treat and dispose of wastewater delivered by contracting local agencies. As a regional wastewater treatment agency, IEUA provides sewage utility services to seven contracting agencies under the Chino Basin Regional Sewage Service Contract: the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Upland, and the City of Rancho Cucamonga (via the Cucamonga Valley Water District). The contracting cities and water districts are responsible for wastewater collection within their individual service areas. A system of regional trunk and interceptor sewers that convey sewage to regional wastewater treatment plants is owned and operated by IEUA. IEUA's wastewater collection system is divided into two major service areas: the Northern Service Area and the Southern Service Area.

IEUA receives approximately 50 MGD of wastewater annually at four wastewater treatment and water recycling plants: Regional Water Recycling Plant No. 1 (RP-1), Regional Water Recycling Plant No. 4 (RP-4), Regional Water Recycling Plant No. 5 (RP-5) and Carbon Canyon Water Recycling Facility (CCWRF). Regional Water Recycling Plant No. 2 (RP-2) no longer operates its liquid treatment sections as of 2002, and only treats solid waste. Recycled water from the plants is treated to Title 22 regulations set forth by the California Department of Health Services and distributed throughout the service area. IEUA

currently delivers approximately 30,000 acre-feet per year (AFY) of recycled water for such uses as agriculture, irrigation, industrial uses, and groundwater replenishment. In addition to its water recycling plants, IEUA operates the Chino I Desalter, a water desalter treatment plant in Chino. The Chino Basin Desalter Authority (CDA) oversees management of the Chino I Desalter, along with the Chino II Desalter located in Jurupa Valley.

In addition to IEUA, there are several other wastewater treatment providers in Chino Basin. For instance, the Water Facilities Authority (Authority) is a Joint Powers Authority governed by its member agencies: Chino, Chino Hills, Monte Vista Water District, Ontario, and Upland; its service area covers approximately 135 square miles within the upper Santa Ana River watershed. The City of Riverside, Inland Empire Brine Line owned by the Orange County Sanitation District, and the Western Riverside County Regional Wastewater Authority (WRCRWA) each treat a portion of the wastewater generated within the Jurupa Community Services District (JCSD). Finally, the Sanitation Districts of Los Angeles County operates a treatment plant that collects wastewater from the City of Pomona. The respective operational treatment plants are described below.

Wastewater and Water Treatment Plants

RP-1 is located at 2662 East Walnut Street in the City of Ontario and has been in operation since 1948. The plant has undergone several expansions to increase the design hydraulic domestic sewage (wastewater) treatment capacity to 44 million gallons per day. The plant serves areas of Chino, Fontana, Montclair, Ontario, Rancho Cucamonga, Upland, and solids removed from RP-4, located in Rancho Cucamonga. The plant treats an average influent wastewater flow of approximately 28 million gallons per day. RP-1 includes both liquid and solid treatment processes (IEUA, 2016).

RP-2 is located at 16400 El Prado Road in the City of Chino and has been in operation since 1960. The plant operated both liquids and solids treatment sections, until 2002, when RP-5 was constructed to handle the liquids treatment section portion of RP-2. Solids are removed from CCWRF and RP-5 and treated at RP-2. The solids treatment section begins with thickening the solids removed from the RP-5 and CCWRF primary and secondary clarification processes. After dewatering, the biosolids are hauled to the Inland Empire Regional Composting Facility (IERCF) in the City of Rancho Cucamonga for further treatment to produce Class A compost (IEUA, 2016).

RP-4 is located at 12811 6th Street in the City of Rancho Cucamonga and has been in operation since 1997. The plant has undergone an expansion to increase the design hydraulic domestic wastewater treatment capacity to 14 million gallons per day. The plant serves areas of Fontana, Rancho Cucamonga, and San Bernardino County. The plant treats the liquid portion of an average influent wastewater flow of approximately 10 MGD (IEUA, 2016).

RP-5 is located at 6063 Kimball Avenue, Building C in the City of Chino and has been in operation since 2004. The design hydraulic domestic wastewater treatment capacity is 16.3 million gallons per day, which includes 1.3 million gallons per day of solids processing returned from RP-2. The plant serves areas of Chino, Chino Hills, and Ontario. The plant treats the liquid portion of an average influent wastewater flow, including RP-2 returned flow, of approximately 9 MGD (IEUA, 2016).

CCWRF is located at14950 Telephone Avenue in the City of Chino and has been in operation since 1992. The design hydraulic domestic wastewater treatment capacity is 11.4 million gallons per day. The plant serves areas of Chino, Chino Hills, Montclair and Upland. The plant treats the liquid portion of an average influent wastewater flow of approximately 7 MGD (IEUA, 2016).

Chino I Desalter plant is located at 6905 Kimball Avenue in the City of Chino and commenced operation in 2001. The plant was expanded in 2005 from an 8.4 MGD facility to a 14 MGD facility. Groundwater is pumped from supply wells throughout the Chino Basin area to the Chino I Desalter. The treatment processes include reverse osmosis and ion-exchange for removal of nitrate and total dissolved solids. Approximately 2 MGD of brine, a byproduct of the reverse osmosis and ion exchange processes is transported by the Santa Ana River Inceptor (SARI line) to Orange County and is subsequently discharged

to the ocean. The high-quality water is then pumped into the municipal water supply systems for the cities of Chino and Chino Hills, and into the Jurupa Community Services District water system (IEUA, 2016).

Chino II Desalter plant is located at 11202 Harrell Street in the City of Mira Loma and was initiated by the Chino Desalter Authority to provide water deliveries to the cities of Norco, Ontario, Jurupa Community Services District and Santa Ana River Water Company. The treatment processes include reverse osmosis and ion-exchange. The Chino II Desalter became operational in 2006 and was expanded in 2010. It produced an average of 10.6 MGD of drinking water in 2012 and a little more than 1 MGD of brine that is transported by the SARI line to Orange County and subsequently discharged to the ocean (IEUA, 2016).

WFA Agua de Lejos Treatment Plant is located at 1775 N Benson Ave, Upland, CA 91784. The Water Facilities Authority (Authority) is a Joint Powers Authority governed by its member agencies: Chino, Chino Hills, Monte Vista Water District, Ontario, and Upland. Its service area covers approximately 135 square miles within the upper Santa Ana River watershed. The Authority owns and operates a surface water treatment plant called Agua de Lejos Treatment Plant, which began operations in 1988 and is located in the City of Upland. This treatment plant treats and disinfects imported water supplies, primarily state project water, purchased from Metropolitan Water District to supplement local groundwater supplies. Through its members, the Authority indirectly serves more than 450,000 people in the west-end of San Bernardino County.[75] Agua de Lejos Treatment Plant receives imported surface water supplies from the State Water Project (SWP) from Metropolitan Water District through Inland Empire Utilities Agency.[76] The treatment plant, located on sixteen acres in North Upland, has the capacity to treat and disinfect 81 mgd (million gallons per day). However, recent historical flows through the treatment plant is normally 40–50 mgd during the peak summer months and can be as low as 9-12 mgd during the slower winter months.[77]

Riverside Water Quality Control Plant (RWQCP) is located at 5950 Acorn Street Riverside, CA 92504. The RWQCP is being expanded, however, it currently consists of two separate treatment plants and one common tertiary filtration plant. These provide preliminary, primary, secondary and tertiary treatment for a rated capacity of 40 million gallons per day (MGD).[78] The Jurupa Community Services District (JCSD) discharges wastewater to three different treatment plants from three independent sewer systems. The first utilizes the District's Regional Lift Station to pump wastewater to the City of Riverside Treatment Plant.[79]

Inland Empire Brine Line is a gravity pipeline that delivers non-reclaimable waste from the Santa Ana River watershed upstream of Orange County to a treatment plant in Orange County owned and operated by Orange County Sanitation District.[80] The JCSD utilizes their CFD No. 1 wastewater system, which collects sewage from industrial sources is discharged to the Inland Empire Brine Line (IEBL) for treatment in Orange County, which has higher salt limits because it is an ocean discharge. The JCSD's water treatment plants also discharge brine to the IEBL to take advantage of these higher discharge limits.

Western Riverside County Regional Wastewater Authority Plant has the capacity to treat 14 million gallons per day (MGD) of wastewater.[81] The Eastvale area (within the JCSD) discharges to the River Road Lift Station, which pumps the wastewater to another regional treatment plant, operated by a joint powers authority known as the Western Riverside County Regional Wastewater Authority (WRCRWA). The JCSD proactively operates and maintains its sewer system to convey the wastewater to the treatment plants in a reliable and cost-effective manner in accordance with the recently adopted Sewer Management Plan.

Pomona Water Reclamation Plant is located at 295 Humane Way in the City of Pomona and is managed by the Sanitation Districts of Los Angeles County. The plant occupies 14 acres northeast of the intersection of the Pomona (60) and Orange (57) Freeways. The Pomona WRP provides primary, secondary and tertiary

[75] http://www.wfajpa.org/
[76] The SWP includes 29 storage facilities, 18 pumping plants, 4 pumping-generating plants, 5 hydroelectric power plants and approximately 660 miles of canals and pipelines—spanning two-thirds of the length of California.
[77] http://www.wfajpa.org/#Facilities
[78] https://www.riversideca.gov/publicworks/sewer/wqcp.asp
[79] https://www.jcsd.us/customers/sewer-wastewater
[80] https://www.sbvmwd.com/about-us/projects/inland-empire-brine-line
[81] https://www.wrcrwa.org/152/Treatment-Plant-Overview

treatment for 15 million gallons of wastewater per day (see flow diagram below). The plant serves a population of approximately 130,000 people. Approximately 8 million gallons per day of the recycled water is used at over 190 different sites. Reuse applications include landscape irrigation of parks, schools, golf courses, greenbelts, etc.; irrigation and dust control at the Spadra Landfill; and industrial use by local manufacturers. The remainder of the recycled water is discharged into the San Jose Creek, where it is allowed to percolate into the groundwater in the unlined portions of the San Gabriel River before flowing into the ocean.

Storm Water

Each of the cities within the Chino Basin maintain storm water drainage infrastructure within their respective city limits. San Bernardino County and Riverside County each manage the storm drain system within their respective unincorporated areas of the Chino Basin and the regional stormwater runoff conveyance infrastructure.

Solid Waste Management

The California Department of Resources Recycling and Recovery (CalRecycle) maintains a Solid Waste Information System (SWIS) that lists disposal sites in San Bernardino County by disposal facility activity, regulatory status, and operational status. According to SWIS, there are two active Class III landfills[82] within a 20-mile radius of the Chino Basin that conduct solid waste disposal activities and accept construction and demolition material. These landfills are the El Sobrante and Mid-Valley Sanitary Landfills. **Table XIX-1** lists the closure dates, daily permitted capacities, and remaining permitted capacities of the local Class III solid waste landfills.

Waste Management of Inland Empire is the local division of Waste Management, Inc. that provides collection, disposal, recycling, and environmental services to the Inland Empire. It serves over 220,000 residents and disposes over 17,000 tons of waste weekly in the Inland Empire. It operates the El Sobrante Landfill in Corona, which processes about 43 percent of the San Bernardino County's annual waste and can currently receive up to 70,000 tons of waste per week (Waste Management, 2013). The County of San Bernardino operates the Mid-Valley Sanitary Landfill in Rialto.

In addition to Waste Management Inc., Burrtec Waste Management Services provides solid waste disposal sites and other services such as: trash and recycling facilities; retail waste disposal containers; construction waste facilities including portable restrooms for wastewater; and other private facilities for customized services. Burrtec facilities in proximity to the Chino Basin may be utilized during project construction and operation in addition to the Mid-Valley and El Sobrante landfills; these include: the Agua Mansa Materials Recovery Facility (MRF)/Transfer Station; the West Valley MRF/Transfer Stations; and the East Valley Transfer Recycling Facility, all located within 10 miles of the Chino Basin area.

Table XIX-1
LANDFILLS IN PROXIMITY TO THE CHINO BASIN

Facility Name	Address	Closure Date	Daily Permitted Capacity (tons/day)	Remaining Permitted Capacity (cubic yards)
Mid-Valley Sanitary Landfill	2390 Alder Ave, Rialto, CA 92377	04/01/2033	7,500	61,219,377 as of 4/18
El Sobrante Landfill	10910 Dawson Canyon Rd, Corona, CA 92883	01/01/2051	16,054	143,977,170 As of 6/19

SOURCE: California Department of Resources Recycling and Recovery, *Solid Waste Information System (SWIS)*, 2020
https://www2.calrecycle.ca.gov/swfacilities/Directory/36-AA-0055/
https://www2.calrecycle.ca.gov/swfacilities/Directory/33-AA-0217

[82] Class III landfills are only permitted to accept nonhazardous solid waste

Energy
Southern California Edison (SCE) is the primary provider of electricity to the Chino Basin area, except within a select area of the southeastern proximity of the City of Rancho Cucamonga, where the Rancho Cucamonga Municipal Utility is the electricity provider. Natural gas services in the Chino Basin are provided by the Southern California Gas Company.

Telecommunication
The Chino Basin area is served by several telecommunication providers including Verizon, California Telecom, AT&T, Frontier, Spectrum, and others.

XIX.2 Impact Discussion

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water
Cumulatively, given that the proposed project involves the management of the Chino Groundwater Basin, the hydrology and water quality impacts related to the implementation of the 2020 OBMPU and associated facilities may be significant. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this issue will be further evaluated in the Focused PEIR.

Wastewater Treatment

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The proposed OBMPU includes construction of wells and installation of monitoring devices. Construction workers would temporarily require use of portable sanitary units during construction of the proposed wells and potentially during the installation of the proposed monitoring devices. Wastewater generated during construction of the proposed projects would be minimal and would not require the construction of new wastewater or water treatment facilities. Because construction of new or expanded facilities is not required to accommodate the OBMPU Category 1 projects, there would be no construction impacts associated with the provision of these facilities to serve the proposed OBMPU facilities.

During operation, the proposed wells and monitoring devices would not require a permanent staff, and as such will not require connection to the sewer system. Therefore, the proposed project would not require the expansion or construction of a new wastewater treatment facilities. Because construction of new or expanded facilities is not required to accommodate the OBMPU projects, there would be no operation impacts associated with the provision of these facilities to serve the OBMPU projects.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts are the same as those identified under Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage

capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts are the same as those identified under Project Categories 1 and 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to require or result in the relocation or construction of new or expanded wastewater facilities.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities.

As stated above, upgrades to IEUA's existing treatment plants were discussed in IEUA's 2017 FMP PEIR; as such though the upgrades at these faculties would constitute "construction of wastewater treatment facilities," impacts thereof were analyzed previously and will not be included within the OBMPU.

The improvements to the Agua de Lejos Treatment Plant and upgrades to the Chino Desalters constitute "construction of wastewater treatment facilities," and are individually not anticipated to result in significant impacts. However, given that the proposed improvements have not been completely identified or designed, and that the specific improvements proposed are needed to fully analyze a project, these improvements need to be further studied once the design has been drafted for each facility. As such mitigation is provided below to ensure that impacts related to construction or extension of wastewater services are minimized below significance thresholds.

Similarly, to the improvements to the Agua de Lejos Treatment Plant and upgrades to the Chino Desalters, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would constitute "construction of wastewater treatment facilities," because these facilities would discharge brine waste that would result from treating groundwater. It is anticipated that such facilities would require connection to the Inland Empire Brine Line or other brine line to treat this brine waste to be discharged in some form—for example treated effluent can be discharged to the Ocean. Given that the location of the above facilities is not presently known, and that the design for such facilities has not been drafted, the development of these facilities needs to be further studied once the design and location have been drafted and identified for each facility. As such, mitigation is provided below to ensure that impacts related to construction or extension of wastewater services are minimized below significance thresholds.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

UTIL-1 ***The Watermaster or Implementing Agency shall prepare subsequent CEQA documentation for the Agua de Lejos Treatment Plant and upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites once specific improvements or facility locations have been identified, and design of such improvements or new facilities has been drafted.***

Level of Significance After Mitigation: Less Than Significant

Implementation of mitigation measure **UTIL-1** is sufficient to reduce the potential for impacts related to construction of wastewater facilities, such as the proposed upgrades at the Agua de Lejos Treatment Plant and to the Chino Desalters.

Stormwater Drainage

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Implementation of proposed wells and extensometers within wells would be housed aboveground, while the flow meters would be installed within surface flows. The proposed wells would be developed within sites that are anticipated to be less than one half acre in size. Well development would result in the addition of impervious surfaces that would increase stormwater quantity. This increase could affect on-site drainage patterns as well as off-site drainage volume and require the construction and operation of new and/or expanded stormwater drainage facilities. As such, mitigation that would require implementation of a drainage plan is provided below to ensure that impacts related to stormwater drainage facilities are minimized below significance thresholds.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Proposed pipelines would be underground and would not permanently alter existing site drainage patterns. The pipelines would not require the construction of new or expanded stormwater drainage facilities. Because there would be no requirement for the construction of new or expanded drainage facilities to serve the proposed project, there would be no construction impacts associated with the provision of these facilities to serve the proposed pipelines.

Development of proposed ancillary facilities would have the same impacts as those identified under Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts are the same as those identified under Project Categories 1 and 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to require or result in the relocation or construction of new or expanded stormwater facilities.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Stormwater construction/relocation impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Impacts are the same as those identified under Project Categories 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

UTIL-2 ***Implementation of a Drainage Plan to Reduce Downstream Flows. Prior to construction of project facilities, the Watermaster or Implementing Agency shall prepare a drainage plan that includes design features to reduce stormwater peak concentration flows exiting the above ground facility sites (consistent with MS4 requirements) so that the capacities of the existing downstream drainage facilities are not exceeded. These design features could include bio-retention, sand infiltration, return of stormwater for treatment within the treatment plant, and/or detention facilities.***

Level of Significance After Mitigation: Less Than Significant

Implementation of mitigation measure **UTIL-2** is sufficient to reduce the potential for impacts related to construction of wastewater facilities, such as the proposed upgrades at the Agua de Lejos Treatment Plant and to the Chino Desalters.

Electric Power
Cumulatively, the energy required for construction and operational activities associated with the facilities proposed by the 2020 OBMPU may result in significant impacts under this category. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this issue will be further evaluated in the Focused PEIR under the topic of "Energy."

Natural Gas
Cumulatively, the natural gas required for construction and operational activities associated with the facilities proposed by the 2020 OBMPU may result in significant impacts under this category. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this issue will be further evaluated in the Focused PEIR.

Telecommunications
The types of facilities proposed as part of the OBMPU typically would not require extension of telecommunication services. However, given that the facilities proposed as part the OBMPU have not been designed, there is a potential for certain facilities (such as regional groundwater treatment facilities, and any other facilities proposed that would require full-time personnel on site) to require extension of telecommunication infrastructure as part of operation. As such, Mitigation Measure **UTIL-1** would suffice to ensure that impacts related to extension of infrastructure are minimized for the proposed OBMPU projects that would require telecommunication services by requiring project-specific subsequent CEQA documentation.

b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Cumulatively, given that the proposed project involves the management of the Chino Groundwater Basin, the hydrology and water quality impacts related to the implementation of the 2020 OBMPU and associated facilities may be significant. A deeper analysis of this issue is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this issue will be further evaluated in the Focused PEIR.

c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The proposed OBMPU includes construction of wells and installation of monitoring devices. As stated under the response to issue XIX(a) above, construction workers would temporarily require use of portable sanitary units during construction of the proposed wells and potentially during the installation of the proposed monitoring devices. Wastewater generated during construction of the proposed OBMPU facilities would be minimal, consisting of portable toilet waste generated by construction workers and therefore would not substantially impact wastewater treatment capacity. All conveyance systems, groundwater recharge, storage basins, wells, monitoring devices, and ancillary facilities would not generate wastewater during their operation. Therefore, impacts related to available wastewater treatment capacity would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts are the same as those identified under Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts are the same as those identified under Project Categories 1 and 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to require or result in the impacts related to wastewater treatment capacities.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities.

As stated above, upgrades to IEUA's existing treatment plants were discussed in IEUA's 2017 FMP PEIR; as such though the upgrades at these faculties would constitute expansion of wastewater treatment capacity impacts thereof were analyzed previously and will not be analyzed further within the OBMPU.

The improvements to the Agua de Lejos Treatment Plant and upgrades to the Chino Desalters would expand the treatment capacity at each of these facilities. As with the impacts outlined above under Project Category 1, the construction of these upgrades and improvements are not anticipated to generate additional demand for capacity from the wastewater treatment provider due to the limited wastewater this would generate. Given that the proposed OBMPU is not anticipated to generate additional demand for these existing facilities, the programs proposed to be implemented as part of the OBMPU and associated facilities therefore are not anticipated to require substantial additional capacity from the applicable area wastewater treatment provider beyond the provider's existing commitments. Impacts are less than significant.

Upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would create a new sources of brine waste generated by water treatment that would require treatment by the applicable wastewater treatment provider. It is anticipated that such facilities would require connection to the Inland Empire Brine Line or other brine line to treat this brine waste to be discharged in some form—for example treated effluent can be discharged to the Ocean. Given that the amount of water proposed to be treated by these existing and proposed water treatment facilities is unknown, it is not possible to determine whether these facilities would require OCSD (or another agency responsible for treating brine waste) to expand the capacity of its treatment plant to accommodate the additional brine waste generated by these projects. As such, mitigation measure UTIL-1, which requires subsequent CEQA documentation to be prepared for certain projects is required to minimize potential impacts below significance thresholds.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Mitigation measure **UTIL-1,** outlined under issue XIX(a) above, is required.

Level of Significance After Mitigation: Less Than Significant

Implementation of mitigation measure **UTIL-1** is sufficient to reduce the potential for impacts related to capacity of area wastewater treatment plants to below significance thresholds.

d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Construction of wells and monitoring devices would not require a large area of construction. Construction of each well may require demolition of existing facilities, grading, soil import/export, etc. at a specific site. Given that the proposed wells would be located within sites no more than one half acre in size, it is not forecast that construction thereof would generate substantial solid waste. Furthermore, it is not anticipated

that each of the proposed wells would be installed concurrently, as such the generation of solid waste from each well would not have a potential to exceed the daily capacity of the local landfills. Each of the OBMPU facilities would include the preparation of a construction and demolition solid waste management plan as required by San Bernardino County, Riverside County, or Los Angeles County for all new construction projects. Information provided in this waste management plan would include how the waste will be managed, hauler identification, and anticipated material wastes. Each plan would demonstrate a minimum of 50 percent diversion of construction building materials and demolition debris from landfills through reuse or recycling, which is required by Assembly Bill 939. As such, development of wells and installation of monitoring devices is not anticipated to generate solid waste in excess of the capacity of local infrastructure.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Similar to the development of wells and monitoring devices, construction of pipelines and ancillary facilities is not anticipated to result in generation of solid waste in excess of the capacities of local infrastructure. However, given that pipelines will require demolition of sections of roadway in order to install conveyance facilities below ground and within rights-of-way, mitigation is required to ensure that all materials that can feasibly be recycled are salvaged.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Similar to the development of wells and monitoring devices, and pipelines and ancillary facilities, construction of storage basins, flood MAR facilities, and new MS4-compliance facilities is not anticipated to result in generation of solid waste in excess of the capacities of local infrastructure. However, given that development of storage basins may require substantial earthmoving activities that may result in substantial soil export, as such, mitigation is required to ensure that, in the event substantial soil export is required, soils of a usable quality are recycled for reuse.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to result in impacts to solid waste capacities.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Stormwater construction/relocation impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Impacts are the same as those identified under Project Categories 1, 2, and 3—mitigation is required to address potential impacts to solid waste capacities.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

UTIL-3 ***The contract with demolition and construction contractors for a given OBMPU Project shall include the requirement that all materials that can feasibly be recycled shall be salvaged and recycled. This includes but is not limited to wood, metals, concrete, road base and asphalt. The contractors for a given OBMPU Project shall submit a recycling plan to the Watermaster or Implementing Agency for review and approval prior to the construction of demolition/construction activities.***

UTIL-4 ***The contract with demolition and construction contractors for a given OBMPU Project shall include the requirement that all soils that are planned to be exported from the site that can feasibly be recycled shall be recycled for re-use; alternatively, soils shall be reused on site to balance soil import/export.***

Level of Significance After Mitigation: Less Than Significant

Implementation of mitigation measure **UTIL-3** will ensure that construction and demolition materials that are salvageable are recycled, and thereby diverted from the local landfill, which will minimize the potential for OBMPU projects to generate waste in excess of local landfill capacities. Similarly, **UTIL-4** will ensure that soils that would generally be exported from a given construction site are salvaged where possible for recycled and ultimately reuse, thereby diverting this waste stream from the local landfill. This too will minimize the potential for OBMPU projects to generate waste in excess of local landfill capacities.

e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)
This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Implementation of proposed wells and monitoring devices would comply with all City and County construction and demolition requirements during construction of the proposed facilities as described above in the regulatory setting. All excavated soil would be hauled offsite by truck to an appropriately permitted solid waste facility. The daily amount of soil to be disposed per day would not exceed the maximum permitted throughput for each waste type (i.e., non-hazardous and hazardous). Any hazardous materials collected on a given OBMPU project site during either construction or operation will be transported and disposed of by a permitted and licensed hazardous materials service provider. As stated above under issue XIX(d), OBMPU projects would be required, through the implementation of mitigation measure **UTIL-2** to recycle construction and demolition materials beyond the mandated 50 percent diversion required by AB 939. Furthermore, mitigation measure **UTIL-3** would require further diversion through the recycling of soils where possible for future OBMPU projects. The proposed projects—development of wells and monitoring devices—would comply all federal, State, and local statues related to solid waste disposal. Therefore, the proposed OBMPU would result in less than significant construction impacts.

The Cities and County in which a given project would be located are required to comply with the California Integrated Waste Management Act of 1989, requiring diversion of solid waste from landfills through reuse and recycling. Facilities proposed as part of the OBMPU would be required to recycle as part of the projects' operational activities. As such, the proposed OBMPU facilities would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Impacts are less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)
This category includes the construction of 550,000 LF of new pipelines, booster pump stations, reservoirs and minor appurtenances whose number. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts are the same as those identified under Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)
This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts are the same as those identified under Project Categories 1 and 2.

The proposed expansion of the safe storage capacity from 600,000 af (through June 30, 2021) to between 700,000 af and 1,000,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to violate federal, state, and local management and reduction statutes and regulations related to solid waste.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)
The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new advanced water treatment plant (discussed in IEUA's 2017 FMP PEIR), improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Stormwater construction/relocation impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Impacts are the same as those identified under Project Categories 1, 2, and 3.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Mitigation measures **UTIL-3 and UTIL-4** outlined under issue XIX(a) above are required.

Level of Significance After Mitigation: Less Than Significant

As stated under issue XIX(d) above, implementation of mitigation measures **UTIL-3 and UTIL-4** will ensure that recyclable waste streams are diverted from the local landfill, thereby ensuring compliance with the required 50 percent waste diversion mandated by the State.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	☐	☒	☐	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☒	☐	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☒	☐	☐

SUBSTANTIATION

This Section evaluates the environmental impacts under the new environmental issue of "Wildfire." The rationale for inclusion of this topic is not just the recent spate of severe wildfires, but to elevate the risk of wildfire to that of other major hazards, such as an active fault line or a flood hazard and the risk that society and future residents attracted to such areas incur from allowing humans to occupy areas with "high" risk. The "Wildfire" issue is also discussed under the Hazards and Hazardous Materials Section, Section IX, of this Initial Study.

XX.1 Existing Conditions

The highly urbanized portion of the Chino Basin and the Prado Wetlands have been designated by the Cal Fire as less than high or very high fire hazard severity zones. This is shown on the attached wildland fire Fire Hazard Severity Zone maps. Figures IX-1 through IX-4 show the fire hazard zones in the relevant portions of San Bernardino and Riverside Counties that encompass the Chino Basin. Almost all "high" or "severe" wildland fire hazard areas are located on the edges of the Chino Basin, or adjacent to isolated hills (Jurupa Hills) that interrupt the slope of the Chino Basin alluvial fan. As described below both the unmanned infrastructure proposed by the OBMPU and the location of this infrastructure occur in areas with at most moderated wildland fire hazards.

XX.2 Project Impact Analysis

The following issues are required to be analyzed if a project is located in or near a state responsibility area or lands classified as very high fire hazard severity zone. As noted above the location of OBMPU facilities would likely not be located in such an area but since many of the proposed OBMPU facilities sites have not yet been identified, it is possible that one or more future facilities could be required to locate within such areas. The following describes the potential impacts if an implementing agency selects such a site.

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

Please refer to the discussion under Emergency Plans under Section IX(f) and Section XVII. None of the OBMPU facility operations have a potential to adversely impact any emergency response plan or

emergency evacuation plan. Construction activities in roadways does have a potential to effect routes to very high or high wildland fire hazard zones, but implementation of mitigation measures **HAZ-11, HAZ-12** and **TRAN-1** would reduce the potential for adverse impact to emergency response vehicles to a less than significant impact level. No further discussion of this adverse impacts under this issue is required. It is important to note that as an essential component of ensuring an adequate water supply over the next 30 years, the OBMPU provides emergency responders with a critical component, an adequate water supply, in controlling future wildland fires.

b. Due to slope, prevailing winds, and other factors exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?

Please refer to the discussion under Emergency Plans under Section IX(f) and Section XVII, Transportation. None of the OBMPU facility operations have a potential to bring new project occupants into a high or very high wild fire hazard area. Therefore, implementation of the proposed OBMPU has no potential to expose any project occupants to pollutant concentrations from a wildfire. Also, no occupants would be exposed to the uncontrolled spread of a wildfire under the OBMPU. Implementation of mitigation measure **HAZ-12** will also minimize the exposure of future OBMPU facilities, that may have to be located within high or very high fire hazard areas, to severe damage or loss. Based on the preceding data, no adverse impact is forecast to occur under this issue.

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Please refer to the discussion under Emergency Plans under Section IX(f) and Section XVII, Transportation. At this time no specific OBMPU infrastructure is proposed for areas designated as high or very high wildland fire hazard areas on the Fire Hazard Severity Zone maps provided on Figures IX-1 through IX-4. However, it is possible that OBMPU facilities could be implemented in the future in the Chino Hills area and on the alluvial slopes immediately south of the San Gabriel Mountains. Installation of OBMPU infrastructure in these locations could "exacerbate fire risk" in these areas; however, the implementation of measure **HAZ-12** would be implemented to reduce any contribution to greater fire risk to a less than significant impact level.

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Please refer to the discussion under Emergency Plans under Section IX(f) and Section XVII, Transportation. As noted in the preceding discussion, no specific OBMPU infrastructure is proposed for areas designated as high or very high wildland fire hazard areas on the Fire Hazard Severity Zone maps provided on Figures IX-1 through IX-4. The most likely facilities are wells (Category 1 facilities), pipelines (Category 2 facilities) or a remote possibility of a new recharge basin (a Category 3 facility) at the northern-edge of the Chino Basin on the alluvial fans of the San Gabriel Mountains. Wells and pipelines have a small surface footprint that can be constructed to minimize potential fire hazards (as required by measure **HAZ-12**) and would not cause significant damage downstream from their location. A new recharge basin would reduce overall fuel load within its footprint and be self-contained from the standpoint of stormwater runoff and slope stability. Thus, based on this evaluation, the implementation of OBMPU infrastructure can be accomplished without causing potentially significant impacts with the implementation of measure **HAZ-12**.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures: Implementation of Mitigation Measures **HAZ-11, HAZ-12** and **TRAN-1** are required in high and very high wildfire hazard areas. These are repeated below for ease of reference.

HAZ-11*: *Prior to initiating construction of proposed facilities, the implementing agency shall prepare and implement a Traffic Control Plan that contains comprehensive strategies

for maintaining emergency access. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches and identification of alternate routing around construction zones. In addition, police, fire, and other emergency service providers shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. The implementing agency shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan, and are reviewed and approved by the local agency with authori9ty over the roadways.

HAZ-12: ***During construction of facilities located in areas designated as High or Very High Fire Hazard Severity Zones (VHFHSZs) by CAL FIRE, fire hazard reduction measures shall be implemented and incorporated into a fire management plan for the proposed facility. These measures shall address all staging areas, welding areas, or areas slated for development that are planned to use spark-producing equipment. These areas shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that includes a spark arrestor shall be equipped with a spark arrestor in good working order. During the construction of the project facilities, all vehicles and crews working at the project site to have access to functional fire extinguishers at all times. In addition, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. This plan shall be reviewed by CAL FIRE and approved prior to construction within high and very high severity zones and implemented once approved. The fire management plan shall also include sufficient defensible space or other measures at a facility site located in a high or very high fire severity area to minimize fire damage to a level acceptable to CAL FIRE.***

Furthermore, the Counties of Riverside and San Bernardino require businesses that use or store certain quantities of hazardous materials and submit a Hazardous Materials Business Plan (HMBP) that describes the hazardous materials usage, storage, and disposal to the Certified Unified Program Agency (CUPA). Further OBMPU facilities that meet these criteria must prepare an HMBP pursuant to the applicable local agency.

TRAN-1: ***For projects that may affect traffic flow along existing roadways, the implementing agency shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:***

- ***Develop circulation and detour plans, if necessary, to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.***
- ***To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.***
- ***Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.***
- ***For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls.***
- ***Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.***

Level of Significance After Mitigation: Less than Significant

The implementation of Mitigation Measure **HAZ-12** would ensure implementation of fire hazard reduction measures during construction in areas designated as VHFHSZs to reduce the potential for wildfire impacts

on people or structures to a less than significant impact. Operational impacts would also be reduced to a less than significant impact.

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more development could expose people or structures to a significant risk of loss, injury or death involving wildland fires. Since there would be potential for OBMPU projects to be located within or adjacent to areas with high wildland fire risks, impacts would be cumulatively considerable and therefore, would result in a potentially significant cumulative impact.

*Cumulative Measures: Implementation of Mitigation Measure **HAZ-12** is required in high and very high wildfire hazard areas.*

Level of Significance After Mitigation: Less than Significant

The implementation of Mitigation Measure **HAZ-12** would ensure that the proposed facilities' contribution to cumulative impacts related to wildfires would be reduced to less than cumulatively considerable by implementing fire hazard reduction measures during construction and operations in areas designated as VHFHSZs to reduce the potential for wildfire impacts on people or structures.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XXI. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

SUBSTANTIATION

a. *Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

This Initial Study has been used to evaluate environmental issues to determine whether an issue has a potential to cause a potentially significant adverse impact, which would require the issue to be evaluated in an environmental impact report. Based on the preliminary findings regarding biological resources and cultural resources, these two issues do have a potential to experience a significant adverse environmental impact and the biological resource and cultural resource issues (including tribal cultural resources) will be evaluated as issues of focus in an Environmental Impact Report (EIR) for the Chino Basin Optimum Basin Management Program Update (OBMPU).

b. *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

Many, but not all, environmental issues have a cumulative quality that reflects the effects of past projects and collective projects proposed in the same time period for a specific environmental issue. The following issues are considered to have cumulative characteristics: agriculture, air quality, biology, cultural resources, energy, greenhouse gases, hydrology and water quality, mineral resources, noise, population and housing, public services, recreation, traffic, utilities and service systems, and wildfire. Of these environmental issues the following were found to have a less than significant impact on the environment, most often with mitigation: agriculture, mineral resources, noise, population and housing, public services, recreation, traffic, some of the utilities and service systems, and wildfire. The following environmental issues have been identified as having the potential to contribute to cumulatively considerable (significant) impacts on the

natural and man-made environment: air quality, biology, cultural resources, energy, greenhouse gases, hydrology and water quality, and some of the utilities and service issues. These issues will all be evaluated in the EIR that will be prepared to determine whether these issues may cause a cumulatively considerable adverse impact on the environment.

c. *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Certain environmental effects include elements or characteristics that can have a direct or indirect substantial adverse impact on the human population of the Chino Basin. Simple examples include flood hazards and earthquake hazards. The following issues are considered to have the potential to cause substantial adverse environmental effects on human beings: aesthetics, air quality, geology and soils, greenhouse gases, hazards and hazardous materials, hydrology and water quality, land uses, noise, public services, utilities and service systems, and wildfire. Of these environmental issues, the following were found to have a less than significant impact on the environment, most often with mitigation: aesthetics, geology and soils, hazards and hazardous materials, land uses, noise, public services, some of the utilities and service systems, and wildfire. The following environmental issues have been identified as having the potential to significant adverse effects on humans: air quality, greenhouse gases, hydrology and water quality, and some of the utilities and service issues. These issues will all be evaluated in the PEIR that will be prepared to determine whether these issues may cause substantial adverse effects on humans.

Conclusion

Based on the findings in this Initial Study, IEUA will distribute this document and a Notice of Preparation (NOP) of the Chino Basin OBMPU EIR for public review and comment. Due to the size of this proposed project, a public scoping meeting will be held as indicated in the NOP that accompanies this Initial Study. The following environmental issues will be evaluated in the Draft OBMPU EIR: **air quality, biology resources, cultural resources, energy, greenhouse gases, hydrology and water quality, tribal cultural resources, and certain water issues under the utilities and service system topic.**

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino*,(1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors*, (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; San *Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Revised 2019
Authority: Public Resources Code sections 21083 and 21083.09
Reference: Public Resources Code sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3/ 21084.2 and 21084.3

SUMMARY OF MITIGTION MEASURES

Aesthetics

AES-1: Proposed facilities shall be designed in accordance with local design standards and integrated with local surroundings. Landscaping shall be installed in conformance with local landscaping design guidelines as appropriate to screen views of new facilities and to integrate facilities with surrounding areas.

AES-2: The Mills Wetland Storage Basin Project shall be designed to include landscaping commensurate with the existing pastoral setting that exists at this site at present.

AES-3: Future regional groundwater treatment facilities and other proposed facilities defined within the OBMPU at unknown locations shall either (1) Be located outside of scenic viewsheds identified in the General Plan or Municipal Code corresponding to a proposed location for a future facility, or (2) Undergo subsequent CEQA documentation to assess potential impacts from locating a future facility in an area that may contain scenic resources.

AES-4: Should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, municipal code, or other local regulations. If no tree ordinance exists within the local jurisdiction, and a project will remove healthy trees as defined by a qualified arborist, (1) the implementing agency shall replace all trees removed at a 1:1 ratio, and (2) The specific location selected for a well shall avoid rock outcroppings and other scenic resources. If this cannot be accomplished a second tier CEQA evaluation shall be completed.

AES-5: Future proposed facilities defined within the OBMPU at unknown locations shall either (1) Be located within sites that avoid rock outcroppings and other scenic resources, or (2) Undergo subsequent CEQA documentation to assess potential impacts from locating a future facility in an area that may contain scenic resources.

AES-6: OBMPU facility implementation will conform with design requirements established in the local jurisdiction planning documents, including but not limited to the applicable zoning code, except where such requirements conflict with the purpose or function of such facilities.

AES-7: When OBMPU above ground facilities are constructed in the future, the local agency design guidelines for the project site shall be followed to the extent that they do not conflict with the engineering and budget constraints established for the facility.

AES-8: Future OBMPU projects shall implement the following:

- Use of low-pressure sodium lights where security needs require such lighting to minimize impacts of glare; Projects within a 45-mile radius of the Mount Palomar Observatory and located within Riverside County must adhere to special standards set by the County of Riverside relating to the use of low-pressure sodium lights.
- The height of lighting fixtures shall be lowered to the lowest level consistent with the purpose of the lighting to reduce unwanted illumination.
- Directing light and shielding shall be used to minimize off-site illumination.
- No light shall be allowed to intrude into sensitive light receptor areas.

Agriculture and Forestry Resources

AGF-1 For all proposed facilities in the southern portion of the Chino Basin (south of SH 60), the potential for impact to important farmlands shall be determined prior to final site election. If important farmland cannot be avoided and individually exceeds 5 acres or cumulatively exceeds 10 acres of important farmland lost to agricultural production over the life of the program, the agency implementing the project shall purchase compensatory mitigation in the

form of comparable important farmland permanently conserved in either a local or State-approved important farmland mitigation bank at a mitigation ratio of 1:1. The acquisition of this compensatory mitigation shall be completed within one year of initiating construction of the proposed facility and verification shall be documented with the Chino Basin Watermaster.

AGF-2 For all proposed facilities in the southern portion of the Chino Basin (south of SH 60), the potential for impact to important farmlands shall be determined prior to final site election. If important farmland cannot be avoided and individually exceeds 5 acres or cumulatively exceeds 10 acres of important farmland lost to agricultural production over the life of the program, the agency implementing the project shall relocate and avoid the site, or alternatively the agency shall conduct a California Land Evaluation and Assessment (LESA) model evaluation. If the evaluation determines the loss of important farmland will occur, the agency shall purchase compensatory mitigation in the form of comparable important farmland permanently conserved in either a local or State-approved important farmland mitigation bank at a mitigation ratio of 1:1. The acquisition of this compensatory mitigation shall be completed within one year of initiating construction of the proposed facility and verification shall be documented with the Chino Basin Watermaster.

AGF-3 For all proposed facilities that may impact riparian woodland/forest land in the portion of the Chino Basin (SH 60), the potential for impact forest land shall be determined prior to final site election. If important forest land cannot be avoided and permanently will exceed 5 acres in area, the agency implementing the project shall relocate and avoid the site, or alternatively the agency shall conduct an evaluation to determine if it qualifies with the State definition of "forest land." If the evaluation determines the permanent loss of important forestland will occur, the agency shall purchase compensatory mitigation in the form of comparable forest land permanently conserved in either a local or State-approved important forest land mitigation bank at a mitigation ratio of 1:1. Alternatively, the agency may carry out a forest land creation program at a 1:1 ratio for comparable woodland. The acquisition or creation of this compensatory mitigation shall be completed/initiated within one year of initiating construction of the proposed facility and verification shall be documented with the Chino Basin Watermaster.

Geology and Soils

GEO-1: If a specific project is proposed within a designated Alquist-Priolo Fault Zone, the facility shall be relocated, if possible. If relocation is not possible, the project shall be designed in accordance with the CBC and according to the recommendations generated by a project specific geotechnical study. If the project specific geotechnical study cannot mitigate potential seismic related impacts, then a second tier CEQA evaluation shall be completed.

GEO-2: Prior to construction of each improvement, a design-level geotechnical investigation, including collection of site-specific subsurface data if appropriate, shall be completed. The geotechnical evaluation shall identify all potential seismic hazards including fault rupture, and characterize the soil profiles, including liquefaction potential, expansive soil potential, subsidence, and landslide potential. The geotechnical investigation shall recommend site-specific design criteria to mitigate for seismic and non-seismic hazards, such as special foundations and structural setbacks, and these recommendations shall be incorporated into the design of individual proposed projects.

GEO-3: For each well development or other OBMPU projects that is less than one acre in size requiring ground disturbing activities such as grading, the Implementing Agency shall identify best management practices (BMPs, such as hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from the construction site does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.

GEO-4: For project-level development involving ground disturbance, a qualified paleontologist shall be retained to determine the necessity of conducting a study of the project area(s) based on the potential sensitivity of the project site for paleontological resources. If deemed necessary, the paleontologist shall conduct a paleontological resources inventory designed to identify potentially significant resources. The paleontological resources inventory would consist of: a paleontological resource records search to be conducted at the San Bernardino County Museum and/or other appropriate facilities; a field survey or monitoring where deemed appropriate by the paleontologist; and recordation of all identified paleontological resources.

Hazards and Hazardous Materials

HAZ-1: For OBMPU facilities that handle hazardous materials or generate hazardous waste, the Business Plan prepared and submitted to the county or local city shall incorporate best management practices designed to minimize the potential for accidental release of such chemicals. The facility managers shall implement these measures to reduce the potential for accidental releases of hazardous materials or wastes

HAZ-2: The business plan shall assess the potential accidental release scenarios and identify the equipment and response capabilities required to provide immediate containment, control and collection of any released material. Adequate funding shall be provided to acquire the necessary equipment, train personnel in responses and to obtain sufficient resources to control and prevent the spread of any accidentally released hazardous or toxic materials.

HAZ-3: For the storage of any acutely hazardous material at an OBMPU facility, such as chlorine gas, modeling of pathways of release and potential exposure of the public to any released material shall be completed and specific measures, such as secondary containment, shall be implemented to ensure that sensitive receptors will not be exposed to significant health threats based on the toxic substance involved.

HAZ-4: All hazardous contaminated material shall be delivered to a licensed treatment, disposal or recycling facility that has the appropriate systems to manage the contaminated material without significant impact on the environment

HAZ-5: Before determining that an area contaminated as a result of an accidental release is fully remediated, specific thresholds of acceptable clean-up shall be established and sufficient samples shall be taken within the contaminated area to verify that these clean-up thresholds have been met.

HAZ-6: Vector management plans shall be prepared and use of pesticides shall be reviewed and coordinated with the West Valley Mosquito and Vector Control District for approval prior to implementing vector control at any of the new or expanded storage basins. All pesticides shall be applied in accordance with State and label requirements to minimize potential for residual concentrations that may be considered adverse to public health and water quality.

HAZ-7: All accidental spills or discharge of hazardous material during construction activities shall be reported to the County Fire Department and shall be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility. This measure shall be incorporated into the SWPPP prepared or each future facility developed under the OBMPU PEIR. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.

HAZ-8: Prior to final site selection for future OBMPU facilities, the implementing agency shall obtain a Phase I Environmental Site Assessment (ESA)for the selected site. If a site contains contamination the agency shall either avoid the site by selecting an alternative location or shall

remove any contamination (remediate) at the site to a level of concentration that eliminates hazard to employees working at the site and that will not conflict with the installation and future operation of the facility. For sites located on agricultural land, this can include soil contaminated with unacceptable concentrations of pesticides or herbicides that shall be remediated through removal or blending to reduce concentrations below thresholds of significance established for the particular pesticide or herbicide.

HAZ-9: Should an unknown contaminated site be encountered during construction of OBMPU facilities, all work in the immediate area shall cease; the type of contamination and its extent shall be determined; and the local CUPA or other regulatory agencies (such as the DTSC or Regional Board) shall be notified. Based on investigations of the contamination, the site may be closed and avoided or the contaminant(s) shall be remediated to a threshold acceptable to the CUPA or other regulatory agency threshold and any contaminated soil or other material shall be delivered to an authorized treatment or disposal site.

HAZ-10: Prior to finalizing sit selection of an OBMPU facility with an airport safety zone, input from the affected airport management entity shall solicited. For projects within airport safety zones, facility design shall follow the guidelines of the appropriate airport land use plan to the extent feasible. If legitimate safety hazards are identified, the implementing agency shall relocate the facility outside the area of conflict if feasible, or if the site is deemed essential, the implementing agency shall propose an alternative design that reduces any conflict to a less than significant level of conflict. As an example, a pump station or reservoir could be installed below ground instead of above ground.

HAZ-11: Prior to initiating construction of proposed facilities, the implementing agency shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches and identification of alternate routing around construction zones. In addition, police, fire, and other emergency service providers shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. The implementing agency shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan, and are reviewed and approved by the local agency with authority over the roadways.

HAZ-12: During construction of facilities located in areas designated as High or Very High Fire Hazard Severity Zones (VHFHSZs) by CAL FIRE, fire hazard reduction measures shall be implemented and incorporated into a fire management plan for the proposed facility. These measures shall address all staging areas, welding areas, or areas slated for development that are planned to use spark-producing equipment. These areas shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that includes a spark arrestor shall be equipped with a spark arrestor in good working order. During the construction of the project facilities, all vehicles and crews working at the project site to have access to functional fire extinguishers at all times. In addition, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. This plan shall be reviewed by CAL FIRE and approved prior to construction within high and very high severity zones and implemented once approved. The fire management plan shall also include sufficient defensible space or other measures at a facility site located in a high or very high fire severity area to minimize fire damage to a level acceptable to CAL FIRE.

Furthermore, the Counties of Riverside and San Bernardino require businesses that use or store certain quantities of hazardous materials and submit a Hazardous Materials Business Plan (HMBP) that describes the hazardous materials usage, storage, and disposal to the Certified Unified Program Agency (CUPA). Further OBMPU facilities that meet these criteria must prepare an HMBP pursuant to the applicable local agency.

Land Use and Planning

LU-1: Following selection of sites for future OBMPU-related facilities, each site and associated facility shall be evaluated for potential incompatibility with adjacent existing or proposed land uses. Where future facility operations can create significant incompatibilities (lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses, an alternative site shall be selected, or subsequent CEQA documentation shall be prepared that identifies the specific measures that will be utilized to reduce potential incompatible activities or effects to below significance thresholds established in the general plan for the jurisdiction where the facility will be located.

Mineral Resources

MR-1: For each new groundwater treatment facility (regionally located or near existing well sites), Flood MAR facility, and MS4 compliance site, the Implementing Agency shall locate these facilities outside of sites designated for the extraction of or as containing significant mineral resources (such as, located within MRZ-2 zones) or otherwise identified by the local jurisdiction as containing important mineral resources (such as, designated by the local general plan as being located within a mineral extraction related land use). Where it is not feasible to locate such facilities outside of sites designated for mineral resources, a subsequent CEQA documentation shall be prepared that identifies specific measures that compensates for the loss of mineral resources.

Noise

NOI-1: The Watermaster and/or Implementing Agency shall implement the following measures during construction:

- Include design measures where feasible to reduce the construction noise levels if necessary to comply with local noise ordinances. These measures may include, but are not limited to, the erection of noise barriers/curtains, use of advanced or state-of-the-art mufflers on construction equipment, and/or reduction in the amount of equipment that would operate concurrently at the construction site.
- Place noise and groundborne vibration-generating construction activities whose specific location on a construction site may be flexible (e.g., operation of compressors and generators, cement mixing, general truck idling) as far as possible from the nearest noise- and vibration-sensitive land uses such as residences, schools, and hospitals.
- Minimize the effects of equipment with the greatest peak noise generation potential via shrouding or shielding to the extent feasible. Examples include the use of drills, pavement breakers, and jackhammers.
- Locate stationary construction noise sources as far from adjacent noise-sensitive receptors as possible, and require that these noise sources be muffled and enclosed within temporary sheds, insulation barriers if necessary to comply with local noise ordinances.
- Provide noise shielding and muffling devices on construction equipment per the manufacturer's specifications.
- If construction is to occur near a school, the construction contractor shall coordinate the with school administration in order to limit disturbance to the campus. Efforts to limit construction activities to non-school days shall be encouraged.
- For major construction projects, identify a liaison for surrounding residents and property owners to contact with concerns regarding construction noise and vibration. The liaison's telephone number(s) shall be prominently displayed at construction locations.
- For major construction projects, notify in writing all landowners and occupants of properties adjacent to the construction area of the anticipated construction schedule at least two weeks prior to groundbreaking.
- Construction activities shall occur within the hours considered to be acceptable for construction by the applicable jurisdiction within which an individual project is constructed, except for activities, such as well drilling which are continuous, and for emergencies. Where no such restrictions are in place that limit hours of construction, construction shall

be limited to the hours of 7 AM and 6 PM on weekdays, 8 AM and 5 PM on Saturdays, and at no time shall construction activities occur on Sundays or holidays, unless a declared emergency exists.

NOI-2: The Watermaster and/or Implementing Agency shall require that all OBMPU-related aboveground facilities that include stationary noise generating equipment (such as emergency generators, blowers, pumps, motors, etc.) to minimize their audible noise levels by locating equipment away from noise-sensitive receptor areas, installing proper acoustical shielding for the equipment, and incorporating the use of parapets into building design to meet the applicable City or County noise level requirements at neighboring property lines.

NOI-3: For construction activities during non-standard working hours or hours that are not exempt from compliance with applicable City or County noise ordinances (e.g., 24-hour well drilling), the Watermaster and/or Implementing Agency will secure a noise waiver from the appropriate jurisdiction if available.

NOI-4: Injection and extraction wells shall be located as far from sensitive receptors as feasible. If new wells are to be constructed in the immediate vicinity of sensitive receptors, construction specification requirements shall include installation and maintenance of a temporary noise barrier (e.g. engineered sound wall or noise blanket) during 24-hour construction activities, to the extent feasible if necessary to comply with local noise ordinances. Specifications shall include use of appropriate materials that shall be installed to a height that intercepts the line of sight between the construction site and sensitive receptors in order to achieve maximum attenuation in an attempt to decrease construction area noise to as close as ambient noise levels as possible. Furthermore, where new wells are located adjacent to sensitive receptors, wells and any other associated noise generating facilities (i.e. associated treatment facilities, pumps, generators, etc.) shall be enclosed within a structure to attenuate noise to an acceptable level at the nearest sensitive receptor.

NOI-5: The Watermaster and/or Implementing Agency shall require the construction contractor(s) to implement the following measure:

- Ensure that the operation of construction equipment that generates high levels of vibration including, but not limited to, large bulldozers, loaded trucks, pile-drivers, vibratory compactors, and drilling rigs, is minimized within 45 feet of existing residential structures and 35 feet of institutional structures (e.g., schools) during construction of the various OBMPU projects. Use of small rubber-tired bulldozers shall be enforced within these areas during grading operations to reduce vibration effects.
- The construction contractor for any individual OBMPU project shall provide signs along the roadway identifying a phone number for adjacent property owners to contact with any complaint. During future construction activities for any individual OBMPU project with heavy equipment within 300 feet of occupied residences, vibration field tests shall be conducted at the property line near the nearest occupied residences. To the extent feasible, if vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold. These measures may include, but are not limited to the following: use different construction methods, slow down construction activity, or other mitigating measures to reduce vibration at the property from where the complaint was received.

NOI-6: Where an OBMPU project would be constructed adjacent to an existing or potential historic building, the Watermaster and/or Implementing Agency shall require, through contract specifications, a certified structural engineer to be retained to submit evidence that the operation of vibration-generating equipment associated with the construction activities would not result in any structural damage to the adjacent historic building. Contract specifications shall be included in the construction documents for the applicable OBMPU project development.

NOI-7: Where an OBMPU project would be constructed within 2 miles of a public airport, any new indoor facilities should be retrofitted to minimize noise to a level that is within OSHA's permissible exposure limit (PEL). Employees working outside at an OBMPU project, either during construction or operation, shall be provided with ear protection to minimize noise to a level that is below OSHA's PEL to be utilized during periods of excessive noise caused by any aircraft overflights.

Population and Housing

POP-1: If future OBMPU facilities must be located on parcels occupied by existing housing, the proponent of the facility will ensure that short- and long-term housing of comparable quality and value are made available to the home owner(s) prior to initiating construction of the facility.

Public Services

PS-1: OBMPU facilities shall be fenced or otherwise have access controlled to prevent illegal trespass to attractive nuisances, such as construction sites or recharge sites.

PS-2: OBMPU facilities proposed to be located within vacant parkland or OBMPU facilities proposed to be located within existing park or recreation facilities that would require more than one acre of disturbance shall be either (1) Relocated to avoid significant impacts to parkland or (2) Shall provide supplemental parkland within the corresponding jurisdiction equal or greater to the amount of parkland or recreation facilities lost as a result of implementation of the OBMPU facility.

Recreation

REC-1: The Watermaster or Implementing Agency shall prepare subsequent CEQA documentation for any Park or Recreation facilities required to be developed as part of implementation of mitigation measure PS-2—i.e., in the event an OBMPU Facility would be result in loss of parkland or recreation facilities.

Transportation

TRAN-1: For projects that may affect traffic flow along existing roadways, the implementing agency shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:

- Develop circulation and detour plans, if necessary, to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.
- To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
- Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.
- For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls.
- Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.

Utilities and Service Systems

UTIL-1 The Watermaster or Implementing Agency shall prepare subsequent CEQA documentation for the Agua de Lejos Treatment Plant and upgrades to the Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites once specific improvements or facility locations have been identified, and design of such improvements or new facilities has been drafted.

UTIL-2 Implementation of a Drainage Plan to Reduce Downstream Flows. Prior to construction of project facilities, the Watermaster or Implementing Agency shall prepare a drainage plan that includes design features to reduce stormwater peak concentration flows exiting the above ground facility sites (consistent with MS4 requirements) so that the capacities of the existing downstream drainage facilities are not exceeded. These design features could include bio-retention, sand infiltration, return of stormwater for treatment within the treatment plant, and/or detention facilities.

UTIL-3 The contract with demolition and construction contractors for a given OBMPU Project shall include the requirement that all materials that can feasibly be recycled shall be salvaged and recycled. This includes but is not limited to wood, metals, concrete, road base and asphalt. The contractors for a given OBMPU Project shall submit a recycling plan to the Watermaster or Implementing Agency for review and approval prior to the construction of demolition/construction activities.

UTIL-4 The contract with demolition and construction contractors for a given OBMPU Project shall include the requirement that all soils that are planned to be exported from the site that can feasibly be recycled shall be recycled for re-use; alternatively, soils shall be reused on site to balance soil import/export.

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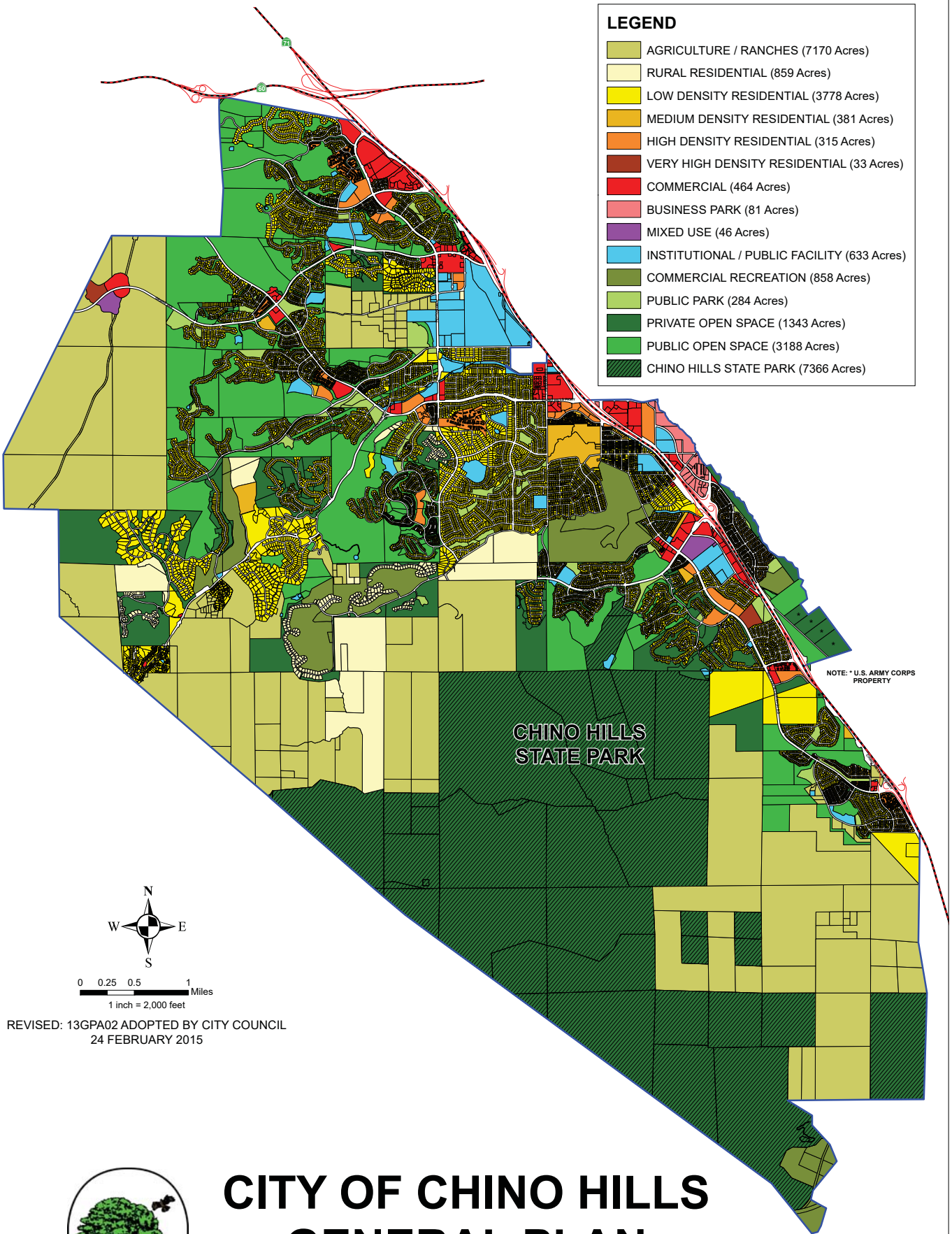
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County of Riverside 2015 General Plan

County of San Bernardino General Plan adopted March 13, 2007

ATTACHMENT 1

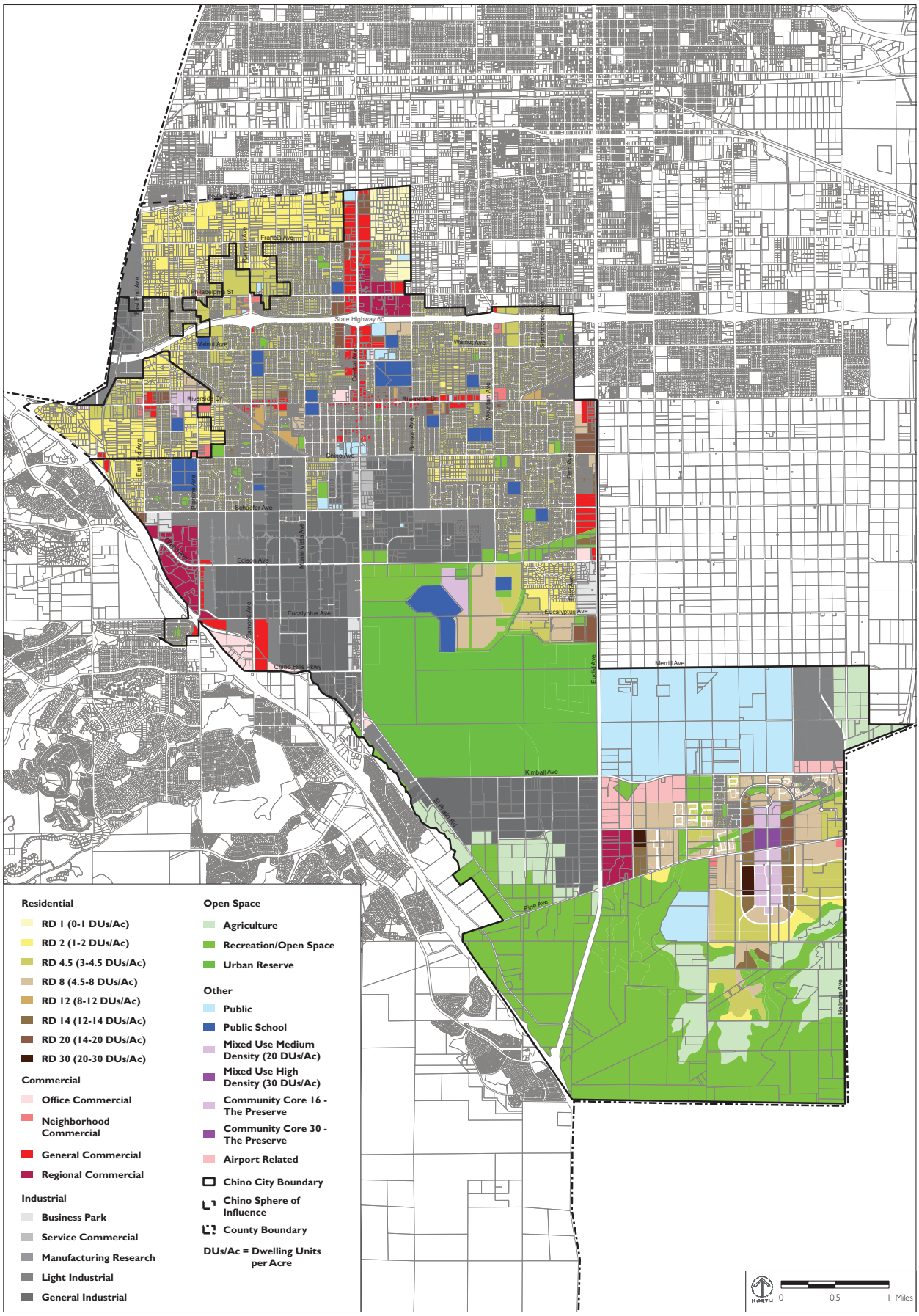
GENERAL PLAN MAPS



REVISED: 13GPA02 ADOPTED BY CITY COUNCIL
24 FEBRUARY 2015

CITY OF CHINO HILLS
INCORPORATED 1991

CITY OF CHINO HILLS GENERAL PLAN LAND USE



Note: General Plan land use designations in Specific Plan areas have been aggregated into General Plan categories for clarity on this map.

FIGURE LU-2
GENERAL PLAN LAND USE DESIGNATIONS

City of Eastvale
General Plan

- Low Density Residential
- Medium Density Residential
- Medium High Density Residential
- High Density Residential
- Highest Density Residential
- Commercial Retail
- Light Industrial
- Business Park
- Public Facilities
- Agriculture
- Conservation
- Open Space Recreation
- Water
- Leal Policy Area
- Freeway
- Airport Influence Areas*

*Development in these areas may be subject to restrictions based on the most recently adopted version of the Chino or Ontario Airport Land Use Compatibility Plans. Please consult the applicable plan for detailed information.

0 0.5 1 2 Miles

N

Digital base data provided by The US Census Bureau Riverside and San Bernardino counties.

G:\PROJECTS\EASTVALE\PLANNING\GENERAL_PLAN\EASTVALE_GP_36x48_edit_0419.mxd 4/29/2019

Revision: 4/29/2019

City of Fontana, State of California

GENERAL PLAN LAND USE MAP

Adopted: September 10, 2019

GENERAL PLAN LAND USE LEGEND

RESIDENTIAL DESIGNATIONS

- R-E Residential Estates (2 du/ac)
- R-PC Residential Planned Community (3.0-6.4 du/ac)
- R-SF Single Family Residential (2.1-5 du/ac)
- R-M Medium Density Residential (5.1-12 du/ac)
- R-MF Multi Family Residential (12.1-24 du/ac)
- R-MFMH Multi Family Medium/High Residential (24.1-39 du/ac)
- R-MFH Multi Family High Residential (39.1-50 du/ac)
- R-T Residential Trucking (2 du/ac)

WALKABLE MIXED USE DESIGNATIONS

- WMXU-1 Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)
- WMXU-2 Walkable Mixed Use Urban Village (0.2-1 FAR, 2.1-24 du/ac)

COMMERCIAL DESIGNATIONS

- C-C Community Commercial (0.1-1.0 FAR)
- C-G General Commercial (0.1-1.0 FAR)
- RMU Regional Mixed Use (0.1-1 FAR, 12-24 du/ac)

INDUSTRIAL DESIGNATIONS

- I-L Light Industrial (0.1-0.6 FAR)
- I-G General Industrial (0.1-0.6 FAR)

PUBLIC DESIGNATIONS

- P-PF Public Facilities
- P-R Recreational Facilities
- P-UC Public Utility

PUBLIC DESIGNATIONS

- OS Open Space

Legend

- Easement
- Railroads
- Parcel
- City Limits
- Sphere of Influence
- Specific Plans

General Plan Amendments

GPA No.	Resolution No.	Adoption Date
GPLU Map Adopted	18-097	11/13/18
17-002	18-1785	11/27/18
17-006	18-1785	11/27/18
18-002	19-029	02/26/19
18-003	19-027	02/26/19
16-001	19-032	02/26/19
11-026	19-040	03/12/19
18-007	19-131	09/10/19
19-005	19-132	09/10/19

Specific Plan Legend

#1	Southridge Village	C	Civic Use
#2	Rancho Fontana	CH	City Hall
#3	Walnut Village	F	Fire Station
#4	Rescinded	H	Hospital
#5	Southwest Industrial Park	P	Police Dept.
#6	Northgate	S	School
#7	Rescinded		
#8	West End		
#9	Fontana Gateway		
#10	Rescinded		
#11	South Park		
#12	Hunter's Ridge		
#13	Empire Center		
#14	Rescinded		
#15	California Landings		
#16	Sierra Lakes		
#17	Westgate		
#18	Summit Heights		
#19	Coyote Canyon		
#20	Citrus Heights South		
#21	Citrus Heights North		
#22	Summit at Rosena		
#23	Ventana at Duncan Canyon		
#24	Valley Trails		
#25	Promenade		
#26	Providence Point		
#27	Arboretum		

- Auto Center Overlay
- Emergency Shelter Overlay
- Fire Hazard Overlay
- Medical Center Overlay
- Valley Business Park Overlay
- Warehousing Distribution Logistics Overlay District

SEAL OF THE CITY OF FONTANA, CALIFORNIA — INCORPORATED JUNE 25, 1952

Scale 1:24,000
1" inch = 2,000 feet
0 2,000 4,000 Feet

N

Map Disclaimer

The data provided hereon may be inaccurate or out of date and any person or entity who relies on said information for any purpose whatsoever does so solely at his or her own risk. Neither the City of Fontana nor any agency, officer, or employee of either nor of any information provider warrants the accuracy, reliability of timeliness of any of the data provided hereon. THIS INFORMATION IS PROVIDED 'AS IS' WITHOUT WARRANTY OF ANY KIND INCLUDING BY WAY OF ILLUSTRATION AND NOT OF LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.

City of Fontana
IT Department / GIS
General Plan Land Use.mxd

BASEMAP UPDATE AUGUST 2019

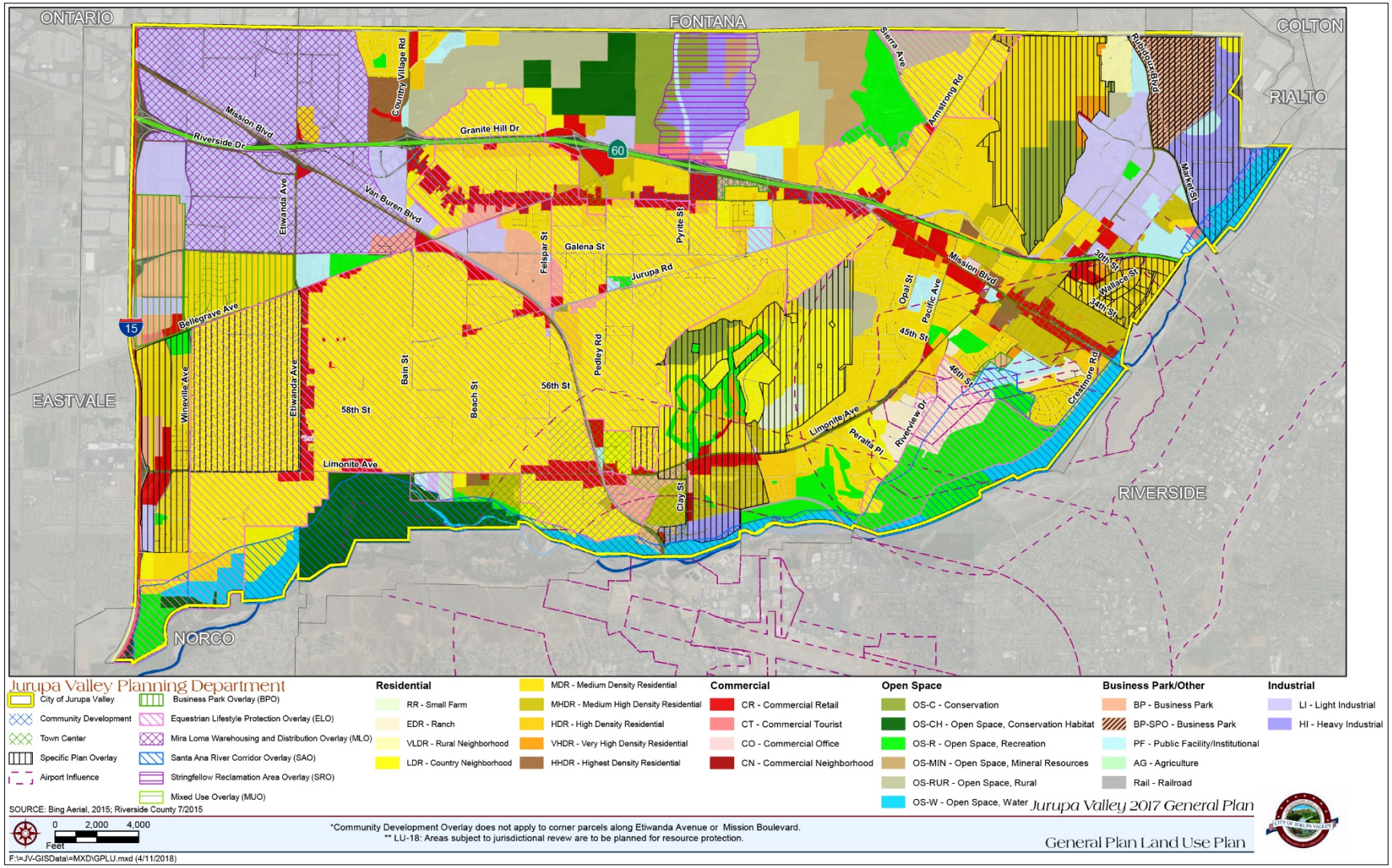
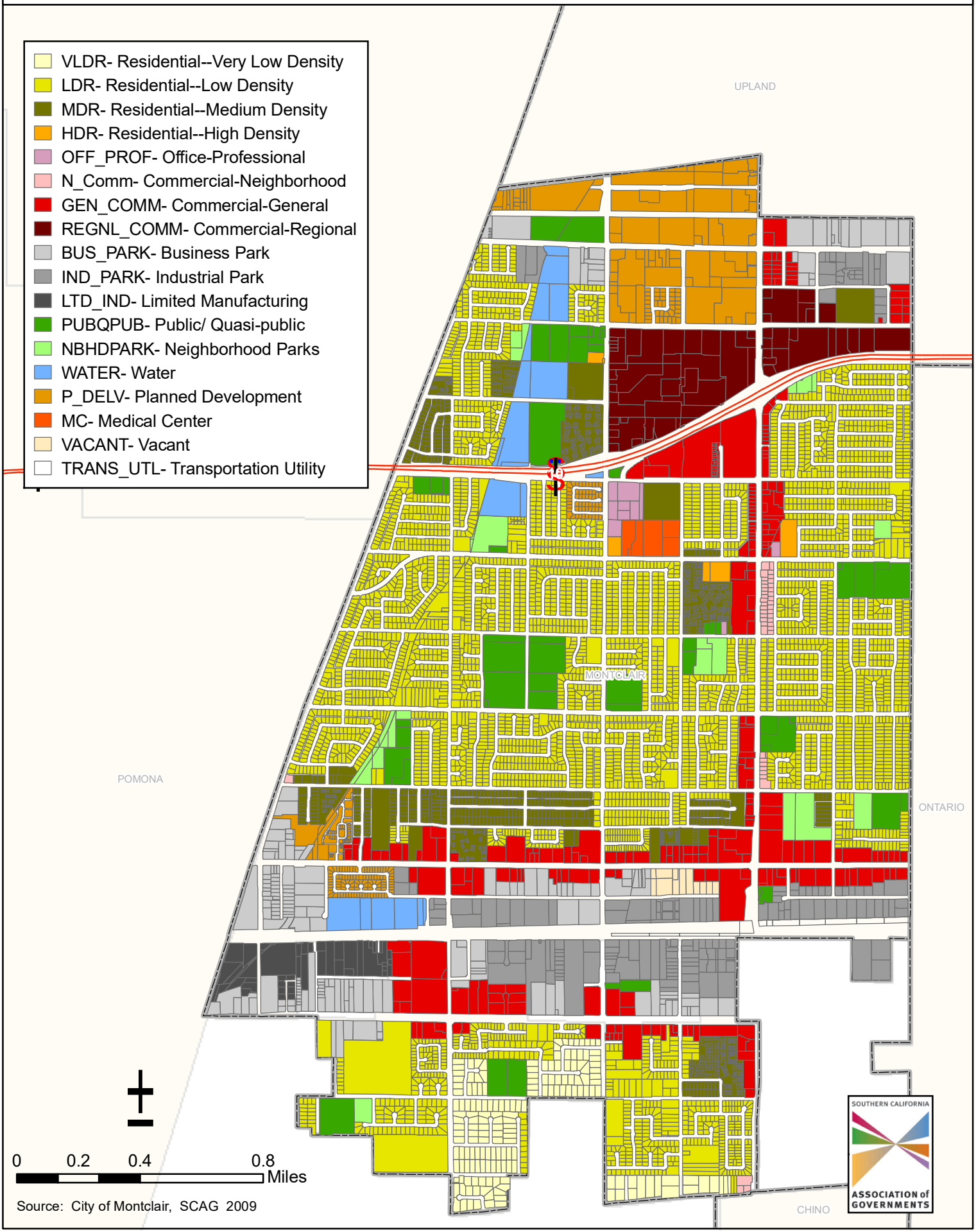


Figure 2-5: 2017 General Plan Land Use Plan

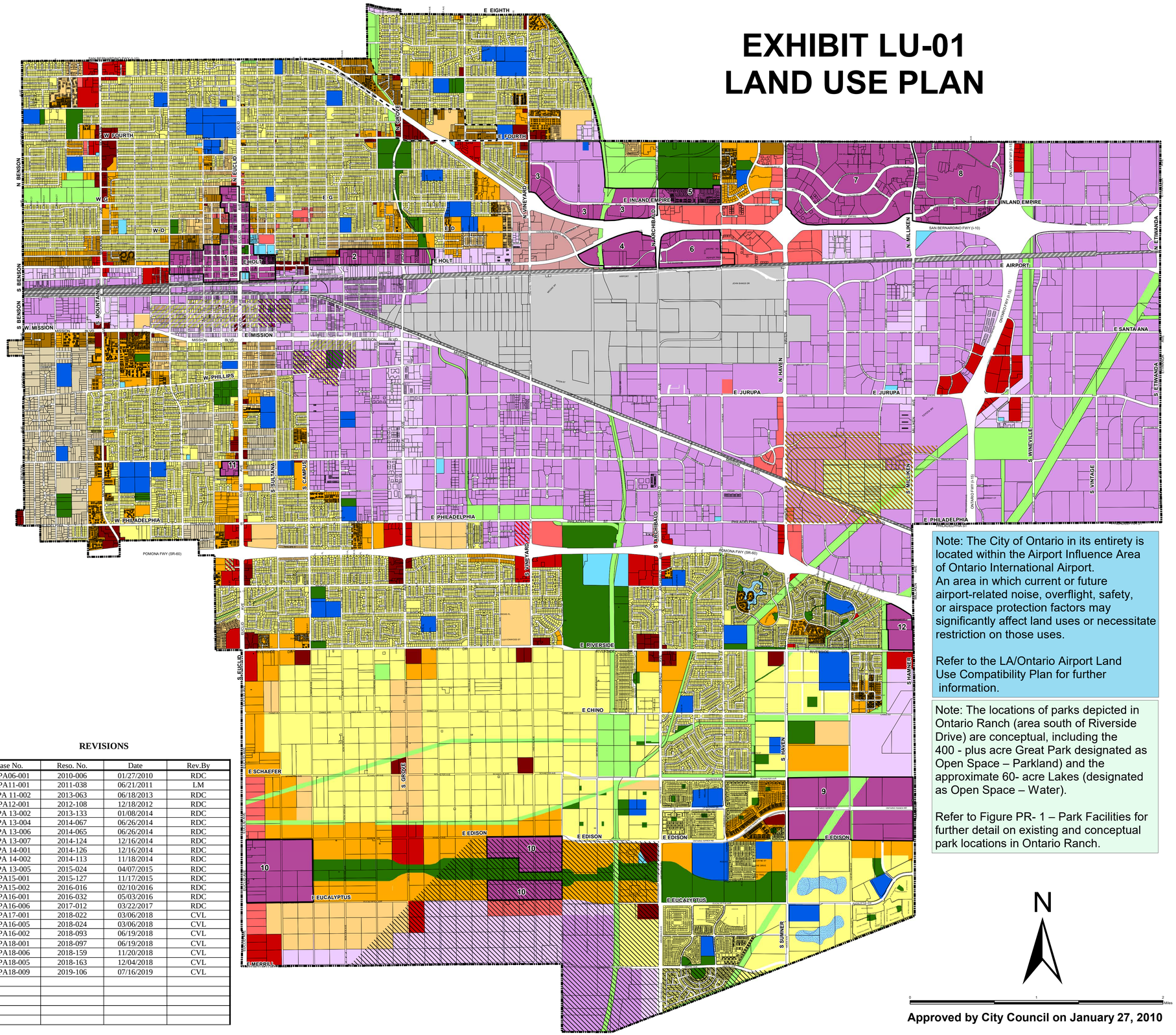
General Plan Land Use in City of Montclair



Source: City of Montclair, SCAG 2009

EXHIBIT LU-01
LAND USE PLAN

THE ONTARIO PLAN
A FRAMEWORK FOR THE FUTURE
www.ontarioplan.org



Note: The City of Ontario in its entirety is located within the Airport Influence Area of Ontario International Airport.
An area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restriction on those uses.

Refer to the LA/Ontario Airport Land Use Compatibility Plan for further information.

Note: The locations of parks depicted in Ontario Ranch (area south of Riverside Drive) are conceptual, including the 400 - plus acre Great Park designated as Open Space – Parkland) and the approximate 60- acre Lakes (designated as Open Space – Water).

Refer to Figure PR- 1 – Park Facilities for further detail on existing and conceptual park locations in Ontario Ranch.

N

0 1 2 Miles

Approved by City Council on January 27, 2010

LEGEND

Residential
- Rural (0 - 2 du/ac)
- Low Density (2.1 - 5 du / ac)
- Low-Medium Density (5.1 - 11 du / ac)
- Medium Density (11.1 - 25 du / ac)
- High Density (25.1 - 45 du / ac)

Mixed Use
- Mixed Use
  1. Downtown
  2. East Holt
  3. Meredith
  4. Multimodal Mixed Use
  5. Inland Empire Corridor
  6. Guasti
  7. Ontario Center
  8. Ontario Mills
  9. NMC East
  10. NMC West
  11. Euclid/Francis
  12. 60/Hamner

Retail/Service
- Neighborhood Commercial (0.4 FAR)
- General Commercial (0.4 FAR)
- Office Commercial (0.75 FAR)
- Hospitality (1.0 FAR)

Employment
- Business Park (0.6 FAR)
- Industrial (0.55 FAR)

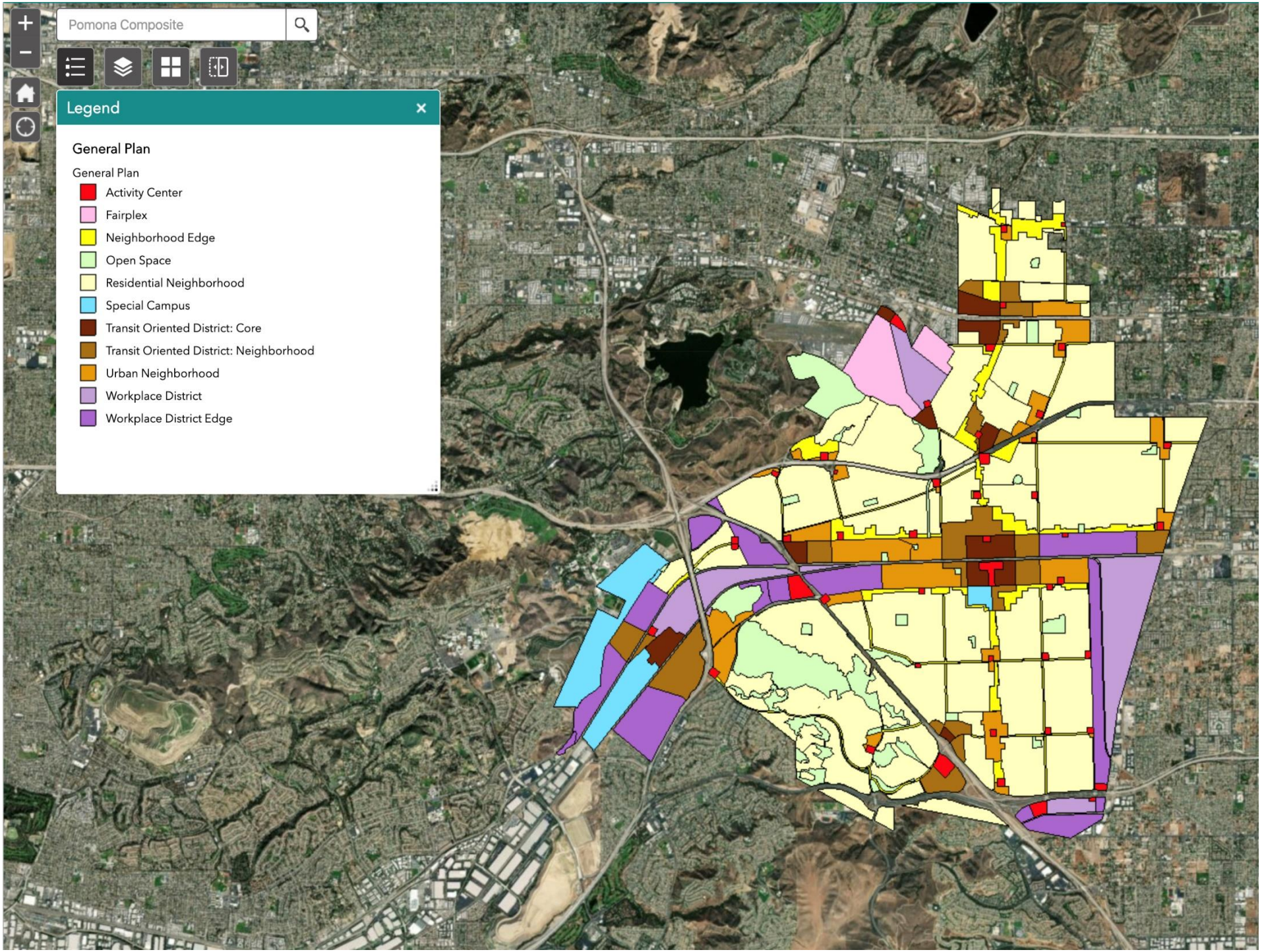
Other
- Open Space - Non Recreation
- Open Space - Parkland
- Open Space - Water
- Public Facility
- Public School
- Airport
- Rail
- Landfill

Overlays
- Business Park
- Industrial
- Commercial
- I-10/Grove Interchange Area
- Landfill Impact Area
- Chino Airport Overlay

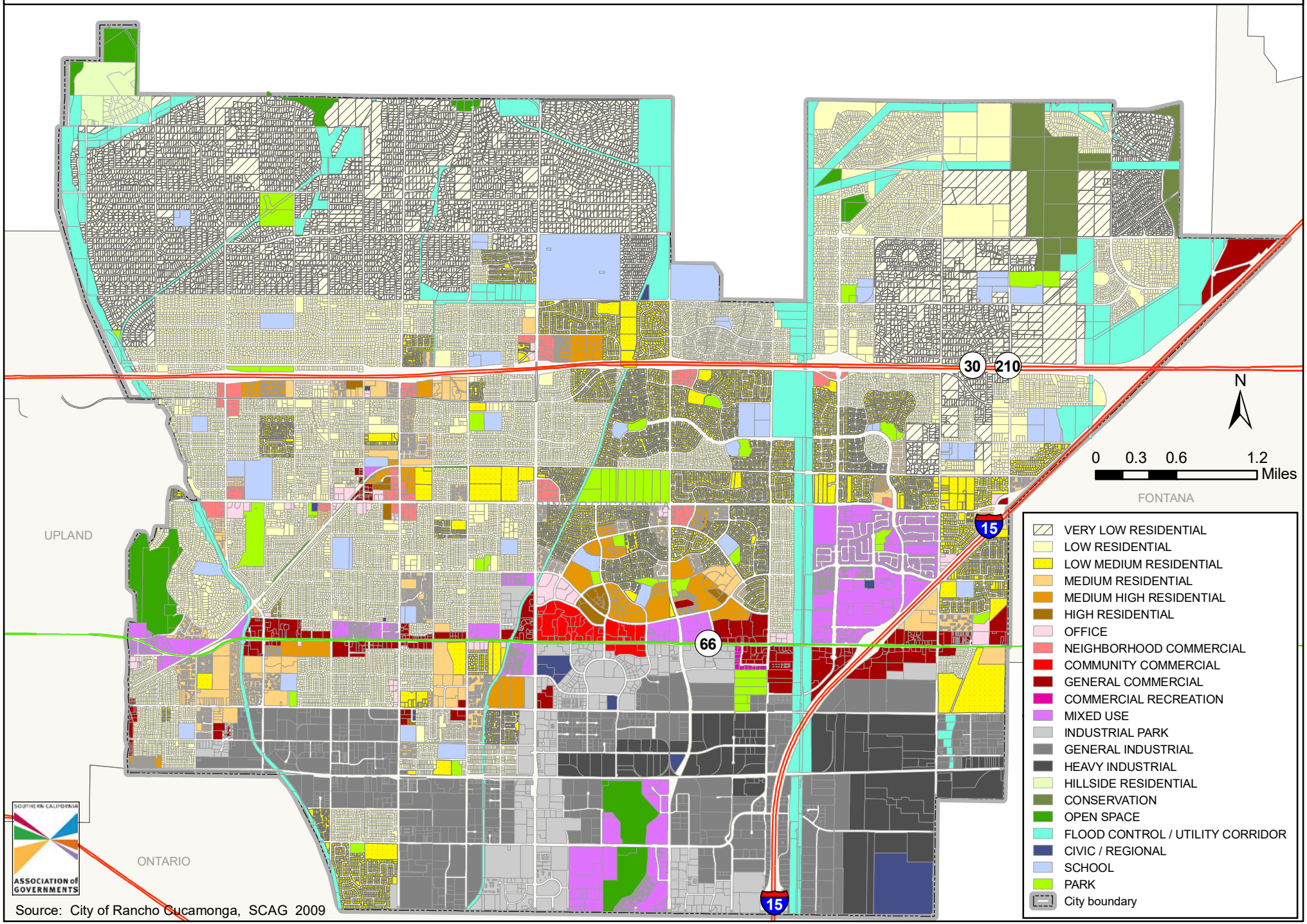
REVISIONS

Case No.	Reso. No.	Date	Rev.By
PGPA06-001	2010-006	01/27/2010	RDC
PGPA11-001	2011-038	06/21/2011	LM
PGPA 11-002	2013-063	06/18/2013	RDC
PGPA12-001	2012-108	12/18/2012	RDC
PGPA 13-002	2013-133	01/08/2014	RDC
PGPA 13-004	2014-067	06/26/2014	RDC
PGPA 13-006	2014-065	06/26/2014	RDC
PGPA 13-007	2014-124	12/16/2014	RDC
PGPA 14-001	2014-126	12/16/2014	RDC
PGPA 14-002	2014-113	11/18/2014	RDC
PGPA 13-005	2015-024	04/07/2015	RDC
PGPA15-001	2015-127	11/17/2015	RDC
PGPA15-002	2016-016	02/10/2016	RDC
PGPA16-001	2016-032	05/03/2016	RDC
PGPA16-006	2017-012	03/22/2017	RDC
PGPA17-001	2018-022	03/06/2018	CVL
PGPA16-005	2018-024	03/06/2018	CVL
PGPA16-002	2018-093	06/19/2018	CVL
PGPA18-001	2018-097	06/19/2018	CVL
PGPA18-006	2018-159	11/20/2018	CVL
PGPA18-005	2018-163	12/04/2018	CVL
PGPA18-009	2019-106	07/16/2019	CVL

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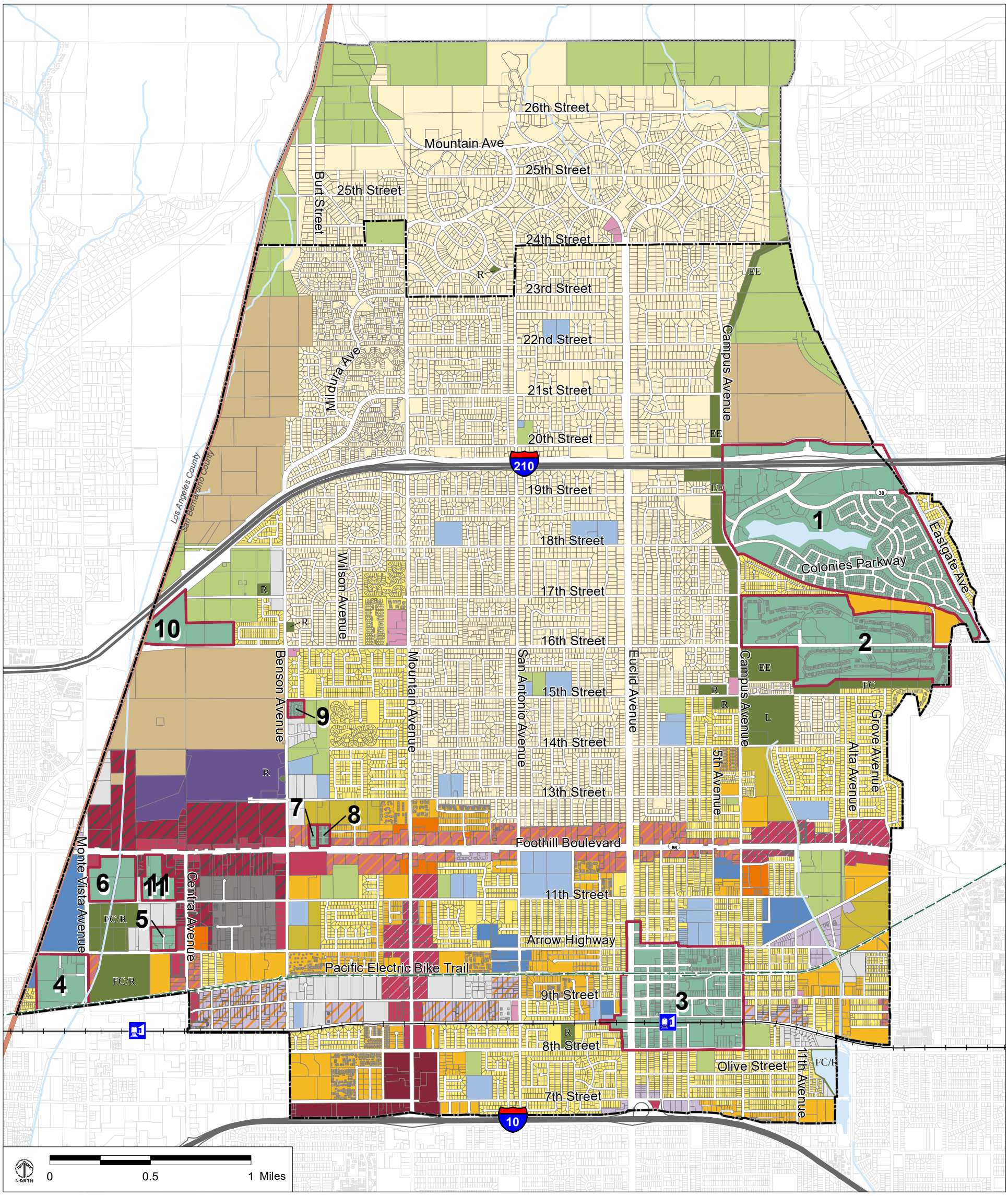

Pomona Composite
Legend
General Plan
General Plan
Activity Center
Fairplex
Neighborhood Edge
Open Space
Residential Neighborhood
Special Campus
Transit Oriented District: Core
Transit Oriented District: Neighborhood
Urban Neighborhood
Workplace District
Workplace District Edge

General Plan Land Use in City of Rancho Cucamonga



Source: City of Rancho Cucamonga, SCAG 2009

Map Date: 9/14/15



Source: City of Upland

SINGLE-FAMILY RESIDENTIAL

- LOW (0-4 du/ac; SFR-L)
- MEDIUM (4-10 du/ac; SFR-M)
- Mobile Home (8-14 du/ac; MH)

MULTI-FAMILY RESIDENTIAL

- LOW (10-20 du/ac; MFR-L)
- MEDIUM (20-30 du/ac; MFR-M)
- HIGH (30-40 du/ac; MFR-H)

COMMERCIAL

- Neighborhood Commercial (NC)
- Highway Commercial (HC)
- Regional Commercial (RC)
- Office/Professional (OP)

MIXED-USE

- Commercial/Residential Mixed-Use (C/R-MU)
- Commercial/Office
- Business/Residential Mixed-Use (B/R-MU)
- Commercial/Industrial Mixed-Use (C/IN-MU)

INDUSTRIAL

- Light Industrial/Business Park (LI-BP)
- Industrial (IN)
- Gravel Mine (GM)

SPECIAL/INSTITUTIONAL

- Cable Airport (CA)
- Institutional (I)
- Civic/School (C-P)
- Park/Open Space (P-OS)
- Public Utilities (PU)

R- Reservoir
L- Landfill
EE- Edison Easement
FC/R- Flood Control/Recharge

SPECIFIC PLAN

- Specific Plan (SP)

1. The Colonies
2. Upland Hills Country Club
3. Historic Downtown Upland
4. College Park
5. College Commerce Center
6. Harvest at Upland
7. Foothill Benson Terrace
8. Foothill Walk
9. Wyeth Cove
10. Park View
11. The Enclave

- Metrolink
- Rail Line
- Pacific Electric Trail
- City Limits
- Sphere of Influence
- County Boundary

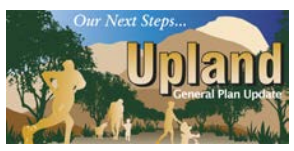


FIGURE LU-1
GENERAL PLAN LAND USE