
Water Supply Assessment **El Camino Project**

AUGUST 2023

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A Water Demand

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AF	acre-feet
AFY	acre-feet per year
amsl	above mean sea level
APN	Assessor's Parcel Number
CDA	Chino Desalter Authority
CEQA	California Environmental Quality Act
CBWM	Chino Basin Watermaster
CVWD	Cucamonga Valley Water District
CWC	California Water Code
DWR	California Department of Water Resources
FY	fiscal year
gpm	gallons per minute
IEUA	Inland Empire Utilities Agency
IWRP	Integrated Water Resources Plan
MCL	maximum contaminant level
MWD	Metropolitan Water District of Southern California
OBMP	Optimum Basin Management Program
Project	El Camino Project
SB	Senate Bill
SF	Square feet
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment

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1 Introduction

1.1 Purpose of Document

Senate Bill (SB) 610 was passed on January 1, 2002, amending the California Water Code (CWC) to require detailed analysis of water supply availability for certain types of development projects. The primary purpose of SB 610 is to improve the linkage between water and land use planning by ensuring greater communication between water providers and local planning agencies, and to ensure that land-use decisions for certain large development projects are fully informed as to whether a sufficient water supply is available to meet project demands. SB 610 requires preparation of a Water Supply Assessment (WSA) for a project that is subject to the California Environmental Quality Act (CEQA) and meets certain requirements. SB 610 is codified in CWC Division 6, Part 2.10 (Sections 10910–10915).

The El Camino Project (Project) has been determined to be subject to CEQA, with the City of Rancho Cucamonga acting as lead agency. The Project satisfies the statutory definition of a “project” for the purpose of determining SB 610 applicability because it is considered an industrial facility in excess of 650,000 square feet of floor area, per CWC Section 10912(a)(5). The lead agency will make an independent determination as to whether there is adequate water supply for the proposed Project, having considered the entire administrative record. In compliance with SB 610, this WSA examines the availability of the identified water supply under normal-year, single-dry-year, and multiple-dry-year conditions over a 20-year projection, accounting for the projected water demand of the Project plus other existing and planned future uses of the identified water supply.

1.2 Project Location and Description

The Project site is on 1,358,636 square feet (SF), or 31.19 acres, of vacant and developed land in the City of Rancho Cucamonga, an incorporated city within San Bernardino County, California (Figure 1, Project Location). The Project site is at 10670 6th Street, Rancho Cucamonga, California, and is bound on the south by 6th Street, on the east by Utica Avenue, on the west by Haven Avenue, and on the north by 7th Street. Access to the Project site is provided via Utica Avenue, 6th Street, and 7th Street. The Project site consists of Assessor’s Parcel Numbers (APNs) 209-411-02, 209-411-03, 209-411-04, 209-411-23, 209-411-24, 209-411-32, 209-411-34, and 209-411-35. The Project site lies within the U.S. Geological Survey Guasti, California 7.5-minute topographic quadrangle and San Bernardino Meridian Township 1 South, Range 7 West, Section 13 of the Public Land Survey System (Figure 1).

The Project would involve construction and operation of an automated storage and retrieval warehouse (52,470 SF), distribution center (188,284 SF), production facility (351,601 SF), existing building (62,210 SF), existing two-story office building (32,890 SF), well house, and on-site parking (both surface and multi-level structure). The total building floor area is 600,001 SF (Figure 2, Site Plan). The Project will also include 206,250 SF of landscaped area which will require drip irrigation. The Project is expected to be built out in three phases over the course of 7 years. Phase 1A would be completed after Year 1 of operation, Phase 1B would be completed after Year 4 of operation, and Phase 2 would be completed after Year 7 of operation (Section 2).

The Project would allow for the manufacturing, bottling, and distribution of beverage products from the warehouse facility. The facility will continue to provide deliveries to stores and restaurants through truck deliveries within a specified radius from the facility. The facility will continue to receive inbound trucks that bring in products to the facility for sorting and re-distributing. The facility would operate similar to the existing operations with a total of 474

employees and visitors at the maximum peak operational capacity, that operate through 3 shifts in a 24 hour per day, 6 days per week operation.

1.3 Water Supply Assessment Applicability

SB 610 amended CWC Sections 10910 and 10912 to create a direct relationship between water supply and land use. SB 610 establishes the legal framework for assessing the sufficiency of water supply for new development that qualifies as a “project.” Per CWC Section 10912(a), a “project” means any of the following:

- Proposed residential development of more than 500 dwelling units
- Proposed shopping center or business establishment employing more than 1,000 persons, or having more than 500,000 SF of floor space
- Proposed commercial office building employing more than 1,000 persons or having more than 250,000 SF of floor space
- Proposed hotel or motel or both having more than 500 rooms
- Proposed industrial, manufacturing, or processing plant or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 SF of floor area
- Proposed mixed-use project that includes one or more of the above components
- Proposed project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project

The Project qualifies as a “project” per CWC Section 10912(a) because it is a proposed industrial, manufacturing, or processing plant or industrial park that has more than 650,000 SF of floor space. The Project would also demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

The CWC, as amended by SB 610, requires that a WSA address the following questions:

- Is there a public water system that will service the project?
- Is there a current Urban Water Management Plan (UWMP) that accounts for the project demand?
- Is groundwater a component of the supplies for the project?
- Are there sufficient supplies to serve the project over the next 20 years?

The primary question to be answered in a WSA per the requirements of SB 610 is “Will the total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection meet the projected water demand of the proposed project, in addition to existing and planned future uses of the identified water supplies, including agricultural and manufacturing uses?”

The response to this question also informs and assists the lead agency in responding to the CEQA Guidelines Utilities and Service Systems question: “Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?”

1.3.1 Identification of a Public Water System

Section 10912 of the CWC defines a “public water system” as a system that has 3,000 or more service connections and provides piped water to the public for human consumption. Under SB 610, WSA reports must be prepared and furnished to local governments by the water utility serving that community for inclusion in any environmental documentation for projects meeting the specified requirements under Section 10912(a) of the CWC and subject to CEQA. According to CWC Section 10910(g)(1), “the governing body of each public water system, or the city or county if either is required to comply with this act ... shall approve the assessment prepared pursuant to this section at a regular or special meeting.” According to SB 610, the public water system serving the Project site is required to prepare the WSA report.

The Project is within the service area of the Metropolitan Water District of Southern California (MWD) and the Cucamonga Valley Water District (CVWD), which is a member agency of Inland Empire Utilities Agency (IEUA). IEUA, as a wholesale water agency, provides the CVWD’s imported water supply from the MWD. The MWD is a public agency whose service area covers the Southern California coastal plain. It extends approximately 200 miles along the Pacific Ocean from the City of Oxnard on the north to the international boundary with Mexico on the south, and it reaches as far as 70 miles inland from the coast (Figure 1). The total area served is 5,200 square miles and it includes portions of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties (MWD 2021a).

The CVWD serves a 46-square-mile area and provides potable water, recycled water, and sewer services to the City of Rancho Cucamonga; portions of the Cities of Upland, Ontario, and Fontana; and some unincorporated areas of San Bernardino County. The CVWD service area is bounded by the City of Fontana to the east, the cities of Upland and Ontario to the west, the City of Ontario to the south, and the San Gabriel Mountains to the north. The CVWD serves a population of 198,979 people, which includes approximately 48,000 water connections and 37,000 sewer connections with an average daily demand of approximately 47 million gallons per day (CVWD 2021).

1.3.2 Urban Water Management Plan Coverage

Urban Water Management Plans (UWMPs) are prepared by California’s urban water suppliers to support long-term resource planning and ensure adequate water supplies. UWMPs must be updated and submitted to the California Department of Water Resources (DWR) every 5 years for review and approval. DWR has identified the UWMP as a foundational document in the preparation of a WSA, noting that a thorough UWMP can provide the required information to fulfill the standards set forth by SB 610. Every urban water supplier that either delivers more than 3,000 acre-feet per year (AFY) of water annually or serves more than 3,000 connections is required to assess the reliability of its water sources over a 20-year period under normal-year, dry-year, and multiple dry-year scenarios; these are the same requirements of a WSA as specified by SB 610. A WSA may also rely on additional water supply data beyond the information in the UWMP.

The Project site is within the area covered by MWD’s and CVWD’s 2020 UWMPs, as well as the MWD Integrated Water Resources Plan (IWRP) 2015 Update (MWD 2016). Descriptions of these plans, as well as other applicable water resources plans, are provided in Chapter 3, Water Supply Assessment, of this WSA. This WSA uses data provided in the aforementioned plans, where applicable, to assess water supply availability.

1.3.3 Groundwater as a Component of Project Water Supply

The primary source of proposed Project water supply is groundwater from the Upper Santa Ana Valley Basin – Chino Subbasin (Chino Basin, DWR Basin No. 8-002.01; Figure 3, Hydrologic Areas, Groundwater Basins, and Water Districts), which has been an adjudicated basin with an order to be managed by a Watermaster since 1978. The Chino Basin was reportedly adjudicated to mitigate declining water levels that were observed as early as the 1930s (SWRCB 2016).

The 1978 Judgement established the following for the Chino Basin (SWRCB 2016):

- Set the initial safe yield of the basin to 140,000 AFY with a stipulation that the safe yield is recalculated every 10 years, and is defined as the long-term average annual quantity of groundwater (excluding replenishment of stored water but including return flow to the Chino Basin from use of replenishment or stored water) which can be produced from the Chino Basin under conditions of a particular yield without causing an undesirable result
- Allocated water rights for three pools of groundwater users: (1) the “overlying agricultural pool,” (2) the “overlying non-agricultural pool,” and (3) the “appropriative pool”
- Allowed for water transfers
- Created a replenishment fee (pumping tax) program
- Instituted a Watermaster

The Chino Basin Watermaster’s (CBWM) function is to administer and enforce provisions of the 1978 *Chino Basin Municipal Water District v. City of Chino* (Judgement, Case Number 164327) and subsequent orders of the Court, and to develop and implement an Optimum Basin Management Program (OBMP) for the Upper Santa Ana Valley Basin – Chino Subbasin. The intent of the OBMP is to enhance basin water supplies, protect water quality, and improve basin management (SWRCB 2016).

In 2012, a restated judgement incorporated all amendments since 1978 and the Peace Agreements of 2000 and 2007 that addressed transfers, subsidence, funding for groundwater exchange, basin de-salters, basin replenishment, and recharge programs. It also allowed an additional 400,000 acre-feet (AF) to be pumped as controlled overdraft for the de-salters (SWRCB 2016). Groundwater is described in more detail in Section 3.1, Water Resources, and water supply availability is discussed in Section 3.3, Water Supply Availability.

The Project would source groundwater from a new on-site well that would be developed in a manner that is suitable to be tied into the Chino Basin. This new source is described in Section 3.3.

1.3.4 Sufficiency of Supplies Over the Next 20 Years

As described in Chapter 2, Project Water Demand, and Chapter 3, Water Supply Assessment, there is adequate water available to supply the proposed Project. Although the future business that is conducted in the warehouses would increase water demand, water supply should be sufficient even at maximum Project demand according to other existing and planned future uses under normal-year, single-dry-year, and multiple-dry-year conditions over a 20-year projection.

2 Project Water Demand

The existing water demand at the Project site based on water usage bills for all parcels except APN 209-411-34 was estimated to be 10 AFY in fiscal year (FY) 2021/2022. The existing parcels are all designated “D 21st Century Employment District”, which comprises a mix of businesses and professional offices with supporting services, retail, and multifamily residential (City of Rancho Cucamonga 2021) and are all zoned as “ME2 Mixed Employment 2 Zone” (City of Rancho Cucamonga 2023). All existing project parcels with the exception of APN 209-411-34 contain parking lots, commercial businesses, restaurants, office buildings, vacant land, and possibly manufacturing (Google Earth 2023). It is assumed that water for these parcels is used for potable use and irrigation. APN 209-411-34 is labeled as an existing 144,000 square foot bottling plant (Google Earth 2023); no water usage bills were available for this parcel. However, water usage was estimated for this facility using usage numbers from other industrial businesses. Because this existing facility is reportedly a distribution center it was estimated to have a similar usage of a Walmart distribution center, which has been documented to use 0.031 AF per 1,000 SF (G. Miles, personal communication, June 20, 2022). This equates to 4.5 AFY for APN 209-411-34. Added to the rest of the existing parcels, the existing water demand for the Project site is 14.5 AFY.

The Project water demand includes bottling uses, building uses, and irrigation uses. The bottling use demand ramps up during each Project phase, while the building use and irrigation use demands remain constant. The irrigation use demands were calculated using DWR’s Model Water Efficient Landscape Ordinance worksheet and assumed that the entire 206,250 square foot landscape area will be low water use plantings requiring drip irrigation. The irrigation calculations, along with the bottling use demands and building use demands are included as Appendix A and are summarized in Table 1.

Table 1. Project Water Demand

Project Phase	Bottling Use ^a (gpy)	Building Use (gpy)	Irrigation Use (gpy)	Acre-Feet per Year
Phase 1A	193,915,467	2,280,303	2,585,917	610
Phase 1B	247,222,841	2,280,303	2,585,917	774
Phase 2	276,282,860	2,280,303	2,585,917	863

Note: gpy = gallons per year

Source: ^aPET Terra Systems 2023.

The Project water demand is estimated to be approximately 610 AFY in the first year of operation after completion of Phase 1A, ramping up to 774 AFY by Year 4 of operation after completion of Phase 1B, and then 863 AFY by Year 7 of operation after completion of Phase 2 (Table 1). This WSA assumes that Phase 1A will begin January 1, 2026. The Project peak water demand is estimated to be approximately 1,789 GPM for a duration of 1-hour by year 7 of operation after completion of Phase 2 (Table 1).

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3 Water Supply Assessment

A WSA is required to identify and describe the water supply source(s) that would serve a proposed project. CWC Section 10910(d) requires a WSA to include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for a proposed project, and a description of the quantities of water received in prior years if the source is a public water supplier.

3.1 Water Resources

3.1.1 Groundwater

3.1.1.1 Upper Santa Ana Valley Basin – Chino Subbasin

The Project site overlies the adjudicated Upper Santa Ana Valley Basin – Chino Subbasin, which covers an area of 240 square miles. DWR has designated the Chino Basin as very low priority with regard to enacting the Sustainable Groundwater Management Act. The Chino Basin was adjudicated in 1978 and is not subject to the requirements of the Sustainable Groundwater Management Act, but instead is subject to groundwater pumping allocations under the court adjudication set up to meet water users' water supply and quality needs and to safeguard the environment (CBWM 2021a).

Hydrogeologic Setting

The Chino Basin is bounded on the east by the Rialto-Colton Fault, on the southeast by the contact with impermeable rocks forming the Jurupa Mountains and low divides connecting the exposures, on the south with impermeable rocks and by the Chino Fault, on the northwest by the San Jose Fault, and on the north by impermeable rocks of the San Gabriel Mountains and by the Cucamonga Fault (DWR 2004) (Figure 4, Regional Geologic Map).

The two primary water-bearing units of the Chino Basin are Holocene¹ and Pleistocene² alluvium (Figure 4). Holocene alluvium consists mainly of alluvial-fan deposits, with a maximum thickness of 150 feet that is coarsest in and near the mouths of the canyons and are finer away from canyon mouths in the southern part of the Chino Basin. The Pleistocene alluvium unit is exposed mainly in the northern part of the Chino Basin and supplies most of the water to wells in the Chino Basin. This alluvium is approximately 600 to 700 feet thick throughout most of the Chino Basin and contains interfingering fine, alluvial-fan deposits and coarser, fluvial deposits. Most of the wells producing water from the eastern half of the Chino Basin draw from the coarse portion of the Pleistocene alluvium. The Pleistocene alluvium in the central part of the Chino Basin has the lowest clay content and the highest well yields, with 500 to 1,000 gallons per minute (gpm). In the southern part of the area, where the sediments tend to contain more clay, wells generally yield between 100 and 500 gpm (DWR 2004). The total groundwater storage capacity of the Chino Basin is estimated to be 18,300,000 AF, and the current amount of groundwater in managed storage is 700,000 AF (CBWM 2021a; DWR 2004).

¹ The Holocene Epoch began approximately 12,000 years ago and continues to present day.

² The Pleistocene Epoch began approximately 2.6 million years ago and lasted until approximately 12,000 years ago.

Groundwater Levels

The Chino Basin receives recharge by direct infiltration of precipitation on the Chino Basin floor, by infiltration of surface flow, and by underflow of groundwater from adjacent basins. As of 2006, the five recharge channels/facilities in the Chino Basin were Deer Creek, Day Creek, East Etiwanda, San Sevaine, and Victoria (DWR 2006). A Recharge Master Plan was completed in 2001 and flood retention facilities, which are also recharge basins, were constructed from 2004 to 2014 (CBWM 2018) (Figure 5, Groundwater Contamination Plumes and Recharge Basins). Before the adjudication, the Chino Basin experienced declining groundwater levels, but levels increased over time. Groundwater levels in 1980 were 80 feet lower than highs from the 1920s, but water levels increased by 20 feet in 2000 (DWR 2004; SWRCB 2016). The MWD found water levels in the Chino Basin were stable in 2007 (MWD 2016).

Groundwater levels vary throughout the Chino Basin. According to a groundwater elevation contour map for spring 2020, groundwater levels ranged from approximately 500 feet above mean sea level (amsl) in the southern part of the Chino Basin to 850 feet amsl in the eastern part of the Chino Basin. The contours from spring 2020 are generally consistent with the contours from spring 2018, indicating regional groundwater flow in a south-southwest direction from the primary areas of recharge in the northern parts of the Chino Basin toward the Prado Basin in the south (CBWM 2021b). From spring 2000 to spring 2020, groundwater levels increased in the western portion of the Chino Basin and decreased in the central and eastern portions of the Chino Basin and around the eastern portion of the Chino Desalter well field in the south (CBWM 2021b).

Existing wells near the Project site are shown in Figure 6, Groundwater Well Locations. Water levels for CVWD Well 03 (State Well Number 01S07W14L001S), which is approximately 0.5 miles west of the Project site, are available from 1979 to 2020 (Figure 6). The hydrograph for Well 03 shows water levels increasing from 1979 to 1990 to a high of approximately 690 feet amsl, declining from 1990 to 2010 to a low of approximately 610 feet amsl, slightly increasing from 2010 to 2015 to approximately 650 feet amsl, and then slightly decreasing to approximately 630 feet amsl in 2022 (SWRCB 2023) (Figure 6).

Groundwater Quality

Groundwater quality in areas of the Chino Basin has been impacted by contamination (CVWD 2021). The most serious problems pertaining to water quality are high concentrations of total dissolved solids and nitrate-nitrogen from agricultural land use. The CVWD 2020 UWMP reports that nitrates and total dissolved solids concentrations in areas of the Chino Basin exceed drinking water quality standards. It also states that the Chino Basin is contaminated with Perchlorate and volatile organic compounds (CVWD 2021). According to the 44th Annual Watermaster report, there are five volatile organic compound contamination plumes within the Chino Basin, based on concentrations measured at wells from July 2015 to June 2020 (CBWM 2021a). The Project site does not fall within the spatial extents of any of the contamination plumes (Figure 5).

The 2020 State of the Basin shows all the contaminants that exceeded a California maximum contaminant level (MCL) and the number of wells with exceedances. Contaminants where a primary MCL was exceeded in 50 or more wells from July 2015 to June 2020 and are not associated with a single point-source contamination plume include 1,2,3-Trichloropropane, 1,2-dichloroethane, arsenic, benzene, total chromium, hexavalent chromium, perchlorate, perchloroethylene, and trichloroethylene. Contaminants that the California Department of Drinking Water considers a candidate for the development of an MCL or is in the process of developing an MCL include perfluorooctanoic acid, perfluorooctanesulfonic acid, and 1,4-dioxane (CBWM 2021b).

Groundwater Production

Total annual groundwater production from the Chino Basin has ranged from a maximum of 188,828 AFY during FY 2008/2009 to a minimum of approximately 122,863 AF during FY 1982/1983. A majority of production is currently pumped for municipal and agricultural purposes, and the remaining production is pumped by non-agricultural parties (CVWD 2021). During FY 2019/2020, 376 production wells were active in the Chino Basin. A breakdown of production per pool can be found in Table 2.

Table 2. Chino Basin Groundwater Production

Pool	Fiscal Year 1982/1983 Production		Fiscal Year 2008/2009 Production		Fiscal Year 2020/2021 Production	
	Acre-Feet	Percentage	Acre-Feet	Percentage	Acre-Feet	Percentage
Agricultural	56,858	46	23,277	12	14,945	9
Overlying Non-Agricultural	2,448	2	2,420	1	2,795	2
Appropriative	63,557	52	134,119	71	105,040	64
Chino Basin Desalter Authority	N/A	N/A	29,012	15	40,156	25

Source: CBWM 2021a.

N/A = not available.

3.1.1.2 Upper Santa Ana Valley Basin – Cucamonga Subbasin

Northwest of the Project site and adjacent to the Chino Basin is the adjudicated Upper Santa Ana Valley Basin – Cucamonga Subbasin (Cucamonga Basin), which covers an area of 15 square miles. The total groundwater storage capacity of the Cucamonga Basin is estimated to be 53,600 AF (DWR 2004).

DWR has designated the Cucamonga Basin as very low priority with regard to the Sustainable Groundwater Management Act. The Cucamonga Basin was adjudicated in 1958 and is not subject to the requirements of the Sustainable Groundwater Management Act, but instead is subject to groundwater pumping allocations under the court adjudication. Today, the adjudicated water rights in the Cucamonga Basin are allocated to three producers: West End Consolidated Water Company, San Antonio Water Company, and CVWD. The 1958 Decree did not designate a Watermaster, and annual reports were not required. The Cucamonga Basin is jointly managed by the CVWD, San Antonio Water Company, and West End Consolidated Water Company, and the CBWM provides reporting for the Cucamonga Basin (SWRCB 2016).

3.1.1.3 Groundwater Well Inventory Proximal to Project Site

Because an on-site well is proposed as the source of water for the Project, available information about the groundwater conditions and users within the radius of influence of the proposed well was reviewed. Based on available information, 21 production wells occur within a 2-mile radius of the Project site: nine CVWD wells, 11 Ontario Municipal Utilities Company wells, and one Fuji Natural Food well (Figure 6). The closest well to the Project site is CVWD Well 46 – Coca Cola Well³, located near the northeast corner of the Project site and approximately 900 feet due north of the proposed on-site well (Figure 6). Well logs are available for four of the wells: CVWD Wells

³ Well 46 – Coca Cola Well name per Groundwater Ambient Monitoring Assessment Program database

41, 42, and 46, and Ontario Municipal Utilities Company Well 41. Well completion information, including total depth, screened interval, and estimated yield, are provided in Table 3, and well logs are included in Appendix B.

Table 3. Well Completion Information for Nearby Wells

Well ID	Well Owner	Log No.	Diameter (inches)	Total Depth (feet bgs)	Top of Screen (feet bgs)	Bottom of Screen (feet bgs)	Estimated Yield (gpm)
Well 41	CVWD	e019362	20	1,010	650	990	3,500
Well 42	CVWD	e019365	20	1,010	650	990	4,000
Well 46	CVWD	e077980	24	1,000	650	990	3,000
Well 41	OMUC	793000	20	1,040	600	1,020	3,000

Source: DWR 2023.

CVWD = Cucamonga Valley Water district; OMUC = Ontario Municipal Utilities Company; bgs = below ground surface; gpm = gallons per minute.

Based on the 2020 State of the Basin Report, the three wells closest to the Project site, Well 46 (Coca Cola Well), Well 41, and Well 42, produced 2,500 to 5,000 AF for FY 2019/2020. No contaminants were detected at levels that exceeded the MCLs in these three wells from June 2015 to June 2020 (CBWM 2021b).

Assuming a Phase 2 Project water demand of 863 AFY and the well pumping 24 hours per day 7 days per week, the Project supply well would need to be pumped at a rate of approximately 535 gpm to meet Project maximum demand. Assuming a Phase 2 Project water demand of 863 AFY and a standard 8 hours per day 5 days a week work schedule, the Project supply well would need to be pumped at a rate of approximately 2,253 gpm to meet Project maximum demand. Based on information contained in the well logs, well yields in the vicinity of the Project are more than adequate to satisfy the water requirements of the proposed Project in both scenarios. An estimate of groundwater level drawdown at various distances from the proposed Project supply well induced by Project pumping is provided in Section 3.3.3, Groundwater Supply Sustainability Analyses.

3.1.2 Surface Water

The Santa Ana River is the primary natural surface water feature in the vicinity of the Project site (Figure 3). The Santa Ana River is largely classified as an intermittent stream and only contains flowing water during certain times of the year (USGS 2023).

The CVWD has several tunnel water sources that originate in the canyons of the San Gabriel Mountains. These tunnel water sources, which are influenced by the magnitude of precipitation, consist of streams, springs, and tunnels in the Cucamonga Canyon, Deer Canyon, and Day/East Etiwanda Canyon of the San Gabriel Mountains (Figure 3). Water from these tunnel sources is treated before distribution to customers.

The CVWD acquired the loamosa Water Company in the 1970s, along with the loamosa Tunnel. CVWD's Cucamonga Canyon facilities are in an unincorporated area of western San Bernardino County, north of the City of Rancho Cucamonga, and consist of two diversion ponds and a 24-inch-diameter transmission pipeline that conveys surface water from the Cucamonga Canyon to the Arthur H. Bridge Water Treatment Plant (CVWD 2021).

The CVWD acquired the Etiwanda Water Company in 1979, along with the surface water rights to the Day Canyon and East Canyon. CVWD's facilities include the Day Basin, East Basin, Smith Tunnel, "Bee" Tunnel, and transmission

pipelines that convey surface water from the Day/East Etiwanda Canyons to either the Royer-Nesbit Water Treatment Plant or the Lloyd Michael Water Treatment Plant (CVWD 2021).

The CVWD acquired the Hermosa Water Company in 1970, along with the water rights to Deer Canyon. When the CVWD acquired the Hermosa Water Company, its major assets were the tunnels in Deer Canyon (Hermosa Tunnel, Thayer Tunnel, and “A” Tunnel) and the transmission mains connecting these various sources to a small reservoir on the south side of Lemon Avenue. The CVWD currently captures flows from only the Hermosa Tunnel in Deer Canyon, which funnels water into a 6-inch-diameter transmission pipeline that conveys surface water to a reservoir for distribution (CVWD 2021).

3.1.3 Imported Water

The CVWD purchases untreated imported water from the MWD through IEUA, which is treated at a water treatment plant. The largest component of CVWD’s water supply typically comes from imported water and ranges from approximately 25% to 65% of CVWD’s water. The CVWD has two connections to untreated State Water Project water: an 18-inch connection and a 60-inch connection. The CVWD also has one 24-inch connection to untreated Colorado River Aqueduct water, but this connection has been disconnected due to the lack of treatment capabilities. CVWD’s projected purchases of untreated imported water over the next 25 years assumes that the CVWD will use all of its maximum MWD Tier I allocation, which is 28,369 AF (CVWD 2021).

3.1.4 Recycled Water

CVWD’s recycled water supplies are produced by IEUA, which has five regional wastewater treatment plants that can produce tertiary-treated, Title 22-quality, recycled water. The CVWD has rights to the recycled water produced from the estimated 14,000 AF of sewage that is treated annually by IEUA. The CVWD has 135 recycled water customers and recycled water accounts, for 2% to 3% of CVWD’s overall supply (CVWD 2021).

3.2 Water Resources Plans and Programs

3.2.1 Cucamonga Valley Water District 2020 Urban Water Management Plan

The 2020 UWMP provides the CVWD with a planning document for long-term resource planning to ensure adequate water supplies are available to meet existing and future water supply needs. In addition, the 2020 UWMP incorporates water supply reliability determinations resulting from potential prolonged drought, regulatory revisions, and/or changing climatic conditions (CVWD 2021). The 2020 UWMP contains detailed information on CVWD’s current and projected water use and supply reliability. CVWD’s water supply sources consist of groundwater pumped from the Chino Basin and Cucamonga Basin; untreated, imported surface water from the MWD purchased through IEUA and treated at CVWD’s treatment plant; local surface water from Cucamonga Canyon, Day/East Etiwanda Canyon, and Deer Canyon; and recycled water purchased from IEUA. CVWD’s main sources of water supply are from groundwater pumped from the Chino Basin and imported surface water (CVWD 2021). The CVWD is a member of the Appropriative Pool of the Chino Basin Judgement. The CBWM can reallocate the unused portion of the Chino Basin safe yield from the Overlying Agricultural Pool to the Appropriative Pool members as a supplement to the Appropriative Pool share of Operating Safe Yield rights in any year (CVWD 2021).

The CVWD relies on imported water as part of its supply, which is ultimately provided by the MWD. The MWD has prepared its own UWMP, which includes a discussion of its water supplies and the impact of climate change (MWD 2021a). MWD's 2020 UWMP is described in Section 3.2.2.

3.2.2 The Metropolitan Water District of Southern California 2020 Urban Water Management Plan

The 2020 UWMP provides an assessment of MWD's water service reliability and describes and evaluates sources of water supply, efficient uses of water, demand management measures, implementation strategy and schedule, and other relevant information and programs. The information included in the 2020 UWMP represents the most current and available planning projections of supply capability and demand forecasts developed through a collaborative process with the member agencies (MWD 2021a). The MWD completed a water service reliability assessment and determined that it has supply capabilities sufficient to meet expected demands from 2025 through 2045 under a normal year, a single dry-year, and a period of drought lasting 5 consecutive water years.

3.2.3 The Metropolitan Water District of Southern California 2015 Integrated Water Resources Plan

As stated in the IWRP (MWD 2016):

The fundamental goal of the IWRP is for Southern California to have as reliable a water system for tomorrow as the region has enjoyed for decades, regardless of challenges that emerge along the way. MWD plans to meet this goal through an adaptive management strategy that is the cornerstone of the 2015 IWRP Update. The 2015 IWRP Update represents a further step in the iterative planning process of a "living" strategic plan that evolves and adapts as needed to address the needs of the next generation.

3.2.4 Peace Agreements

The Chino Basin Watermaster was established in 1978 under a Judgement entered in the Superior Court of the State of California for the County of San Bernardino. In July 2000, parties to the Judgment entered into the Peace Agreement. The Peace Agreement outlined the parties' intent to implement the OBMP and other related responsibilities for the CBWM and the parties. In 2007, Peace II Agreement was entered into by the parties to the Peace Agreement to maximize the beneficial use of the groundwater and the Chino Basin to further benefit the Chino Basin and the parties to the Judgment (CBWM 2007).

As part of these Agreements, the Chino Basin Storage Management Plan was developed, which includes three types of storage agreements that result in five types of storage accounts. These include unproduced rights in the Safe Yield and Chino Basin water purchased or transferred from other parties. Parties can store water that is in excess of their demands and may recover that water in the future as the need arises. The CBWM maintains records of the replenishment, production, losses, and end-of-year storage totals for all storage accounts and provides that information on an annual basis (CVWD 2021).

The Chino Desalter Authority (CDA) has constructed two desalters and several wells in the southern part of the Chino Basin and can produce approximately 40,000 AFY from the Chino Basin for the purpose of groundwater cleanup and control of contaminant migration. The CDA is not party to the Judgment and has no water rights in

the Chino Basin. All CDA production of groundwater is replenished by members of the Appropriative and overlying non-agricultural Pools, in accordance with the 2007 Peace II Agreement. Collectively, the overlying non-agricultural parties have a relatively small replenishment obligation for the CDA. The members of the Appropriative Pool will contribute a total of 10,000 AFY toward Desalter replenishment as follows (CVWD 2021):

- 1) 85% of the total will be allocated according to the Operating Safe Yield percentage of each Appropriative Pool member; and
- 2) 15% of the total will be allocated according to each land use conversion agency's percentage of the total land use conversion claims, based on the actual land use conversion allocations of the year.

3.2.5 Optimum Basin Management Program

The OBMP was developed pursuant to the Judgement and a ruling by the court on February 19, 1998. The OBMP maps a strategy that provides for the enhanced yield of the Chino Basin, and seeks to provide reliable, high-quality water supplies for the development that is expected to occur within the Chino Basin. The OBMP Implementation Plan is the court-approved governing document for achieving the goals defined in the OBMP (CBWM 2021b). The 2020 State of the Basin Report is the most recent State of the Basin Report (CBWM 2021b), and the *OBMP Staff Status Report 2022-2: July to December 2022* is the most recent semi-annual status report (CBWM 2022).

3.2.6 Chino Basin Watermaster 2018 Recharge Master Plan

The 2018 Recharge Master Plan for the CBWM documents the investigation conducted by the IEUA and the CBWM pursuant to the Court's direction to update the 2013 Amendment to the 2010 Recharge Master Plan Update (CBWM 2018). The Recharge Master Plan contains technical documentation demonstrating that the CBWM has sufficient recharge capacity to meet expected future replenishment obligations through 2050 (CBWM 2018).

3.2.7 Chino Basin Watermaster Annual Report

An Annual Report is prepared by the CBWM. These reports encompass the activities that occurred during the fiscal year and includes the Assessment Package and Audited Financial Report that were produced during the year of the report. The report provides updates on the OBMP, the Recharge Master Plan, community and engagement programs, and groundwater monitoring programs. The latest report as of the writing of this WSA is the 44th Annual Report of the Chino Basin Area Watermaster (CBWM 2021a), which provides an update on groundwater conditions in the Chino Basin for water year 2020/2021.

3.3 Water Supply Availability

Water demands throughout the Chino Basin are supplied by a variety of water purveyors, including municipal utilities, water districts, water companies, and private groundwater wells. Water supply for the City of Rancho Cucamonga (Project location) is from the CVWD, whose service area also includes portions of the cities of Fontana, Ontario, and Upland, and some unincorporated areas of San Bernadino County.

3.3.1 Chino Basin Assessment

The Judgement established a safe yield of 140,000 AFY for the Chino Basin, which has since been lowered by the CBWM, reflecting the effects of continued development, conservation, and long-term drought (CVWD 2021). Pursuant to the most recent safe yield reset, effective July 2020, the safe yield in the Chino Basin is determined to be 131,000 AFY for the period of 2021 through 2030 (CVWD 2021). As a result of this reset, the Appropriative Pool operating safe yield is 40,834 AFY. The safe yield is recalculated every 10 years and is defined by the Judgement as the long-term average annual quantity of groundwater (excluding replenishment of stored water but including return flow to the Chino Basin from use of replenishment or stored water) that can be produced from the Chino Basin under conditions of a particular yield without causing an undesirable result.

The CBWM can reallocate the unused portion of the Chino Basin Safe Yield from the Overlying Agricultural Pool to the Appropriative Pool members in any year if agricultural pool extractions are less than their share or if agricultural land has been converted to non-agricultural use. From 2000 to 2020, the annual quantity of the Agricultural Pool averaged 50,457 AFY (CVWD 2021). In FY 2020/2021, the total water rights available for reallocation due to agricultural pool underproduction of safe yield was 61,315 AF, and rights available for reallocation less claimed rights was 9,000 AF (CBWM 2021a). Appropriators that are parties to the Judgement are authorized to produce groundwater in excess of their rights as long as they pay assessments to the CBWM. The assessments are used to purchase water from MWD to replenish the Chino Basin (CVWD 2021).

The total agricultural pool production in FY 2020/2021 was 21,484.8 AF, and the safe yield was 82,800 AF. Of the 61,315.2 AF available for reallocation, the CVWD received 2,552.2 AF of that. The CVWD produced 26,225.7 AF as part of its Appropriative pool production (CBWM 2021a).

3.3.2 CVWD Assessment

The primary water sources for the CVWD are groundwater pumped from the Chino Basin and imported surface water. On average, from FY 2011 to 2020, 47% of water supplied to CVWD customers was from pumped groundwater (34% from the Chino Basin and 13% from the Cucamonga Basin), 45% was from imported surface water, 6% was from local surface water, and 2% was from recycled water (CVWD 2021). The CVWD will construct new groundwater wells in the Chino Basin by 2025 as part of future water projects, estimated to provide 7,500 AFY (CVWD 2021).

The CVWD has determined that a Chino Basin production well could serve the Project, and the well would be located in the southeastern corner of APN 209-411-34. It is anticipated that the well will have a high production rate, and it could be used for overall supply in the water infrastructure network. The estimated production rate of the well is approximately 1,200 gpm (CVWD 2022).

The CVWD has an appropriative right of 5,199 AFY as of 2021 (CBWM 2021a). The CVWD has acquired the appropriative rights of two other appropriators, the Etiwanda Water Company and a majority interest of the Fontana Union Water Company. Through these acquisitions, the CVWD acquired rights in the Chino Basin to 768 AFY from Etiwanda Water Company and 9,188 AFY from the Fontana Union Water Company. Under the Judgement, the annual pumping rights of Appropriative parties are not administered according to their specific rights. Instead, their specific rights are used to determine what percentage of the “Operating Safe Yield” each Appropriative Party can

produce without paying a replenishment obligation. CVWD's total rights equate to 18.3% of total Chino Basin rights, which equates to 7,455.47 AFY (CVWD 2021).

CVWD's reliable quantities of projected water supply sources over the next 25 years is provided in Table 4.

Table 4. Cucamonga Valley Water District Water Supplies

Water Supply	Additional Detail on Water Supply	Actual Volume (acre-feet)	Projected Water Supply (acre-feet)				
		2020	2025	2030	2035	2040	2045
Groundwater	Chino Basin	23,315	10,250	14,773	16,331	17,630	17,630
Groundwater	Cucamonga Basin	3,618	10,000	10,000	10,000	10,000	10,000
Surface Water	Cucamonga Canyon Tunnel Water	931	800	800	800	800	800
Surface Water	Deer Canyon	0	50	50	50	50	50
Surface Water	Day/East Etiwanda Canyon Tunnel Water	3,813	2,100	2,100	2,100	2,100	2,100
Purchased or Imported Water	Inland Empire Utilities Agency	14,343	28,369	28,369	28,369	28,369	28,369
Recycled Water	Inland Empire Utilities Agency (Direct Use)	1,038	1,800	2,000	2,000	2,000	2,000
Recycled Water	Inland Empire Utilities Agency (Groundwater Recharge)	4,458	4,000	4,000	4,000	4,000	4,000
Total		51,516	57,369	62,092	63,650	64,949	64,949

Source: CVWD 2021.

CVWD's projected quantities of imported water supplies and surface water supplies are based on historical long-term averages and available supplies during previous dry year conditions. CVWD's projected quantities of recycled water supplies to meet non-potable demands are based on historical long-term averages. The CVWD will purchase additional imported water supplies and produce additional groundwater from the Chino Basin to meet its total water demands. In the event that local surface water and/or imported water is limited, the CVWD has the flexibility to increase groundwater production from the Chino Basin (CVWD 2021).

CVWD's imported water supplies from the MWD, through the IEUA, may be impacted during a multi-year drought or other conditions that limit the MWD from delivering sufficient water supplies to all its member agencies, and consequently to the CVWD. In anticipation of such a reduction in supplies, the MWD developed a Water Supply Allocation Plan that provides a means of equitably providing reduced water supplies to each of MWD's member agencies (MWD 2021b).

3.3.3 Water Supply and Demand Comparison

CVWD's projected normal water year demands were based on CVWD's 2020 Water Use Target of 232 gallons per-capita per-day for potable water demands. The ratio of total water supplies available to the CVWD during a historical normal year and during a historical single dry year was used to estimate the CVWD's projected water demands during single dry years. The ratio of total water supplies available to the CVWD during a historical normal year and a historical 5-year drought was used to estimate the CVWD's projected water demands during a 5 consecutive-year drought period. CVWD's projected dry-year water supplies over the next 25 years were based on the minimum supplies needed by the CVWD to meet projected single-dry-year demands. CVWD water demands over the past 10 years has ranged from 40,166 AFY to 55,726 AFY, with an average of 48,276 AFY (CVWD 2021).

FY 2010/2011 represents an "average" or "normal" water year for CVWD, in which the total amount of rainfall was similar to the historical average rainfall of 10.7 inches (CVWD 2021). CVWD's projected water supplies available during normal years in 5-year increments over the next 25 years are provided in Table 5.

Table 5. Normal Year Supply and Demand Comparison

	Projected Water Supply and Demand (acre-feet)				
	2025	2030	2035	2040	2045
CVWD Supply Totals	57,369	62,092	63,650	64,949	64,949
CVWD Demand Totals	53,369	58,092	59,650	60,949	60,949
Project Water Demand ¹	N/A	774	863	863	863
Existing Water Usage ¹	N/A	14.5	14.5	14.5	14.5
Difference²	4,000	3,240.5	3,151.5	3,151.5	3,151.5

Source: CVWD 2021.

CVWD = Cucamonga Valley Water District; N/A = not applicable.

¹ Project Water Demand and Existing Water Usage are discussed in Chapter 2.

² Difference = CVWD Supply Totals – CVWD Demand Total – Project Water Demand + Existing Water Usage

A single dry year for the CVWD was represented in FY 2017/2018, in which the total amount of rainfall was below the historical average rainfall. CVWD's projected water supplies available during single dry years in 5-year increments over the next 25 years are provided in Table 6.

Table 6. Single Dry Year Supply and Demand Comparison

	Projected Water Supply and Demand (acre-feet)				
	2025	2030	2035	2040	2045
CVWD Supply Totals	55,999	60,610	62,131	63,399	63,399
CVWD Demand Totals	52,099	56,710	58,231	59,499	59,499
Project Water Demand ¹	N/A	774	863	863	863
Existing Water Usage ¹	N/A	14.5	14.5	14.5	14.5
Difference²	3,900	3,140.5	3,051.5	3,051.5	3,051.5

Source: CVWD 2021.

CVWD = Cucamonga Valley Water District; N/A = not applicable

¹ Project Water Demand and Existing Water Usage are discussed in Chapter 2.

² Difference = CVWD Supply Totals – CVWD Demand Total – Project Water Demand + Existing Water Usage

CVWD's projected water supplies available during 5 consecutive dry years in 5-year increments over the next 25 years are provided in Table 7. Upon adoption of a water supply shortage stage, water reduction demands will be effective immediately (CVWD 2021).

Table 7. Multiple Dry Year Supply and Demand Comparison

		Projected Water Supply and Demand (acre-feet)				
		2025	2030	2035	2040	2045
First Year	CVWD Supply Totals	60,708	65,708	67,358	68,733	68,733
	CVWD Demand Totals	56,508	61,508	63,158	64,533	64,533
	Project Water Demand ¹	N/A	774	863	863	863
	Existing Water Usage ¹	N/A	14.5	14.5	14.5	14.5
	Difference²	4,200	3,440.5	3,351.5	3,351.5	3,351.5
Second Year	CVWD Supply Totals	63,297	68,509	70,229	71,662	71,662
	CVWD Demand Totals	58,897	64,109	65,829	67,262	67,262
	Project Water Demand ¹	N/A	774	863	863	863
	Existing Water Usage ¹	N/A	14.5	14.5	14.5	14.5
	Difference²	4,400	3,640.5	3,551.5	3,551.5	3,551.5
Third Year	Supply Totals	64,924	70,271	72,035	73,506	73,506
	Demand Totals	60,424	65,771	67,535	69,006	69,006
	Project Water Demand ¹	N/A	774	863	863	863
	Existing Water Usage ¹	N/A	14.5	14.5	14.5	14.5
	Difference²	4,500	3,740.5	3,651.5	3,651.5	3,651.5
Fourth Year	Supply Totals	57,077	61,774	63,323	64,615	64,615
	Demand Totals	53,077	57,774	59,323	60,615	60,615
	Project Water Demand ¹	N/A	774	863	863	863
	Existing Water Usage ¹	N/A	14.5	14.5	14.5	14.5
	Difference²	4,000	3,240.5	3,151.5	3,151.5	3,151.5
Fifth Year	Supply Totals	46,852	50,707	51,978	53,038	53,038
	Demand Totals	43,552	47,407	48,678	49,738	49,738
	Project Water Demand ¹	N/A	774	863	863	863
	Existing Water Usage ¹	N/A	14.5	14.5	14.5	14.5
	Difference²	3,300	2,540.5	2,451.5	2,451.5	2,451.5

Source: CVWD 2021.

CVWD = Cucamonga Valley Water District; N/A = not applicable

- ¹ Project Water Demand and Existing Water Usage are discussed in Chapter 2.
- ² Difference = CVWD Supply Totals – CVWD Demand Total – Project Water Demand + Existing Water Usage

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4 Conclusions

A WSA is required to identify and describe the water supply source(s) that will serve a proposed Project. CWC Section 10910(d) requires a WSA to include an identification of any existing water supply entitlements, water rights, and water service contracts relevant to the identified water supply for a proposed project, and a description of the quantities of water received in prior years if the source is a public water supplier.

The CVWD would be the sole source of water for the Project, and its primary sources are groundwater pumped from the Chino Basin and Cucamonga Basin, and imported surface water. The CVWD has the ability to purchase additional imported water supplies and produce groundwater from the Chino Basin to meet its total water demands. In the event local surface water and/or imported water is limited, the CVWD has the flexibility to increase groundwater production from the Chino Basin (CVWD 2021). CVWD may increase groundwater production from the Chino Basin in excess of water rights as long as overproduction is taken from the CVWD storage account or by purchasing replenishment water. CVWD currently has about 65,000 AF stored in the Chino Basin.

Based on the information, analysis, and findings documented in this WSA, and depending on coordination with the Basin Watermaster, CVWD's total projected water supplies available during normal, single-dry, and multiple-dry water year scenarios during a 20-year projection will meet the projected water demand associated with the proposed Project, accounting for the projected water demand of the Project plus other existing and planned future uses of the identified water supply.

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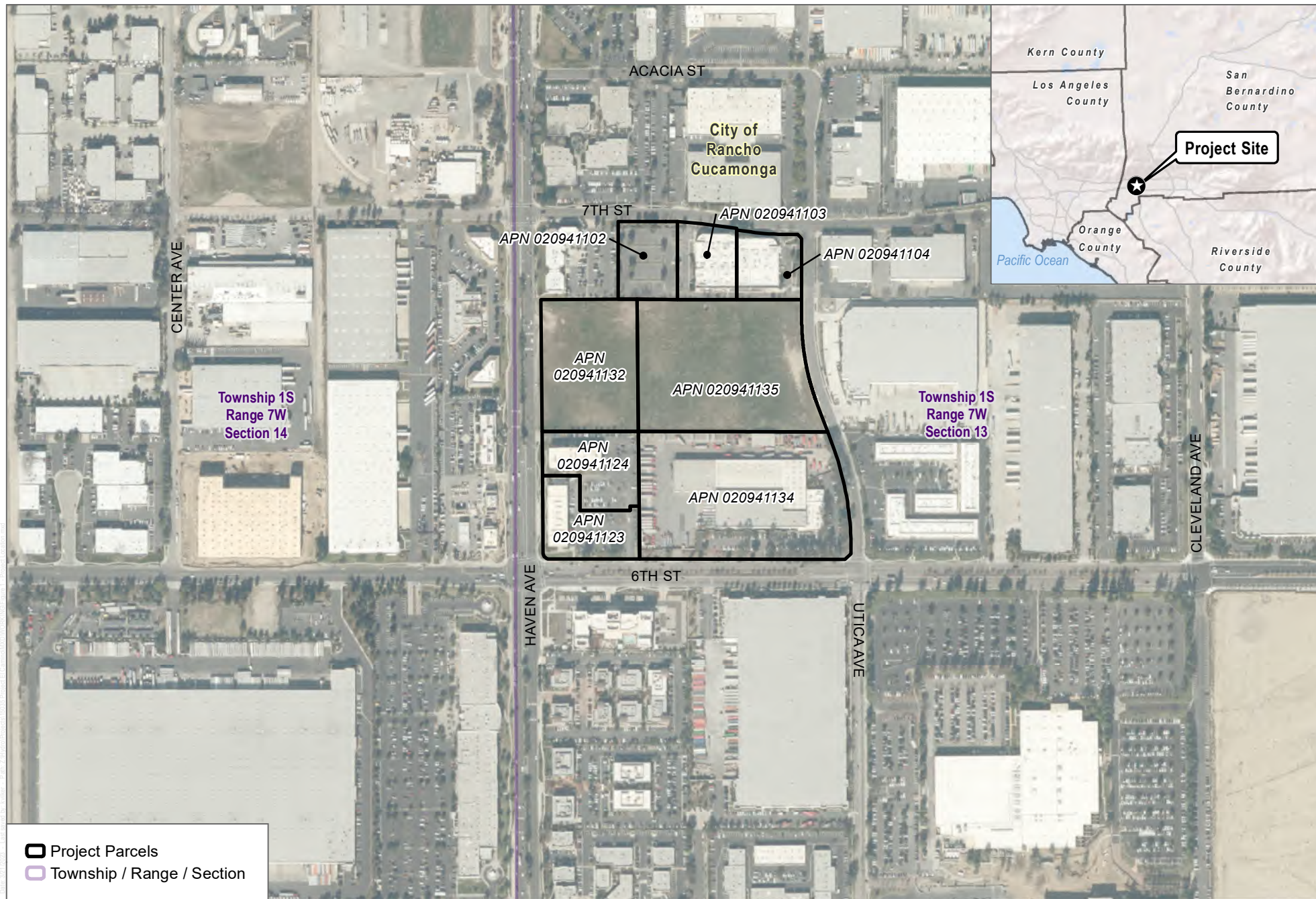
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SOURCE: ESRI; USGS; County of San Bernardino

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PROJECT DATA:

APN: 254-11-04-205-415-02 254-415-03

SITE AREA:

6.0 AC, DEDICATION:	1,100,000 SF (25.45 AC)
NET:	254,000 SF (5.86 AC)

BUILDING AREA:

EXISTING 2-STORY OFFICE FOOTPRINT:	16,300 SF
EXISTING 2-STORY OFFICE AND LEVEL:	16,300 SF
EXISTING 2-STORY OFFICE TOTAL:	32,600 SF
DC FOOTPRINT:	186,450 SF
DC MEZZANINE:	8,832 SF
DC TOTAL:	195,282 SF
ASBIA FOOTPRINT:	52,470 SF
ASBIA FOOTPRINT:	398,248 SF
PC MEZZANINE:	9,476 SF
PC 2ND LEVEL:	128,878 SF
PC TOTAL:	338,354 SF
POSS. ASBIA FOOTPRINT:	18,232 SF
POSS. ASBIA 2ND LEVEL:	12,288 SF
POSS. ASBIA TOTAL:	30,520 SF
TRUCK DECK FOOTPRINT:	85,107 SF
TRUCK DECK 2ND LEVEL:	81,524 SF
TRUCK DECK TOTAL:	166,631 SF
PARKING GARAGE FOOTPRINT:	52,111 SF
PARKING GARAGE TOTAL (2 LEVELS):	104,222 SF
TOTAL SITE BUILDING FOOTPRINT AREA:	606,001 SF
TOTAL SITE BUILDING AREA:	950,234 SF

BUILDING USE:

WAREHOUSE (BCL 2ND LEVEL PC):	332,138 SF
INDUSTRIAL WAREHOUSE (1ST LEVEL PC):	298,248 SF
OFFICE:	34,112 SF
TRUCK DECK:	32,890 SF

FLOOR AREA RATIO/FAR:

GROSS GROUND FLOOR AREA / NET SITE AREA:	0.63 : 1
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LOT COVERAGE:

GROSS BUILDING FOOTPRINT AREA / NET SITE AREA:	54%
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PARKING SUMMARY:

PARKING REQUIREMENTS (CODES):			
WAREHOUSE:			
1ST 20,000 SF:	31,000 SF	40 STALLS	
20,000 SF - 40,000 SF:	16,000 SF	10 STALLS	
40,000 SF +:	14,000 SF	71 STALLS	
INDUSTRIAL WAREHOUSE:	31,000 SF	417 STALLS	
OFFICE:	41,000 SF	368 STALLS	
TOTAL REQUIRED:		886 STALLS	
PARKING PROVIDED:			
WALKWAY:		498 STALLS	
REAR ACCESSIBLE:	2% OF TOTAL	8 STALLS	
TRUCKS & TRAILERS:	10% OF TOTAL	28 STALLS	
TRUCK DOCKS:		87 STALLS	
DOCKWATER DOORS:		87 DOCKS	
GRADE-LEVEL DOORS:		4 DOCKS	
REQUIRED NET VEHICLE PARKING:			
SHORT TERM:	5% OF TOTAL	28 STALLS	
LONG TERM:		25 STALLS	

DEVELOPMENT STANDARDS:

ZONING:

MED - MIXED EMPLOYMENT 2 ZONE

SITE COVERAGE:

MAX COVERAGE ALLOWED PER ZONING:	0.4 - 1.2 FAR
MAX STORES:	4 STORES

SETBACKS:

SURFACE PARKING FRONT:	40 FT
SURFACE PARKING, SIDE STREET:	10 FT

PARKING:

ALL PARKING STALLS SHALL BE PERMANENTLY MAINTAINED WITH DOUBLE LINES, WITH TWO LINES LOCATED AN EQUAL LINE INCHES ON EITHER SIDE OF THE STALL BOUNDARIES.

OUTDOOR: 8' x 12' MIN. + 1' OVERHANG

INDOOR - ADJACENT TO WALL/COLUMN: 10' x 20' MIN.

INDOOR - ADJACENT TO WALL/COLUMN: 10' x 20' MIN.

INDOOR - ADJACENT TO WALL/COLUMN: 10' x 20' MIN.

INDOOR - ADJACENT TO WALL/COLUMN: 10' x 20' MIN.

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INDOOR - ADJACENT TO WALL/COLUMN: 10' x 20' MIN.

SHEET INDEX - ENTITLEMENT PACKAGE

SHEET NO.	DESCRIPTION
00	ENTITLEMENT - GENERAL
01	ENTITLEMENT - GENERAL
02	ENTITLEMENT - GENERAL
03	ENTITLEMENT - GENERAL
04	ENTITLEMENT - GENERAL
05	ENTITLEMENT - GENERAL
06	ENTITLEMENT - GENERAL
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96	ENTITLEMENT - GENERAL
97	ENTITLEMENT - GENERAL
98	ENTITLEMENT - GENERAL
99	ENTITLEMENT - GENERAL
100	ENTITLEMENT - GENERAL



LONE OAK - EL CAMINO
10670 6TH STREET
RANCHO CUCAMONGA, CA 91730

DESIGN REVIEW
DRC2023-00067

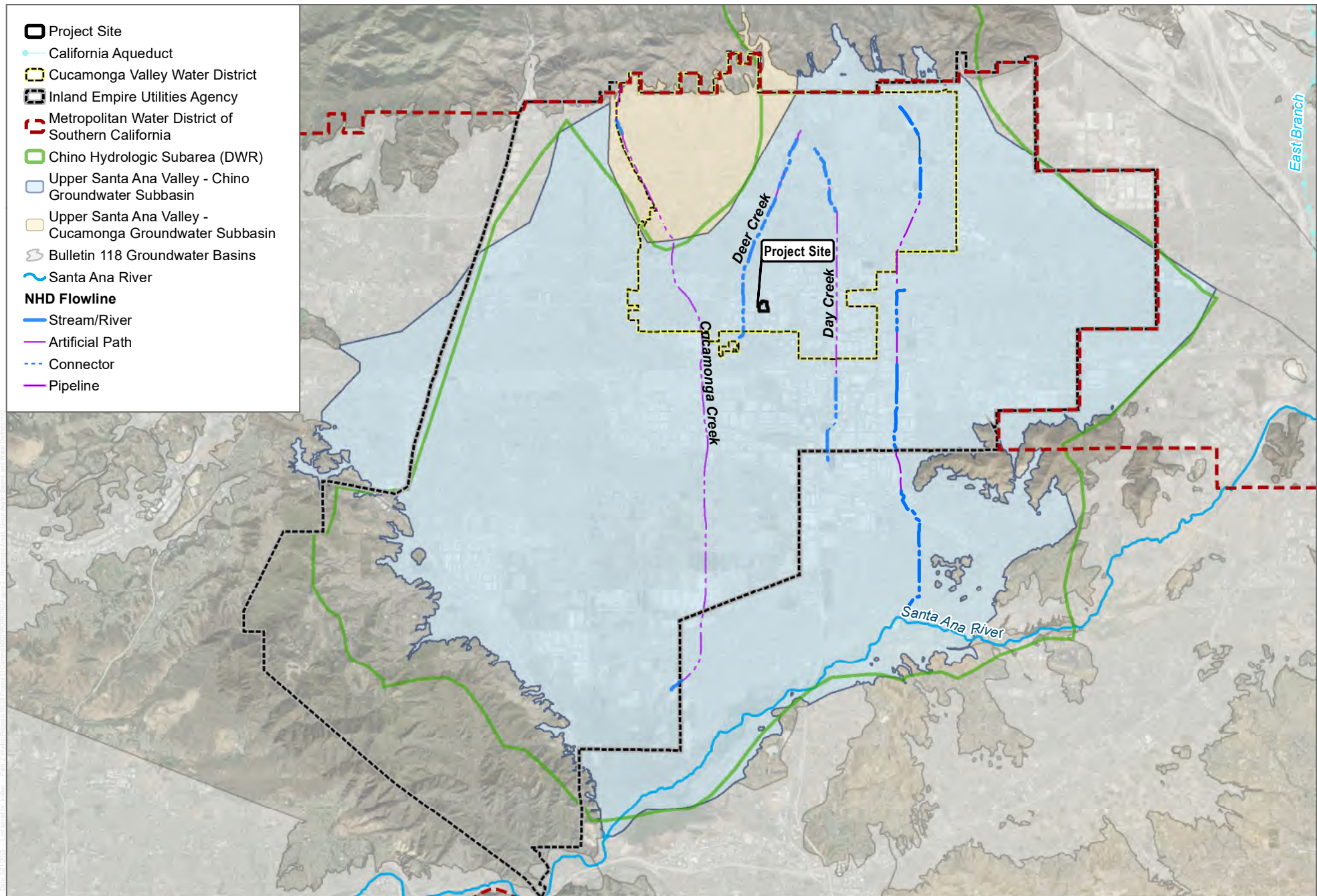
SUBMITTAL:
1ST SUBMITTAL
2ND SUBMITTAL
DATE: 02.15.2023
DATE: 05.31.2023

GO.01

GENERAL INFORMATION & VICINITY MAP

FIGURE 2a
Site Plan
El Camino - WSA

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SOURCE: ESRI; DWR; NHD

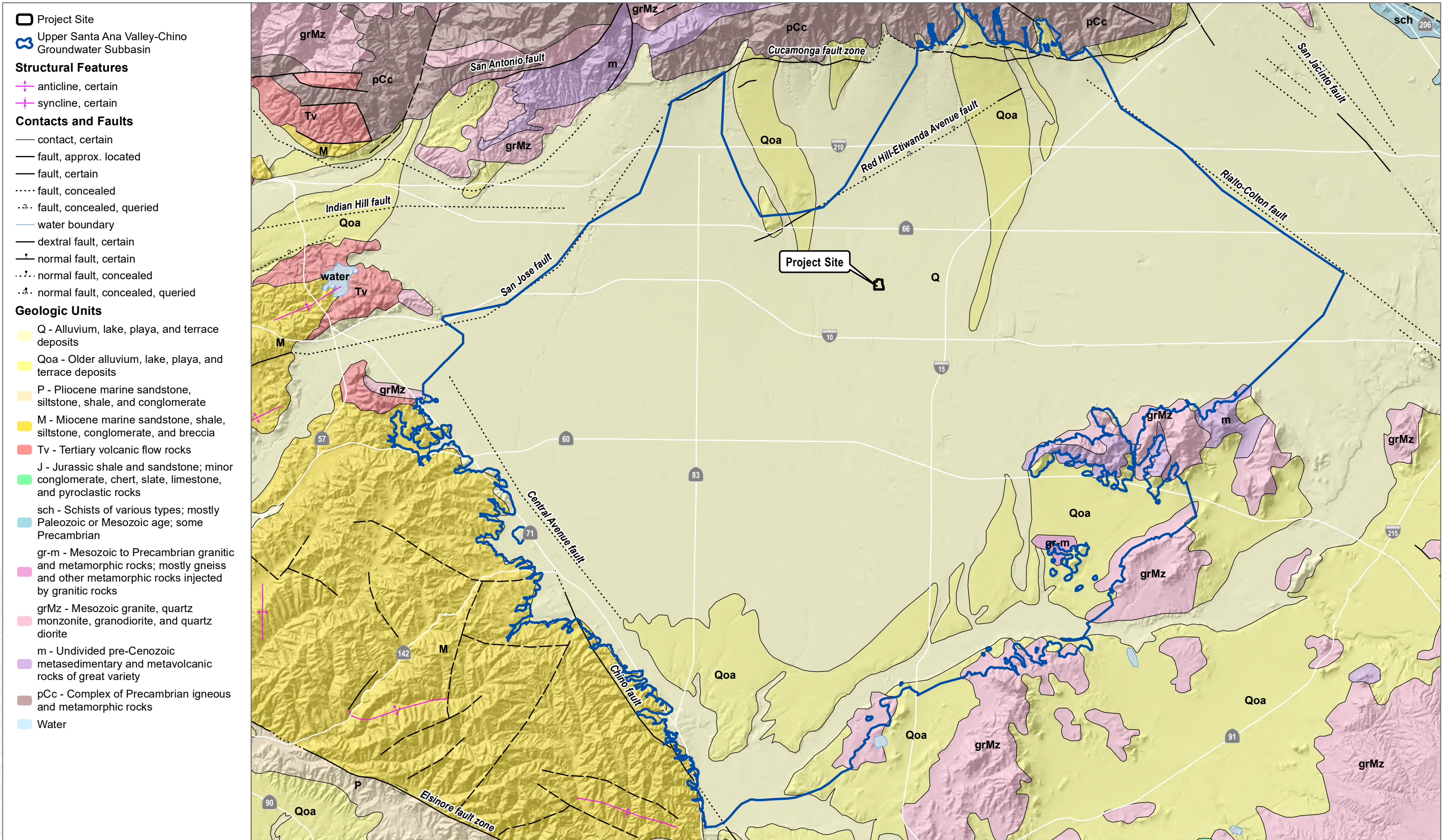
DUDEK



0 1.5 3 Miles

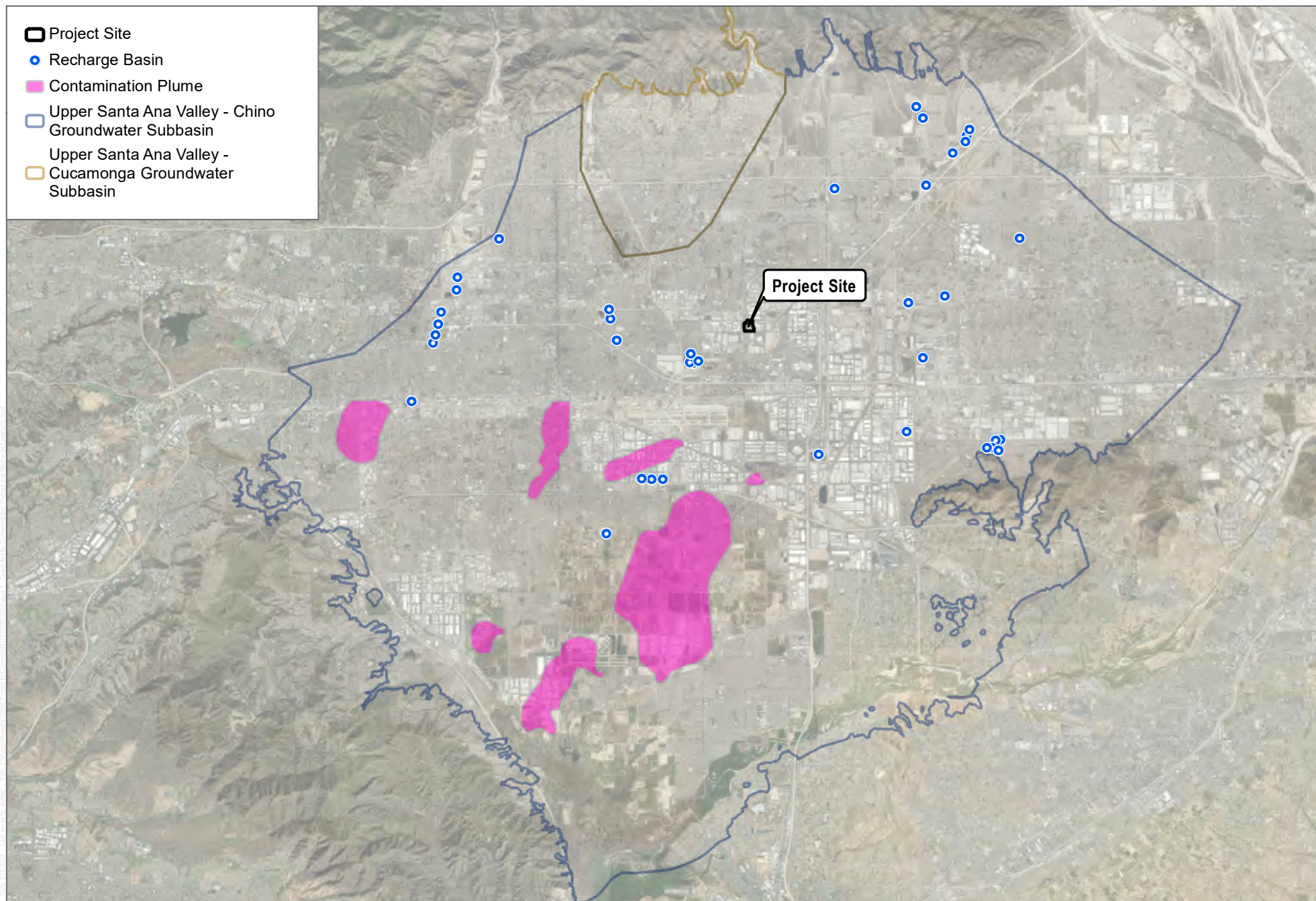
FIGURE 3
Hydrologic Areas, Groundwater Basins, and Water Districts
El Camino Water Supply Assessment

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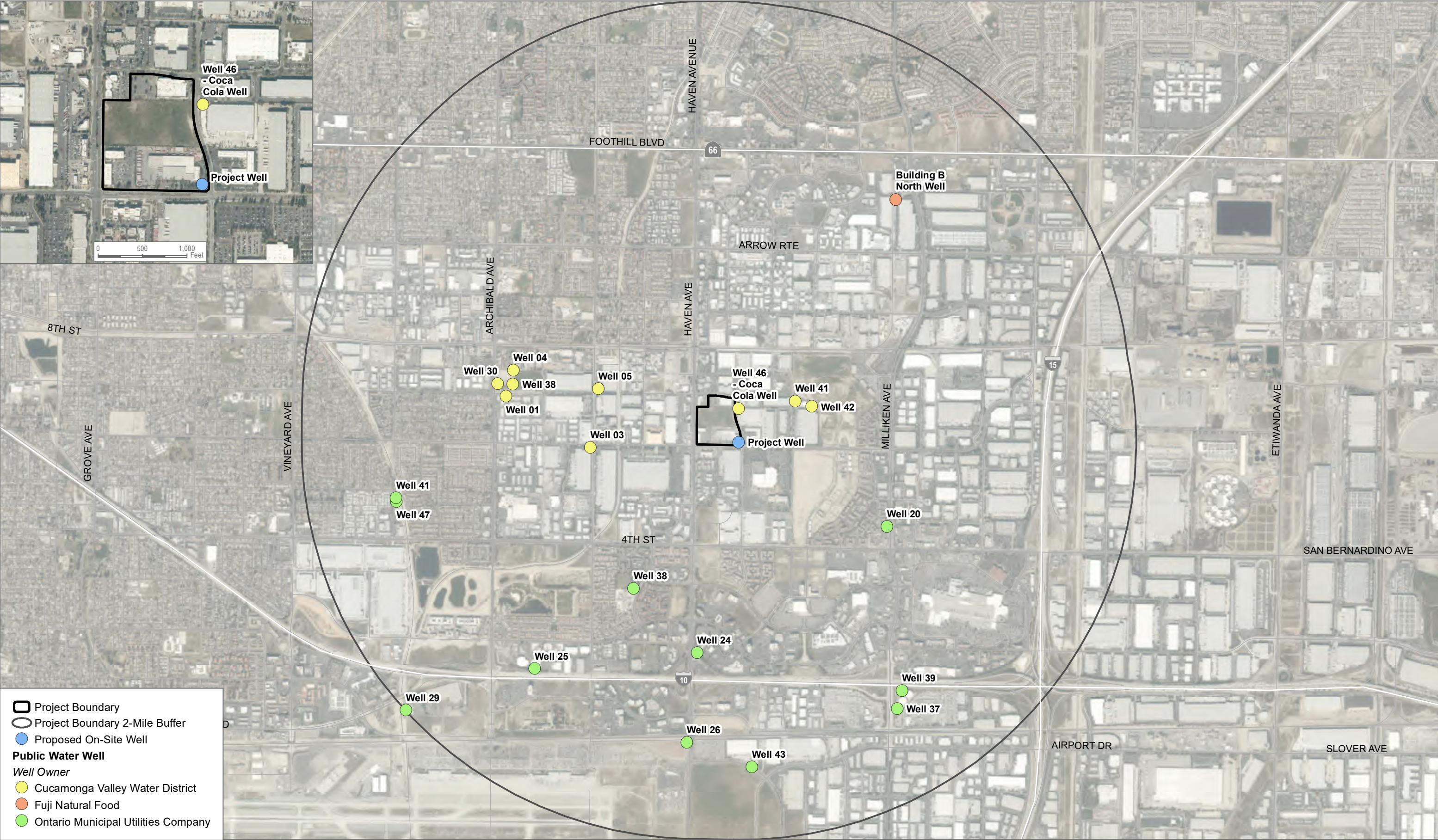
SOURCE: California Department of Conservation

INTENTIONALLY LEFT BLANK



SOURCE: ESRI; DWR; CBWM 2018; CBWM 2021b

INTENTIONALLY LEFT BLANK



SOURCE: SWRCB; DWR; USGS

DUDEK

FIGURE 6
Groundwater Well Locations
El Camino Water Supply Assessment

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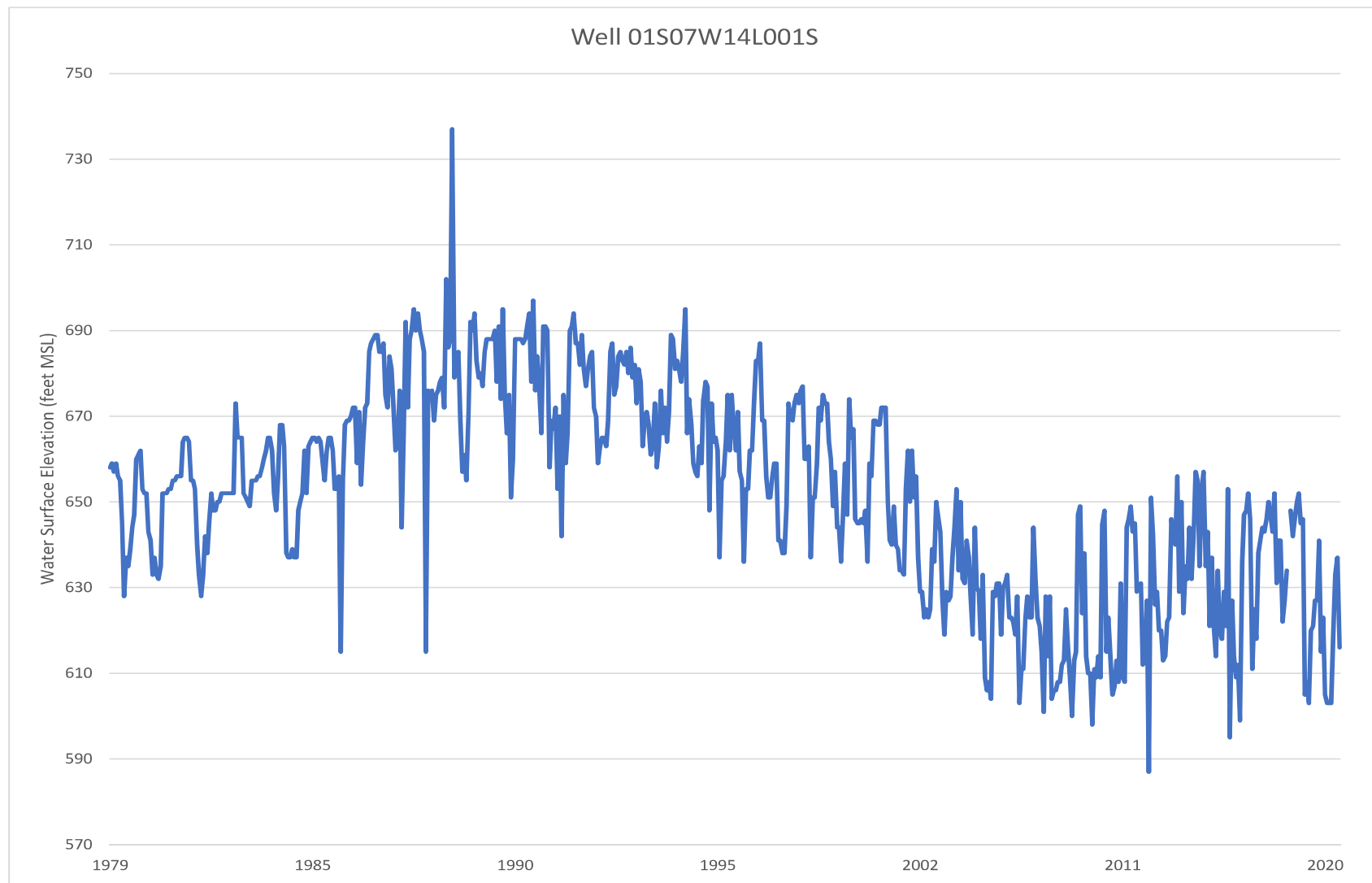


FIGURE 7

Well 01S07W14L001S Hydrograph

El Camino - WSA

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Appendix A

Water Demand

Project El Camino - Water Balance

Revision - April 11, 2023

Phase 1A = 3000 cpm Can Line, 1500 cpm Can Line, Small PET Line, Large PET Line

Phase 1B = Aseptic Small PET Line

Phase 2 = 1500 cpm Can Line



WATER BALANCE SHEET

Assumed Line Utilization **60%**

Assumed RO Recovery **80%**

VSEP Overall Recovery **98%**

CIP Reuse Percent **60%**

VSEP OF RO CONCENTRATE							
	Peak Day City Water Demand (gpm)	Average Day City Water Usage (gpd)	Average Month Water Usage @ 5 days/wk (gal/mo)	Average Year Water Usage @ 5 days/wk (gal/yr)	Average Day Flow to City Sewer (gpd)	Average Day VSEP Brine Generation RO (gpd)	Estimated WUR
Phase 1A	1,082	830,473	16,159,622	193,915,467	145,810	13,748	1.24
Phase 1B	1,520	1,058,770	20,601,903	247,222,841	299,224	18,349	1.32
Phase 2	1,707	1,183,224	23,023,572	276,282,860	299,368	20,835	1.28

VSEP OF RO CONCENTRATE AND CIP WATER							
	Average Day City Water Usage (gpd)	Average Month Water Usage @ 5 days/wk (gal/mo)	Average Year Water Usage @ 5 days/wk (gal/yr)	Average Day Flow to City Sewer (gpd)	Average Day VSEP Brine Generation CIP (gpd)	Average Day VSEP Brine Generation TOTAL (gpd)	Estimated WUR
Phase 1A	767,158	14,927,625	179,131,505	71,810	11,123	24,871	1.15
Phase 1B	983,277	19,132,938	229,595,254	140,229	23,823	42,172	1.23
Phase 2	1,107,658	21,553,178	258,638,132	140,286	23,836	44,671	1.20

PROJECT EL CAMINO - WATER USAGE ESTIMATE

DISTRIBUTION CENTER

SHIFT	NUMBER OF EMPLOYEES PER SHIFT	GPD PER EMPLOYEE	GALLONS USED
1ST SHIFT	25	9.49	237.3
2ND SHIFT	0	9.49	0.0
3RD SHIFT	61	9.49	578.9
DRIVERS	75	2.98	223.7
ADMIN	17	9.49	161.3
WASHDOWN FOR MISC. CLEANUP	# OF WASHDOWNS PER DAY	GPD	GALLONS USED
	3	20	60
SUBTOTAL (GPD)			1262

PRODUCTION CENTER

SHIFT	NUMBER OF EMPLOYEES PER SHIFT	GPD PER EMPLOYEE	GALLONS USED
1ST SHIFT	161	9.49	1527.9
2ND SHIFT	130	9.49	1233.7
3RD SHIFT	125	9.49	1186.3
SUBTOTAL (GPD)			3948

VISITORS

SHIFT	NUMBER OF EMPLOYEES PER SHIFT	GPD PER EMPLOYEE	GALLONS USED
10 PER HR, 12 HR PER DAY	120	0.90	108.0
SUBTOTAL (GPD)			108

2 STORY OFFICE BUILDING

SHIFT	NUMBER OF EMPLOYEES PER SHIFT	GPD PER EMPLOYEE	GALLONS USED
EXECUTIVE / HR	30	9.49	284.7
SALES / MERCH	8	9.49	75.9
SUBTOTAL (GPD)			361.0

TOTAL BUILDING LOAD (GPD)

5,679

SAFETY FACTOR

10%

6,247

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

Reference Evapotranspiration (ET_o) 54.6

Hydrozone # / Planting Description ^a	Plant Factor (PF)	Irrigation Method ^b	Irrigation Efficiency (IE) ^c	ETAF (PF/IE)	Landscape Area (sq. ft.)	ETAF x Area	Estimated Total Water Use (ETWU) ^e
Regular Landscape Areas							
2) Low water use plantings	0.3	Drip	0.81	0.37037	206,250	76,389	2,585,917
				Totals	(A)	(B)	
Special Landscape Areas							
				1			
				1			
				1			
				Totals	(C)	(D)	
				ETWU Total			2,585,917
				Maximum Allowed Water Allowance (MAWA)^e			3,141,889

^aHydrozone #/Planting Description
E.g

- 1.) front lawn
2.) low water use plantings
3.) medium water use planting

^bIrrigation Method
overhead spray
or drip

^cIrrigation Efficiency
0.75 for spray head
0.81 for drip

^dETWU (Annual Gallons Required) =
ET_o x 0.62 x ETAF x Area
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

^eMAWA (Annual Gallons Allowed) = (ET_o) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year, LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non-residential areas.

ETAF Calculations

Regular Landscape Areas

Total ETAF x Area	(B)
Total Area	(A)
Average ETAF	B ÷ A

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.

All Landscape Areas

Total ETAF x Area	(B+D)
Total Area	(A+C)
Sitewide ETAF	(B+D) ÷ (A+C)

Appendix B

Well Logs

ORIGINAL
File with DWR
Page 1 of 1

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet
No. 6019362

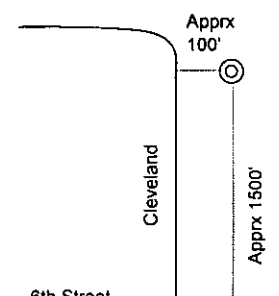
DWR USE ONLY — DO NOT FILL IN	
01S 07W 13B 0015	
STATE WELL NO. / STATION NO.	
LATITUDE	LONGITUDE
APN/TRS/OTHER	

Owner's Well No. #41
Date Work Began 3/9/2004 Ended 12/1/2004
Local Permit Agency San Bernardino County Dept. of Public Health
Permit No. 2004-01-0043 Permit Date 1/9/2004

GEOLOGIC LOG

ORIENTATION: <u>XX</u> VERTICAL <u> </u> HORIZONTAL <u> </u> ANGLE <u> </u>	DRILLING METHOD <u>reverse rotary</u> FLUID <u>water</u>
DEPTH FROM SURFACE	DESCRIPTION
	50 Conductor Casin
50	90 Sand - Gravel and Rock
90	110 Sand - Gravel and Clay
110	140 Silty Sand and Clay
140	160 Coarse Sand and Gravel
160	200 Fine Sand and Clay
200	230 Coarse Sand and Gravel
230	270 Clay and Some Gravel
220	310 Coarse Sand and Clay
310	340 Coarse Sand
340	400 Fine Sand and Clay
400	460 Trace Clay and Sand
460	510 Coarse Sand and Clay
510	580 Clay and Medium Sand
580	650 Clay and Sand
650	700 Coarse Sand and Small Gravel
700	750 Small Gravel
750	810 Coarse Sand and Smal Gravel
810	860 Small Gravel
860	890 Clay and Sand
890	940 Coarse Sand and Small Gravel
940	990 Small Gravel and Sand
990	1010 Clay and Sand
TOTAL DEPTH OF BORING: <u>1010</u> (Feet)	
TOTAL DEPTH OF COMPLETED WELL <u>1010</u> (Feet)	

WELL OWNER

WELL LOCATION	
Address <u>9111 Cleveland Avenue</u>	
City <u>Rancho Cucamonga</u>	
County <u>San Bernadino County</u>	
APN Book <u>0209-272-25</u>	Page <u> </u> Parcel <u> </u>
Township <u>1S</u>	Range <u>7W</u> Section <u>13</u>
Latitude <u> </u>	Longitude <u> </u>
LOCATION SKETCH	
	
Illustrate or Describe Distance of Well From Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary.	
PLEASE BE ACCURATE & COMPLETE	
ACTIVITY	
<u>XX</u> NEW WELL	
MODIFICATION/REPAIR	
<u> </u> Deepen	
<u> </u> Other	
PLANNED USES	
WATER SUPPLY	
Dom. <u> </u>	
Public <u>XX</u>	
Irrig. <u> </u>	
Indust. <u> </u>	
Monitor <u> </u>	
Test <u> </u>	
Cath. <u> </u>	
Heat <u> </u>	
Drct Psh <u> </u>	
Inject <u> </u>	
Vapor <u> </u>	
Sparg <u> </u>	
Other <u> </u>	
WATER LEVEL & YIELD OF COMPLETED WELL	
DEPTH OF FIRST WATER <u>430.75</u> (Ft.) BELOW SURFACE	
STATIC WATER LEVEL <u>430.75</u> (Ft.) & DATE <u>12/1/2004</u>	
ESTIMATED YIELD <u>3,500</u> (GPM) & TEST TYPE <u>Constant</u>	
TEST LENGTH <u>24</u> (Hrs.) TOTAL DRAWDOWN (Ft.) <u>121.5</u>	

DEPTH FROM SURFACE		BORE HOLE DIA.	CASING (S)								DEPTH FROM SURFACE		ANNULAR MATERIAL			
			TYPE				MATERIAL/ GRADE	ID.	GAUGE/ WALL	SLOT SIZE			TYPE			
			BL- ANK	SCR- EEN	CON DUCT	FILL PIPE					CEMENT	BEN- TONITE	FILL	FILTER PACK		
Ft.	to Ft.	Inch.														
0	50	46			XX		Mild Steel	36	5/16		0	50	XX			10 3 Sack
50	650	30	XX				304 Stainless Steel	20	5/16							
650	860	30		XX			Ful Flo	20	5/16	0.085						
860	890	30	XX				304 Stainless Steel	20	5/16							
890	990	30		XX			Ful Flo	20	5/16	0.085						
990	1010	30	XX				304 Stainless Steel	20	5/16							

ATTACHMENTS	CERTIFICATION STATEMENT
☐ Geologic Log	I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
☐ Well Construction Diagram	NAME <u>SOUTH WEST PUMP & DRILLING, INC.</u>
☐ Geophysical Log(s)	ADDRESS <u>53-381 HWY 111, COACHELLA, CA 92236</u>
☐ Soil/Water Chemical Analysis	Signed <u>[Signature]</u> 723919
☒ Other	WELL DRILLER/AUTHORIZED REPRESENTATIVE
ATTACH ADDITIONAL INFORMATION.	DATE <u>8-24-05</u> C-57 LICENSE NUMBER

ORIGINAL

File with DWR

Page 1 of 2

Owner's Well No. #42

Date Work Began 1/26/2004 Ended 6/2/2004

Local Permit Agency San Bernardino County Dept. of Public Health

Permit No. 2004-01-0044 Permit Date 1/9/2004

STATE OF CALIFORNIA
WELL COMPLETION REPORTRefer to Instruction Pamphlet
No. e019365

01S 07W 13G 001S

DWR USE ONLY - DO NOT FILL IN	
01S 07W 13G 001S	
STATE WELL NO. / STATION NO.	
LATITUDE	LONGITUDE
APN/TRS/OTHER	

GEOLOGIC LOG

ORIENTATION: ☒ VERTICAL ☐ HORIZONTAL ☐ ANGLE		DRILLING METHOD ☐ reverse rotary ☐ FLUID ☐ water
DEPTH FROM SURFACE	DESCRIPTION	
0	50	Conductor casing
50	80	sand gravel and rock
80	100	sand gravel and rock traces of clay
100	130	fine silty sand and small amount of gravel
130	140	coarse sand
140	150	coarse sand and some gravel
150	170	fine silty sand and some clay
170	190	coarse sand and some gravel
190	200	coarse sand and some silt
200	210	clay and some sand
210	220	Coarse sand and clay
220	310	coarse sand and small gravel
310	340	coarse sand some gravel traces of clay
340	380	coarse sand and some gravel
380	390	coarse sand gravel
390	400	coarse sand gravel clay
400	420	coarse sand and clay
420	430	clay and some coarse sand
430	470	clay and medium sand
470	480	clay and coarse sand
480	550	coarse sand small gravel and clay
550	650	coarse sand and gravel
650	690	coarse sand and small gravel
690	710	small gravel
710	820	coarse sand and small gravel
820	830	gravel and little coarse sand
830	840	coarse sand little clay small gravel
840	850	clay and coarse sand
850	880	little coarse sand mostly clay
880	890	little coarse sand small gravel and mostly clay
TOTAL DEPTH OF BORING: (Feet)		
TOTAL DEPTH OF COMPLETED WELL (Feet)		

WELL OWNER

WELL LOCATION	
Address	9111 Cleveland Avenue
City	Rancho Cucamonga
County	San Bernadino County
APN Book 1209-272-2	Page Parcel
Township 1S	Range 7W Section 13
Latitude 34.0877198	Longitude 117.565391
LOCATION SKETCH	
Illustrate or Describe Distance of Well From Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE	
ACTIVITY	
☒ NEW WELL	
MODIFICATION/REPAIR	
☐ Deepen	
☐ Other	
Planned Uses	
WATER SUPPLY	
Dom. ☐	
Public ☒	
Irrig. ☐	
Indust. ☐	
Monitor ☐	
Test ☐	
Cath. ☐	
Heat ☐	
Drct Psh ☐	
Inject ☐	
Vapor ☐	
Sparg ☐	
Other ☐	
WATER LEVEL & YIELD OF COMPLETED WELL	
DEPTH OF FIRST WATER (Ft.) BELOW SURFACE	
STATIC WATER LEVEL 431 (Ft.) & DATE 11/24/2004	
ESTIMATED YIELD 4,000 (GPM) & TEST TYPE turbine pump	
TEST LENGTH 21 days (Hrs.) TOTAL DRAWDOWN (Ft.) 145	

DEPTH FROM SURFACE		BORE HOLE DIA.	CASING (S)								DEPTH FROM SURFACE		ANNULAR MATERIAL			
			TYPE				MATERIAL/ GRADE	ID.	GAUGE/ WALL	SLOT SIZE			TYPE			
			BL- ANK	SCR- EEN	CON- DUCT	FILL- PIPE							CEMENT	BEN- TONITE	FILL	FILTER PACK
Ft. to Ft.	Inch.										Ft. to Ft.					
0	50	46			XX		Mild Steel	5-Feb	5/16		0	50	XX		10.3 sack	
10	650	30	XX				304 stainless steel	20	5/16							
650	780	30		XX			moss ful-flu	20	5/16	0.085						
780	800	30	XX				304 stainless steel	20	5/16							
800	840	30		XX			moss ful-flu	20	5/16	0.085						
840	900	30	XX				304 stainless steel	20	5/16							
900	940	30		XX			moss ful-flu	20	5/16	0.085						

ATTACHMENTS

☐ Geologic Log
☐ Well Construction Diagram
☐ Geophysical Log(s)
☐ Soil/Water Chemical Analysis
☐ Other

ATTACH ADDITIONAL INFORMATION.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME SOUTH WEST PUMP & DRILLING, INC.

ADDRESS 53-381 HWY 111, COACHELLA, CA 92236

Signed

WELL DRILLER/AUTHORIZED REPRESENTATIVE

DATE 8-24-05 C-57 LICENSE NUMBER 723919

Permit No.	2004-01-0044	Permit Date	1/9/2004
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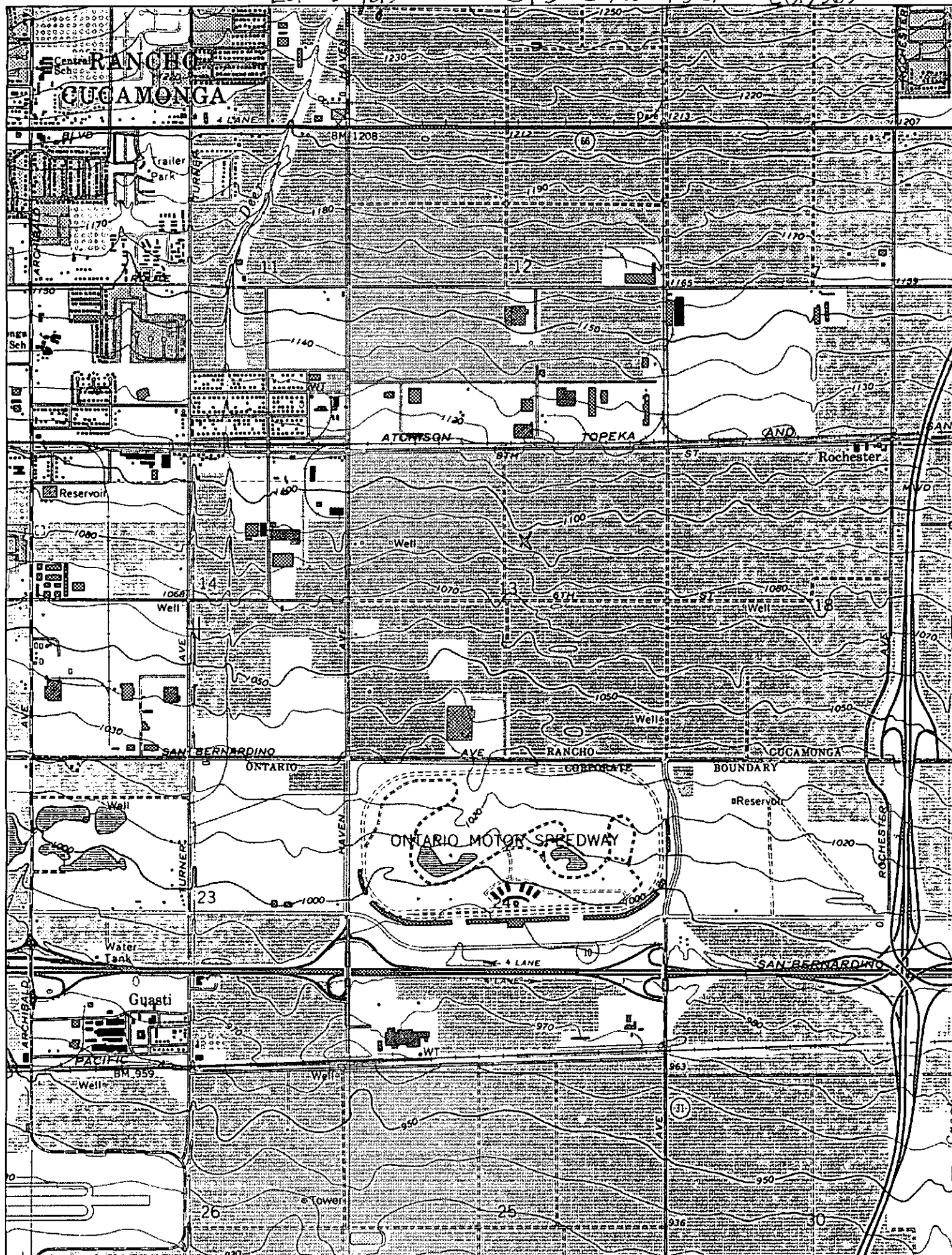
No.e019365

DWR USE ONLY --- DO NOT FILL IN	
STATE WELL NO. / STATION NO.	
LATITUDE	LONGITUDE
APN/TRS/OTHER	

WELL OWNER[illegible][illegible]

CERTIFICATION STATEMENT

C-57 LICENSE NUMBER



ORIGINAL
File with DWR
Page 1 of 1

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet
No. e077980

myr 10/16/08

DWR USE ONLY - DO NOT FILL IN	
01507W13E0025	
STATE WELL NO. / STATION NO.	
LATITUDE	LONGITUDE
APN/TRS/OTHER	

Owner's Well No. 46
Date Work Began 4/14/2008 Ended 7/30/2008
Local Permit Agency County of San Bernardino Environmental Health Services
Permit No. 2008040185 Permit Date 4/14/2008

GEOLOGIC LOG

ORIENTATION: _____ VERTICAL ☒ _____ HORIZONTAL _____ ANGLE _____		DRILLING METHOD Reverse Rotary FLUID Water
DEPTH FROM SURFACE	DESCRIPTION	
0	70	Sand
70	150	Sand, Gravel
150	640	Sand, Gravel, Clay
640	660	Sand, Gravel, Rock
660	730	Sand, Gravel, Clay
730	800	Sand, Gravel
800	820	Sand, Gravel, Clay
820	860	Sand, Clay
860	910	Sand, Clay, Gravel
910	960	Sand, Gravel
960	1000	Sand, Gravel, Clay
1000	1040	Sand, Clay
1040	1100	Gravel, Sand, Clay
1100	1120	Sand, Clay
1120	1140	Sand, Gravel, Clay
1140	1160	Sand, Clay
1160	1200	Sand, Gravel, Clay
TOTAL DEPTH OF BORING: 1200 (Feet)		
TOTAL DEPTH OF COMPLETED WELL 1000 (Feet)		

WELL OWNER

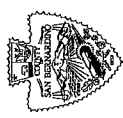
Address	Ulica Avenue & 7th Street		
City	Rancho Cucamonga, CA 91736		
County	San Bernardino		
APN Book	020-941-133	Page	Parcel
Township	1S	Range	7W
Latitude	Longitude		
Section	13 E		

LOCATION SKETCH	ACTIVITY
	☒ NEW WELL MODIFICATION/REPAIR Deepen Other Destroy
WATER LEVEL & YIELD OF COMPLETED WELL	PLANNED USES
DEPTH OF FIRST WATER 459 (Ft.) BELOW SURFACE STATIC WATER LEVEL 454.25 (Ft.) & DATE 7/30/2008 ESTIMATED YIELD 3,000 (GPM) & TEST TYPE Constant Rate TEST LENGTH 24 (Hrs.) TOTAL DRAWDOWN (Ft.) 53	WATER SUPPLY Dom. _____ Public ☒ Irrig. _____ Indust. _____ Monitor _____ Test _____ Cath. _____ Heat _____ Drct Psh _____ Inject _____ Vapor _____ Sparg _____ Other _____

DEPTH FROM SURFACE		BORE HOLE DIA.	CASING (S)								DEPTH FROM SURFACE		ANNULAR MATERIAL				
			TYPE				MATERIAL/ GRADE	ID.	GAUGE/ WALL	SLOT SIZE			TYPE				
			BL- ANK	SCR- EEN	CON- DUCT	FILL PIPE							CEMENT	BEN- TONITE	FILL	FILTER PACK	
Ft. to Ft.		Inch.										Ft. to Ft.					
0	50	48			X		Mild Steel Conductor	44	3/8			0	540	10.3 Sack			
0	650	38	X				HSLA Steel Blank	24	3/8			540	550		X		
650	800	36		X			304 SS Ful-Flo Louver	24	5/16	0.085		550	1010				6 x 12
800	840	36	X				304 SS Blank	24	5/16								
840	990	36		X			304 SS Ful-Flo Louver	24	5/16	0.085							
990	1000	36	X				304 SS Sump with Shoe	24	5/16								

ATTACHMENTS Geologic Log Well Construction Diagram Geophysical Log(s) ☒ Soil/Water Chemical Analysis Other	CERTIFICATION STATEMENT I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief. NAME SOUTH WEST PUMP & DRILLING, INC. ADDRESS 53-381 HWY 111, COACHELLA, CA 92236 Signed WELL DRILLER/AUTHORIZED REPRESENTATIVE 8/13/2008 DATE 723919 C-57 LICENSE NUMBER
--	---

THIS MAP IS FOR THE PURPOSES
OF THE SAN BERNARDINO COUNTY
TAX MAP ACT.

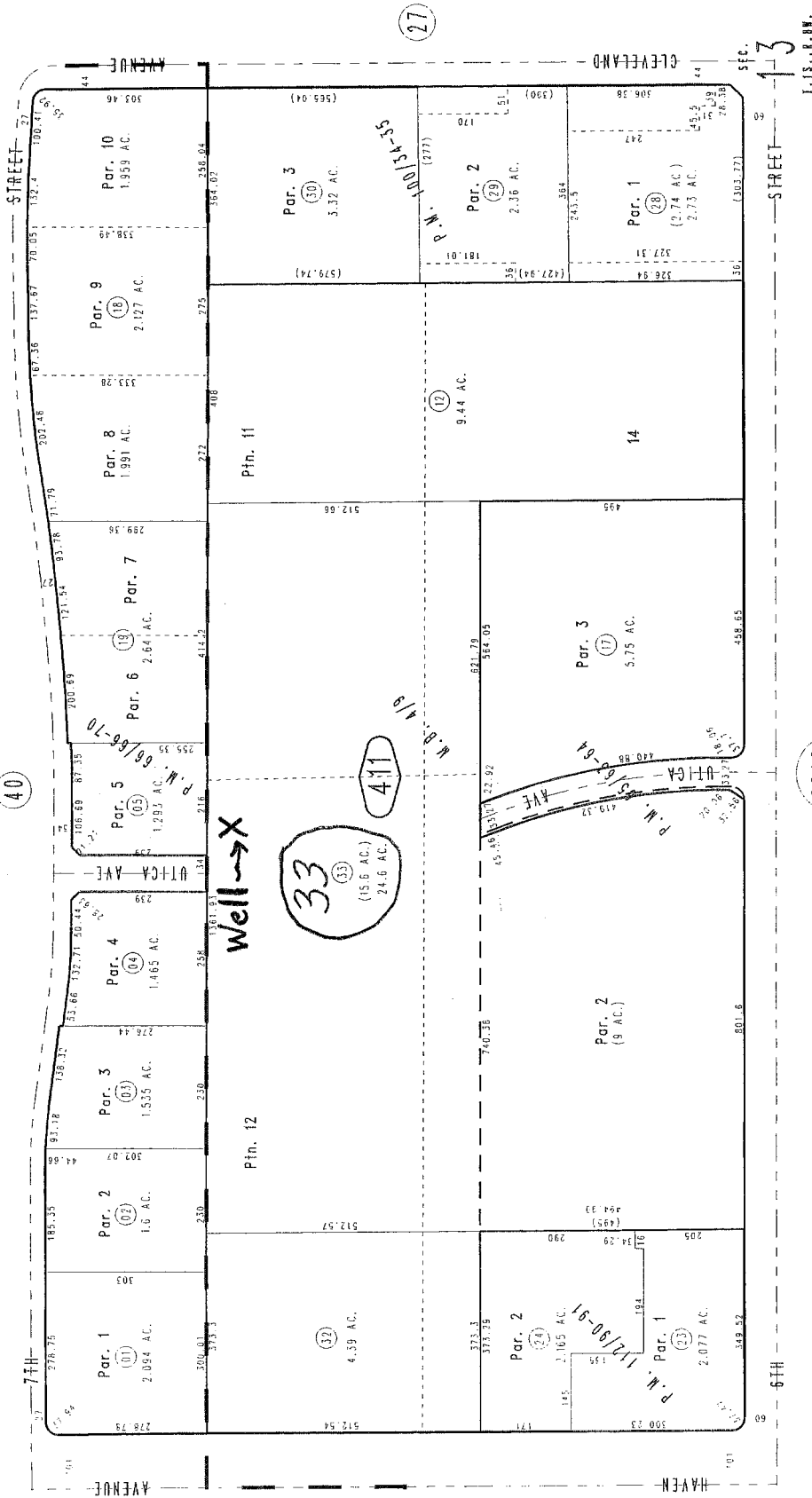


Ptn. Cucamonga Fruit Lands
M.B. 4/9

City of Rancho Cucamonga
Tax Rate Area
15015

0209 - 41

DD 34,087507632
-117,571838783



0077980

REVISED
04/25/07 GL

Assessor's Map
Book 0209 Page 41
San Bernardino County

Ptn. N.W.1/4, Sec.13
T.1S..R.7W.

Parcel Map No. 10223, P.M. 112/90-91
Parcel Map No. 9204, P.M. 100/34-35
Ptn. Parcel Map No. 6544, P.M. 65/63-64
Ptn. Parcel Map No. 6194, P.M. 62/62-66, Amended P.M. 65/66-76

September 2004

DUPLICATE Job #: 2404
Driller's Copy

STATE OF CALIFORNIA
WELL COMPLETION REPORT

DWR USE ONLY DO NOT FILL IN
01507W29A0025
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Page 1 of 1
Owner's Well No. 41
Date Work Began 01/2003 Ended 02/2003
Local Permit Agency San Bernardino County
Permit No. 200209752 Permit Date 09/2002

GEOLOGIC LOG

ORIENTATION () ☒ VERTICAL ☐ HORIZONTAL ☐ ANGLE (SPECIFY)

DRILLING METHOD Reverse FLUID Water

DEPTH FROM SURFACE DESCRIPTION
Fl. to Fl. Describe material, grain size, color, etc.

-0-	120	Sand and Gravel
120	130	Clay and Gravel
130	140	Clay
140	200	Sand and Gravel
200	210	Sand, Gravel and some Clay
210	240	Sand and Gravel
240	260	Sand, Gravel and some Clay
260	300	Sand and Clay
300	320	Sand and Gravel
320	400	Gravel and Rocky
400	440	Gravel and Clay
440	470	Gravel and Rocky
470	520	Gravel, Sand and Clay
520	570	Sand and Gravel
570	660	Gravel, Sand and Clay
660	670	Clay
670	690	Clay and Sand
690	700	Sand and Gravel
700	820	Clay and Gravel
820	890	Sand, Gravel & Clay
890	900	Clay and Sand
900	910	Clay, Sand and Gravel
910	920	Clay Sand
920	1210	Clay, Sand and Gravel
1210	1280	Gravel and Clay
1280	1300	Sand, Gravel and Clay
1300	1320	Sand and Gravel
1320	1360	Sand, Gravel and some Clay
1360	1370	Clay
1370	1400	Grey and Brown Clay, Gravel

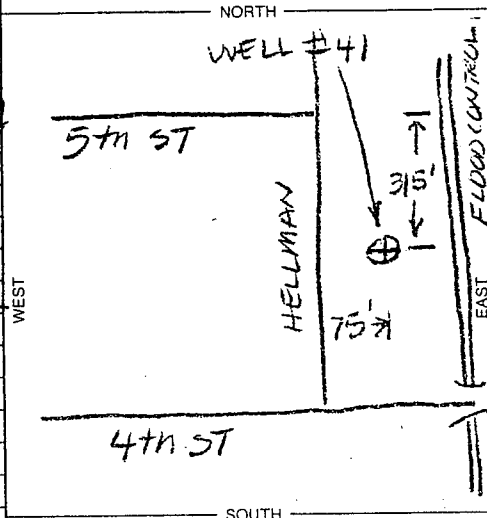
TOTAL DEPTH OF BORING 1400 (Feet)

TOTAL DEPTH OF COMPLETED WELL 1040 (Feet)

WELL OWNER

WELL LOCATION
Address S/E Corner of Hellman & 5th St.
City Ontario
County San Bernardino
APN Book Page Parcel 0210-062-36
Township 1S Range 7W Section 21
Latitude 34-33-03 Longitude 117-37-40.65

LOCATION SKETCH



ACTIVITY ()

☒ NEW WELL
MODIFICATION/REPAIR
Deepen
Other (Specify)

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES ()
WATER SUPPLY
Domestic ☒ Public
Irrigation Industrial

MONITORING
TEST WELL
CATHODIC PROTECTION
HEAT EXCHANGE
DIRECT PUSH
INJECTION
VAPOR EXTRACTION
SPARGING
REMEDICATION
OTHER (SPECIFY)

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER 402 (Fl.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL 402 (Fl.) & DATE MEASURED 2/17/03

ESTIMATED YIELD 3000 (GPM) & TEST TYPE Pump

TEST LENGTH 24 (Hrs.) TOTAL DRAWDOWN 63 (Fl.)

* May not be representative of a well's long-term yield.

DEPTH FROM SURFACE		BORE-HOLE DIA. (Inches)	CASING (S)						DEPTH FROM SURFACE	ANNULAR MATERIAL							
			TYPE ()				MATERIAL GRADE	INTERNAL DIAMETER (Inches)		GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	TYPE					
Ft.	to Ft.		BLANK	SCREEN	CON- DUCTOR	FILL PIPE									Ft.	to Ft.	CE- MENT ()
-0-	50	48			x		139-B	35 1/4	.375		-0-	50	x				
+2	600	30	x				139-B	20	.375		-0-	450	x				
600	1020	30		x			139-B	20	.312	3/32	450	1060				3/8" x 16	
1020	1040	30	x				139-B	20	.312		1060	1080		x			

ATTACHMENTS ()

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analyses
- Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Ted Caldwell for Beylik Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

555 S. Harbor Blvd. La Habra, CA 90631-6124
ADDRESS CITY STATE ZIP

Signed T. Caldwell DATE SIGNED 3/7/03 306291
WELL DRILLER/AUTHORIZED REPRESENTATIVE C-57 LICENSE NUMBER

City of Ontario - Well 41

793000

Complete as much information as possible. Leave blank if information is not available, use N.A. if not applicable.

* Indicates items required for Source Water Assessment

** Indicates additional items required for assessments and Ground Water Rule

	(separate multiple entries in field with semi-colon)	Actual, Estimated or Default?
DATA SHEET GENERAL INFORMATION		
System Name	City of Ontario	
System Number	3610034	
Source of Information (well log, DHS/County files, system, etc)	GEOSCIENCE Support Services, Inc.	
Organization Collecting Information (DHS, County, System, other)	GEOSCIENCE Support Services, Inc.	
Date Information Collected/Updated	4/11/03	
WELL IDENTIFICATION		
* Well Number or Name	Well 41	
* DHS Source Identification Number (FRDS ID No.)	NA	
DWR Well Log on File? (yes or no)	NA	
State Well Number (from DWR)	NA	
Well Status (Active, Standby, Inactive)	Unequipped as of Apr-03	
WELL LOCATION		
Latitude	34.07962° North	Estimate
Longitude	117.60211° West	Estimate
Ground Surface Elevation (ft above MSL)	1,035	Estimate
Street Address	~~Hellman Avenue~~	1252 Al. Hellman
Nearest Cross Street	5th Avenue	
City	Ontario	
County	San Bernardino	
Neighborhood/Surrounding Area (see Note 1)	Re, Co	
Site plan on file? (yes or no)	No	
DWR Ground Water Basin	Upper Santa Ana	
DWR Ground Water Sub-basin	Chino	
SANITARY CONDITIONS		
** Distance to closest Sewer Line, Sewage Disposal, Septic Tank (ft)	100	Estimate
Distance to Active Wells (ft)	6,720	Actual
Distance to Abandoned Wells (ft)	8,060	Actual
Distance to Surface Water (ft)	30	Estimate
** Size of controlled area around well (square feet)	11,000	Estimate
* Type of access control to well site (fencing, building, etc)	Fencing & Building	Estimate
* Surface Seal? (Concrete slab)(yes or no)	Yes, Concrete Slab	Yes
* Dimensions of concrete slab: Length(ft)/ Width(ft)/ Thick(in)	54' x 40' x 6"	Estimate
* Within 100 year flood plain? (yes or no)	Yes, FEMA Map	Actual
* Drainage away from well? (yes or no)	Yes	Estimate
ENCLOSURE/HOUSING		
Enclosure Type (building, vault, none, etc.)	Block Building	Estimate
Floor material	Concrete	Estimate
Located in Pit? (yes or no)	No	Actual
Pit depth (feet) (if applicable)	-	-

WELL CONSTRUCTION		
Date drilled	Dec-03	Actual
Drilling Method	Reverse	
Depth of Bore Hole (feet below ground surface)	1,080	Actual
Casing Beginning Depth/Ending Depth(ft below surface); 2nd Casing Beginning Depth/Ending Depth; 3rd Casing, etc.	0-1,040	Actual
Casing Diameter (inches); 2nd Casing Diameter; 3rd Casing, etc.	20	Actual
Casing Material; 2nd Casing Material; 3rd Casing, etc.	copper-bearing steel	Actual
Conductor casing used? (yes, no or not sure) (See Note 2)	Yes	Actual
Conductor casing removed? (yes, no or not sure)	No	
* Depth to highest perforations/screens(ft below surface)	600	Actual
Screened Interval Beginning Depth/Ending Depth (ft below surface); 2nd Screened Interval Beg. Depth/Ending Depth; 3rd Screened Interval, etc.	600-1,020	Actual
* Total length of screened interval (ft) (default = 10% pump capacity in gpm)	420	Actual
* Annular Seal?(yes, no, or not sure) (See Note 3)	Yes	Actual
* Depth of Annular Seal (ft)	450	Actual
Material of Annular Seal (cement grout, bentonite, etc.)	10.5 sack cement	Actual
Gravel pack, Depth to top (ft below ground surface)	450-1,080	Actual
Total length of gravel pack (ft)	630	Actual
AQUIFER		
* Aquifer Materials (list all that apply: sand, silt, clay, gravel, rock, fractured rock)	Gravel; Sand; Silt; Clay	Actual
* Effective porosity (decimal percent) (default = 0.2)	0.25	Default
* Confining layer (Impervious Strata) above aquifer? (yes, no or not sure)	Yes	Actual
Thickness of confining layer, if known (ft)	10	Actual
Depth to confining layer, if known (ft below ground)	130	Actual
* Static water level (ft below ground surface)	403	Actual
Static water level measurement: Date/Method	24-Feb-03 / Sounder	Actual
Pumping water level (ft below ground surface)	462	Actual
Pumping water level measurement: Date/Method	25-Feb-03 / Sounder	Actual
WELL PRODUCTION		
Well Yield (gpm)	2,500	Actual
Well Yield Based On (i.e., pump test, etc.)	Pump Test	
Date measured	24-Feb-03	
Is the well metered? (yes or no)	N/A	
Production (gallons per year)	N/A	
Frequency of Use (hours/year)	N/A	
Typical pumping duration (hours/day)	N/A	
PUMP		
Make	Perless Pump	Estimate
Type	Vertical Turbine	Estimate
Size (hp)	600	Estimate
* Capacity (gpm)	2,500	Estimate
Depth to suction intake (ft below ground surface)	580	Estimate
Lubrication Type	Oil	Estimate
Type of Power: (i.e., electric, diesel, etc.)	Electric	Estimate
Auxiliary power available?(yes or no)	Yes	Estimate
Operation controlled by: (i.e., level in tank, pressure, etc.)	Level in Tank	Actual
Pump to Waste capability? (yes or no)	Yes	Estimate
Discharges to: (i.e., distribution system, storage, etc.)	Distribution Sytem	Estimate

REMARKS AND DEFECTS (use additional sheets as necessary)

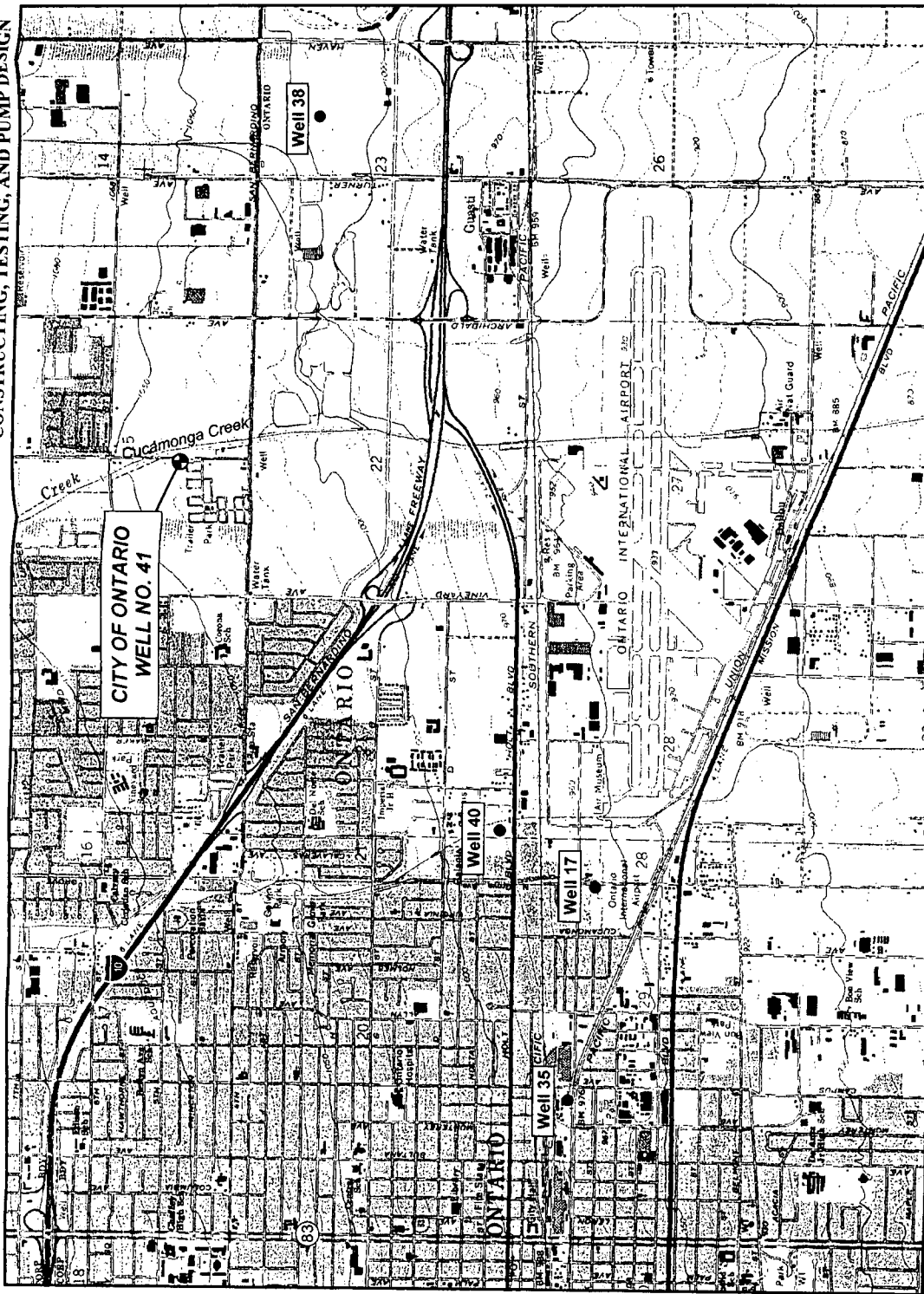
ALBERT A. WEBB ASSOCIATES /
CITY OF ONTARIO

CITY OF ONTARIO WELL 41: RESULTS OF DRILLING,
CONSTRUCTING, TESTING, AND PUMP DESIGN

GENERAL LOCATION MAP CITY OF ONTARIO WELL 41

EXPLANATION

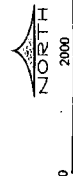
- City of Ontario Well 41
- Other City of Ontario Wells



Map Projection:
UTM 1927 (Zone 11)
Central Meridian: -117 degrees

GIS_jaw city_of_ontario_well_41_11.apr

Base Maps from:
U.S.G.S Topographic Maps Ontario (1981) and Guast (1981).
Scale: 24,000.



23-APR-03
Prepared by: DWB

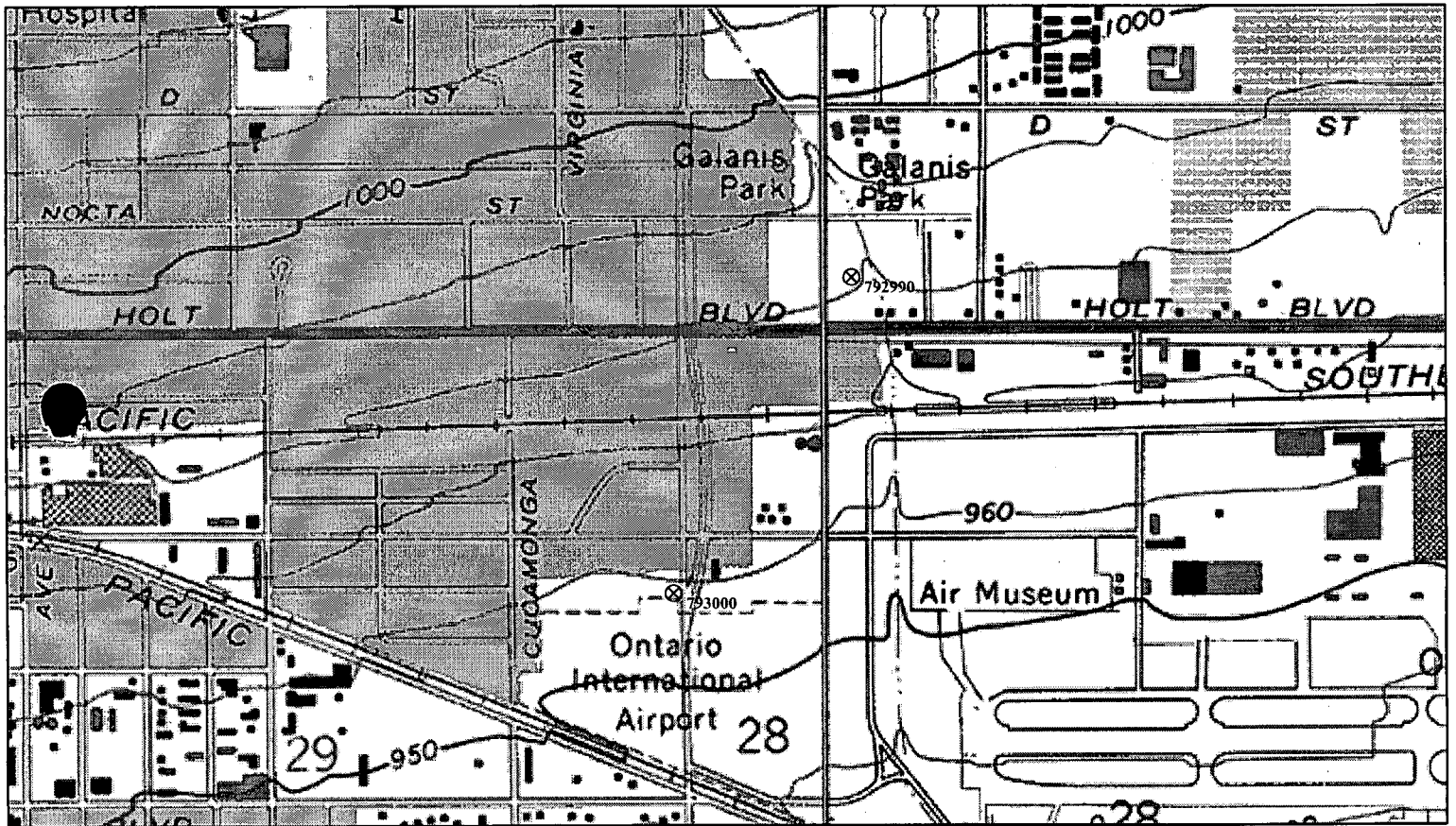
GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 920-0107 Fax: (909) 920-0403
E-mail: enr@geoscience-water.com

Figure 1

793000

793000



15/7W - 29A