

ALBERT A. WEBB ASSOCIATES

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Initial Study/ Mitigated Negative Declaration

Well 30
District Project No. C195054

Prepared for

Jurupa
COMMUNITY SERVICES DISTRICT
Proudly serving Jurupa Valley and Eastvale

Prepared by
Albert A. Webb Associates
3788 McCray Street
Riverside, CA 92506

May 2021

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

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Acronyms

AB 52	Assembly Bill 52
AB 939	Assembly Bill 939
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
BMPs	Best Management Practices
CalEEMod	California Emissions Estimator Model
Cal-OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	Methane
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2E	Carbon dioxide equivalent
CRPR	California Rare Plant Rank
DEV	Developed Community
DIS	Disturbed Community
DOC	California Department of Conservation
DTSC	Department of Toxic Substances Control
EIC	Eastern Information System
FEMA	Federal Emergency Management Agency
FT AMSL	Feet Above Mean Sea Level
FT BGS	Feet Below Ground Surface
GHG	Greenhouse Gas
GP	General Plan
GPM	Gallons per Minute
GSP	Groundwater Sustainability Plan
HP	Horse Power

I-10	Interstate 10
I-15	Interstate 15
JCSD	Jurupa Community Services District
JUSD	Jurupa Unified School District
JVGP	City of Jurupa Valley General Plan 2017
JVGP DEIR	City of Jurupa Valley General Plan 2017 Draft Environmental Impact Report
JVGP FPEIR	City of Jurupa Valley General Plan 2017 Final Environmental Impact Report
JVZM	City of Jurupa Valley Zoning Map 2019
Lbs/day	Pounds per day
LI	Light Industrial
LST	Localized significance threshold
MBMI	Morongo Band of Mission Indians
MGD	Million gallons per day
MLO	Mira Loma Warehousing and Distribution Overlay
MSHCP	Western Riverside County Multiple-Species Habitat Conservation Plan
$MTCO_2E/yr$	Metric tonnes per year of carbon dioxide equivalents
N_2O	Nitrous oxide
NO_x	Oxides of nitrogen
NPDES	National Pollution Discharge Elimination System
OBMP	Optimum Basin Management Program
ONT ALUCP	Ontario International Airport Land Use Compatibility Plan
PRC	Public Resource Code
PM-2.5	Particulate matter less than 2.5 microns in size
PM-10	Particulate matter less than 10 microns in size
PQP	Public/Quasi-Public Lands
PZ	Pressure Zone
ROW	Right-of-way
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SGMA	Sustainable Groundwater Management Act of 2014
SO_x	Sulfur oxides
SR-60	State Route 60
SR-91	State Route 91
SMBMI	San Manuel Band of Mission Indians

SRA	Source receptor area
SWPPP	Storm Water Pollution Prevention Plan
TDS	Total Dissolved Solids
USFWS	United States Fish and Wildlife Service
VOC	Volatile organic compound

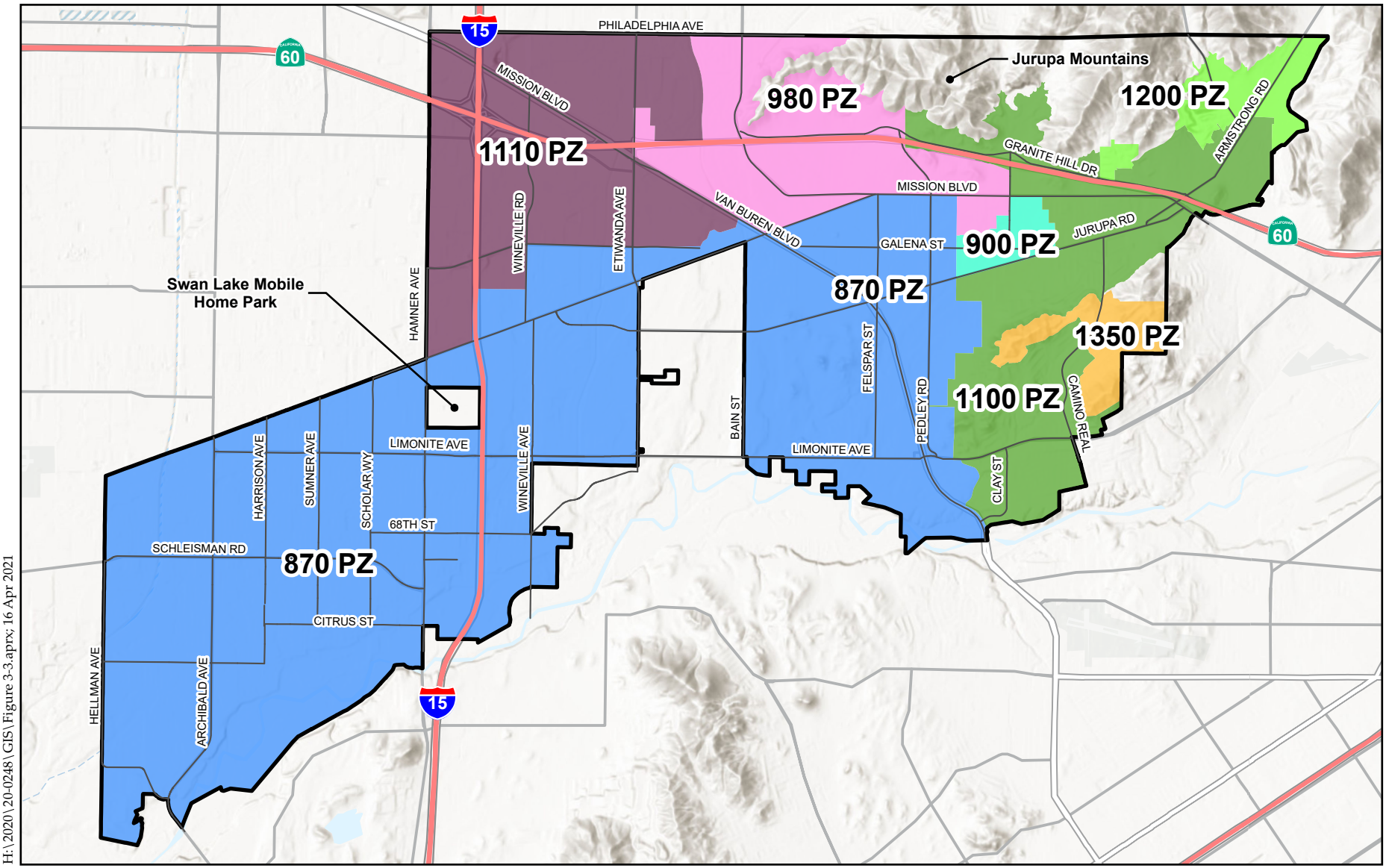
I. INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Sections 21000–21177), this Initial Study has been prepared to determine potentially significant environmental impacts resulting from the proposed destruction and abandonment of Well 19 and the construction and operation of Well 30 (District Project No. C195054), hereinafter refer to as "proposed Project" or "Project". In accordance with *CEQA Guidelines* Section 15063 and the Jurupa Community Services District (JCSD) *Local Guidelines for Implementing the California Environmental Quality Act* (Local Guidelines) Section 5, this Initial Study is a preliminary analysis prepared by JCSD, as Lead Agency, to inform the JCSD Board of Directors, affected agencies, and the public of potential environmental impacts associated with the implementation of the proposed Project.

Background

JCSD is a public retail urban water supplier. JCSD's water supply distribution system is made up of seven pressure zones (PZs) as shown in **Figure 1 – Water System Pressure Zones**. As shown on **Figure 1**, not all of JCSD is within a water pressure zone, primarily because of the natural topography of the Jurupa Mountains. (JCSD 2020 UWMP, p. 3-3.) JCSD desires to drill and construct up to two new ground water projection wells that could be implemented into JCSD's 980 blend zone program. This program currently blends water from several ground water production wells in order to meet regulatory compliance standards for municipal drinking water. New wells are necessary for the 980 blend zone program as several existing wells are experiencing reduced production and/or increases in ground water contaminates, most notably nitrate.

JCSD and GEOSCIENCE Support Services, Inc. identified four potential locations for the construction and operation of a new high-capacity production well: JCSD's Well 19 site, JCSD's Well 20 Site, an undeveloped lot near the intersection of Wineville Avenue/Hasting Boulevard (Wineville North), and an undeveloped lot near the intersection of Wineville Avenue/Cantu-Galleano Ranch Road (Cantu South). Each of these sites were investigated and ranked and the findings were documented the *Jurupa Community Services District Well Site Assessment* (Well Site Assessment), which is included as Appendix A of this Initial Study. The Well Site Assessment evaluated and ranked each of the four potential well sites in term of both geohydrology and engineering factors. Geohydrology factors included: aquifer production potential; well interference; ground water quality, and proximity of open-case sites of environmental concern. Engineering factors included: operational input and concerns; site access and logistical constraints (for well drilling), public impacts, proximity to storm drains and other discharge access, proximity to construction water source; proximity to sanitary hazards; and current ownership. (GEOSCIENCE, pp. 1–2, 9.) The results of the Well Site Assessment identified that the Well 19 site and the Cantu South site were the two highest-ranked sites of the four sites evaluated. (GEOSCIENCE, p. 12.) At this time JCSD is proposing to drill a new well on property adjacent to the Well 19 site.



H:\2020\20-0248\GIS\Figure 3-3.aprx; 16 Apr 2021

Sources: JCSD, 2019;
Riverside Co. GIS, 2020.

0 0.5 1 1.5 2 Miles

Figure 1- Water System Pressure Zones

Well 30

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Purpose and Need for the Project

Groundwater contamination in the JCSD area is a direct result of the historic and current agricultural activity. Nitrate contamination in groundwater is associated with both nitrogen-based fertilizers applied to crops as well as manure from cattle. Although northern sections of JCSD's service area have been almost fully urbanized, residual nitrate can still be found in the groundwater. JCSD has permitting regulations in place to ensure concentration of nitrate is below 35 mg/L. Prospective JCSD well sites were tested for nitrate levels, total dissolved solids (TDS) and perchlorate concentrations. Well 19 reported a minimum of 4 mg/L and a maximum of 18 mg/L of nitrate, which is below JCSD's maximum allowed contamination level. There was a single occurrence of TDS concentration reported more than the lower limit of secondary MCL of 500 mg/L in Well 19. However, perchlorate was not detected.

JCSD's Well 19 was constructed in 1917. While Well 19 is still active and has been a reliable source of good quality groundwater, due to its advanced age it has reached the end of its economic life. Well 19 was originally designed to pump at 1,200 gpm; and is currently pumping at approximately 1,195 gallons per minute (gpm). As documented in JCSD's *2020 Water Master Plan* and JCSD's *2020 Urban Water Management Plan (JCSD 2020 UWMP),* Well 30 is proposed to replace Well 19 and increase supply by 1,300 gpm for a total of 2,500 gpm, to the 980 PZ and 1110 PZ to meet future water demand within these pressure zones to accommodate planned and expected growth within JCSD's service area and offset projected degradation in water quality to maintain system reliability.

JCSD does not have land use authority within its service area. That authority rests with the cities of Eastvale, Jurupa Valley, Norco, and the County of Riverside since the District's service area encompasses land within each of these agencies.[1] The best guide for future land use within any city or county is that jurisdiction's General Plan Land Use Element; thus, the basis for land use and population projections used in JCSD's *2020 Water Master Plan* and *JCSD's 2020 UWMP* are the current General Plan land use plans for these agencies. (JCSD UWMP, p. 3-25; MWP 2-3.) JCSD met with Planning Department staff from the cities of Eastvale and Jurupa Valley as part of the *2020 Water Master Plan* effort in 2019 and met again with these agencies (via teleconference) in 2021 during preparation of the *JCSD 2020 UWMP,* as required by California Water Code Section 10631(a). During the 2021 teleconferences, both Eastvale and Jurupa Valley provided updated land use information and informed JCSD of three general plan amendments that occurred after JCSD's water demand projections were calculated. (JCSD UWMP, p. 3-24–3-26.)

Based on buildout of the General Plan Land Use Plans for Eastvale and the portion of Jurupa Valley within JCSD and the updated information provided by the respective Planning Departments, the *JCSD 2020 UWMP* projected the JCSD service area population at approximately 171,300 persons. This projection is based on buildout at medium or "mid-range" density. These projections assume buildout of Jurupa Valley by 2036 and buildout of Eastvale by 2036, which is consistent with JCSD's *2020 Water Master Plan*. (JCSD UWMP, p. 3-20.)

[1] Although territory within the city of Norco and unincorporated Riverside County are within JCSD's boundary, JCSD does not provide water service to the portions of those jurisdictions within its boundary; therefore, JCSD did not coordinate with Norco or Riverside County regarding future land use. (UWMP, p. 3-25.)

Based on JCSD's most recent water duty factors[2] from the *2020 Water Master Plan*, these changes would result in an increase in overall water demand of 57.3 AF per year, or an increase of 0.16 percent to ultimate buildout water demand. Because this is within the margin of error of the buildout projections for water demand, the effect of these three land use designation changes to future demands is considered negligible. Thus, the improvements identified in the *2020 Water Master Plan* and *JCSD 2020 UWMP* are sized to serve planned development within JCSD's water service area.

JCSD's. Well 30 is expected to supply average year, single dry and multiple-dry year demands for growth within JCSD's water service area consistent with the land use plans of the cities of Eastvale and the portion of Jurupa Valley within the water service area. (JCSD UWMP, pp. 6-24, 6-26.)

Due to Well 19 having favorable water quality and because the Well 19 site is only 0.11 acres in size and there is not sufficient space for a new well, the proposed Well 30 site (adjacent to Well 19) is proposed as the location to construct replacement Well 30 in order to provide JCSD with continual access to the superior water quality located in the northern area of JCSD's service area for its 980 PZ and 1110 PZ.

Implementation of the proposed Project is consistent with JCSD's mission to "…provide water, sewer, wastewater, park and recreation, graffiti abatement, and other essential services to our community" and the JCSD Board of Directors' vision to "Ensure high quality water service for the community and diversify water portfolio to maximize economic and operational efficiencies and to secure supply reliability into the future." (JCSD Strategic Plan.)

Document Process

The environmental process being undertaken as part of the Project began with the initial project and environmental research. The Initial Study/Mitigated Negative Declaration will be subject to a 30-day public review period. During this review period, public and agency comments on the document relative to environmental issues should be addressed to:

Keith Backus, Engineering Services Supervisor (kbackus@jcsd.us)
Ashish Marwal, Assistant Engineer (amarwah@jcsd.us)
Jurupa Community Services District
Engineering Department
11201 Harrel Street
Jurupa Valley, California 91752

Comments received during that time will be considered as part of the Project's environmental review and will be included with the environmental documents for consideration by the JCSD Board of Directors.

[2] Water duty factors (or "unit water demand factors") reflect a typical rate of water consumption (e.g., gallons per day per acre or gallons per day per dwelling unit) that has been observed from actual meter records. (UWMP. P. 4-7.)

Incorporation by Reference and Tiering

Because the proposed Project would increase the potable water pumping capacity by 1,300 gpm within JCSD's service area, there is a potential the Project could provide water for new land uses contemplated by the *Jurupa Valley General Plan* (JVGP) and the *Eastvale General Plan* (EGP). The environmental impacts from buildout contemplated under the JVGP and EGP were studied and disclosed in the *Jurupa Valley General Plan EIR (JVGP EIR)* and the *Eastvale General Plan EIR* (*EGP EIR*). Therefore, this IS/MND tiers off the *JVGP EIR* and *EGP EIR* in analyzing the Project's potential growth-inducing impacts and potential reasonably foreseeable indirect impacts. As noted above, JCSD does not have discretionary authority over the potential future buildout within its service area as contemplated in the JVGP and EGP. Such potential future development would be subject to CEQA review by the appropriate lead agency at the time such development is proposed.

Section 15150 of the State *CEQA Guidelines* permits and encourages an environmental document to incorporate by reference other documents that provide relevant data. This IS/MND hereby incorporates the *JVGP EIR* and the *EGP EIR* by reference. The analysis in this IS/MND regarding the Project's potential impacts to each issue area resulting from growth within JCSD's service area tiers of the *JVGP EIR* and *EGP EIR* per State *CEQA Guidelines Section* 15152. To that end, this IS/MND summarizes the significance conclusions from the *JVGP EIR* and the *EGP EIR* and analyzes whether there would be any additional impacts not identified in the *JVGP EIR* and *EGP EIR* that would result from the proposed Project's provision of water for such potential future development.

Jurupa Valley General Plan EIR

The *JVGP EIR* was certified September 2017. The *JVGP EIR* is a program-level EIR that evaluates the environmental impacts associated with the adoption and implementation of Jurupa Valley's first locally prepared General Plan, the 2017 Jurupa Valley General Plan. The *JVGP EIR* also identifies General Plan policies that function as mitigation measures to avoid or minimize significant environmental impacts. The *JVGP EIR* describes the existing conditions of Jurupa Valley and the surrounding area and region as applicable and includes a summary of all relevant federal, state, regional, and local adopted laws and regulations.

The *JVGP EIR* (consisting of the JVGP Draft and Final EIRs) is available for review at the City of Jurupa Valley Community Development Department, Planning Division, 8930 Limonite Avenue, Jurupa Valley, CA 92509.

Eastvale General Plan EIR

The *EGP EIR* was certified May 2012. The *EGP EIR* is a program-level EIR that evaluates the environmental impacts associated with the adoption and implementation of the Eastvale General Plan and revisions to Eastvale's Zoning Code.

The *EGP EIR* (consisting of the EGP Draft and Final EIRs) is available for review at the City of Eastvale Community Development Department – Planning, 12363 Limonite Avenue, Suite 910, Eastvale, CA 91752.

1. **Project Title:** Well 30 (District Project No. C195054)

2. **Lead Agency:** Jurupa Community Services District
Engineering Department
11201 Harrel Street
Jurupa Valley, California 91752

3. **Contacts** Ashish Marwah, Assistant Engineer (amarwah@jcsd.us)
Keith Backus, Engineering Services Supervisor (kbackus@jcsd.us)
Phone Number: (951) 685-7434

4. **Project Location:**

The proposed Project Site is generally located north of State Route 60 (SR-60), west of State Route 91 (SR-91), east of Interstate 15 (I-15), and south of Interstate 10 (I-10), in the city of Jurupa Valley, Riverside County. (See **Figure 2 – Regional Map**.) The Project Site is located south of E. Philadelphia Avenue, east of S. Vintage Avenue, and west of S. Etiwanda Avenue. (See **Figure 3 – Project Location**.)

The Project Site encompasses approximately one acre and consists of two Assessor's parcels. Assessor's parcel number (APN) 156-332-021 is the approximately 0.11 acre site upon which Well 19 is located (referred to as the Well 19 site) and APN 156-310-63, is the approximately 0.96 acre site upon which Well 30 is proposed to be constructed (referred to as the Well 30 site). The Project Site is located within Section 5, Township 2S, Range 6W, San Bernardino Base and Meridian. (See **Figure 4 – USGS Map**.)

5. **Project Applicant/Project Sponsor's Name and Address:**

Jurupa Community Services District
11201 Harrel Street
Jurupa Valley, California 91752

6. **General Plan Designation:**

The Project Site has a Jurupa Valley General Plan (JVGP) land use designation of Light Industrial (LI) and is within the Mira Loma Warehousing and Distribution Overlay (MLO) designation.

7. **Zoning:**

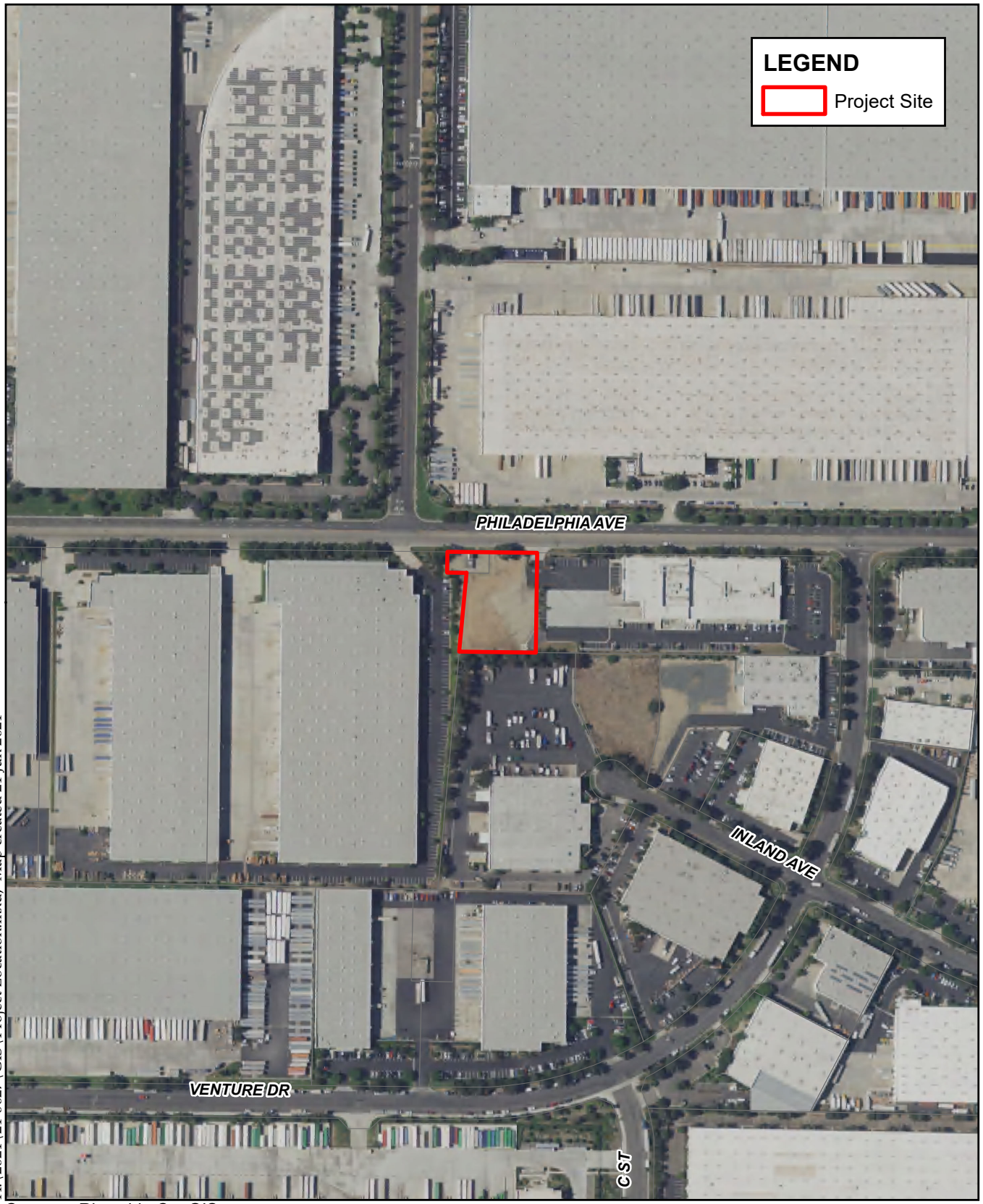
The Project Site has a zoning designation of M-M (Manufacturing – Medium).



Figure 2 – Regional Location

Well 30

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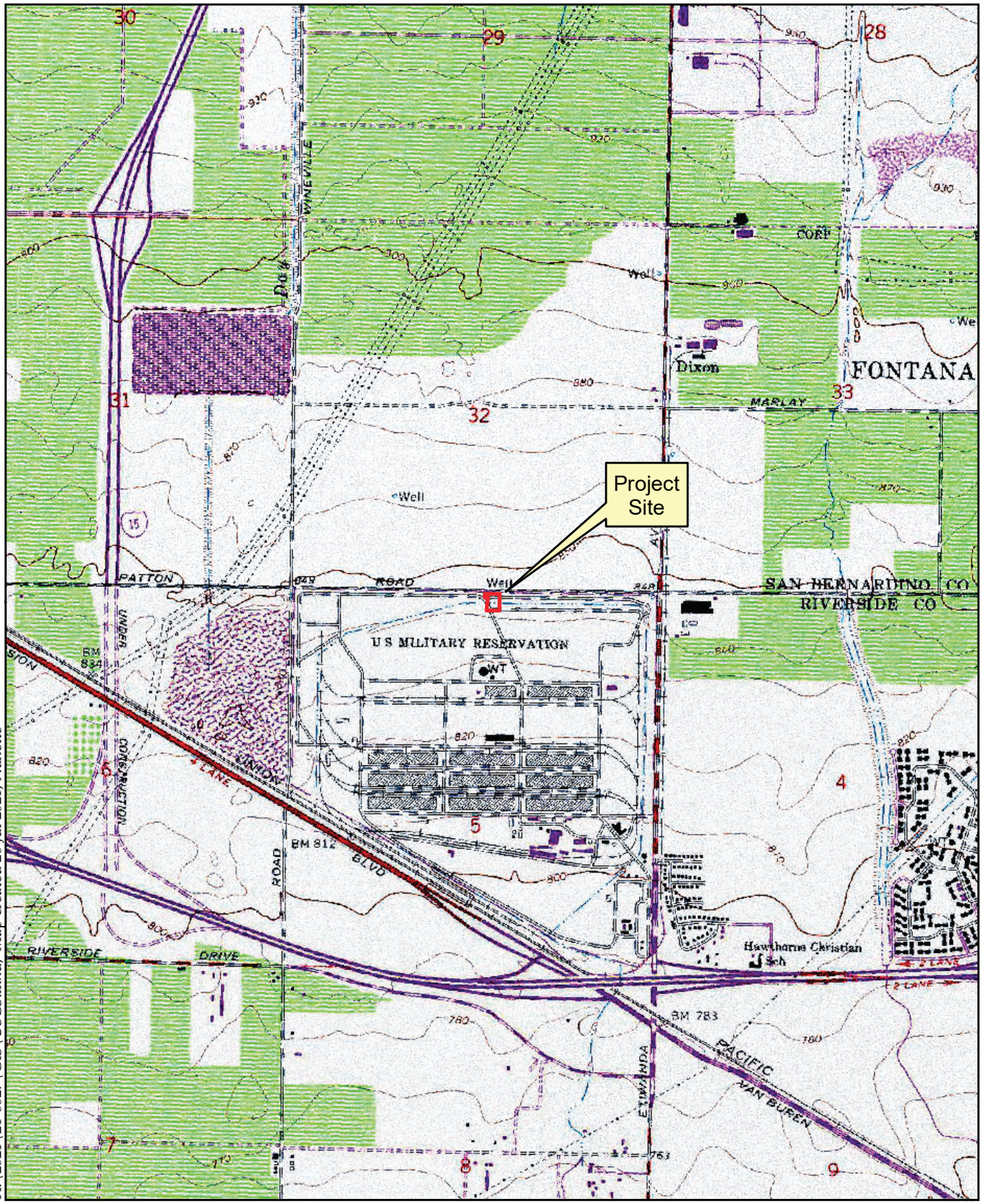
Sources: Riverside Co. GIS, 2021 (streets) and 2016 (imagery).

0 250 500 750 Feet

Figure 3 - Project Location

Well 30

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H:\2021\21-0027\GIS\USGS.mxd; Map created 20 Jul 2021; Nanette

Source: ESRI / USGS 7.5min Quad: GUASTI

Figure 4 – USGS Map

Well 30

0 1,000 2,000 3,000 Feet

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8. Description of Project:

The proposed Project consists of the destruction of the JCSD's Well 19 and site acquisition, design, drilling, construction, and operation of a new community groundwater well identified as Well 30 (District Project No. C195054). The proposed Well 30 site is an approximately 0.96-acre vacant parcel (APN 156-310-063) located south and east of the approximately 0.11-acre Well 19 site (APN 156-332-021). Collectively these two parcels are referred to as the "Project Site." As previously stated, the Project Site is located in the City of Jurupa Valley, Riverside County. (See **Figure 3 – Project Location.**)

Well 30 is proposed to be approximately 20 inches in diameter and drilled to a depth of approximately 850 feet below ground surface. Well 30 would be equipped with a 400 to 600 horse power (HP) electric motor. The well head and approximately 200 linear feet of above ground piping (including valves) would be constructed on top of a concrete pad. Site improvements also include an approximately 340 square foot (SF) electrical building to house the electronics to operate the well; SCADA[3] antenna, standby backup diesel generators installed on a concrete pad in a waterproof enclosure; a Southern California Edison (SCE) meter and transformer, both installed on concrete pads; an approximately 890 SF chemical building, driveway access to the site from Etiwanda Avenue, and approximately 160 linear feet (LF) of water pipeline from the well head to JCSD's existing water pipeline in Philadelphia Avenue. The Project also includes approximately 165 linear feet of PVC piping (identified on **Plate 1** as "PUMP TO WASTE" from the well head to existing storm drain facilities in Philadelphia Avenue. (Refer to **Plate** 1 – **Preliminary Site Layout.**) This pipeline" will be used during the initial start-up of Well 30 and during periodic equipment tests conducted as part of maintenance inspections when "blow-off" water is released. The released blow-off water will be conveyed via this pipeline to the existing storm drain system in Philadelphia Avenue. The Project will also include on-site drainage facilities to convey site runoff into the existing storm drain system. Operation of Well 30 will entail regular maintenance of the equipment and grounds of the well site. It is anticipated that JCSD personnel will visit the Well 30 site on a daily basis, which is the same frequency personnel are currently visiting Well 19.

Although operation of Well 30 will increase potable water pumping capacity within JCSD's service area by 1,300 gpm, this increase will service buildout in JCSD's service area that is already planned for in the JVGP and EGP and studied in the *JVGP EIR* and *EGP EIR* . Implementation of the proposed Project would not result in any development not previously studied in the *JVGP EIR* or *EGP EIR*, which is why this IS/MND is tiering from the *JVGP EIR* and *EGP EIR* to analyze the Project's reasonably foreseeable indirect impacts.

[3] SCADA is short for supervisory control and data acquisition. The proposed Well 30 SCADA system will allow operations to be monitored either on the well site or from a remote location.

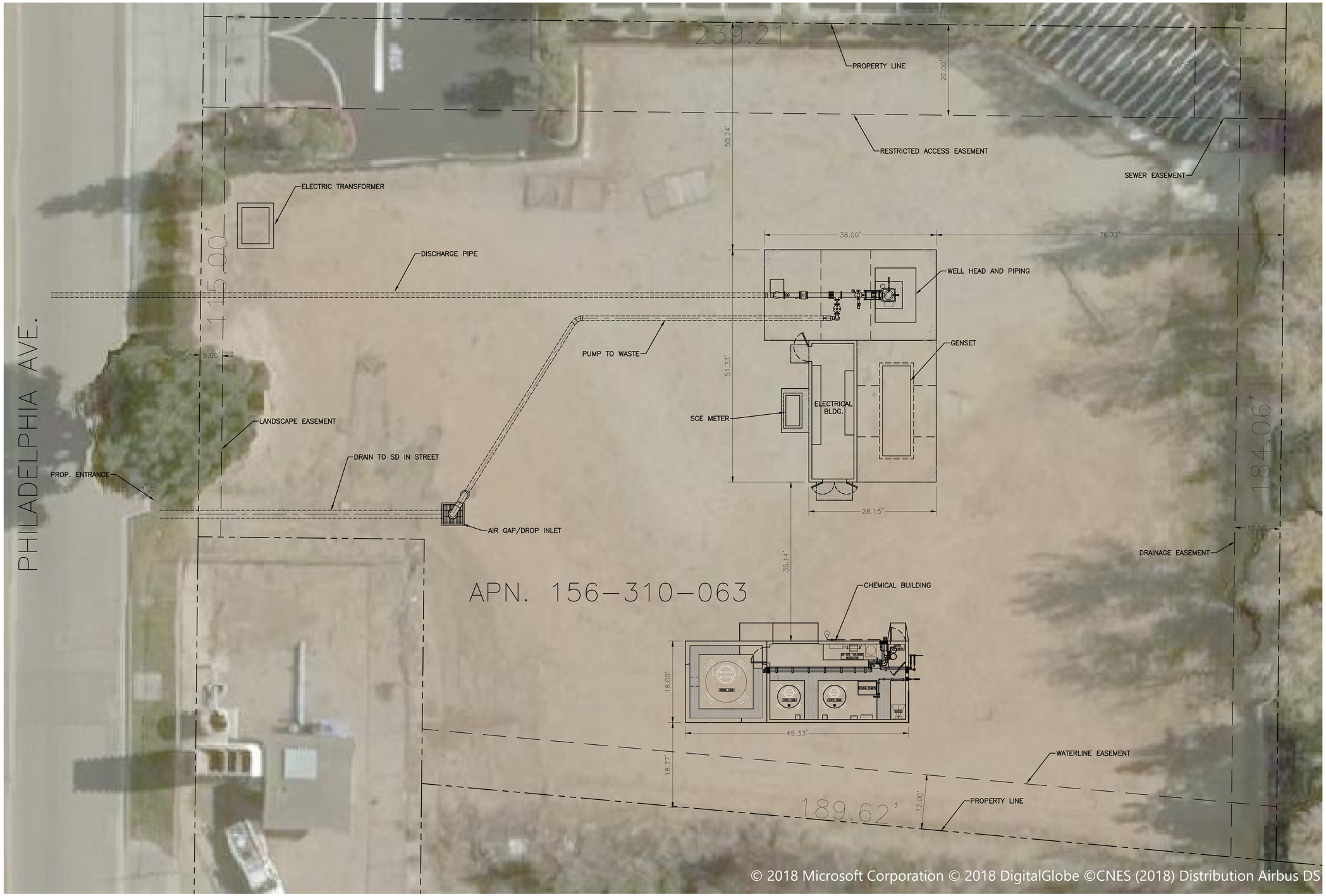


Plate 1
Well 30 Preliminary Layout

N E S W WEBB

1" = 10'
5 0 10 20 30

FOR REVIEW ONLY

G:\2018\18-0107\DRAWINGS\PLAN SHEETS\18-0107 C2.DWG 11/3/2020 8:31:03 AM

811 Know what's below. Call 811 before you dig.

NOTE:
WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED.

THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE DESIGN HEREON. IN THE EVENT OF DISCREPANCIES ARISING AFTER JCSD APPROVAL OR DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY JCSD.

DATE	BY	MARK	REVISIONS	APPR.	DATE
ENGINEER				COUNTY	

SEAL – ENGINEER

REGISTERED PROFESSIONAL ENGINEER SHANE L. BLOOMFIELD NO. C77435 CIVIL STATE OF CALIFORNIA

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

PREPARED UNDER THE SUPERVISION OF: XX
DESIGNED BY: XX CHECKED BY: XX
R.C.E. NO.: XX
DATE:

BENCHMARK: N/A

SCALE:
HORIZ. SCALE: 1" = 10' VERT SCALE: N/A

JURUPA COMMUNITY SERVICES DISTRICT
RIVERSIDE COUNTY, CALIFORNIA
WELL NO. 19 IMPROVEMENT
PRELIMINARY SITE LAYOUT

SHEET NO. 1 OF 1 SHEETS

FOR: XX | W.O. XX | COUNTY FILE NO. XX

The chemical storage building will store salt in a brine tank. The chemical storage building will also include an on-site chlorine generator, which will use the salt to produce sodium hypochlorite (also known as chlorine) at a 0.8 percent solution. Once produced the chlorine will be introduced into the pumped groundwater prior to the water entering JCSD's potable water system. The chemical storage building include 110 percent secondary containment so that in the event of an accidental release of chlorine, it will be totally contained within the chemical storage building until cleaned up by JCSD personnel. The chemical storage building will be locked when JCSD personnel are not on site.

For security purposes, the Well 30 site will be enclosed with either a chain link fence or a solid wall. Access to the site will be via a locked gate from Philadelphia Avenue.

As part of the construction of Well 30, an approximately 18-inch diameter pilot bore hole will be drilled to the expected final depth of the well. Following drilling of bore hole, the larger diameter well will be drilled. As part of the design of the electrical and chemical building, two shallow geotechnical borings will be made. These borings will be filled.

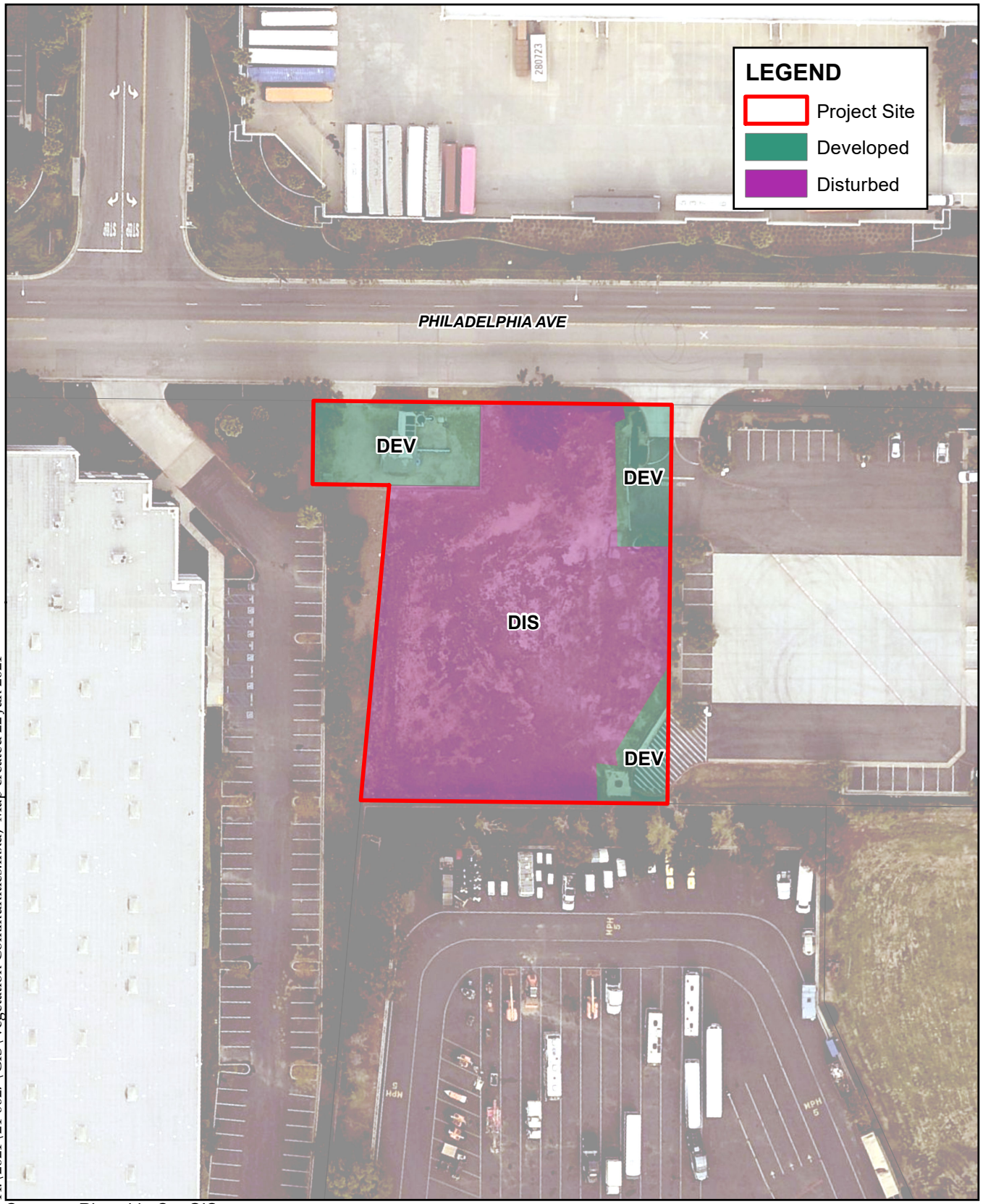
Construction of Well 30 is estimated to take approximately 17 months and destruction of Well 19 is estimated to take approximately one month; for a total construction/destruction period of approximately 18 months.

Destruction and abandonment of Well 19 would entail the removal of all above ground buildings and piping on the Well 19 site and deconstruction of Well 19. Destruction of Well 19 would serve the dual purpose of protecting the groundwater supply and eliminating potential physical hazards. The process for destroying a well entails cleaning the well to remove undesirable materials, including obstructions to filling and sealing the well. All debris, oil from oil-lubricated pumps, and pollutants and contaminants that could interfere with well destruction would be removed and disposed in accordance with applicable regulations. The Well 19 casing may be perforated or removed in whole or in part prior to filling Well 19 with suitable impervious sealing material. (DWR Part III.) Destruction of Well 19 is estimated to take approximately one month.

9. Surrounding Land Uses and Setting:

The Project Site is surrounded by warehouses and parking lots as shown on **Figure 2 – Project Location**. The San Gabriel Mountains are partially visible in the distance from the Project site when looking north. The Jurupa Mountains are partially visible in the distance from the Project Site when looking east.

There are two vegetation communities present on the Project Site, developed land and disturbed vegetation. The 0.79 acres of disturbed vegetation is largely dominated by primarily ruderal vegetation and species common in disturbed habitats including slender pectocarya (*Pectocarya linearis*),common fiddleneck (*Amsinckia menziesii*), red stemmed filaree (*Erodium cicutarium*), black mustard (*Brassica nigra*), golden crownbeard *(Verbesina enceliodes*), London rocket (*Sisymbrium irio*), and common sow thistle (*Sonchus oleraceus*). (See **Figure 5 – Vegetation Communities Map**.)



H:\2021\21-0027\GIS\Vegetation Communities.mxd; Map created 22 Jun 2021

Sources: Riverside Co. GIS, 2021 (streets) and 2019 (imagery).

0 50 100 150 Feet

Figure 5 - Vegetation Communities Map

Well 30

ALBERT A. WEBB ASSOCIATES

The Project Site is located within the boundary of the Chino Basin as identified by the California Regional Water Quality Control Board Santa Ana Region (RWQCB). The Chino Basin is a structural depression located between San Gabriel Mountains on the north and the Chino and La Sierra Hills on the south. The San Gabriel Mountains are located along the Transverse Range province and are formed of granitic and metamorphic rock. Over time erosion of the surrounding mountains filled the basin with alluvial sediments which created basin aquifers. (Geoscience, p. 2.)

Alluvial basins tend to have many different interconnected water-bearing zones that make up the aquifer system. However, within the JCSD service area no significant confining (i.e. impermeable) layers were found. The aquifer system present throughout the JCSD service area is composed of layers that are considered unconfined to semiconfined. (Geoscience, p. 3.) Specific capacity is calculated and used to estimate the potential yield of an aquifer. It should be noted that there are a lot of variables that can alter the specific capacity such as pumping rate, static water level decline, and improper well development. JCSD wells specific capacity range from 10 gpm/ft to 140 gpm/ft. Wells with a higher specific capacity are located where the alluvial thickness is the greatest, and with wells that are deeper and have long perforation intervals. (Geoscience, p. 3.)

Well 19 is located in the northern portion of the JCSD service area, with ground water depth at approximately 240 feet below ground surface (ft bgs). JCSD groundwater flows from northeast to southwest. Data demonstrates groundwater levels have remained steadily stable without dramatic upward or downward trend during 2008 to 2016. (Geoscience, p. 3.)

10. Other Public Agencies Whose Approval is Required (e.g., permits, financial approval, or participation agreement):

a. City of Jurupa Valley, Public Works Department – encroachment permit for work in Philadelphia Avenue

b. County of Riverside Department of Environmental Health – permit to construct Well 30 and destruct Well 19

c. California Department of Water Resources – review of well completion report

d. California State Water Resources Control Board Department of Drinking Water – Permit Amendment Application to add Well 30 and Permit Amendment Application to destroty Well 19.

e. Regional Water Quality Control Board (RWQCB), Santa Ana Region – National Pollutant Discharge Elimination System (NPDES) Construction General Permit and Stormwater Pollution Prevention Plan (SWPPP)

f. South Coast Air Quality Management District – permit for backup generator

11. California Native Americans Tribes Consulted
Have California Native American Tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the

determination of significant impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

JCSD provided “Notification of Consultation Opportunity” letters dated July 21, 2021 pursuant to Assembly Bill (AB 52) to Tribes that have previously requested such a notice. Letters were sent from JCSD to two tribes: Morongo Band of Mission Indians (MBMI) and San Manuel Band of Mission Indians (SMBMI). Refer to the discussion under Threshold 18, Tribal Cultural Resources for additional information.

12. Documents Used and/or Referenced in this Review:

Refer to the reference list in Section V.

II. 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 and Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☐ Noise	☐ Population and Housing	☐ Public Service
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities and Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

III. DETERMINATION

(To be completed by the Lead Agency)

On the basis of this initial evaluation:

JCSD finds that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

JCSD finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because mitigation measures have been incorporated and agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. ☒

JCSD finds that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ☐

JCSD finds that 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. ☐

JCSD finds that 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. ☐

Signature Eddie Rhee Date 5/25/2022

Printed Name & Title

Eddie Rhee, Engineering Manager For JCSD

IV. 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 measure 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 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.

1. Aesthetics	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in the Public Resource Code Section 210099, 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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and 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?	☐	☐	☒	☐

(Sources: Caltrans; DOF; JVGP DEIR; JVGP Figure 3-30 – Scenic Corridor and Figure 4-23 – Jurupa Valley Scenic Corridors and Roadways; Project Description; US Census)

1a. Have a substantial adverse effect on a scenic vista?

Direct Impacts

Less Than Significant Impact. The JVGP identifies the Jurupa Mountains, Pedley Hills. Santa Ana River, La Sierra Hills, and the San Gabriel Mountains as scenic vistas. (JVGP DEIR, p. 4.1-17.) The Project Site is flat and located among developed warehouses and other industrial buildings. Views towards the Jurupa Mountains and San Gabriel Mountains have already been obstructed by neighboring warehouses and large ornamental trees.

Project related construction and destruction activities could have visual impacts from the equipment used. However, these impacts would be temporary and short-term during the approximately 18 month construction period. Once construction of Well 30 and destruction of Well 19 are complete, the structure height and character of replacement Well 30 will be similar to existing Well 19, that is low rise single-story structures and above ground piping. Also located on the Well 19 site is a rectangular, tall, board formed concrete structure that functions as a standpipe. This structure will also be demolished and there will not be a similar structure constructed as part of Well 30. As discussed in the Project Description and shown on **Plate 1**, proposed Well 30 includes two buildings, one located on the west side along the property line that would be used for chemical storage. The second building will be attached to the west of the wellhead and will be designated as an electrical building. Because the approximately 890 SF single-story chemical building and the approximately 340 SF single-story electrical building associated with Well 30 will be considerably smaller than the surrounding industrial buildings and warehouses, the proposed Project would not result in a substantial adverse effect on a scenic vista; therefore, direct impacts would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

Regarding effects on a scenic vista resulting from buildout per the JVGP, the *JVGP EIR* states:

> *By its very nature, the 2017 General Plan establishes overall guiding principles or programmatic direction against which to review new development to ensure it does not result in significant impacts to scenic resources, or results in a substantial increase in lighting or glare as development occurs. These programmatic actions will help reduce impacts of individual development projects within the City to less than significant levels. For these reasons, implementation of the City's 2017 General Plan will not make a significant contribution to cumulatively adverse impacts to aesthetic resources.* (JVGP DEIR, p. 4.1-21.)
>
> *The cumulative effect on scenic vistas and visual resources from implementation of the 2017 General Plan would be less than significant because the proposed goals, policies, and programs of the Plan will protect and preserve identified public scenic vistas as future development occurs within the City. As a result, the project would create a less than significant cumulative impact on local scenic vistas, scenic resources, and visual character.* (JVGP DEIR, p. 4.1-21.)

Regarding effects on a scenic vista resulting from buildout per the Eastvale General Plan (EGP), the Notice of Preparation (NOP) for the Eastvale General Plan EIR states:

> *Major scenic resources within view of the City of Eastvale are the Santa Ana River and surrounding mountains. These resources are visible from various points within the city. The proposed City of Eastvale General Plan would not include changes to the existing land use map. Therefore, no development beyond that previously considered in the 2003 Riverside County General Plan EIR[4] would occur as a result of the proposed General Plan. The Parks, Recreation and Open Space chapter of the General Plan includes a goal to maintain the Santa Ana River corridor's scenic beauty.* (NOP, p. 9.)

The Santa Ana River and surrounding mountains are not visible from the Project Site.

For the reasons set forth above, direct, reasonably foreseeable indirect, and cumulative impacts regarding effects to a scenic vista are less than significant.

[4] The document referred to as the 2003 Riverside County General Plan EIR in the NOP for the EGP EIR is the *General Plan Final Program Environmental Impact Report for the Riverside County Integrated Project, Comprehensive General Plan Amendment No. 618, Environmental Assessment No. 38614, Environmental Impact Report No. 441, State Clearinghouse No. 2002051143.* The 2003 Riverside County General Plan EIR is available at https://planning.rctlma.org/Portals/0/genplan/content/eir/volume1.html.

1b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Direct Impacts

No Impact. The proposed Project Site is not near a state scenic highway. The closest state scenic highway, identified by the California Department of Transportation (Caltrans), is a segment of SR-91, which is more than 20 miles southwest of the Project site. Therefore, there will be no direct impacts regarding substantially damaging scenic resources within a state scenic highway.

Potential Reasonably Foreseeable Indirect Impacts

There are no officially designated scenic highways in Jurupa Valley or Eastvale. (JVGP DEIR, p. 4.1; NOP, p. 9.)

Therefore, implementation of the Project would not damage any scenic resources within or visible from a state scenic highway. As such, no direct, reasonably foreseeable indirect, or cumulative impacts regarding scenic resources within a state scenic highway will occur.

1c. 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 points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Direct Impacts

Less Than Significant Impact. Per CEQA Guidelines Section 21071(a)(1), Jurupa Valley is an urbanized area, which is defined as an incorporated city with a population of at least 100,000 persons. As of 2019, Jurupa Valley has a population of 109,527 people. (US Census.) The California Department of Finance (DOF) population estimate for Jurupa Valley as of January 1, 2021, is 108,097. The Well 30 site is located within the M-M (Manufacturing – Medium) zone, which allows public utility facilities. (JVGP, p. 2-19.)

Development standards governing scenic quality for the M-M Zone are set forth in Section 9.150.040 of the Jurupa Valley Municipal Code (JVMC). Because the Well 30 site is surrounded by property zoned M-M on the west, south, and east, and by industrial property in the City of Fontana to the north, the Project is consistent with the setback requirements in JVMC Section 9.150.040(2) and a masonry wall is not required on the property line as required by JVMC Section 9.150.040(4). The proposed electrical and chemical buildings will be consistent with the height requirements in JVMC Section 9.150.040(3). The Well 30 site will be landscaped consistent with JVMC Section 9.150.040(5). All lighting on the Well 30 site shall be focused, directed, and arranged to prevent glare or direct illumination on streets or adjoining property consistent with JVMC Section 9.150.040(11).

In addition to the development standards set forth in the JVMC, the JVGP sets forth several goals and policies to protect and preserve scenic quality. **Table 1,** presents the applicable goals and policies and provides a brief discussion of how the proposed Project is consistent.

Table 1 – Project Consistency with Applicable Jurupa Valley General Plan Goals and Policies to Protect Scenic Resources

Goals and Policies		Project Consistency
COS 9. Scenic Resources		
Goal COS 9	*Preserving the City's scenic resources, including mountains, hills, ridgelines, rock outcroppings, canyons, mature trees, Santa Ana River and floodplain, riparian corridors, agricultural fields, views of scenic resources from vista points or along scenic street or highway corridors, and other landscape features deemed significant by the City Council.*	**Consistent.** The Project Site is not located on a mountain, ridgeline, hillside, river view corrido, canyon, agricultural field or along the Santa Ana River. There is no riparian habitat present on the Project Site. As discussed in response to Threshold 1a, the Project Site is flat and located among developed warehouses and other industrial buildings. Views towards the Jurupa Mountains and San Gabriel Mountains have already been obstructed by neighboring warehouses and large ornamental trees. As discussed in response to Threshold 1b, the Project Site is not near a state scenic highway. Further, according to *Jurupa Valley General Plan Figure 4-23: Jurupa Valley Scenic Corridors and Roadways* (on page 33 this IS/MND), the Project site is not adjacent to or within proximity of a designated scenic corridor.
Policy COS 9.1	*Protect scenic resources, especially skylines, undeveloped ridgelines, rocky hillsides, river view corridors, and outstanding scenic vistas not designated for urban uses from development and maintain those resources in their current patterns of use.*	**Consistent.** See the consistency discussion for Goal COS 9.1. The Project Site is designated for urban uses by the Jurupa Valley General Plan. The Project Site is designated for urban uses. Specifically the land use designation for the Project Site is Light Industrial within the Mira Loma Warehousing and Distribution Overlay (MLO). The Project Site is zoned Manufacturing – Medium (MM).
Policy COS 9.2	*Ensure that development in areas with scenic values, including natural or agricultural landscapes, is visually subordinate to and compatible with the dominant landscape features, colors and textures. Development includes, but is not limited to buildings, signs (including billboard signs), roads, utility and telecommunication lines and structures. Such development shall:*	**Consistent.** The Project Site is not located in an area with scenic values. As discussed in response to Threshold 1a, the Project Site is flat and located among developed warehouses and other industrial buildings.

Table 1 – Project Consistency with Applicable Jurupa Valley General Plan Goals and Policies to Protect Scenic Resources

Goals and Policies	Project Consistency
1. *Avoid visually prominent locations such as ridgelines, and slopes exceeding 20 percent.* 2. *Avoid unnecessary grading, vegetation removal and site lighting.* 3. *Incorporate building forms, architectural materials, and landscaping, that response the setting, including the historical pattern of development in similar settings, and avoid start contrasts with its setting.* 4. *Preserve scenic or unique landforms, significant trees in terms of size, age, species, or rarity, historical features, and rock outcroppings.*	
COS 10. Dark Skies	
Policy COS 10.1 *<u>Outdoor Lighting</u>. Require outdoor lighting to be shielded and prohibit outdoor lighting that:* 1. *Operates at unnecessary locations, levels, and times* 2. *Spills onto areas off-site or to areas not needing or wanting illumination* 3. *Produces glare (intense line-of-site contrast)* 4. *Includes lighting frequencies (colors) that interfere with astronomical viewing* *Policy COS 10.2* *Public Facilities, Buildings, and Streets. Use outdoor light-shielding measures for new and existing lighting fixtures, including signs, to minimize light trespass and glare while*	**Consistent**. Well 30 will include security lighting on the electrical building and chemical storage building in addition to other strategic locations on the Well 30 site. Consistent with Policy COS 10.1, the lighting fixtures will either be operated by a timer or light sensitive switches so that lights are only on when necessary. As discussed in the response to Threshold 1d, any lighting installed on the Well 30 site will be directed downwards so as to avoid light spillage onto adjacent properties.

Table 1 – Project Consistency with Applicable Jurupa Valley General Plan Goals and Policies to Protect Scenic Resources

Goals and Policies	Project Consistency
enhancing safety and aesthetics.	
Mobility Element– Scenic Corridors	
ME 7.3 <u>*Public Equipment and Facilities*</u>*. The City and other agencies should locate and design utility and circulation-related equipment and facilities to avoid blocking or cluttering views of scenic resources from scenic roadways, consistent with the following standards:* *a. Whenever possible, signs in the public right-of-way should be consolidated onto a single low-profile standard.* *b. Public utilities along scenic highways should be installed underground.* *c. The placement and design of fencing, walls, landscaping, and street trees should not block views of scenic resources from Scenic Routes. Clustering of street trees along scenic roadways should be considered as an alternative to uniform spacing.*	**Consistent.** The Project Site is not located along a scenic corridor or roadway.

Table 1 – Project Consistency with Applicable Jurupa Valley General Plan Goals and Policies to Protect Scenic Resources

Goals and Policies	Project Consistency
d. Traffic signals with long mast arms should be discouraged along scenic roadways.	

Because the Project is consistent with zoning and applicable General Plan goals and policies to protect scenic resources, the Project will not conflict with local regulations governing scenic quality; therefore, direct impacts will be less than significant.

Reasonably Foreseeable Indirect Impacts

Regarding substantially degrading the existing visual character or quality of a site or its surroundings resulting from buildout per the JVGP, the *JVGP EIR* states:

> *It is possible that future private development or public infrastructure may negatively affect existing views of visual resources, although it should be noted the City has adopted design guidelines for certain areas of the City which will also help implement process-oriented measures to protect aesthetic views in the City.* (JVGP DEIR, p. 4.1-17.)
>
> *The following goal and policies of the Conservation and Open Space Element of the 2017 General Plan are related to preservation of visual character: (DEIR, p. 4.1-17; JVGP, pp. 4-8, 4-41–4-43.)*
>
> *Goal COS 8* *Securing and maintaining a diverse network of open lands including valuable natural and recreational resources, including:*
>
> 1. *Santa Ana River floodway and riparian areas.*
> 2. *Jurupa Mountains, Pedley Hills, and Indian Hills.*
> 3. *Wetlands and vernal pools.*
> 4. *Wildlife habitat and corridors, particularly for species of local concern or for species that are officially listed as threatened or endangered.*
> 5. *Parks and natural areas with significant recreational opportunities.*
> 6. *Encourage public access to open space without harming the resource and without exposing the public or the property owners to unacceptable risk.*
> 7. *Preserve open space and wildlife habitat and help provide trails and other recreation opportunities where they will not harm the environment.*

8. *Avoid actions that will result in the loss of designated open space resources and, when feasible, require mitigation for their loss.*

Goal COS 9 *Preserving the City's scenic resources, including mountains, hills, ridgelines, rock outcroppings, canyons, mature trees, Santa Ana River and floodplain, riparian corridors, agricultural fields, views of scenic resources from vista points or along scenic street or highway corridors, and other landscape features deemed significant by the City Council.*

Policies

COS 8.1 *Environmental Resource Protection. Preserve and maintain open space that protects environmental resources and protects public health and safety.*

COS 8.9 *Open Space Enhancement and Restoration. Encourage, and, as budget resources allow, support the enhancement and restoration of permanently dedicated open space and trail easements. Enhancements may include trail clearing, erosion protection, drainage, fencing, revegetation, trash clean up, directional and interpretive signage, and other improvements the City Council determines necessary for public health and safety.*

COS 9.1 *Protect scenic resources, especially skylines, undeveloped ridgelines, rocky hillsides, river view corridors, and outstanding scenic vistas not designated for urban uses from development, and maintain those resources in their current patterns of use.*

COS 9.2 *Ensure that development in areas with scenic values, including natural or agricultural landscapes, is visually subordinate to and compatible with the dominant landscape features, colors, and textures. Development includes, but is not limited to buildings, signs (including billboard signs), roads, utility and telecommunication lines, and structures. Such development shall:*

1. *Avoid visually prominent locations such as ridgelines, and slopes exceeding 20%, particularly in the visually sensitive Jurupa Mountains.*
2. *Avoid unnecessary grading, vegetation removal, and site lighting.*
3. *Incorporate building forms, architectural materials, and landscaping, that respect the setting, including the historical pattern of development in similar settings, and avoid stark contrasts with its setting.*
4. *Preserve scenic or unique landforms, significant trees in terms of size, age, species or rarity, historical features, and rock outcroppings.*

COS 9.3 Urban development. Implement the following aesthetic principles and encourage other agencies with jurisdiction to do so:

1. *Design Context. Urban development should be designed to reflect its architectural, environmental, and historical context. This does not necessarily prescribe a specific style, but requires deliberate design choices that acknowledge human scale, natural site features, and neighboring urban development, and that are compatible with historical and architectural resources. Plans for sub-areas of the city and within the three town centers may require certain distinctive architectural styles.*
2. *Utilities and Signs. In and near public streets, public spaces and parks, and important scenic resources, features that clutter, degrade, intrude on, or obstruct views should be avoided. Necessary features, such as utility and communication equipment, and traffic equipment and signs should be designed and placed so as to not impinge upon or degrade scenic views, consistent with the primary objective of safety. Billboard and electronic signs within scenic corridors shall require City Council approval.*
3. *Streetscapes and Major Roadways. In the acquisition, design, construction, or significant modification of major roadways (highways/ regional routes and arterial streets), the City will promote the creation of "streetscapes" and linear scenic parkways or corridors that promote the City's visual quality and character, enhance adjacent uses, and integrate roadways with surrounding districts. To accomplish this, the City will:*
    - *Establish streetscape design standards for major roadways.*
    - *Encourage the creation and maintenance of planted medians and widened parkway landscaping.*
    - *Retain mature trees in the public right of way.*
    - *Emphasize the planting and maintenance of California native tree species of sufficient height, spread, form, and horticultural characteristics to create the desired streetscape canopy, shade, buffering from adjacent uses, and other desired streetscape characteristics.*
    - *Encourage the use of water-conserving landscaping, street furniture, decorative lighting and paving, arcaded walkways, public art, and other pedestrian-oriented features to enhance streetscape appearance, comfort, and safety.*
    - *Encourage and, where possible, require undergrounding of overhead utility lines and structures.*

COS 9.4 View Protection in New Development. The City will include in all environmental review and carefully consider effects of new development, streets and road construction, grading and earthwork, and utilities on views and visual quality.

COS 9.5 Views to and from Public Places, Including Scenic Corridors. The City will preserve and improve views of important scenic resources from public places, and encourage other agencies with jurisdiction to do so. Public places include parks, plazas, the grounds of civic buildings, streets and roads, and publicly accessible open space. In particular, the route segments shown in Figure 4-23 below are designated as local scenic corridors. (Note to reader, Figure 4-23 is on page 31 of this IS.)

COS 9.6 Scenic Corridors and Roadways. Development projects along and within scenic corridors, including state highway projects, noise walls, and new private or public construction, shall not wall off scenic roadways and block views of scenic resources. The following measures shall be implemented:

1. *Utilities, traffic signals, and public and private signs and lights shall not intrude on or clutter views, consistent with safety needs.*
2. *Where important vistas of distant landscape features occur along local streets, street trees shall be clustered to facilitate viewing.*

These goals and policies emphasize that the design and planning for new development must take visual or scenic resources into consideration. Several of them direct new development along scenic corridors or roadways to carefully consider major views or other resources. The various measures appear to address major areas of potential concern, so future impacts of development on visual resources will be reduced to less than significant levels. (JVGP DEIR, p. 4.1-17.)

Regarding substantially degrading the existing visual character or quality of a site or its surroundings resulting from buildout per the EGP, the NOP for the *EGP EIR* states:

The proposed City of Eastvale General Plan would not include changes to the existing land use map. Therefore, no development beyond that previously considered in the 2003 Riverside County General Plan EIR would occur as a result of the proposed General Plan. In addition, goals and policies in the Design Chapter of the General Plan would ensure that future development would visually enhance the character of the immediate area. The City's Zoning Code regulates features such as setbacks and building heights and seeks to protect surrounding properties from objectionable views. This impact would be less than significant. (NOP, p. 10.)

For the reasons set forth in the preceding paragraphs, direct, reasonably foreseeable indirect, and cumulative impacts regarding substantially degrading the existing visual character or quality of a site or its surroundings or conflicting with applicable zoning or other regulations governing scenic quality will be less than significant.

1d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Direct Impacts

Less Than Significant Impact. As discussed in the response to Threshold 1c, the Project will adhere to Jurupa Valley's Conservation and Open Space Dark Sky policies and JVMC Section 9.150.040(11), which will require the project to shield outdoor lightning so light created by the Project is contained on the Project site, and to prohibit outdoor lighting to operate at unnecessary location, levels, and times, spill over to offsite areas, produce glare, or interfere with astronomical viewing. The construction of Well 30 and the destruction and abandonment of Well 19, for the most part, would not necessitate the use of artificial light as construction is expected to occur during daylight hours. The Project will include new security lighting on the Well 30 site; however, because this lighting will be consistent with the Jurupa Valley Dark Sky policies and JVMC Section 9.150.040, it would not be a new source of substantial light. Further, the area in which the Project Site is located is already developed with industrial uses, which have parking lot lights, lights on buildings, and street lights along Philadelphia Avenue. Moreover, building materials that will be used for the Project would prevent the creation of glare. During Project operations, in addition to the security lighting the use of additional artificial light may become necessary if emergency repairs at the Well 30 site are required, in which case such lighting will be directed downwards and away from off-site structures and land uses in accordance with Jurupa Valley's Dark Sky policies. Such an event is expected to be infrequent and does not constitute a substantial new source of light. The Project does not propose removing or replacing existing streetlights, or installing new streetlights. As such, impacts are considered to be less than significant**.**

Potential Reasonably Foreseeable Indirect Impacts

Regarding impacts from a new substantial source of light or glare resulting from buildout per the JVGP, the *JVGP EIR* states:

> *Future private development and public improvements within the City would introduce a substantial new source of light and glare in the form of street lighting, parking lots, and security lighting, nighttime traffic, and landscape lighting. This new lighting will incrementally increase overall nighttime conditions in the City and contribute to less "dark sky" conditions. The community has indicated it values rural and semi-rural living conditions, and a major contribution to such conditions is lighting levels that are lower than typical urban or even suburban areas.* (JVGP DEIR, p. 4.1-19.)
>
> *As new development is planned and occurs, care must be exercised to make sure the potential spillage of light from a particular building or site is minimized through the use of fixtures, cut-off shielding, etc. With the proper goals and policies, it will be possible to protect dark sky conditions in the City to the extent possible or practical, but understanding Jurupa Valley is slowly transitioning from a rural/agricultural community to a more suburban/rural community. As that transition occurs, overall ambient lighting levels will increase as vacant or agricultural land with no lighting is converted to some form of development (e.g.,*

even rural equestrian residential development has some type of night lighting impacts). (JVGP DEIR, p. 4.1-19.)

Cumulatively, more lighting would be introduced into the area by proposed, existing, and future development both in the City and from surrounding communities. The City cannot control lighting impacts from development or activities outside of its jurisdiction, but the incremental contribution to cumulative lighting-related impacts from development within the City can be reduced to less than significant levels by implementing the indicated goals, policies, and programs of the General Plan as outlined in Sections 4.1.2.2. Therefore, the 2017 General Plan would make a less than significant contribution to cumulatively considerable aesthetic impacts from regional growth in western Riverside County, and no programmatic mitigation is recommended. (JVGP, DEIR p. 4.1-20.)

The JVGP Conservation and Open Space Element goal and policies to reduce light and glare within Jurupa Valley are: (JVGP pp. 4-8, 4-49–4-50.)

Goal COS 10 *Minimizing light trespass and pollution caused by exterior light sources in public and private structures, new development, and public facilities to ensure safety, protection of the natural environment, and preservation of dark nighttime skies.*

Policies

COS 10.1 *Outdoor Lighting. Require outdoor lighting to be shielded and prohibit outdoor lighting that:*

1. *Operates at unnecessary locations, levels, and times*
2. *Spills onto areas off-site or to areas not needing or wanting illumination*
3. *Produces glare (intense line-of-site contrast)*
4. *Includes lighting frequencies (colors) that interfere with astronomical viewing.*

COS 10.2 *New Residential Development and Remodeling Projects. Require development projects and major remodel projects to minimize light pollution and trespass while enhancing safety and aesthetics.*

CPS 10.3 *Public Facilities, Buildings, and Streets. Use outdoor light-shielding measures for new and existing lighting fixtures, including signs, to minimize light trespass and glare while enhancing safety and aesthetics.*

COS 10.4 *Commercial and Industrial Buildings. Require that site lighting for commercial and industrial uses is unobtrusive and constructed or located so that only the intended area is illuminated, off-site glare is prevented, and adequate safety is provided.*

COS 10.5 Public Education and Outreach. Support programs that provide public education on the importance of dark skies and how to protect them. Collaborate with nonprofit and other public agencies to help achieve our goals.

Regarding impacts from a new substantial source of light or glare resulting from buildout per the EGP, the NOP for the *EGP EIR* states:

> *The Eastvale-adopted Ordinance 655 restricts the permitted use of certain light fixtures emitting into the night sky and contains outdoor lighting standards including shielding requirements and maximum level of illumination. Furthermore, all development would be subject to a design and architectural review in accordance with the City's adopted Design Guidelines. The Design Guidelines state that outdoor lighting, other than street lighting, shall be low to the ground or shielded and hooded to avoid shining onto adjacent properties and streets. Therefore, light and glare impacts would be less than significant,*

For the reasons set forth above, direct, reasonably foreseeable indirect, and cumulative impacts regarding the Project's contribution to a new source of substantial light or glare would be less than significant.

Jurupa Valley General Plan Figure 4-23

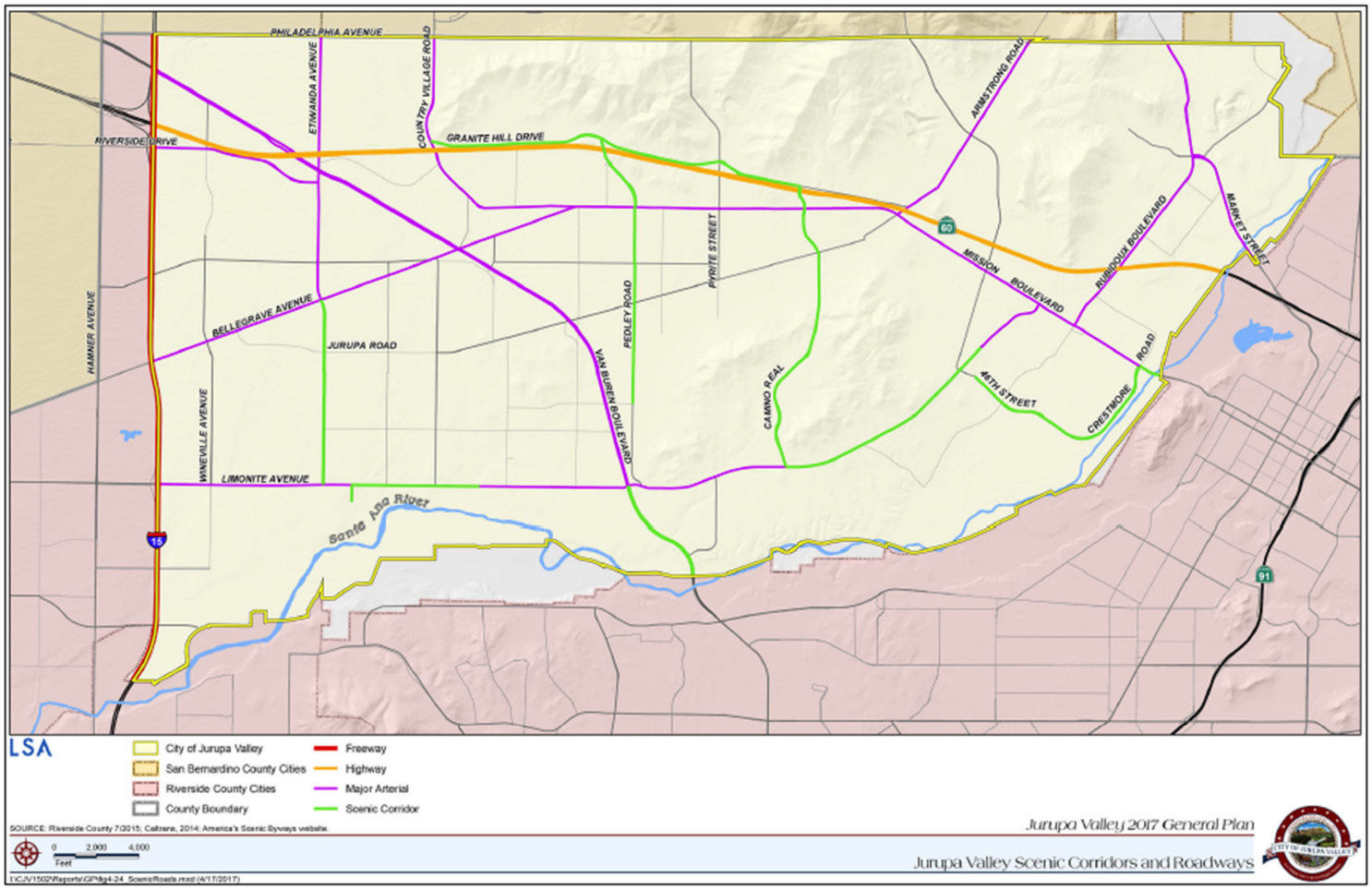


Figure 4-23: Jurupa Valley scenic corridors and roadways

2. Agriculture and Forestry Resources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

(Sources: EGP, EGP DEIR, JVGP DEIR*, JVGP Figure 2-5 – 2017 General Plan Land Use Plan; JVGP Figure 4-13 – Farmland in Jurupa Valley; January 2019 City of Jurupa Valley Zoning Map (JVZM))*

2a. 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?

Direct Impacts

No Impact. The Project Site does not include any mapped Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland). The Project site is designated "Urban and Built-Up Land" by the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program as shown on JVGP Figure 4-13 – Farmland in Jurupa Valley. (JVGP, p. 4-25.) Therefore, there will be no direct impacts to the conversion of Farmland.

Potential Reasonably Foreseeable Indirect Impacts

The following goal and policies of the JVGP are related to supporting and conserving agricultural uses.

Goal COS 4 *To be a good steward of Jurupa Valley's natural resources, and protect and enhance open space by continuing to accommodate agricultural uses and encourage its expansion, where appropriate.*

Policies

COS 4.1 *Support Agricultural Uses. Employ a variety of agricultural land conservation programs to improve the viability of farms and ranches and thereby ensure the long-term conservation of viable agricultural uses in cooperation with individual farmers, farming organizations, farmland conservation organizations, and the County.*

COS 4.2 *Agricultural Land Conversion. Discourage the conversion of productive agricultural lands to urban uses unless the property owner can demonstrate overarching Community-wide benefits or need for conversion.*

COS 4.3 *Compatible Uses. Encourage the combination of agriculture with other compatible uses to help with the production of food, fiber, and support uses incidental to the on-site agricultural operation. Provide an economic advantage to agriculture uses by allowing activities such as farm stores, retail sales of produce or wares, and related accessory uses.*

LUE 1.3 *Prime Farmland. Encourage conservation of designated Prime Farmland and productive agricultural lands.*

LUE 1.4 *Right-To-Farm. Adhere to the Riverside County Right-To-Farm Ordinance and any subsequent ordinance assuring the ability of farmers to continue with legally established agricultural activities.*

LUE 1.5 *Agricultural. Where it is determined by the City to be compatible, the City will allow new agricultural uses.*

Regarding the conversion of Farmland resulting from implementation of the JVGP, the *JVGP EIR* states:

> *Although Land Use Element Policies LUE 1.3 and LUE 1.4 clearly indicate prime farmland and the right-to-farm should be protected in the City. It should be noted that the term "development" in this policy applies to building improvements on both private and public actions involving vacant land. However, eventual conversion or loss of agricultural land will be an eventual result of implementation of the 2017 General Plan. As land that currently supports or could support agriculture is developed, there will be less and less agricultural activity in the City. The City's 2017 General Plan reflects the community's desire that agriculture remain viable and active as long as it is economically practical and local landowners wish to farm. The 2017 General Plan clearly states one of its*

goals is to provide a transitional process away from agriculture toward rural and suburban land uses. (JVGP DEIR, p. 4.2-13.)

The physical loss of prime agricultural soil (i.e., covering them over with non-agricultural uses) represents a significant environmental impact that cannot be mitigated under the proposed General Plan, mainly because the State Department of Conservation considers these soils to be important state-wide resources and has indicated they believe their loss to be a significant impact under CEQA. Implementation of General Plan goals, policies, and programs regarding agriculture will not reduce environmental impacts related to loss of prime agricultural soils to less than significant levels, and there is no feasible mitigation for this eventual loss (e.g. no long-term preservation programs for agriculture). (JVGP DEIR, pp. 4.2-12–4.2-14.)

The EGP contains two policies regarding agricultural land:

Policy AQ-39 *The loss of agricultural productivity on lands designated for urban uses within the city limits is anticipated as a consequence of the development of Eastvale.*

Policy AQ-40 *As long as agricultural land in the City exists, the City shall not require buffers between farmland and urban uses, relying instead on the following actions to address the impacts of farming on urban uses:*

- *Implement the City's "Right to Farm" ordinance.*
- *Prospective buyers of property adjacent to agricultural land shall be notified through the title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities as per provisions of the City's right-to-farm ordinance.*

Regarding the conversation of Farmland resulting from buildout per the EGP, the EGP DEIR concluded that although Eastvale has planned to accommodate urban growth and is not seeking to maintain any agricultural land within its boundaries, implementation of the EGP would convert Farmland to non-Farmland uses and that impact would be considered significant and unavoidable. (EGP DEIR, p. 3.1-3.)

For the reasons set forth above, there will be no direct impacts resulting from implementation of the proposed Project regarding the conversion of Farmland to a non-agricultural use. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

2b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Direct Impacts

No Impact. No portion of the Project site is zoned for agricultural use or subject to a Williamson Act contract. (JVGP, p. 4-25; JVZM.) There will be no direct impacts in this regard.

Potential Reasonably Foreseeable Indirect Impacts

In addition to the JVGP Goals and Policies identified in the response to Threshold 2a, above, the JVGP includes the following goal and policies regarding agriculture and related resources: (JVGP, pp. 4-6, 4-12, 9-8, 9-14.)

Goal COS 1 — *Working to protect, preserve, and create the conditions that will promote the preservation of significant trees and other vegetation, particularly native California species.*

Goal EJ 5 — *To be a City that supports and achieves environmental justice by ensuring healthy and affordable housing opportunities for all segments of the community.*

Policies

COS 1.3 — *Other Significant Vegetation. Maintain and conserve superior examples of vegetation, including: agricultural wind screen plantings, street trees, stands of mature native and non-native trees, and other features of ecological, aesthetic, and conservation value.*

EJ 4.9 — *Community/Private Gardens. Ensure that regulations allow community and private gardens where residents can grow healthy fruits and vegetables.*

Regarding conflicts with existing zoning for agricultural use or a Williamson Act contract resulting from buildout per the JVGP, the *JVGP EIR* concluded that implementation of the above General Plan goals and policies in addition to JVGP programs that encourage as individuals, non-profit agencies, and Riverside County to seek out grants and programs to promote farmland conservation and encourage sustainable agricultural practices, will provide sufficient transition of agricultural land to rural and suburban land uses and potential impacts to agricultural zoning and William Act contracts will be less than significant. (JVGP DEIR, p. 4.2-9.)

Regarding conflicts with existing zoning for agricultural use or a Williamson Act contract resulting from buildout per the EGP, the *EGP EIR* concluded potential conflicts between new development and existing agricultural land uses would still occur when the new development, by its nature, precludes or interferes with the continued agricultural use of adjacent or nearby land. Urban encroachment adversely affects the efficiency of remaining farming operations due to increased air pollution, livestock predation by pets, crop diseases resulting from inadequate care of off-farm ornamental plants, restrictions of pesticide use and burning, and requirements to set aside on-farm buffer zones. In addition, production costs increase due to rising land values, water scarcity, theft and vandalism of farm equipment, crop pilferage. road congestion, and trespassing. (EGP DEIR, pp. 3.1-2–3.1-3.)

The *EGP EIR* states, although EGP Policy AQ-39 states that the loss of agricultural productivity on lands designated for urban uses within Eastvale's limits is accepted as a consequence of the development, the importance of agricultural lands is recognized and Eastvale is committed to protecting this resource so long as existing agricultural uses wish to remain in place as

supported by EGP Policy AQ-40. EGP Policy AQ-40 supports Eastvale's Right to Farm ordinance and notifies prospective buyers of property adjacent to agricultural land uses, including agricultural lands under Williamson Act contracts, that they could be subject to inconvenience or discomfort resulting from accepted farming activities. Although provision of disclosure would partially mitigate the potential for future development to impact the efficiency of adjacent agricultural uses, it is likely that over time most or all of the dairies in Eastvale will be converted to urban uses. This is considered a significant and unavoidable impact related to the buildout of the EGP. (EGP DEIR, p. 3.1-3.) For the reasons set forth in the preceding paragraphs, there will be no direct impact associated with the proposed Project regarding conflicts with existing zoning for agricultural use or a Williamson Act Contract. No new reasonably foreseeable indirect or cumulative impacts beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR* would occur.

2c. 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))?

Direct Impacts

No Impact. The Project site is not zoned for forest land, timberland, or timberland zoned for Timberland Production areas. (JVGP, p. 4-25; JVZM.) There will be no direct impacts in this regard.

Potential Reasonably Foreseeable Indirect Impacts

There is no forestland, timberland, or timberland zoned for Timberland Project within the cities of Eastvale or Jurupa Valley. (NOP p. 12; JVGP DEIR, p. 4.2-9.)

For the reasons set forth in the preceding paragraphs, no direct, reasonably foreseeable indirect, or cumulative impacts would occur in this regard.

2d. Result in the loss of forest land or conversion of forest land to non-forest use?

Direct Impacts

No Impact. There is no forest land in proximity to the Project site. (JVGP, p. 4-25; JVZM.) Thus, there will be no direct impacts regarding the loss or conversion of forest land.

Potential Reasonably Foreseeable Impacts

There is no forest land within the cities of Eastvale or Jurupa Valley. (NOP, p. 12; JVGP, p. 4.2-9.)

For the reasons set forth in the preceding paragraphs, no direct, reasonably foreseeable indirect, or cumulative impacts with regard to the loss of or conversion of forest land will occur.

2e. 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?

Direct Impacts

No Impact. As discussed in response to Threshold 2a above, there is no designated Farmland on the Project site and there is no designated Farmland within the 1110 PZ or 980 PZ that Well 30 will serve. The proposed Project is located within an urban area and does not include any component that would result in the conversion of Farmland or forest land to other uses. As discussed in response to Threshold 2d above, there is no forest land on or in the proximity of the Project site. Thus, there will be no direct impacts in this regard.

Potential Reasonably Foreseeable Indirect Impacts

Refer to the response to Threshold 2a above, for a discussion regarding the conversion of Farmland to non-agricultural uses within Eastvale and Jurupa Valley.

As discussed in response to Threshold 2d above, there is no forest land in the cities of Eastvale and Jurupa Valley.

For the reasons set forth in the response to Threshold 2a, there will be no direct impacts resulting from implementation of the proposed Project regarding the conversion of Farmland to a non-agricultural use. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR* regarding the conversion of Farmland.

Regarding the conversion of forest land to non-forest use, for the reasons set forth in the preceding paragraphs, no direct impacts would occur, and no new reasonably foreseeable indirect, or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

3. Air Quality	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 in 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?	☐	☐	☒	☐

(Sources: AQMP; EGP; EGP DEIR; JVGP; JVGP DEIR; SCAQMD-C; WEBB-A*)*

3a. Conflict with or obstruct implementation of the applicable air quality plan?

Direct Impacts

No Impact. Jurupa Valley is located within the South Coast Air Basin (Basin). The South Coast Air Quality Management District (SCAQMD) prepares the Air Quality Management Plan (AQMP) for the Basin. The AQMP sets forth a comprehensive program that will lead the Basin into compliance with all federal and state air quality standards. The AQMP's control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, if a project demonstrates compliance with local land use plans and/or population projections, then the AQMP would have taken into account such uses when it was developed.

The proposed Project consists of public utility improvements that do not directly impact population projections or conflict with local land use plans. The increase in capacity of the new well accommodates the existing and future water demand estimated by the District, which is based on the development envisioned in the Jurupa Valley and Eastvale General Plans. Thus, no indirect impacts will occur. For these reasons, the Project does not conflict with or obstruct implementation of the AQMP.

Potential Reasonably Foreseeable Indirect Impacts

The Air Quality Element of the JVGP includes the following goal and policies related to consistency with regional plans: (JVGP p. 6-8.)

Goal AQ 1 *To be a City that works with regional, sub-regional, and state agencies to protect and improve air quality and reduce greenhouse gas emissions.*

Policies

AQ 1.1 *Regional Participation. Promote and participate with regional, subregional, and state agencies, both public and private, in all areas to protect and improve air quality, including enforcement of all regulations.*

AQ 1.2 *Air Quality Measures. Establish and implement air quality, land use, and mobility measures that improve not only the City's environment but also that of the entire region.*

Regarding conflicting with or obstructing implementation of the AQMP, the *JVGP EIR* states:

> *An AQMP consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. It fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans. The SCAQMD has the following consistency criteria:*
>
> - *Consistency Criterion No. 1: The 2017 General Plan is a programmatic document and by itself would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP. In fact, the goals, policies, and programs of the Air Quality Element are designed to help minimize air pollutant emissions from future development to the degree possible and practical given the limits of City control over this regional issue.*
> - *Consistency Criterion No. 2: Future development under the 2017 General Plan will not exceed the growth assumptions in the 2012 AQMP. The 2012 AQMP is based on regional growth projections developed by the Southern California Association of Governments (SCAG). Future land uses under the proposed General Plan would result in more traffic than at present. However, land uses are generally similar to those identified in the County's Jurupa Area Plan (see previous Table 3.A) which means buildout of the City under the 2017 General Plan would be equivalent to buildout that would have occurred under the County's General Plan. The AQMP was based on the County's General Plan land use data and growth projections, so the proposed 2017 General Plan is consistent in terms of growth and land use buildout to that data used to prepare the AQMP. In addition, the previous Sections 4.10, Land Use and Planning, and Section 4.13, Population, Housing, and Employment, demonstrate that the 2017 General Plan is consistent with the regional land use, housing, and transportation planning documents prepared by the (SCAG).* (JVGP DEIR, p. 4.3-26.)

For these reasons, the proposed 2017 General Plan is consistent with the AQMP at a programmatic level. (JVGP DEIR, p. 4.3-26.)

The Land Use, Conservation, and Air Quality Elements of the EGP includes the following policies regarding air quality-related impacts: (EGP pp. 3-14_3-15, 4-9–4-11, 7-10–7-11.)

LU-11 *Development should be located to capitalize on multimodal transportation opportunities and promote compatible land use arrangements that reduce reliance on the automobile.*

LU-12 *The Land Use Mop should provide for land use patterns which reduce the number and length of motor vehicle trips.*

LU-14 *Clustering can be applied in all residential designations. The allowable density of a particular land use designation may be clustered in one portion of the site in smaller lots, as long as the ratio of dwelling units per acre remains within the allowable density range associated with the designation.*

LU-15 *The City will encourage parcel consolidation or coordinated planning of adjacent parcels. through incentive programs and planning assistance.*

LU-16 *The City will allow mixed-use projects to develop in commercially designated areas in accordance with the guidelines of the Town Center land use designation and with special consideration of impacts to adjacent uses.*

C-15 *Following the principles of complete streets, maximize visibility and access for pedestrians and encourage the removal of barriers (walls. easements. and fences) for safe and convenient movement of pedestrians. Ensure that the entire travel way is included in the design from building facade to building facade.*

C-16 *Pedestrian access shall be provided from developments to existing and future transit routes, park and ride lots, terminal facilities, etc.*

C-17 *All development located along planned trails shall provide access to the trails system. All developments shall allow for trails to pass their boundaries and shall provide connections to existing and proposed trails in Eastvale and adjacent jurisdictions.*

C-18 *Collaborate with schools to ensure that school children have safe and adequate transportation routes available, such as a pedestrian or bike paths, or a local bus service.*

C-19 *Require, where feasible, the construction of overpasses or undercrossings where trails intersect urban arterials or freeways.*

C-20 *Review all existing roadways without pedestrian facilities when they are considered for improvements (whether maintenance or upgrade) to determine if new pedestrian facilities ore warranted.*

C-21 *Coordinate with Caltrans, the Riverside County Transportation Commission, transit agencies, and other responsible agencies to identify the need for additional park-and-ride facilities along major commuter travel corridors and at major activity centers.*

C-22 *Examine the use of public access utility easements for trail linkages to the regional trails system and/or other open space areas.*

C-25 *Incorporate the potential for public transit service in the design of developments that are identified as major trip attractions (i.e., retail and employment centers}.*

C-26 *Design the physical layout of urban arterials, major and secondary highways, and collectors to facilitate bus operations, including turnouts and shelters.*

AQ-4 *Attain performance goals and/or VMT reductions which are consistent with SCAG's Growth Management Plan.*

AQ-5 *Sensitive receptors should be separated and protected from polluting point sources to the greatest extent possible.*

AQ-6 *Require site plan designs to protect people and land uses sensitive to air pollution.*

AQ-7 *The City encourages the use of pollution control measures such as landscaping, vegetation, and other materials, which trap particulate matter or control pollution.*

AQ-8 *The City encourages the planting of urban trees to remove pollutants from the air, provide shade, and decrease the negative impacts of heat on the air.*

AQ-16 *Require stationary pollution sources to minimize the release of toxic pollutants through:*

- *Design features;*
- *Operating procedures:*
- *Preventive maintenance;*
- *Operator training; and*
- *Emergency response planning*

AQ-17 *To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAOMD. the Environmental Protection Agency and the California Air Resources Board.*

Regarding conflicting with or obstructing implementation of the AQMP the EGP DEIR states:

> *The Riverside County General Plan EIR determined that implementation of the Riverside County General Plan is consistent with SCAG's Regional Growth Management Plan and SCAQMD's 2007 AQMP, and the vehicle miles traveled growth rote under the Riverside County General Plan is consistent with SCAG's projected population growth. The proposed Eastvale General Plan will result in a new General Plan that blends existing (County of Riverside) goals and policies and new, Eastvale-specific goals and policies. As stated in Section 2.0, Project Description, the proposed General Plan retains the existing land use designations in the current Riverside County General Plan and, similarly, roadway classifications and other physical planning in the Riverside County General Plan will remain unchanged.* (EGP DEIR, p. 3.3-15.)
>
> *The proposed General Plan would not conflict with or obstruct implementation of the 2007 AQMP. The proposed City of Eastvale General Plan would not include changes to the existing County of Riverside Land Use Map and, as a result, no development beyond that previously considered in the 2003 Riverside County General Plan EIR would occur with implementation of the proposed General Plan. Therefore, while implementation of the proposed General Plan is anticipated to result in residential and nonresidential (retail, commercial. office, industrial, and other uses) development which would contribute to the vehicle miles traveled growth rate, such growth would not occur to on extent beyond that previously considered in the 2003 Riverside County General Plan EIR.* (EGP DEIR, p. 3.3-15.)
>
> *In addition, implementation of the proposed policy provisions of the Eastvale General Plan would not obstruct implementation of any of the control measures contained within the 2007 AQMP. The proposed General Plan seeks to reduce the environmental impact (including air quality) of land use development by increasing the viability of walking, biking, and transit by allowing mixed-use projects which provide land use arrangements that reduce reliance on the automobile and improve opportunities for pedestrian, bicycle, and transit use. For example, Policy LU-14 would allow mixed-use projects to develop in commercially designated areas in accordance with the guidelines of the Community Center Land Use Designation, and Policy LU-29 states that commercial uses should be located near transportation facilities and include facilities to promote the use of public transit (such as bus turnouts, bus shelters, etc.). Also, Policy C-11 would allow on alternative level of service (a level of service below C) in planned development or similar identified mixed-use areas that demonstrate links to transit, trails, alternative transportation and comfortable walking distance to goods and services in order to promote compact development; and Policy C-25 would require the incorporation of public transit service in the design of developments that ore identified as major trip attractions (i.e., retail and employment centers).* (EGP DEIR, p. 3.3-15.)

The intent of the proposed General Plan policies listed above is to accommodate anticipated growth in a compact urban form, including mixed-use development, as well as focusing development along transit corridors and at other key locations. This impact is less than significant. (EGP DEIR, p. 3.3-15.)

For the reasons set forth in the preceding paragraphs, no direct impacts would occur, and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

3b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?

Direct Impacts

Less Than Significant Impact. The portion of the Basin within which the proposed Project site is located is designated as a non-attainment area for ozone, PM-10, and PM-2.5 under the state standards and in a non-attainment area for ozone, and PM-2.5 under federal standards. (CARB.) The SCAQMD considers the thresholds for project-specific impacts and cumulative impacts to be the same. (SCAQMD-A.) Therefore, projects that exceed project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable. Based on SCAQMD's regulatory jurisdiction over regional air quality, it is reasonable to rely on its thresholds to determine whether there is a cumulative air quality impact.

Air quality impacts can be described in a short- and long-term perspective. Short-term impacts will occur during site grading and Project construction. Long-term air quality impacts will occur once the Project is in operation. It is anticipated that JCSD personnel will visit the Well 30 site on a daily basis, which is the same frequency personnel are visiting Well 19. Therefore, no new operational activities are anticipated. Operational emissions would only be from the electric pump at the new well site and daily visits by vehicles driven by maintenance personnel, which also occur under existing conditions and as such, the operational emissions are considered negligible; therefore, only short-term construction impacts were evaluated.

All active operations (any activity capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/destruction activities, disturbed surface area, or heavy- and light-duty vehicular movement) within the Basin will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions, which is established in SCAQMD Rule 403. Compliance with this rule would be achieved through application of standard best management practices in construction and operation activities, such as the application of water or chemical stabilizers to disturbed soils, reducing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 or more acres of soil, or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD.

The air quality impacts from the Project were evaluated in the Air Quality and Greenhouse Gas (AQ/GHG) Analysis prepared for the Project (WEBB-A) and provided in Appendix B.

The construction of the Project will be required to comply with SCAQMD Rule 403 for fugitive dust. Based on the area of disturbance, a Fugitive Dust Control Plan or a Large Operation Notification Form would not be required.

Short-term emissions were evaluated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0 computer program. Short-term emissions consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by construction-related vehicles. The default parameters within CalEEMod were used, except as identified below, and these default values generally reflect a worst-case scenario, which means that Project emissions are expected to be equal to or less than the estimated emissions.

The estimated construction period for the proposed Project is approximately 17 months as identified in **Table 2 – Estimated Construction Schedule**.

Table 2 – Estimated Construction Schedule

Construction Activity	Start Date	End Date	Total Working Days
Demolition	April 1, 2022	May 3, 2022	23 days
Well Drilling	May 4, 2022	August 4, 2022	67 days
Well Testing	August 5, 2022	September 6, 2022	23 days
Well Construction	September 4, 2022	September 4, 2023	261 days
Paving	August 28, 2023	September 4, 2023	6 days
Architectural Coating	August 28, 2023	September 4, 2023	6 days
Demolition	April 1, 2022	May 3, 2022	23 days

The equipment to be used for each construction activity is shown in **Table 3 – Construction Equipment List** and is based on engineering estimates. Each piece of equipment is assumed to operate 8 hours per day.

Table 3 – Construction Equipment List

Construction Activity	Off-Road Equipment	Unit Amount
Demolition	Concrete/Industrial Saw	1
	Rubber Tired Dozer	1
	Tractor/loader/backhoes	2
Well Drilling	Bore/Drill Rig	1
	Crane	1
	Tractor/loader/backhoes	1
Well Testing	No Off-road equipment	
Well Construction	Crane	1
	Grader	1
	Rubber Tired Dozer	1
	Welder	1
	Tractor/loader/backhoes	2
Paving	Pavers	1
	Paving Equipment	1
	Rollers	1
Architectural Coating	Air Compressor	1

- Demolition of the structures associated with Well 19 was estimated to be 532 square feet.
- To evaluate Project compliance with SCAQMD Rule 403 for fugitive dust control, the Project utilized the mitigation option of watering the Project site three times daily which achieves a control efficiency of 61 percent for PM-10 and PM-2.5 emissions.
- Two (2) one-way vendor truck trips per day were added to the demolition, well drilling and paving activities to account for water truck trips.
- To be conservative the entire construction footprint (minus the building footprint) was assumed to be paved.

Maximum daily emissions from Project construction are summarized in **Table 4 – Estimated Maximum Daily Construction Emissions** and compared to the SCAQMD's daily regional thresholds:

Table 4 – Estimated Maximum Daily Construction Emissions

	Peak Daily Emissions (lb/day)[3]					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Construction Thresholds[1]	**75**	**100**	**550**	**150**	**150**	**55**
Demolition-2022	1.57	15.07	12.15	0.02	0.88	0.74
Well Drilling-2022	0.80	8.24	6.52	0.02	0.44	0.34
Well Testing-2022	0.08	0.36	0.82	0.00	0.25	0.07
Well Construction-2022	2.31	23.41	14.19	0.03	1.25	1.00
Well Construction-2023	2.05	20.37	13.53	0.03	1.09	0.84
Paving-2023	0.98	5.18	7.61	0.01	0.36	0.26
Architectural Coating-2023	4.34	1.75	2.56	0.01	0.14	0.11
Maximum[2]	**7.37**	**27.30**	**23.70**	**0.05**	**1.59**	**1.21**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: *WEBB*-A, Table 2

Notes:

[1] SCAQMD CEQA Daily regional Significant from SCAQMD CEQA Air Quality Handbook (SCAQMD–B)

[2] Maximum emissions are the greater of either: Demolition, Well Drilling, Well Testing, or Well Construction alone in 2022 or the sum of Well Construction, Paving, and Architectural Coating in 2023 because these activities overlap. Maximum emissions are shown in bold.

[2] The numbers shown are the maximum summer or winter daily emissions (i.e., worst-case) results from CalEEMod and takes credit for reductions achieved through standard regulatory requirements (SCAQMD Rule 403).

As shown in **Table 4**, the maximum daily criteria pollutant emissions from construction of the proposed Project will be below the SCAQMD daily regional thresholds for all criteria pollutants. Impacts would be less than significant**.** No mitigation is required.

In addition to the daily regional thresholds, the SCAQMD has developed localized significance threshold (LST) methodology that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts (both short- and long-term) (SCAQMD-C). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA). The Project is located in SRA 23.

According to the LST methodology, only on-site emissions need to be analyzed. Emissions associated with vendor and worker trips are mobile source emissions that occur off site. The emissions analyzed under the LST methodology are NO_x, CO, PM-10, and PM-2.5. SCAQMD has provided LST lookup tables to allow users to readily determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts for projects five acres or smaller. The LST tables can be used as a screening tool to determine if dispersion modeling would be necessary. If project-related emissions are below the

LST table emissions, no further analysis is necessary. The Project site disturbs approximately 1.01 acres. Therefore, the LST for one-acre site was utilized.

The LST thresholds are estimated using the maximum daily disturbed area (in acres) and the distance of the Project to the nearest sensitive receptors (in meters). The closest sensitive receptors to the Project construction site are existing residential homes located over 1,500 meters east of the Project. LST methodology applies to sensitive receptors within 500 meters. Therefore, to provide a conservative analysis, a receptor distance of 500 meters (1,640 feet) was used. **Table 5 – Unmitigated LST Results for Daily Construction Emissions** identifies the worst-case on-site construction emissions of the proposed Project.

Table 5 – Unmitigated LST Results for Daily Construction Emissions

Pollutant	Peak Daily Emissions (lb/day)			
	NO_X	CO	PM-10	PM-2.5
LST Threshold for 1-acre at 25 meters	**118**	**602**	**4**	**3**
Demolition-2022	14.95	11.72	0.76	0.70
Well Drilling-2022	8.13	6.17	0.34	0.31
Well Testing-2022	0.00	0.00	0.00	0.00
Well Construction-2022	23.05	13.37	0.03	1.00
Well Construction-2023	20.09	12.77	0.84	0.78
Paving-2023	5.10	7.29	0.01	0.26
Architectural Coating-2023	1.74	2.41	0.09	0.09
Maximum[1, 2]	**26.92**	**22.48**	**0.94**	**1.12**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: WEBB-A, Table 3

Notes:

[1] Maximum emissions are the greater of either Demolition, Well Drilling, Well Testing, or Well Construction alone in 2022 or the sum of Well Construction, Paving, and Architectural Coating in 2023 because these activities overlap. Maximum emissions are shown in bold.

[2] The numbers shown are the maximum summer or winter daily emissions (i.e., worst-case) results from CalEEMod and takes credit for reductions achieved through standard regulatory requirements (SCAQMD Rule 403).

As shown in **Table 5**, all concentrations of pollutants would be below the SCAQMD's short-term LST. Therefore, short-term LST significant air quality impacts would be less than significant**.** No mitigation is required.

The long-term emissions from the well, as discussed previously, are primarily in the form of mobile source emissions, with no stationary sources of emissions present. The new pump at the new well site will be similar to the existing pump and is electric. The new well will have a diesel-powered emergency generator. No changes are required for this stand-by generator, similar to

the existing well. According to the LST methodology, LSTs only apply to the operational phase if a project includes stationary sources or on-site mobile equipment generating on-site emissions. The proposed Project does not include such uses. Thus, long-term LST analysis is not required.

In sum, the Project's short-term emissions do not exceed the SCAQMD established thresholds of significance on either a regional or localized level and the Project does not include stationary sources or on-site mobile equipment generating on-site emissions. All applicable equipment (such as emergency standby diesel generators that are used on a limited basis) is permitted through SCAQMD. The SCAQMD permitting process would ensure that the Project meets regulatory requirements through the application review process and by placing specific operating conditions on the permit.

Potential Reasonably Foreseeable Indirect Impacts

In addition to the JVGP goal and policies identified in the response to Threshold 3a above, the JVGP Air Quality Element also includes the following goals and policies to minimize air pollutant emissions to the greatest degree practical: (JVGP pp. 6-8–6-12, 6-14, 6-16, 9-10.)

Goal AQ 2 *To be a City that helps protect its residents, and especially senior citizens, youth and other sensitive receptors, from toxic air pollution.*

Goal AQ 3 *To be a City that works to reduce emissions from stationary and mobile sources.*

Goal AQ 4 *To be a City that employs measures to improve the jobs/housing balance and reduce commuting time.*

Policies

AQ 2.1 *Site Plan Designs. Require City land use planning efforts and site plan designs to protect people and land uses sensitive to air pollution, using barriers and/or distance from emissions sources, and protect sensitive receptors from polluting sources, wherever possible.*

AQ 3.1 *Stationary Pollution Reduction. Require stationary pollution sources to prevent the release of toxic pollutants through the following:*

1. *Design features;*
2. *Operating procedures;*
3. *Preventive maintenance;*
4. *Operator training; and*
5. *Emergency response planning*

AQ 3.5 *Fugitive Dust Reduction Measures. Apply, as appropriate, measures contained in the County's Fugitive Dust Reduction to the entire City.*

AQ 4.2 *Particulate Matter. Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights of way, and off-road vehicles to the maximum extent possible.*

AQ 4.4 *Natural Gas/Electric Vehicles. Support efforts to encourage the use of natural gas and electric vehicles in distribution centers.*

AQ 5.2 *Energy Conservation. Encourage advanced energy conservation techniques and the incorporation of energy efficient design elements for private and public developments, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling, and offer incentives, as appropriate.*

AQ 6.9 *Natural Gas/Electric Vehicles. Support efforts to encourage the use of natural gas and electric vehicles in distribution centers.*

AQ 7.7 *Pedestrian and Bicycle Facilities. Emphasize the use and improvement of pedestrian and bicycle facilities when funding transportation improvements.*

EJ 2.4 *Stationary Source Emissions. Require, wherever possible, existing sources of stationary emissions near sensitive land uses to relocate and/or incorporate measures to minimize emissions.*

EJ 2.6 *Mitigate Air Quality. Identify resources for the existing sensitive receptors experiencing adverse air quality issues to incorporate measures to improve air quality such as separation/setbacks, landscaping, barriers, ventilation systems, air filters/cleaners, and other measures.*

EJ 2.7 *Latest Technologies. Give preference in approving commercial and industrial development to those projects that incorporate the latest technologies to reduce diesel emissions.*

The *JVGP EIR* concluded that although implementation of the 2017 General Plan policies will help reduce programmatic air quality impacts from future land uses (i.e., air pollutants generated by new development) these policies will not be able to reduce impacts from future development to less than significant levels when compared to SCAQMD daily thresholds. Individual projects will have to identify and implement their own project-specific mitigation; however, there are no additional programmatic measures available other than the goals, policies, and programs of the JVGP Air Quality Element and other elements of the 2017 General Plan that will help reduce air pollution from future development. Further, future development projects may exceed SCAQMD daily thresholds even with project-specific mitigation. (JVGP DEIR, p. 4.3-21.)

Because no additional feasible mitigation is available at a programmatic level and because even with implementation of all the goals, policies, and programs in the JVGP, long-term air pollutant emissions from future development may exceed SCAQMD daily thresholds impacts; associated

with implementation of the JVGP are considered significant and unavoidable. (JVGP DEIR, p. 4.3-21.)

The Land Use, Circulation and Infrastructure, and Air Quality and Conservation chapters of the EGP includes the following policies that address air-quality related impacts: (EGP DEIR, pp. 3.3-12–3.3-14.)

Policies

LU-11 *Development should be located to capitalize on multimodal transportation opportunities and promote compatible land use arrangements that reduce reliance on the automobile.*

LU-12 *The Land Use Map should provide for land use patterns which reduce the number and length of motor vehicle trips.*

LU-14 *Clustering can be applied in all residential designations. The allowable density of a particular land use designation may be clustered in one portion of the site in smaller lots, as long as the ratio of dwelling units per acre remains within the allowable density range associated with the designation.*

LU-15 *The City will encourage parcel consolidation or coordinated planning of adjacent parcels, through incentive programs and planning assistance.*

LU-16 *The City will allow mixed-use projects to develop in commercially designated areas in accordance with the guidelines of the Town Center land use designation and with special consideration of impacts to adjacent uses.*

C-11 *Alternative levels of service may be allowed on intersections in planned development or similar identified mixed-use areas that demonstrate links to transit, trails, and alternative transportation and comfortable walking distance to goods and services.*

C-15 *Following the principles of complete streets, maximize visibility and access for pedestrians and encourage the removal of barriers (walls, easements, and fences) for safe and convenient movement of pedestrians. Ensure that the entire travel way is included in the design from building façade to building façade.*

C-16 *Pedestrian access shall be provided from developments to existing and future transit routes, park and ride lots, terminal facilities, etc.*

C-17 *All development located along planned trails shall provide access to the trails system. All developments shall allow for trails to pass their boundaries and shall provide connections to existing and proposed trails in Eastvale and adjacent jurisdictions.*

ACTION C-17.1: Determine if trails, paths, and pedestrian access can be extended into existing neighborhoods to provide for connectivity to transit and pedestrian corridors.

ACTION C-17.2: Develop a multipurpose recreational trail network with support facilities which provide a linkage with regional facilities.

C-18 *Collaborate with schools to ensure that schoolchildren have safe and adequate transportation routes available, such as pedestrian or bike paths, or local bus service.*

C-19 *Require, where feasible, the construction of overpasses or undercrossings where trails intersect urban arterials or freeways.*

C-20 *Review all existing roadways without pedestrian facilities when they are considered for improvements (whether maintenance or upgrade) to determine if new pedestrian facilities are warranted.*

C-21 *Coordinate with Caltrans, the Riverside County Transportation Commission, transit agencies, and other responsible agencies to identify the need for additional park-and-ride facilities along major commuter travel corridors and at major activity centers.*

C-22 *Examine the use of public access utility easements for trail linkages to the regional trails system and/or other open space areas.*

C-25 *Incorporate the potential for public transit service in the design of developments that are identified as major trip attractions (i.e., retail and employment centers).*

C-26 *Design the physical layout of urban arterials, major and secondary highways, and collectors to facilitate bus operations, including turnouts and shelters.*

AQ-4 *Attain performance goals and/or VMT reductions which are consistent with SCAG's Growth Management Plan.*

AQ-5 *Sensitive receptors should be separated and protected from polluting point sources to the greatest extent possible.*

AQ-6 *Require site plan designs to protect people and land uses sensitive to air pollution.*

AQ-7 *The City encourages the use of pollution control measures such as landscaping, vegetation, and other materials, which trap particulate matter or control pollution.*

AQ-8 *The City encourages the planting of urban trees to remove pollutants from the air, provide shade, and decrease the negative impacts of heat on the air.*

AQ-16 *Require stationary pollution sources to minimize the release of toxic pollutants through:*

- *Design features;*
- *Operating procedures;*
- *Preventive maintenance;*
- *Operator training; and*
- *Emergency response planning*

AQ-17 *To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, the Environmental Protection Agency, and the California Air Resources Board.*

Implementation of the EGP is anticipated to result in residential and nonresidential (retail. commercial, office, industrial, and other uses) development, which will result in short-term emissions from construction activities and long tern operational emissions. (EGP DEIR, pp. 3.3-16–3.3-17.) Although it was not possible to quantify the air quality impacts from future short-term, temporary construction activities in Eastvale under the EGP due to project-level variability and uncertainties related to future individual projects, all construction projects can produce nuisance dust emissions and all future construction projects are subject to SCAQMD rules and regulations in effect at the time of construction. Applicable SCAQMD rules include:

- Rule 402 (Nuisance), which prohibits the discharge from any source quantities of air contaminants or other material which cause injury, detriment. nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause. or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals. (EGP DEIR, p. 3.3-16.)

- Rule 403 (Fugitive Dust), which requires fugitive dust sources to implement Best Available Control Measures for all sources. This rule also prohibits all forms of visible particulate matter from crossing any property line. SCAQMD Rule 403 is intended to reduce PM-10 emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. (EGP DEIR, pp. 3.3-16–3.3-17.)

- Rule 1113 (Architectural Coatings), which requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories. (EGP DEIR, pp. 3.3-16–3.3-17.)

Regarding operational impacts, the *EGP EIR* determined that build-out of Eastvale per the EGP would result in emissions in excess of SCAQMD thresholds for criterial pollutants and precursors for which the Basin is in non-attainment. (EGP DEIR, p. 3.3-18.) Thus, the EGP DEIR concluded that even if future development is consistent with the Land Use, Circulation and Infrastructure, and Air Quality and Conservation policies addressing air-quality identified above

and with compliance with applicable SCAQMD rules, impacts regarding a cumulatively considerable net increase in criteria pollutant emissions for which the Project region is non-attainment resulting from implementation of the EGP would be significant and unavoidable.

For the reasons set forth in the preceding paragraphs, the Project's direct impact regarding a cumulatively considerable net increase in criteria pollutant emissions for which the Project region is non-attainment is less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR* would occur.

3c. Expose sensitive receptors to substantial pollutant concentrations?

Direct Impacts

Less Than Significant Impact. People most likely to be affected by air pollution, as identified by the SCAQMD, may include children, the elderly, and people with cardiovascular and chronic respiratory diseases. Sensitive receptors may include residences, schools, playgrounds, athletic facilities, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes. (SCAQMD 1993)

Sensitive receptors in the Project vicinity include existing residential homes located more than 1,500 meters east of the Project site. The construction emissions were found to be less than significant, as indicated above in response to Threshold 3b above. Operational emissions were also found to be less than significant (refer to response to Threshold 3b). Hence, the Project will not expose sensitive receptors to substantial pollutant concentrations and direct impacts are considered less than significant. No mitigation is required.

Reasonably Foreseeable Indirect Impacts

In addition to JVGP Goal AQ 2, Goal AQ 3 and policies AQ 2.1, AQ 3.4, AQ 3.5, EJ 2.4, 2.6, and EJ 2.7, identified in the response to Threshold 3b above, the JVGP Air Quality Element and Environmental Justice Element includes the following goal and policies specifically intended to protect sensitive receptors: (JVGP pp. 6-9, 9-8, 9-10–9-11.)

Goal EJ 3 *To be a City that supports and achieves environmental justice by ensuring a reduction in disproportionate environmental burdens affecting low-income and minority populations.*

Policies

AQ 2.2 *Pollution Control Measures. Strongly encourage the use of pollution control measures such as landscaping, vegetation and other materials that trap particulate matter or control pollution.*

AQ 2.4 *Tree Planting. Consider creating a citywide program to plant trees that help to filter pollutants from the air, provide shade, and add oxygen to the atmosphere.*

EJ 2.2 *Sensitive Land Use Buffers. Require that proposals for new sensitive land uses incorporate adequate setbacks, barriers,*

landscaping, or other measures as necessary to minimize air quality impacts.

EJ 2.3 *School Buffers .Provide adequate buffers between schools and industrial facilities and transportation corridors.*

EJ 2.5 *Residential Buffers. Require that zoning regulations provide adequate separation and buffering of residential and industrial uses.*

EJ 2.8 *Separation of Uses. Build new sensitive land uses with sufficient buffering from industrial facilities and uses that pose a significant hazard to human health and safety. The California ARB recommends that sensitive land uses be located at least 1,000 feet from hazardous industrial facilities.*

EJ 2.11 *Toxic Emissions. Ensure that low-income and minority populations understand the effect of projects that may use or generate toxic materials or emissions.*

EJ 2.14 *Truck Idling. Seek the necessary funding and resources to enforce the statewide idling limit of five minutes for heavy-duty diesel vehicles with a Gross Vehicle Weight Rating (GVWR) of 10,000 pounds or more.*

EJ 2.17 *Brownfield Sites. Promote the remediation and reuse of contaminated brownfield sites within the City, with priority given to those near environmental justice populations.*

Regarding localized air quality impacts resulting from vehicular traffic increases as a result of a specific project, the *JVGP EIR* concluded that because the SCAQMD has demonstrated that the Basin is in attainment for CO and that there are no “hotspots” anywhere in the Basin, even at intersections with much worse congestion than anywhere in Riverside County, it follows that any local impacts from a particular project will be below the above applicable thresholds, and thus sensitive receptors would not be impacted by CO hotspots in Jurupa Valley. (JVGP, p. 4.3-21.)

Regarding LSTs developed by the SCAQMD, the JVGP DEIR concluded that future development in Jurupa Valley may result in exceedances of LSTs; however, specific mitigation would be required for such projects to assure there would be no significant impact to nearby sensitive receptors. (JVGP DEIR, pp. 4.3-21–4.3-22.)

Regarding sensitive receptors and Toxic Air Contaminants (TACs), the *JVGP EIR* identified diesel particulate matter (DPM) associated with diesel truck exhaust as the most common TAC in Jurupa Valley. As discussed in the JVGP DEIR, the SCAQMD recommends preparation of a Health Risk Assessment for individual large commercial or industrial projects. (JVGP DEIR, p. 4.3-22.)

Regarding the exposure of sensitive receptors to substantial pollutant concentrations, the *JVGP EIR* concluded, that implementation of the 2017 General Plan goals, policies, and programs will

provide sufficient protection for sensitive receptors and programmatic impacts from implementing the 2017 General Plan would be less than significant. (JVGP DEIR, p. 4.3-23.)

The EGP policies that address air-quality are identified in the response to Threshold 3b, above.

Regarding CO hotspots, the *EGP EIR* concluded that the increase in traffic volumes resulting from implementation of the EGP would not be large enough to generate excessive CO emissions levels and thus would not affect sensitive receptors. (EGP, DEIR, p. 3.3-19.)

Regarding short-term construction TACs. the *EGP EIR* concluded implementation of the EGP would result in short-term emissions of DPM; however, construction emissions are regulated by SCAQMD. SCAQMD has developed LSTs and all future construction activities would be required to meet SCAQMD thresholds or implement project-specific mitigation. (EGP DEIR, p. 3.3-21.)

Regarding long-term operational TACs, the *EGP EIR* concluded that the issuance of SCAQMD air quality permits and compliance with all SCAQMD, state, and federal regulations regarding stationary TACs reduce emissions such that sensitive receptors would not be exposed to substantial air pollutant concentrations. SCAQMD limits public exposure to TACs through a number of programs. SCAQMD reviews the potential for TAC emissions from new and modified stationary sources through the SCAQMD permitting process for stationary sources. The *EGP EIR* identified following as limiting TAC emissions from existing stationary sources: (EGP DEIR, p. 3.3-21.)

1. SCAQMD Rule 1401 which requires that construction or reconstruction of a major stationary source emitting hazardous air pollutants listed in Section 112 (b) of the Clean Air Act be constructed with Best Available Control Technology and comply with all other applicable requirements.
2. Implementation of the Air Toxics "Hot Spots" (AB 2588) Program; and
3. Implementation of the federal Title Ill Toxics program.

Facilities and equipment that require permits from SCAQMD are screened from risks from toxic emissions and can be required to install Toxic Best Available Control Technology (T-BACT) to reduce the risks to below significant if deemed necessary by SCAQMD. T-BACTs are the most up-to- date methods, systems, techniques. and production processes available to achieve the greatest feasible emission reductions for TACs. (EGP DEIR, p. 3.3-22.)

In addition to the above requirements EGP policy AQ-5 states that sensitive receptors should be separated and protected from polluting point sources to the greatest extent possible, and policy AQ-6 requires that site plan designs protect people and land uses sensitive from air pollution. Policy AQ-16 requires stationary pollution sources to minimize the release of toxic pollutants through design features, operating procedures. preventive maintenance. operator training, and emergency response planning

The *EGP EIR* concluded that implementation of the proposed EGP policies described above in combination with SCAQMD's permitting process and CARB guidance would minimize the

exposure of sensitive receptors to TACs and impacts would be less than significant in this regard. (EGP DEIR, p. 3.3-22.)

For the reasons set forth in the preceding paragraphs, direct impacts would be less than significant and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

3d. Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

Direct Impacts

Less Than Significant Impact. The Project presents the potential for generation of other emissions such as those leading to odors in the form of diesel exhaust during construction in the immediate vicinity of the Project site and operation of the emergency standby diesel generator. Odors generated during construction will be short-term, be limited to the Project site, and would cease to occur after construction is completed. Only infrequent maintenance of the proposed well facilities will be required in which any potential odors would disperse quickly and cease after maintenance activities are completed. No other emissions are anticipated to result from the Project that could adversely affect substantial numbers of people. As such, direct impacts will be less than significant. No mitigation is required.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP Goal AQ 2 and policy AQ 2.1 identified in the response to Threshold 3b, above, and policy AQ 2.2 identified in the response to Threshold 3c, the JVGP Land Use Element includes the following policies regarding odors: (JVGP pp. 2-38, 2-42.)

Policies

LU 3.5 *Residential Compatibility. Commercial uses abutting residential properties shall be designed to protect the residential use from the impacts of noise, vibration, light, fumes, odors, vehicular traffic, parking, and safety hazards.*

LU 4.3 *Locations. Locate and design new public facilities to protect sensitive uses, such as schools and housing, from impacts due to noise, vibration, light, fumes, odors, and vehicular traffic, parking and safety hazards.*

Regarding the generation of odors affecting a substantial number of people, the *JVGP EIR* concluded that based on the types of land uses proposed under future development within Jurupa Valley, long-term objectionable odors are not expected to occur during construction or occupancy of typical land uses, especially for residential projects. Some potential sources of odors include emissions from diesel trucks and trash storage areas, mainly in commercial and industrial projects. In addition, solid waste generated by future land uses would be collected by a contracted waste hauler, ensuring that any odors resulting from operations would be adequately managed. Typical procedures that stem from JVGP goals and policies would generally prevent the proliferation of odors, so no significant odor impacts are expected to

occur. Therefore, with implementation of the JVGP goals and policies programmatic odor impacts from implementing the JVGP would be less than significant and no mitigation is required. (JVGP DEIR, p. 4.3-24.)

The EGP has two policies regarding the protection of residential uses from odors in addition to a policy requiring notification be provided to prospective buyers of property adjacent to agricultural land that they could be subject to inconvenience or discomfort resulting from accepted farming activities: (EGP, pp. 3-17, 3-19, 7-14.)

Policies

LU-22 *Require that commercial projects abutting residential properties protect the residential use from the nuisance impacts of noise, light, fumes, odors, vehicular traffic, parking, and operational hazards.*

LU-36 *The City shall require that new public facilities protect sensitive uses, such as schools and residences, from the impacts of noise, light spillover, fumes, odors, vehicular traffic, parking, and operational hazards.*

AQ-40 *As long as agricultural land in the city exists, the City shall not require buffers between farmland and urban uses within the City, relying instead on the following actions to address the impacts of farming on urban uses:*

- *Implement the City's "right-to-farm" ordinance.*
- *Prospective buyers of property adjacent to agricultural land shall be notified through the title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities per provisions of the City's right-to-farm ordinance.*

Regarding the creation of objectionable odors affecting a substantial number of people, the *EGP EIR* indicates that subsequent land use activities associated with implementation of the EGP could allow for the development of uses that have the potential to produce odorous emissions either during construction and/or operation. Additionally, subsequent land use activities may allow for the construction of sensitive land uses (i.e., residential development, parks, offices, etc.) near existing or future sources of odorous emissions. (EGP DEIR, p. 3.3-22.)

Future residential development would involve typical minor residential odor-generating activities, such as backyard barbecue smoke, lawn mower exhaust. application of exterior paints for home improvement, etc. The development of future nonagricultural land uses adjacent to agricultural areas (dairies) has the potential to expose people to objectionable odors from existing agricultural uses. For this reason EGP policy AQ-40 implements Eastvale's Right to Farm ordinance and requires notification of prospective buyers of property adjacent to agricultural land uses that they could be subject to inconvenience or discomfort resulting from accepted farming activities, even though no agricultural uses are expected to remain in Eastvale at build-out of the EGP. (EGP DEIR, pp. 3.3-22–3.3-23.)

The *EGP EIR* concluded that implementation of EGP policies LU-22, LU-36, and LU-40, in combination with SCAQMD's Rule 402, would minimize the creation of objectionable odors affecting a substantial number of people; therefore impacts would be less than significant. (EGP DEIR, p. 3.3-23.)

For the reasons set forth in the preceding paragraphs, direct impacts would be less than significant and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

4. Biological Resources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modification, 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 Game 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 Game 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?	☐	☒	☐	☐

(Sources: BRTR; EGP; JVGP; JVGP DEIR; MSHCP; NOP; RCA MSHCP*)*

The analysis in this section is based on the findings of the *Biological Resources Technical Report, Jurupa Community Services District Well Site 19 Project* (the "BRTR"), which is included as Appendix C of this Initial Study. The Project's BRTR was prepared Cadre Environmental to assess the biological resources that have been reported from the vicinity of, or have the potential to occur, on and adjacent to the Project Site. The BRTR included a thorough review of pertinent literature, site reconnaissance to characterize existing flora, fauna, and vegetation communities. Federal register listings, protocols, and species data provided by the United States Fish and Wildlife Service (USFWS) were reviewed in conjunction with anticipated federally listed species potentially occurring within the region of the Project Site. The California Natural Diversity Database (CNDDB), a California Department of Fish and Wildlife (CDFW) Natural Heritage Division species account database, was also reviewed for all pertinent information regarding the locations of known occurrences of sensitive species in the vicinity of the Project Site. Additionally, numerous regional floral and faunal field guides were utilized in the identification of species and suitable habitats. (BRTR, pp. 1, 5.)

In order to characterize and identify potential sensitive plant and wildlife habitats and to establish the accuracy of the data identified in the literature search, Cadre biologist Ruben Ramirez (USFWS Permit

780566-14, CDFW Permit 02243) conducted a reconnaissance survey on March 4, 2021. The reconnaissance survey for the Well 30 site was conducted from adjacent rights-of-way and developed parking lots. During the reconnaissance survey habitat assessments were conducted for, but not limited to, the following target species/groups: sensitive plants, coastal California gnatcatcher (a federally threatened and California species of special concern), burrowing owl (a California species of special concern), and San Bernardino kangaroo rat (a federally endangered and California species of special concern.) (BRTR, pp. 5–6.)

4a. Have a substantial adverse effect, either directly or through habitat modification, 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 Game or U.S. Fish and Wildlife Service?

Direct Impacts

Less Than Significant With Mitigation Incorporated. The approximately one-acre Project Site includes two vegetation communities, Developed and Disturbed. (Refer to **Figure 4 – Vegetation Communities Map**.) The Project Site's approximately 0.21-acre of the Developed vegetation community includes all of the Well 19 site and paved portions on both the northwest and southwest areas of the proposed Well 30 site. The remaining 0.79-acre of the Project Site is classified as Disturbed vegetation community. All of the Disturbed community is located on the proposed Well 30 site. Vegetation on this portion of the Well 30 site is dominated by primarily ruderal vegetation and species. These species include including slender pectocarya (*Pectocarya linearis*),common fiddleneck (*Amsinckia menziesii*), red stemmed filaree (*Erodium cicutarium*),black mustard (*Brassica nigra*), golden crownbeard (*Verbesina enceliodes*), London rocket (*Sisymbrium irio*), and common sow thistle (*Sonchus oleraceus*). (BRTR, p. 7.)

Based on the results of the initial habitat assessment and review of the western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and CNDDB, a total of ten (10) sensitive plant species have potential of occurring within the vicinity of the Project Site. (BRTR, pp. 18–19.) As indicated in **Table 6**, no sensitive habitats, state or federally listed threatened, endangered, or MSHCP narrow endemic plants are expected to occur within or adjacent to the Project Site. (BRTR, p. 18.)

Table 6 – Sensitive Plant Species Assessment

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
San Diego ambrosia (*Ambrosia pumila*) FE CRPR List 1B.1 MSHCP Narrow Endemic	San Diego ambrosia is known from Baja California, Mexico, and San Diego and Riverside counties in the United States. It blooms May to September. San Diego ambrosia occurs primarily on upper terraces of rivers and drainages as well as in open	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.

Table 6 – Sensitive Plant Species Assessment

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
	grasslands, openings in coastal sage scrub, and occasionally in areas adjacent to vernal pools.	
Plummer's mariposa-lily (*Calochortus plummerae*) CRPR 4.2	Perennial bulbiferous herb which generally blooms from May to June within chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and grassland habitats with granite and rocky substrates. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Parry's spineflower (*Chorizanthe parryi var. parryi*) CRPR 1B.1	Annual herb, generally blooms from April to June within chaparral, cismontane woodland, coastal scrub, grassland habitats with sandy, rocky openings. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Slender-horned spineflower (*Dodecahema leptoceras*) CRPR 1B.1 FE/SE	Annual herb which generally blooms from April to June within chaparral, cismontane woodland and coastal scrub (alluvial fan) with sandy substrates. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Mesa horkelia (*Horkelia cuneata ssp. Puberula*) CRPR 1B.1	Perennial herb which generally blooms from February to September within chaparral (maritime), cismontane woodland and coastal scrub with sandy or gravelly substrates. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Parish's desert-thorn (*Lycium parishii*) CRPR 2B.3	Perennial herb which generally blooms from March to April in coastal scrub and Sonoran Desert scrub habitats. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Pringle's monardella (*Monardella pringlei*) CRPR 1A	Annual herb which generally blooms from May to June in coastal scrub dominated sandy substrates. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.

Table 6 – Sensitive Plant Species Assessment

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Brand's phacelia (*Phacelia stellaris*) CRPR List 1B.1 MSHCP Narrow Endemic	Brand's phacelia is an annual herb. It blooms March to June. This species occurs in coastal sage scrub and dune habitats.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
San Miquel savory (*Satureja chandleri*) FT/SE CRPR List 1B.2 MSHCP Narrow Endemic	San Miquel savory is a perennial shrub that blooms from March to July. This species occurs in rocky habitats within chaparral, coastal scrub, riparian woodland, and grassland habitats.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Chaparral ragwort (*Senecio aphanactis*) CRPR 2B.2	Annual herb which generally blooms from January to May within chaparral, cismontane woodland and coastal scrub habitats. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.

California Native Plant Society (CNPS): California Rare Plant Rank (CRPR)
CRPR 1A – plants presumed extinct in California
CRPR 1B – plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 2A – plants presumed extirpated in California but common elsewhere
CRPR 2B – plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3 – plants about which we need more information, a review list
CRPR 4 – plants of limited distribution, a watch list
.1 – Seriously endangered in California
.2 – Fairly endangered in California
.3 – Not very endangered in California

Federal (USFWS) Protection and Classification
FE – Federally Endangered
FT – Federally Threatened
FC – Federal Candidate for Listing

State (CDFW) Protection and Classification
SE – State Endangered
ST – State Threatened

Source: *Biological Resources Technical Report, Jurupa Community Services District Well Site 19 Project, Table 3, pp. 18-19*

Based on the results of the initial habitat assessment, review of the Western Riverside County MSHCP and CNDDB, a total of nineteen (19) sensitive wildlife species have the potential of occurring within nine USGS quads of the Project site. As indicated in **Table 7 – Sensitive**

Wildlife Species Assessment, no state or federally listed threatened, endangered, or MSHCP target species were observed onsite during the habitat assessment conducted during March 2021.

Table 7 – Sensitive Wildlife Species Assessment

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
INVERTEBRATES		
Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) FE	Restricted to Delhi sand formations in Riverside and San Bernardino Counties.	The entire Project Site is mapped as Delhi fine sand soils and is located in the USFWS Ontario Recovery Unit. There is a total of four (4) records of this species occurring within one (1) mile of the Project Site. However, the 0.79-acre of disturbed habitat is heavily compacted, surrounded by industrial development and does not represent suitable habitat for the species.
REPTILES		
Orange-throated whiptail (*Aspidoscelis hyperythra*) WL	The orange-throated whiptail occurs in Riversidean sage scrub and chaparral where loose soils and occasional rocky areas are found.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Coast horned lizard (*Phrynosoma blainvillii*) SSC	The horned lizard occurs primarily in scrub, chaparral, and grassland habitats.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
BIRDS		
Bell's sage sparrow (*Artemisiospiza belli belli*) CWL	This species is typically found in chaparral on alluvial fans and foothills.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.

Table 7 – Sensitive Wildlife Species Assessment

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Cooper's hawk *(Accipiter cooperii)* *SSC*	Cooper's hawk is most commonly found within or adjacent to riparian/oak forest and woodland habitats. This uncommon resident of California increases in numbers during winter migration.	Cooper's hawks occasionally nest in large pines and Eucalyptus trees. No nests were documented onsite and the majority of ornamental trees are small in stature and not expected to be utilized for nesting.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens)* CWL	Southern California rufous-crowned sparrow is a non-migratory bird species that primarily occurs within sage scrub and grassland habitats and to a lesser extent chaparral sub-association. This species generally breeds on the ground within grassland and scrub communities in the western and central regions of California.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Golden eagle (*Aquila chrysaetos*) CWL, SFP	Within southern California, the species prefers grasslands, brushlands (coastal sage scrub and chaparral), deserts, oak savannas, open coniferous forests, and montane valleys.	Not expected to occur onsite based on a lack of suitable habitat.
Burrowing owl (*Athene cunicularia)* SSC	The burrowing owl uses predominantly open land, including grassland, agriculture (e.g., dry-land farming and grazing areas), playa, and sparse coastal sage scrub and desert scrub habitats. Some breeding burrowing owls are year-round residents and additional individuals from the north may winter throughout the region.	Not expected to occur onsite. No suitable burrows documented within the Project Site.

Table 7 – Sensitive Wildlife Species Assessment

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Northern Harrier (*Circus cyaneus*) SSC	The northern harrier frequents open wetlands, wet/lightly grazed pastures, fields, dry uplands/prairies, mesic grasslands, drained marshlands, croplands, meadows, grasslands, open rangelands, fresh and saltwater emergent wetlands.	Not observed or expected to occur onsite based on a lack of suitable habitat.
Least Bell's vireo *(Vireo bellii pusillus)* *FE, SE*	Least Bell's vireo resides in riparian habitats with a well-defined understory including southern willow scrub, mule fat, and riparian forest/woodland habitats.	Not expected to occur onsite based on a lack of riparian within or adjacent to the Project Site.
Southwestern willow flycatcher *(Empidonax traillii extimus)* *FE, SE*	The southwestern willow flycatcher is narrowly distributed. Although the preferred habitat, riparian woodland and select other forests, is well distributed within all, few current locations for the willow flycatcher have been documented.	Not expected to occur onsite based on a lack of riparian within or adjacent to the Project Site.
Loggerhead shrike (*Lanius ludovicianus*) SSC	This species of shrike hunts in open or grassy areas and nests in large chaparral shrubs such as ceanothus and lemonade berry.	Not expected to occur onsite based on a lack of suitable habitat
Coastal California gnatcatcher *(Polioptila californica californica)* *FT/SSC*	The coastal California gnatcatcher is a non-migratory bird species that primarily occurs within sage scrub habitats in coastal southern California dominated by California sagebrush.	Not expected to occur onsite based on lack of suitable habitat.

Table 7 – Sensitive Wildlife Species Assessment

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
MAMMALS		
Northwestern San Diego pocket mouse *(Chaetodipus fallax fallax)* *SSC*	The northwestern San Diego pocket mouse occurs in coastal sage, upland sage scrubs, and alluvial fan sage scrub, sage scrub/grassland ecotones, chaparral, and desert scrubs at all elevations up to 6,000 feet.	Not expected to occur onsite based on lack of suitable habitat.
San Bernardino kangaroo rat (*Dipodomys merriami parvus*) FE/SSC	Prefers alluvial scrub, coastal sage scrub habitats with sandy and gravelly substrates.	Not expected to occur onsite based on a lack of alluvial fan or adjacent terrace habitats.
Western mastiff bat (*Eumops perotis californicus*) SSC	Roosts in rocky areas and forages in grassland, shrublands, and woodlands.	Not expected to occur onsite based on a lack of suitable habitat.
Western yellow bat (*Lasiurus xanthinus*) SSC	Roosts in the skirts of palm trees and forages in adjacent habitats.	Not expected to occur onsite based on a lack of suitable foraging habitat within the vicinity of the Project Site.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC	The San Diego black-tailed jackrabbit in open habitats, primarily including grasslands, sage scrub, alluvial fan sage scrub, and Great Basin sage scrub.	Not expected to occur onsite based on a lack of suitable foraging habitat within the vicinity of the Project Site.
Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) SSC	Low elevation grassland alluvial sage scrub and coastal sage scrub habitats.	Not expected to occur onsite based on a lack of suitable foraging habitat within the vicinity of the Project Site.

Federal (USFWS) Protection and Classification
FE – Federally Endangered
FT – Federally Threatened
FC – Federal Candidate for Listing

Table 7 – Sensitive Wildlife Species Assessment

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
State (CDFW) Protection and Classification SE – State Endangered SPE – State Proposed Endangered ST – State Threatened SSC – State Species of Special Concern CWL – California Watch List SPF – State Fully Protected		

Source: *Biological Resources Technical Report, Jurupa Community Services District Well Site 19 Project, Table 3, pp. 20-23*.

There is a potential for short-term direct (i.e. habitat disturbance or removal) and indirect (i.e. noise) impacts to birds protected by the Migratory Bird Treaty Act (MBTA) if construction takes during avian nesting season, which is generally from February 16 to August 31. To avoid impacts to nesting birds if construction occurs during the nesting season, mitigation measure **MM BIO 1**, which requires preconstruction surveys, shall be implemented.

MM BIO 1: Preconstruction Nesting Bird Surveys. To avoid direct and indirect impacts to nesting birds, if construction or ground disturbance takes place between February 16 and August 31, a qualified biologist (the "Project Biologist") retained by the Jurupa Community Services District, shall conduct preconstruction nesting bird survey(s) no sooner than 3 days prior to initiation of ground disturbing activities, to document the presence or absence of nesting birds within or directly adjacent to (within 100 feet) the construction zone. If no active nests are found during the survey, construction activities may proceed. The Project Biologist shall serve as a biological monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests occur.

If active nests are documented during the preconstruction survey(s), species-specific measures shall be prepared by the Project Biologist and implemented to prevent abandonment of the active nest. At a minimum, grading in the vicinity of an active nest shall be monitored by the Project Biologist and, if necessary, grading in the vicinity of the nest shall be postponed until the young birds have fledged. A minimum exclusion buffer of 100 feet from an active nest shall be maintained during construction, depending on the avian species and location of nest. The perimeter of the nest setback zone shall be fenced or adequately demarcated with stakes and flagging at 20-foot intervals, and construction personnel and activities restricted from the area.

A survey report by the Project Biologist verifying that no active nests are present, or that the young have fledged, shall be submitted to Jurupa Community Services District prior to initiation of construction activities in the nest-setback zone. A final

report of the findings, prepared by the Project Biologist, shall be submitted to Jurupa Community Services District prior to construction-related activities that have the potential to disturb any active nests during the nesting season.

Any nest permanently vacated for the season would not require protection pursuant to the California Fish and Game Code.

If construction takes place outside of the nesting season, i.e., between September 1 and February 15, no preconstruction nesting bird surveys are required.

Therefore, with implementation of mitigation measure **MM BIO 1**, direct impacts will be less than significant with mitigation.

Potential Reasonably Foreseeable Indirect Impacts

The Conservation and Open Space Element of the JVGP includes the following goals and policies specifically related to endangered and threatened species: (JVGP, pp. 4-6, 4-11–4.12, 4.13.)

Goal COS 1 *To be a good steward of Jurupa Valley's natural resources, and protect and enhance open space by working to protect, preserve, and create the conditions that will promote the preservation of significant trees and other vegetation, particularly native California species.*

Goal COS 2 *To be a good steward of Jurupa Valley's natural resources, and protect and enhance open space by seeking to achieve self-sustaining populations of the native birds, fish, and other wildlife and avoid actions that remove or damage habitat for native plants and animals.*

Policies

COS 1.1 *Habitat Conservation. Conserve key habitats, including existing wetlands and California native plant communities, with a focus on protecting and restoring the following endangered species habitats:*

1. *Conserve alluvial fan sage scrub associated with the Santa Ana River to support key populations of Santa Ana River* woollystar *(Eriastrum densifolium sanctorum).*
2. *Conserve clay soils to support key populations of many-stemmed liveforever plants (Dudleya multicaulis) known to occur along the Jurupa Valley portion of the Santa Ana River.*
3. *Conserve known populations of least Bell's vireo (Vireo bellii pusillus) and southwestern willow flycatcher (Empidonax traillii extimus) along the Santa Ana River.*
4. *Conserve large intact habitat areas consisting of coastal sage scrub, chaparral, and grasslands to support known locations of coastal California gnatcatcher (Polioptila californica).*

5. *Conserve grassland and coastal sage scrub supporting known populations of San Bernardino kangaroo rat (Dipodomys merriami parvus) in the Jurupa Mountains.*
6. *Conserve grasslands adjacent to sage scrub for foraging habitat for raptors.*
7. *Conserve riparian areas, including river basin, creeks, streams, vernal springs, seeps and other natural water features.*

COS 1.2 *Protection of Significant Trees. Protect and preserve significant trees, as determined by the City Council upon the recommendation of the Planning Commission. Significant trees are those trees that make substantial contributions to natural habitat or to the urban landscape due to their species, size, or rarity. In particular, California native trees should be protected.*

COS 1.3 *Other Significant Vegetation. Maintain and conserve superior examples of vegetation, including: agricultural wind screen plantings, street trees, stands of mature native and non-native trees, and other features of ecological, aesthetic, and conservation value.*

COS 2.1 *MSHCP Implementation. Implement provisions of the MSHCP when conducting review of development applications, General Plan amendments/zoning changes, transportation, or other infrastructure projects that are covered activities in the MSHCP.*

COS 2.2 *Wildlife Corridors. Identify and maintain a continuous wildlife corridor along the City's northern boundary through the Jurupa Mountains and along the Santa Ana River from the northern boundary to the City's western boundary. Condition development approvals to ensure that important corridors for wildlife movement and dispersal are protected and not interrupted by walls, fences, roadways or other obstructions. Features of particular importance to wildlife include riparian corridors, wetlands, streams, springs, and protected natural areas with cover and water. Linkages and corridors shall be provided to maintain connections between habitat areas.*

COS 2.3 *Biological Reports. Require the preparation of biological reports to assess the impacts of development and provide mitigation for impacts to biological resources when reviewing discretionary development projects with the potential to affect adversely wildlife habitat.*

The Project's BRTR (included as Appendix C) satisfies JVGP policy COS 2.3.

The *JVGP EIR* states that the following eight species listed by either the federal or state governments as endangered or threatened have the potential to occur within Jurupa Valley: California gnatcatcher, San Bernardino kangaroo rat, least Bell's vireo, western yellow-billed cuckoo, Riverside fairy shrimp, Santa Ana woolly-star, and San Diego ambrosia. There is USFWS-designated critical habitat for three federally listed species within Jurupa Valley:

California gnatcatcher, Santa Ana sucker, and least Bell's vireo. (JVGP DEIR, pp. 4.4-26–4.4-27.)

Regarding impacts to endangered species, the *JVGP EIR* states: (JVGP DEIR, p. 4.4-31.)

> *Implementation of the above General Plan goals, policies, and programs as future development occurs will help ensure that potential impacts to listed species within the City will be less than significant. The most important policies in this regard will be protection of listed species (COS Policy 1.1), implementation of the MSHCP (Policy COS 2.1), and preparing biological reports to identify and protect site-specific resources (Policy COS 2.3). It should be noted that the term "development" in this policy applies to building improvements on both private and public actions involving vacant land.*
>
> *For properties along the Santa Ana River, it will be important to assure implementation of MSHCP restrictions regarding: (a) direct and indirect lighting and noise levels to protect listed species associated with the river; and (b) Table 6-2 of Volume 1 of the MSHCP (Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area) lists the plants that should not be planted adjacent to the river.*

The *JVGP EIR* concluded that with implementation of the identified JVGP goals and policies plus the regulatory requirements of the federal and state resource agencies, potential impacts to listed species from buildout within Jurupa Valley would be reduced to less than significant levels, and no mitigation is required.

The EGP has two policies regarding endangered species and one policy regarding habitat. (EGP, pp. 3-14, 3-20.)

LU-9	*The City will participate in regional efforts to address issues of mobility, transportation, traffic congestion, economic development, air and water quality, and watershed and habitat management with cities, local and regional agencies, stakeholders, and surrounding jurisdictions.*
LU-41	*The City shall require that proposed projects on properties containing the Water designation be reviewed for compliance with habitat, endangered species, flood control, and applicable regulations and standards.*

Regarding effects on sensitive species and their habitats resulting from buildout per the EGP, the NOP for the *EGP EIR* concluded that through implementation of the MSHCP and future project-level CEQA requirements, impacts would be less than significant. (NOP, p. 15.)

For the reasons stated above, with implementation of mitigation measure **MM BIO 1**, direct, indirect, and cumulative impacts to candidate, sensitive, or special status species will be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

4b. 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 Game or U.S. Fish and Wildlife Service?

Direct Impacts

No impact. According to the *Biological Resources Technical Report,* no sensitive habitats, including Western Riverside County MSHCP riparian, riverine, or vernal pool resources were documented within or adjacent to the Project Site. For these reasons there will be no direct impacts with regard to adversely effecting riparian habitat or other sensitive natural communities. (BRTR, p. 25.)

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP goals COS 1 and COS 2 and policies COS 1.1, COS 1.2, COS 1.3, COS 2.1, COS 2.2, and COS 2.3, set forth in the response to Threshold 4a, the Conservation and Open Space Element of the JVGP includes the following goals and policies related to riparian habitat or other sensitive natural communities: (JVGP, pp. 4-6–4-8, 4-17, 4-22–4-23, 4-41.)

Goal COS 3 *To be a good steward of Jurupa Valley's natural resources, and protect and enhance open space by working with the Jurupa Community Services District (JCSD), the Rubidoux Community Services District (RCSD), the Santa Ana Water Company, and other agencies and private companies to help meet Jurupa Valley's urban water needs without substantial harm to the natural environment or to agriculture, to help meet water needs including requiring conservation measures such as drought-tolerant landscaping and water-saving fixtures in new homes, and to:*

1. *Protect and maintain water quality in aquifers, the Santa Ana River, streams, and wetlands that help support beneficial uses, including domestic and commercial/industrial uses, agricultural uses, and wildlife habitat.*
2. *Protect and improve the quality of local water sources, including groundwater and the Santa Ana River.*
3. *Encourage JCSD and RCSD to retain and, where possible, expand the capacity of wells, aquifers, and other groundwater reserves.*
4. *Preserve natural floodways, floodplains, and wetlands, and avoid actions that adversely affect waterways or riparian areas, or that increase flood hazards to urban uses.*

Goal COS 8 *To be a good steward of Jurupa Valley's natural resources, and protect and enhance open space by Securing and maintaining a diverse network of open lands including valuable natural and recreational resources, including:*

1. *Santa Ana River floodway and riparian areas.*
2. *Jurupa Mountains, Pedley Hills, and Indian Hills.*
3. *Wetlands and vernal pools.*
4. *Wildlife habitat and corridors, particularly for species of local concern or for species that are officially listed as threatened or endangered.*
5. *Parks and natural areas with significant recreational opportunities.*
6. *Encourage public access to open space without harming the resource and without exposing the public or the property owners to unacceptable risk.*
7. *Preserve open space and wildlife habitat and help provide trails and other recreation opportunities where they will not harm the environment.*
8. *Avoid actions that will result in the loss of designated open space resources and, when feasible, require mitigation for their loss.*

Policies

COS 3.1 *Water Use Planning. Adopt and strive for the most efficient available water conservation practices in the City's operations and planning, and encourage community services districts and other agencies to do the same. "Most efficient available practices" means actions and equipment that use the least water for a desired outcome, considering available equipment, lifecycle costs, social and environmental side effects, and the regulations of other agencies.*

COS 3.2 *Multi-Use Consideration. Consider, in planning, land use decisions, and municipal operations, the effects of water supply on urban growth, wildlife habitat, agriculture, and stream flows, and seek to ensure continued water availability for these uses in planning for long-term water supplies. The City will encourage individuals, organizations, and other agencies to follow this policy.*

COS 3.6 *Landscaping with California Native Plants. Encourage the use of California native plants for drought-resistant landscape planting.*

COS 3.17 *Environmental Mitigation. Encourage and, where possible, require that substantial modifications of a floodplain be designed to reduce adverse environmental effects to the maximum extent feasible, considering the following factors:*

1. *Stream scour*
2. *Erosion protection and sedimentation*
3. *Wildlife habitat and linkages*
4. *Groundwater recharge capability*
5. *Adjacent property*

6. *Designed to achieve a natural effect. Examples could include soft riparian bottoms, riparian corridors within the floodway, and gentle and modulating bank slopes, wide and shallow floodways, minimization of visible use of concrete, and landscaping with California native plants to the maximum extent possible. A site-specific hydrologic study may be required.*

COS 3.18 *Setbacks. Based upon site-specific study, all development shall be set back from the designated floodway boundary or top of bank, whichever is most appropriate, a distance adequate to address the following issues:*

1. *Public safety,*
2. *Erosion,*
3. *Riparian or wetland buffer,*
4. *Wildlife movement corridor or linkage, and*
5. *Slopes*

COS 3.19 *Trails. Consider designating floodway setbacks to accommodate greenways, trails, and recreation opportunities and allowing such uses within floodways, where appropriate.*

COS 3.21 *Ecotones. Identify and, to the maximum extent possible, conserve remaining upland habitat areas, or "ecotones" adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species.*

COS 8.1 *Environmental Resource Protection. Preserve and maintain open space that protects environmental resources and protects public health and safety.*

According to the JVGP the Santa Ana River supports riparian, woodland, and other important vegetation associations along much of its length within Jurupa Valley. There is also riparian vegetation along several tributary drainages such as Pyrite Creek. Based on vegetation and hydrographic characteristics, the Santa Ana River and Pyrite Creek contain several kinds of woodland vegetation (e.g. southern cottonwood/willow riparian forest, etc,) Areas in Jurupa Valley north of the SR-60 may contain grassland, coastal sage scrub or chaparral vegetation, which are considered sensitive natural communities by CDFW and under the MSHCP (JVGP DEIR, p. 4.4-35.)

The JVGP DEIR concluded that with implementation of the above JVGP goals and policies and those applicable goals and policies identified in the response to Threshold 4a, potential impacts to riparian and other sensitive natural communities resulting from implementation of the JVGP will be less than significant. Of highest importance will be implementation of the MSHCP (Policy COS 2.1) and preparing biological reports to identify and protect site-specific resources (Policy

COS 2.3).[5] It should be noted that the term "development" in this policy applies to building improvements on both private and public actions involving vacant land. (JVGP DEIR, p. 4.4-37.)

Regarding impacts to riparian habitat or other sensitive natural communities resulting from implementation of the JVGP, the *JVGP EIR* concluded that with implementation of the identified 2017 JVGP goals and policies combined with the regulatory requirements of federal and state resource agencies, potential impacts from future development Jurupa Valley will be reduced to less than significant levels, and no mitigation is required. (JVGP DEIR, p. 4.4-38.)

The EGP policy LU-41 regarding habitat is set forth in the response to Threshold 4a.

Regarding effects on riparian habitat or other sensitive natural communities resulting from buildout per the EGP, the NOP for the *EGP EIR* concluded that through implementation of the MSHCP and future project-level CEQA requirements, impacts would be less than significant. (NOP, p. 15.)

For the reasons stated above, there will be no direct impacts to riparian habitat or other sensitive natural communities. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

4c. 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?

Direct Impacts

No impact. According to the *Biological Resources Technical Report*, no wetlands or jurisdictional resources regulated by the United States Army Corps of Engineers, California Department of Fish and Wildlife, or Regional Water Quality Control Board were documented within the Project Site. For these reasons there will be no impacts with regard to state or federally protected wetlands. (BRTR, p. 11.)

Potential Reasonably Foreseeable Indirect Impacts

JVGP goals COS 1 and COS 2 and policies COS 1.1, COS 1.2, COS 1.3, COS 2.1, COS 2.2, and COS 2.3, set forth in the response to Threshold 4a, and JVGP goals COS 3 and COS 8 and policies COS 3.1, COS 3.2, COS 3.6, COS 3.17, COS 3.18, COS 3.20, COS 3.21, and COS 8.1 set forth in the response to Threshold 4b, are related to jurisdictional waters or wetlands. (JVGP DEIR, pp. 4.4-38–4.4-39.)

The *JVGP EIR* concluded that implementation of the above identified JVGP goals and policies as buildout occurs within Jurupa Valley would help ensure that potential impacts to jurisdictional waters and wetlands within Jurupa Valley would be less than significant. Of highest importance would be implementation of the MSHCP (Policy COS 2.1) and preparing biological reports to

[5] The Project's BRTR (included as Appendix C) satisfies Policy COS 2.3.

identify and protect site-specific resources (Policy COS 2.3).[6] For properties along the Santa Ana River,[7] it will also be important to assure implementation of MSHCP restrictions regarding: (a) direct and indirect lighting and noise levels associated with riparian or woodland areas along the river; and (b) Table 6-2 of Volume 1 of the MSHCP (*Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area*), which lists the plants that should not be planted adjacent to jurisdictional resources of the river or in tributary drainages with jurisdictional resources in Jurupa Valley. (JVGP DEIR, p. 4.4-40.)

Regarding impacts to state or federally protected wetlands, the *JVGP EIR* concluded that with implementation of the identified JVGP goals and policies, plus the regulatory requirements of the federal and state resource agencies, potential impacts to jurisdictional drainages, waters, or wetlands from buildout within Jurupa Valley will be reduced to less than significant levels, and no mitigation is required. (JVGP DEIR, p. 4.44.)

The EGP does not have any specific policies to protect biological resources. The Open Space Chapter of the EGP has goal OS-4 to maintain the Santa Ana River (EGP, p. 11-4). The Santa Ana River is a jurisdictional water, migratory corridor, and contains habitat for sensitive species. The EGP also has two policies, OS-10 and OS-11, regarding the Santa Ana River. (EGP, p. 11-7.)

Goal OS-4 — *Maintain the Santa Ana River corridor as an important resource for open space, recreation, wildlife, and scenic beauty.*

Policy OS-10 — *The City will work with other local and regional agencies to implement the master plan for the Santa Ana River.*

Policy OS-11 — *The City will encourage development along the Santa Ana River to take advantage of river views and to provide access to the river consistent with safety and the need to protect sensitive resource. Examples include:*

- *Orienting development to face the river and take advantage of views.*
- *Placing single-loaded roadways adjacent to the river to open up and maintain views and access (where consistent with ownership and restrictions on public access).*

Regarding effects to state or federally protected wetlands resulting from buildout per the EGP, the NOP for the *EGP EIR* concluded that through implementation of the MSHCP and future project-level CEQA requirements, impacts would be less than significant. (NOP, p. 15.)

[6] The Project's BRTR (included as Appendix C) satisfies Policy COS 2.3.

[7] The Project Site is approximately 4.5 miles north of the Santa Ana River.

For the reasons set forth in the preceding paragraphs, there will be no direct impacts to state or federally protected wetlands. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

4d. 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?

Direct Impacts

Less than significant impact. The Project Site is within a developed industrial area and not within an established or proposed. Migratory corridor. There are no native wildlife nursery sites, watercourses, rivers, or MSHCP-designated linkages or noncontiguous habitat blocks on or in proximity to the Project Site that serve as a wildlife corridor. (BRTR, p. 24.) Therefore, direct, impacts with regard to substantially interfering with the movement of any native resident or migratory fish or wildlife species or impeding the use of a native wildlife nursery site would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

JVGP goals COS 1 and COS 2 and policies COS 1.1, COS 1.2, COS 1.3, COS 2.1, COS 2.2, and COS 2.3, set forth in the response to Threshold 4a, and JVGP goals COS 3 and COS 8 and policies COS 3.1, COS 3.2, COS 3.6, COS 3.17, COS 3.18, COS 3.20, COS 3.21, and COS 8.1 set forth in the response to Threshold 4b, are related to habitat fragmentation and wildlife movement. (JVGP DEIR, pp. 4.4-41–4.4-42.)

The Santa Ana River represents a significant regional resource for biological habitat and wildlife movement in Jurupa Valley. The river also represents a wildlife nursery site for birds and fish when present. Impacts of future development per the JVGP adjacent to the river could be significant unless carefully controlled or restricted. Development in the northern portions of Jurupa Valley, in the Jurupa Hills north of the SR-60 Freeway, may impact coastal sage scrub and grassland vegetation that may also allow for wildlife movement through these upland areas. Although not a specifically identified wildlife movement corridor, Pyrite Creek and its riparian resources may allow for some limited wildlife movement north-south between the Jurupa Hills and the Santa Ana River. (JVGP DEIR, p. 4.4-41.) The Project site is approximately 4.5 miles north of the Santa Ana River and approximately 4.25 miles northwest of Pyrite Creek.

The *JVGP EIR* concluded implementation of the above JVGP goals and policies would help prevent habitat fragmentation and that potential impacts to wildlife movement within Jurupa Valley would be less than significant. Of highest importance would be implementation of MSHCP (policy COS 2.1) and preparing biological reports to identify and protect site-specific resources (policy COS 2.3) including habitat assessments and the presence of wildlife movement corridors. JVGP COS policy 3.17 encourages protecting wildlife movement corridors along the Santa Ana River and in the northern Jurupa Hills.

The EGP does not have any specific policies to protect biological resources. EGP goal OS-4 to maintain the Santa Ana River, which is a jurisdictional water, migratory corridor, and contains

habitat for sensitive species and Policies OS-10 and OS-11, regarding the Santa Ana River are set forth in the response to Threshold 4c, above.

Regarding effects to the movement of native resident or migratory fish or wildlife species or established native resident or migratory wildlife corridors, or the use of native wildlife nursery sites resulting from buildout per the EGP, the NOP for the *EGP EIR* concluded that through implementation of the MSHCP and future project-level CEQA requirements, impacts would be less than significant. (NOP, p. 15.)

For the reasons set forth in the preceding paragraphs, direct impacts to the movement of native resident or migratory fish or wildlife species or established native resident or migratory wildlife corridors, or the use of native wildlife nursery sites would be less than significant. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

4e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Direct Impacts

Less than significant impact. Regarding tree preservation, Jurupa Valley Municipal Code section 13.10.050 – Tree Removal states:

> *No person, firm, corporation, public district, public agency or political subdivision shall remove or severely trim any tree planted in the right-of-way of any city highway without first obtaining a permit from the Public Works Director to do so. Such permit shall be issued without fee, if the Public Works Director is satisfied that such removal or trimming is in the public interest or is necessary for the improvement of the right-of-way or the construction of improvements on adjacent land. He or she may impose such conditions as he or she deems reasonable or necessary, including requirements for the work to be done only by a qualified tree surgeon or tree trimmer actually engaged in that business, and for bond, insurance or other security to protect person and property from injury or damage. The provisions limiting trimming of trees shall not apply to any public utility maintaining overhead power of communication lines pursuant to franchise, where necessary to prevent interference of a tree with such installation. A permit for removal of a tree may be conditioned upon its relocation or replacement by one or more other trees of a kind or type to be specified in the permit.*

As shown on **Plate 1 – Well 30 Preliminary Site Layout**, there is an existing street tree along Philadelphia Avenue adjacent to the proposed Well 30 site. Although it appears from the Preliminary Site Layout that Project construction will avoid this tree, because the Well 30 site layout has not been finalized, this tree may require trimming or removal during construction. If this tree must be removed, compliance with Jurupa Valley Municipal Code section 13.10.050, would reduce potential impacts regarding conflict with local policies to protect biological resources to less than significant.

JVGP goals and policies to protect biological resources are presented in the responses to Threshold 4a and Threshold 4b. The proposed Project is consistent with JVGP goals COS 1, COS 2, and COS 3. As discussed in response to Threshold 4f below, the Project is consistent with MSHCP sections 6.1,2, 6.1.3, 6.1.4, and 6.3.2 and as such is consistent with policy COS 2.1. As discussed in response to Threshold 4d, the Project will not interfere with wildlife movement and as such is consistent with policy COS 2.2.

Potential Reasonably Foreseeable Indirect Impacts

The JVGP goals and policies regarding biological resources are set forth in the responses to Threshold 4a Threshold 4b, above. Regarding conflicts with local policies or ordinances protecting biological resources, the *JVGP EIR* states: (JVGP DEIR, p. 4.4-43.)

> *The proposed action studied by this EIR is the adoption of a General Plan with goals, policies, and programs that address potential impacts to biological resources. The General Plan is intended by its very nature to be the framework for the subsequent establishment of specific programs or ordinances that implement these goals and policies. Therefore by its very nature it cannot conflict with adopted policies or ordinances.*

The *JVGP EIR* concluded that because the JVGP goals, policies, and programs will establish a framework within which subsequent programs and ordinances for the protection of biological resources will occur (e.g., tree protection ordinance), the JVGP would be consistent with adopted policies and ordinances; impacts will be less than significant and no mitigation will be required. (JVGP DEIR, p. 44-47.)

Regarding conflicts with local policies to protect biological resources, the EGP would not result in any changes to existing local policies or ordinances protecting biological resources. Further, future development projects within Eastvale would be subject to project-level CEQA review, which would address any potential conflicts with local policies and ordinances. For these reasons, impacts would be less than significant.

For the reasons set forth in the preceding paragraphs, direct indirect impacts regarding conflicts with local policies to protect biological resources will be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

4f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less than significant impact. The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional Habitat Conservation Plan focusing on conservation of species and their associated habitats in western Riverside County. The Project Site and all of JCSD's service area are located within the boundaries of the MSHCP. The cities of Eastvale and Jurupa Valley are Permittees and as such future development projects approved by those cities would be subject to the requirements of the MSHCP. Although JCSD is not a Permittee, coverage under the MSHCP (and therefore, take authorization under the MSHCP) can be obtained by seeking "Third Party Take Authorization"

through the Western Riverside County Regional Conservation Authority. As impacts to biological resources resulting from implementation of the proposed Project will be avoided through mitigation measures, no “Third Party Take Authorization” is needed.

The MSHCP identifies a series of Criteria Cells and conservation goals for each Criteria Cell. The Project Site is not located within an MSHCP Criteria Cell, Consistency with the MSHCP is determined through compliance with Sections 6.1.2, 6.1.3, 6.1.4, and 6.3.2 of the MSHCP.

MSHCP Section 6.1.2 requires assessment of riparian, riverine, fairy shrimp and vernal pool habitats. None of these features, habitats or vegetation communities are present within or adjacent to the Project Site. Therefore, the proposed Project would not conflict with Section 6.1.2 of the MSHCP. (BRTR, p. 25.)

MSHCP Section 6.1.3 requires assessment of sites in a designated survey area for narrow endemic plants to be completed. Although the Project Site is within a narrow endemic plant survey area for San Diego ambrosia, Brand’s Phacelia, and San Miguel savory, it does not contain suitable habitat and is therefore not required to survey for any narrow endemic plants. Because there is no suitable habitat, the Project does not conflict with Section 6.1.3 of the MSHCP. (BRTR, pp. 24–25.)

MSHCP Section 6.1.4 requires projects located adjacent to or near MSHCP conservation areas to consider edge effects or conditions of their urban/wildlife interface into the project design. Since the Project Site is not located near any lands identified for MSHCP conservation, this section of the MSHCP does not apply. Therefore, the Project would not conflict with Section 6.1.4 of the MSHCP. (BRTR, p. 25.)

MSHCP Section 6.3.2 requires assessments for particular species in designated survey areas. The Project Site is within a designated survey area for burrowing owl. However, no suitable burrows potentially utilized for refugia and/or nesting were documented within or adjacent to the Project Site. Due to the absence of suitable burrows and with implementation of mitigation measure **MM BIO 2**, which requires preconstruction surveys for burrowing owl, the Project would not conflict with Section 6.3.2 of the MSHCP. (BRTR, p. 25.)

> **MM BIO 2: Preconstruction Burrowing Owl Surveys.** To avoid direct and indirect impacts to burrowing owls, the Project Biologist shall conduct take avoidance surveys prior to any vegetation removal or soil disturbance on the Project Site. The first survey shall take place no sooner than 14 days prior to initiating ground disturbance and a second survey shall take place within 24 hours prior to ground disturbance. If burrowing owls are present, the Project Biologist shall consult with the California Department of Fish and Wildlife to determine if a Habitat Loss Mitigation and Relocation Program is warranted. Based on the location of the owls and if avoidance of the area is not feasible, mitigation options may range from passive relocation to habitat replacement. Depending on the timing, this survey may be combined with the nesting bird survey in mitigation measure **MM BIO 1**.

Therefore, as discussed above, the proposed Project would not conflict with the MSHCP. The Project Site is not located within the Stephen's kangaroo rat Core Reserve and is not located within other habitat conservation plans; direct impacts in this regard would be less than significant with implementation of mitigation measure **MM BIO 2**.

Potential Reasonably Foreseeable Indirect Impacts

The MSHCP is the only adopted Habitat Conservation Plan that encompasses Jurupa Valley and Eastvale. (JVGP DEIR, p. 4.4-47.)There are no other Habitat Conservation Plans or Natural Community Conservation Plans, or other approved state local, regional, or state habitat conservation plans.

JVGP COS Policy 2.1 set forth under Threshold 4a, requires Jurupa Valley to implement the provisions of the MSHCP when conducting development review, General Plan amendments/zoning changes, transportation or other implementation projects that are covered activities in the MSHCP. (JVGP, p. 4-14.)

Regarding conflicts with the MSHCP resulting from implementation of the JVGP, the *JVGP EIR* concluded that impacts would be less than significant because JVGP policy COS 2.1 requires future development projects to comply with the requirements of the MHSCP and policy COS 2.3 requires future development to prepare biological reports that identify potential impacts to biological resources. Additionally, the *JVGP EIR* states the other JVGP goals and policies set forth in the responses to Threshold 4a and Threshold 4b, above, would reduce potential impacts to less than significant and no mitigation is needed. (JVGP DEIR, p. 4.4-47.)

Regarding conflicts with the MSHCP resulting from buildout per the EGP, the NOP for the *EGP EIR* concluded that the proposed EGP would comply with the provisions of the MSHCP. All future development projects will be subject to the requirements of the MSHCP as well as project-level CEQA review which will address any potential conflicts with the MSHCP. Therefore, there will be no impact to the MSHCP. (NOP, p. 15.)

For the reasons set forth in the preceding paragraphs, direct impacts with regard to conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan would be less than significant with implementation of mitigation measure **MM BIO 2**. Further no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

5. Cultural Resources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

(Sources: EGP, JVGP; JVGP DEIR; HSC Section 7050.5; NOP; PRC Section 5097.98; PaleoWest*)*

The analysis regarding direct impacts in this section is based on the findings in the *Cultural Resource Investigation for the Jurupa Community Service District's Well 30 Project,* which was prepared by PaleoWest and is included as Appendix D of this Initial Study. As part of the *Cultural Resources Investigation*, PaleoWest conducted records searches on April 30, 2021 and May 17, 2021 at the Eastern Information Center (EIC) and the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information Center, located at the University of California, Riverside and California State University, Fullerton, respectively. The EIC and SCCIC are the official cultural resource records repositories for the Counties of Riverside and San Bernardino, respectively. PaleoWest reviewed maps and records on file at the EIC and SCCIC for previously identified cultural resources in or within a one mile radius around the Project area and existing cultural resources reports pertaining to the vicinity. A PaleoWest archaeologist (Gena Granger) conducted a pedestrian survey to observe and note the condition of the Project area on June 18, 2021. The Well 30 site was surveyed from public right-of-way areas, including adjacent parking lots and the public sidewalk.

Outside of the Project area boundaries but within a half-mile radius of the reservoir site, the EIC and SCCIC records show at least 22 previous investigations have been conducted and documented with the Project study area. None of these studies appear to include any portion of the Project area. Additionally, the records search indicated that two cultural resources had been recorded within a one-mile radius around the Project area. These resources are both historic period and archaeological sites that include the remains of a World War II military facility and the remains of an old vineyard. However, neither of these resources are located in the Project area thus, none of them require further consideration in connection to the Project area.

5a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Direct Impacts

Less than significant impact. "Substantial adverse change" is defined by CEQA as a "physical demolition, destruction, relocation, or alteration of the resource or its immediate surrounding such that the significance of an historical resource would be materially impaired" (State CEQA Guidelines Section 15064.5(b)(1)). Implementation of the proposed Project would

entail the destruction and decommissioning of Well 19, which is an extant historic period built-environment resource.

Historic Context – Riverside County and Jurupa Valley

Riverside was founded as a town in San Bernardino County in the 1870s and was incorporated in 1883. Riverside became a center of the citrus industry, famous for its Washington navel orange. The County of Riverside was formed in 1893, with Riverside as the county seat. (PaleoWest, p. 11.)

In addition to citrus, this area of Riverside County, including the Project site, was also home to thousands of acres of vineyards. The Project Site and other lands were owned and cultivated by Charles Stern and Sons, one of two major wine producers of the region and the era. In the 1880s, Charles and his three sons established a winery on the outskirts of Los Angeles, but soon realized as the city grew, his land, used for grape production dwindled. He and his sons formed the Riverside Vineyard Company and purchased 3,000 acres along the San Bernardino County line (part of Mira Loma), renaming the area, Wineville. In 1900, the company sank its first well, one of many and began construction of a 20-mile-long irrigation system to water the vineyards. As part of their growing holdings and irrigation system, the company sank Well D-936a (now known as JCSD Well 19) in 1917. This well was representative of their growing holding and increasing need for water and irrigation systems. (PaleoWest, p. 11.)

Historic Context – Mira Loma Quartermasters Depot

Established in 1942, the Mira Loma Quartermasters Depot (MLQD) served as a military storage facility that processed and shipped quartermaster, engineers, medical and signal corps supplies throughout the Pacific theater. The MLQD consolidated operations shared with another, smaller facility located in San Bernardino County. Located 10 miles north of the city of Riverside, the new MLQD facility consisted of 531 acres between Philadelphia Street on the north, Etiwanda Avenue on the east, Mission Boulevard on the south, and Wineville Road on the west. It centered around a series of large warehouses with administration, training, solider and officer housing, and a hospital. Most of the buildings and structures served common support roles, they included wastewater treatment facility, oil pump house, repair and paint shops, sheds, and oil and water storage structures. The U.S. Army retained ownership of the facility through World War II after which the surplus property was transferred to the United States Air Force (USAF) in 1955. The MLQD was redesignated the Mira Loma Air Force Station (AFS) and continued to function as a storage facility until 1963, at which time it was began to be used for the decommissioning and deconstruction of the nonnuclear components of the Titan I intercontinental ballistic missile. In 1964, the USAF disposed of over 350 acres of land associated with Mira Loma AFS. (PaleoWest, p. 12.)

As previously stated, Well 19 was originally built in 1917 by Charles Stern and Sons as part of the development of irrigation facilities to supply water for the Riverside Vineyard Company. Following acquisition of the property by the U.S. Army in 1942, the standpipe and associated pump building were constructed in support of the MLQD. The well and pumping infrastructure were part of a larger water system used by the U.S. Army and later the USAF. Specifically, water extracted from the well was pumped approximately 0.2 miles south to a water treatment facility consisting of a water tank and tower. The water treatment facility appears to have been

demolished in mid-1990s. Archival research indicates that there have been numerous upgrades and changes since construction including the addition of chlorination facilities, new pumps, and electrical equipment. The well, building, and associated infrastructure were acquired in 1998 by JCSD with the well serving the customers in the surrounding region. (PaleoWest, p. 20.)

The United States military constructed infrastructural systems, including Well 19 and the associated water treatment facility, on many of their installations. These infrastructural systems served as a support role to the installation's primary missions. Many buildings and structures in the former quartermaster depot would have fallen within this "Utilities / Infrastructure" property type. These properties were not directly related to any of the primary missions of the base during World War II (1941-1945) and Cold War periods (1946-1991) but were constructed as necessary elements of a functioning army and later air force facility. This water pump and well evaluated under this property type was not used for storage or Titan I disposal missions. Typical buildings and structures within this general supporting storage category range from tanks (water and fuel), pipelines, pump houses, electrical substations, and waste treatment facilities. Although broadly related to the support and operations context of the installation, this property type does not individually, nor as a resource type group, have a direct or important association with a historically significant event or theme within that context. (PaleoWest, p. 12.)

Since Well 19 was originally built in 1917, it was analyzed for historical significance to determine if it is eligible for listing in the California Register of Historical Resources (CRHR). The criteria for a resource to be eligible for listing on the CRHR are:

1. Association with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Association with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history

The following table presents a discussion of Well 19 with each of the above CRHR criteria.

Table 8 – Evaluation of Well 19 Site Against CRHR Criteria

CRHR Criteria	Well 19
1. Association with events that have made a significant contribution to the broad patterns of California's history and cultural heritage	Well 19 was originally constructed in 1917 to support a large network of irrigation facilities for vineyard operations. While Charles Stern and Sons and their Riverside Vineyard Company (Charles Stern and Sons) were important to the development of wine in the region, this facility was constructed 17 years following the establishment of the company. By the time Well 19 was constructed, the family and the company were already well established, with this facility not

Table 8 – Evaluation of Well 19 Site Against CRHR Criteria

CRHR Criteria	Well 19
	representative of the company's early success. Additionally, the current buildings and structures that are present at Well 19 were constructed following acquisition of the property by the U.S. Army and were part of the broader support functions of the base during that time and during the Cold War period. In this context, MLQD's core missions were storage of U.S. Army and USAF property and this facility did not play a significant role in these themes. As part of the water supply for MLQD, the facility served a necessary function but did not support any important operations on the base. In the larger context of army and air force base operations in California and nationwide during this period, the utility/infrastructure function of the Well 19 site did not play a direct or important role in significant historic events or trends. Therefore, Well 19 is not eligible for the CRHR under Criterion 1. (PaleoWest, pp. 20–21.)
2. Association with the lives of persons important in our past.	Although Well 19 was originally constructed by the company, Charles Stern and Sons, it does not have any direct association to the individuals or their achievements. Further, research has yielded no information to indicate that any persons of historical significance are specifically associated with this facility during its use by the army, air force, or subsequent owners. Therefore, Well 19 is not eligible for the CRHR under Criterion 2. (PaleoWest, p. 21.)
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.	When originally constructed, Well 19 was one of several wells that made up an irrigation system. It was representative of improvements to an established system of wells, irrigation lines and laterals which irrigated 3,000 acres. Additionally, when the U.S. Army took ownership of the property, they constructed the current buildings and structures. This facility is utilitarian in design, materials, and construction technology and is a relatively common property type on military facilities. Therefore, Well 19 is not eligible for the CRHR under Criterion 3. (PaleoWest, p. 21.)

Table 8 – Evaluation of Well 19 Site Against CRHR Criteria

CRHR Criteria	Well 19
4. Has yielded, or may be likely to yield, information important in prehistory or history[8]	This criterion has two requirements that must both be met for a property to quality: • The property must have or have had, information to contribute to our understanding of human history or prehistory, and • The information must be considered important. Although Well 19 was constructed to support a large network of irrigation facilities for vineyard operations and Charles Sterns and Sons and their Riverside Vineyard Company was important to the development of wine in the area, by the time Well 19 was constructed, the family and company were well established and Well 19 was not representative of the company's early success. Thus, there is nothing to be learned from Well 19 regarding Charles Sterns and Sons or the Riverside Vineyard Company. (PaleoWest, p. 20.) The current building and structures were constructed following acquisition of the Well 19 site by the U.S. Army. Although Well 19 was part of the broader support function of the MLQD, which had the main function of processing and shipping quartermaster, engineers, medical and signal corps supplies throughout the Pacific theater during World War II, Well 19 did not support any important operations. (PaleoWest, p. 20.) Thus, there is nothing to be learned from Well 19 regarding World War II operations. Well 19's design, materials and construction technology is utilitarian and relatively common on military bases. (PaleoWest, p. 21.) Thus, there is nothing to be learned from Well 13 regarding well design and construction. Because the design and construction of Well 19 are unlikely to yield significant historical information, Well 19 is not eligible for the CRHR under Criterion 4. (PaleoWest, p. 21.)

Because Well 19 does not meet the criteria for listing on the CRHR, it is not considered a historic resources for CEQA purposes.

This Well 30 site is currently vacant and covered with vegetation and debris. The area appears to be compacted; however, a slight linear earthen berm is visible running north/south from Well 19 along the west side of the Well 30 site. Modern trash and construction debris were noted within the vacant parcel. (PaleoWest, p. 17.) Therefore, the Well 30 site is not considered a historic resource.

Since implementation of the proposed Project would not result in a substantial adverse change in the significance of a historical resource direct, impacts would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

The Conservation and Open Space Element of the JVGP includes the following goals and policies regarding historic resources: (JVGP, pp. 4-7, 4-35, 4-38.)

Goal COS 7 *To be a good steward of Jurupa Valley's natural resources, and protect and enhance open space by ensuring the preservation of cultural, historical, archaeological, and paleontological resources.*

Policies

COS 7.1 *Preservation of Significant Cultural Resources. Identify, protect, and, where necessary, archive significant paleontological, archaeological, and historical resources.*

COS 7.2 *Public Information. Encourage programs that provide public information on the City's history and cultural heritage, and participate with other agencies to help educate students about the City's rich natural and manmade environment.*

COS 7.6 *Non-Development Activities. Prohibit activities that could disturb or destroy cultural resource sites, such as off-road vehicle use, site excavation or fill, mining, or other activities on or adjacent to known sites, or the unauthorized collection of artifacts.*

COS 7.10 *Historically significant buildings. Prohibit the demolition or substantial alteration of historically significant buildings and structures unless the City Council determines that demolition is necessary to remove an imminent threat to health and safety and other means to eliminate or reduce the threat to acceptable levels are physically infeasible (see Table 4.1 below). Additional unlisted historic resources may also be present and must be evaluated and protected, pursuant to CEQA requirements.*

Table 4.1: Designated Historic Structures in Jurupa Valley

Historic Name	Location	Category/Status	Significance
Jensen-Alvarado Ranch	*4307 Briggs Street Jurupa Valley, CA 92509*	*California Historical Landmark (Cornelius and Mercedes Jensen Ranch, No. 943), https://en.wikipedia.org/ wiki/Jensen_Alvarado_R anch- cite_note-OHP-2 listed on the National Register of Historic Places on September 6, 1979*	*First kiln-fired brick building built in Riverside County and the oldest non-adobe structure in the Inland Empire. Ranch house and grounds serve as an 1880s living history interpretive museum administered by Riverside County Parks*
Crestmore Manor	*4600 Crestmore Rd Jurupa Valley, CA 92509*	*Potentially significant, architecture and commerce.*	*Crestmore Manor, a 10,830-square-foot colonial-style mansion, built in mid-1950s by W.W. "Tiny" Naylor, a restaurateur and the state's then second-leading thoroughbred horse breeder.*
Galleano Winery	*4231 Wineville Rd Jurupa Valley, CA*	*Listed, National Register of Historic Places, architecture and commerce.*	*Early example of Southern California vineyard and winery.*
Robidoux [sic] Grist Mill Site	*5540 Molina Way Rubidoux*	*California State Historic Landmark #303; marker.*	*One of the first grist mills in this part of Southern California, built by Jurupa Valley pioneer Louis Rubidoux on the Rancho Jurupa in 1846-47.*
Site of Louis Robidoux [sic] House	*5575 block, Mission Boulevard, Rubidoux*	*California State Historic Landmark and Riverside County Historic Landmark; marker.*	*Location of former home of Louis Rubidoux (nee "Robidoux").*
Site of de Anza crossing of the Santa Ana River, 1775 and 1776.	*Jurupa Hills Country Club. Site is near Union Pacific Bridge, Jurupa Heights; plaque is located between the clubhouse and No. 1 tee, Jurupa Hills*	*California State Historic Landmark; marker.*	*On January 1, 1776, the first party of colonists to come overland to the Pacific Coast, led by Early California explorer Juan Bautista de Anza, crossed the Santa Ana River south of this marker and camped*

Table 4.1: Designated Historic Structures in Jurupa Valley

Historic Name	Location	Category/Status	Significance
	Country Club Golf Course, 6161 Moraga Avenue		*between here and the River.*
Rubidoux Drive-in Theater	*3770 Opal Street*	*Potentially significant, architecture and entertainment/cultural*	*Vintage 1948 drive-in movie theatre, one of the oldest drive-in theaters in continuous operation; only about 20 drive-in theaters remaining in California.*

**Additional potentially historic resources as known to exist and require additional documentation for listing.*

The *JVGP EIR* states there are three potentially significant historic resources, three California State Historical Landmarks, one resource listed on the National Register of Historic Places, and one resource on both the state and national registers. At the time development or redevelopment projects are proposed, the project-level CEQA document would need to identify impacts to known or potential historic sites and structures. (JVGP DEIR, p. 4.5-14.)

Regarding impacts to historic resources resulting from implementation of the JVGP, the *JVGP EIR* concluded that compliance with the JVGP goals and policies identified above will generally be effective in reducing potential impacts to historical resources, although there could still be impacts if buildings older than 45 years are demolished without a complete inventory of historic resources. Although the JVGP Land Use Element includes policies and programs that requires preparation of historic surveys to identify historic buildings, sites and other important cultural landmarks to be preserved and the preservation of designated historic structures, landmarks, and sites, these policies and programs are only applicable with Jurupa Valley's Historic and Cultural Resource Overlay (HRO). Thus, it is possible that with buildout of the JVGP historic structures outside of the HRO could be demolished without analysis. The *JVGP EIR* includes the mitigation measure 4.5.5.1A to help assure no potentially historic buildings are demolished in Jurupa Valley without appropriate evaluation. (JVGP DEIR, p. 4.5-15.)

4.5.5.1A Prior to issuance of a demolition permit for any structure older than 45 years at the time of application and according to City building records or other official documentation, a project applicant shall provide an historical assessment of the structure prepared by a qualified professional (i.e., certified historian or architectural historian) with a determination of whether the structure represents a significant 26 historical resource according to Section 15064.5 of the State CEQA Guidelines. The assessment shall include contact with a local source of historical information regarding the structure's potential local significance, as available. If the structure is determined to not be

historic or potentially historic, either at a state or local level, the structure may be demolished without further documentation.

If the structure is not historic on a state level but has local historical significance, the structure may be demolished with City Council approval, provide (sic) *that the property is photo-recorded and archived prior to demolition. If the structure has state historical significance, the project historian shall prepare a preservation plan which shall address in-place or onsite preservation, relocation to an appropriate offsite location, or demolition only if it can be clearly demonstrated that preservation in place is not physically, or structurally feasible. This measure shall be implemented to the satisfaction of the City Planning Department.*

[NOTE: This shall become a standard Condition of Approval for development within the City.]

Preparation of the *Cultural Resource Investigation for the Jurupa Community Service District's Well 30 Project* (Appendix D of this Initial Study) satisfies the *JVGP EIR* mitigation measure 4.5.5.1A requirement for a historical assessment.

Regarding effects on historic structures resulting from buildout per the EGP, the NOP for the *EGP EIR* concluded that future development projects would be subject to individual, project-level CEQA review which would address the potential for a project to disturb known and unknown historic resources and would require mitigation. (NOP, p. 16.)

For the reasons set forth in the preceding paragraphs, direct impacts to historic resources would be less than significant. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

5b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Direct Impacts

Less than significant with mitigation incorporated. As discussed above, none of the two historical/archaeological sites were recorded within or immediately adjacent to the Project Site. PaleoWest contacted the Native American Heritage Commission (NAHC) on March 18, 2021 for a review of the SLF. The objective of the SLF search was to determine if the NAHC had any knowledge of Native American cultural resources within the immediate vicinity of the Project area. The NAHC responded on April 1, 2021, stating that the SLF was completed with negative results; however, the NAHC requested that 13 individuals representing 10 Native American tribal groups be contacted to elicit information regarding cultural resource issues related to the proposed Project.

PaleoWest contacted those individuals as requested and received eight responses from 10 tribal groups. The Quechan Historic Preservation Department sent an email indicating the Tribe does not wish to comment and defers to more local tribes. Ms. Jamie Nord, Cultural Resource

Technician for the San Manuel Band of Mission Indians (SMBMI), stated that the Project area is not located within the Serrano ancestral territory. As such, the Tribe will not be requesting to receive consulting party status with the lead agency and do not wish to participate in scoping, development, or review of documents for the Project. Ms. Lacy Padilla, Archaeologist for the Agua Caliente Band of Cahuilla Indians, sent an email stating that the Project area is not within the Tribe's Traditional Use Area and therefore, they do not have any information to provide and defer to other tribes in the area. Mr. Robert Dorame, Chairperson for the Gabrielino Tongva Indians of California Tribal Council, indicated that in the event any prehistoric resources are identified, the Tongva Indians of California Tribal Council would like to be notified. Additionally, if human remains are identified, regardless of the NAHC-assigned Most Likely Descendent, the Tongva Indians of California Tribal Council request to be notified. Mr. Anthony Morales, Chairperson for the Gabrieleno/Tongva San Gabriel Band of Mission Indians, stated that he would have concerns with the Project if ground-disturbing activities would be taking place in previously undisturbed soils. Mr. Joseph Ontiveros, Soboba Band of Luiseño Indians, stated that existing village sites with placenames are located adjacent to the Project and in the surrounding area. He further stated that information regarding tribal and historic resources will be disclosed to the lead agency. Mr. Andrew Salas, Chairperson for the Gabrieleno Band of Mission Indians - Kizh Nation, requested to be sent the outreach letter again for review. The outreach letter was resent on August 10, 2021; no additional response has been received to date. Lastly, a representative of the Santa Rosa Band of Cahuilla Indians stated that the Tribe does not have any comments on the Project. (PaleoWest, pp. 15-16.)

The lack of reported prehistoric archaeological remains with the Project study area suggests that the property is not highly sensitive for prehistoric archaeological resources. (PaleoWest, pp. 15, 22.) Therefore, the Project Site contains a relatively low potential to encounter intact, subsurface archaeological deposits Nonetheless, mitigation measure **MM CR 1**, which requires the construction in the vicinity of a find be halted until a qualified archaeologist makes a determination as to the significance of the find, will be implemented. Therefore with implementation of mitigation measure **MM CR 1**, potential impacts to archaeological resources would be less than significant.

> **MM CR 1: Inadvertent Discovery.** To reduce impacts to cultural resources inadvertently discovered during Project construction, in the event cultural resources are discovered during Project activities all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting Secretary of Interior standards ("Project Archaeologist") shall be retained by JCSD to assess the find. If the Project Archaeologist determines that work may continue on other portions of the Project Site while the significance of the find is being assessed, the Project Archaeologist shall identify a buffer area that shall be marked and avoided by all construction personnel. Additionally, the Gabrielino Tongva Indians of California Tribal Council shall be notified regarding any pre-contact and/or historic-era finds and be provided information after the Project Archaeologist makes the initial assessment of the nature of the find, as to provide Tribal input with regard to significance and treatment.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP goal COS 7 and policies COS 7.1, COS 7.2, COS 7.6, COS 7.7, and COS 7.10 set forth in the response to Threshold 5a, the JVGP Conservation and Open Space Element also includes the following goals and policies related to archaeological resources and coordination with Naïve American tribal groups: (JVGP, pp. 4-5, 4-38.)

Policies

COS 7.3 *Development Review. Evaluate project sites for archaeological sensitivity and for a project's potential to uncover or disturb cultural resources as part of development review.*

COS 7.4 *Site Confidentiality. Protect the confidentiality and prevent inappropriate public exposure or release of information on locations or contents of paleontological and archaeological resource sites.*

COS 7.5 *Native American Consultation. Refer development projects for Native American tribal review and consultation as part of the environmental review process, in compliance with state law.*

COS 7.8 *Native American Monitoring. Include Native American participation in the City's guidelines for resource assessment and impact mitigation. Native American representatives should be present during archaeological excavation and during construction in an area likely to contain cultural resources. The Native American community shall be consulted as knowledge of cultural resources expands and as the City considers updates or significant changes to its General Plan.*

COS 7.9 *Archaeological Resources Mitigation. Require a mitigation plan to protect resources when a preliminary site survey finds substantial archaeological resources before permitting construction. Possible mitigation measures include presence of a qualified professional during initial grading or trenching; project redesign; covering with a layer of fill; and excavation, removal and curation in an appropriate facility under the direction of a qualified professional.*

The *JVGP EIR* states that land within Jurupa Valley has the potential to yield archaeological resources or tribal cultural resources from past Native American activities. Lands along the Santa Ana River may contain archaeological artifacts or tribal cultural resources from past human activities, however, this area is an active floodplain and contains deep alluvial soils so the potential for finding undisturbed artifacts is relatively low. (JVGP DEIR, p. 4.5-16.)

The *JVGP EIR* concluded that implementation of the JVGP goals and policies identified above would provide sufficient programmatic protection for undiscovered archaeological resources or artifacts that may be present within Jurupa Valley. Therefore, impacts regarding a substantial change in an archaeological resource resulting from buildout per the JVGP would be less than significant and no mitigation is required. (JVGP DEIR, p. 4.5-17.)

Regarding effects on historic structures resulting from buildout per the EGP, the NOP for the *EGP EIR* concluded that future development projects would be subject to individual, project-level CEQA review which would address the potential for a project to disturb known and unknown archaeological resources and would require mitigation. (NOP, p. 16.)

For the reasons set forth in the preceding paragraphs, direct impacts to archaeological resources would be less than significant with implementation of mitigation measure **MM CR 1**. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

5c. Disturb any human remains, including those interred outside of formal cemeteries?

Direct Impacts

Less than significant impact. In the unlikely event that unknown human remains are uncovered during Project construction, pursuant to law, the proper authorities will be notified and standard procedures for the respectful handling of human remains will be adhered to in compliance with California Code of Regulations (CCR) Title 14, Chapter 3,[9] Section 15064.5(e); Public Resources Code (PRC) Division 5, Chapter 1.75, Section 5097.98, State Health and Safety Code (HSC) Division 7, Part 1, Chapter 2, Section 7050.5. Additionally, if human remains are identified, regardless of the NAHC-assigned Most Likely Descendent, the Gabrielino Tongva Indians of California Tribal Council shall be notified. (PaleoWest, p. 16.) Therefore, compliance with these regulations will reduce potential direct, impacts associated with disturbing human remains to less than significant.

Potential Reasonably Foreseeable Indirect Impacts

The JVGP does not include specific goals and policies related to the disturbance or discovery of human remains during excavation and grading. The *JVGP EIR* concluded that because state law provides adequate guidance on procedures to follow if human remains are found during excavation or grading, impacts would be less than significant and no mitigation is required. (JVGP DEIR, p. 4.5-19.)

Regarding the disturbance of human remains resulting from buildout per the EGP, the NOP for the *EGP EIR* concluded that future development activities in Eastvale would be subject to the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.94 et seq., regarding the discovery and disturbance of archaeological resources and human remains. Through compliance with these state regulations, impacts would be less than significant (NOP, p. 16.)

For the reasons set forth in the preceding paragraphs, direct, indirect, and cumulative impacts to the disturbance of human remains that could potentially result from JVGP or EGP buildout, which the Project could potentially facilitate in part, would be less than significant. Further, no

[9] California Code of Regulations (CCR) Title 14, Chapter 3 are the CEQA Guidelines.

new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

6. Energy	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

(Sources: California Energy Code; JVGP; WEBB-A; WEBB-B*)*

6a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Direct Impacts

Less than significant impact. As an infrastructure project, the majority of impacts will be short-term. As described in the Air Quality and Greenhouse Gas Analysis (WEBB-A), the Project's short-term construction would last approximately 17 months. Project construction would require the use of construction equipment for existing well destruction and abandonment, drilling, testing, and construction of the new well, and paving and painting activities, as well as construction workers and vendors traveling to and from the Project Site. Construction equipment requires diesel as the fuel source and construction worker and vendor trips use both gasoline and diesel fuel. Project-related fuel consumption was estimated and is included in Appendix E – Energy Tables. (WEBB-B). Construction of the Project is estimated to use approximately 45,040 gallons of diesel fuel and 3,130 gallons of gasoline. (WEBB-B).

Fuel consumption from on-site heavy-duty construction equipment and construction would be temporary in nature and use a limited number of equipment, which would represent a negligible demand on energy resources. Furthermore, there are no unusual Project Site characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the state.

Energy used during operation of the new well would primarily result from electricity usage from the pump. Based on the electricity consumption from the existing well and the estimated increase in well capacity for the new well, the estimated increase in electricity consumption is 675 megawatt-hours (MWh) per year. This represents a negligible demand on Southern California Edison's (SCE's) energy resources and would not operate in a manner that is wasteful or inefficient.

For these reasons, the Project would not result in a potentially significant impact due to wasteful, inefficient, or unnecessary consumption of energy during Project construction or operation. Impacts are less than significant. No mitigation is required.

Potential Reasonably Foreseeable Indirect Impacts

The Air Quality and Conservation and Open Space Elements of the JVGP includes the following goal and policies regarding energy conservation and developing new energy resources within the City: (JVGP, pp. 4-7, 4-27–4-30, 4-34, 4-38, 6-12.)

Goal COS 5 *To be a good steward of Jurupa Valley's natural resources, and protect and enhance open space by ensuring the preservation of cultural, historical, archaeological, and paleontological resources.*

Policies

AQ 5.1 *Reduce Solid Waste. Utilize source reduction, recycling, and other appropriate measures to reduce the amount of solid waste disposed of in landfills.*

AQ 5.2 *Energy Conservation. Encourage advanced energy conservation techniques and the incorporation of energy efficient design elements for private and public developments, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling, and offer incentives, as appropriate.*

COS 5.1 *Best Available Practices. The City will employ the best available practices in energy conservation, procurement, use, and production, and encourage individuals, organizations, and other agencies to do likewise. "Best available practices" means behavior and technologies that reflect recommendations of specialists and that use the least energy for a desired outcome, considering available equipment, life-cycle costs, social and environmental side effects, and the regulations of other agencies. Best available practices include use of sustainable energy sources. Sustainable energy sources are naturally renewed in a relatively short time and avoid substantial undesirable side effects, and include:*

1. *Space heating and cooling using earth, plantings, and/or building thermal mass to moderate temperature changes.*
2. *Space cooling through natural ventilation.*
3. *Space cooling through reflectivity and shading.*
4. *Indoor illumination by natural light.*
5. *Solar space and water heating.*
6. *Wind electricity generation.*

COS 5.2 *Energy-Efficient City Facilities. The City will meet or exceed Title 24 requirements for energy efficiency and shall operate and maintain City facilities in the most energy-efficient manner, without reducing public safety or service levels, as budget resources allow.*

COS 5.3 *Energy-efficiency improvements. Identify energy efficiency improvement measures to the greatest extent possible, undertake all necessary steps to seek funding for their implementation, and upon securing availability of*

funds, implement the measures in a timely manner, as budget resources allow.

COS 5.4 *Agency Cooperation. Cooperate with federal, state, and local governments and other appropriate entities to accomplish energy conservation objectives when consistent with the City's General Plan goals and policies.*

COS 5.5 *Energy Efficiency and Green Building. Encourage energy-efficient "green buildings" as addressed by the U.S. Green Building Council's LEED® (Leadership in Energy and Environmental Design) Program or through other similar programs.*

COS 5.6 *Energy Efficiency Incentives. Support standards, incentives and innovative technologies that encourage and allow developers, designers, and property owners to design, build, and operate buildings to achieve energy savings that exceed Title 24 requirements of the California Building Code.*

COS 5.7 *Energy Efficient Materials. Specify and use energy efficient materials and systems for City facilities as budget resources allow.*

COS 5.8 *Reduce "Heat Island" Effect. Encourage the conversion of asphalt and concrete paving to porous surfaces that help reduce surface runoff and the "heat island" effect.*

COS 5.9 *Renewable Energy Projects. Encourage and accommodate applications for projects that will produce renewable energy for the grid, such as solar generating stations, where appropriate.*

COS 5.10 *Wind Energy. Where appropriate, allow non-commercial wind energy generation in a manner that maximizes beneficial uses and minimizes detrimental effects to residents and the environment.*

COS 5.11 *Solar Access. Encourage the provision for and protection of solar access.*

COS 5.12 *Solar Energy Use. Use solar energy in City facilities and operations, as budget resources allow, and encourage the use of active and passive solar energy by homeowners, business owners, developers, government, and public agencies.*

COS 5.13 *Biomass Conversion. Encourage economic biomass conversion under sensible environmental controls, and where compatible with adjacent uses.*

COS 6.6 *City Operations. Seek ways to improve the energy efficiency of City operations to save energy, reduce consumption of non-renewable materials, reduce municipal costs, and set a positive example for the community.*

COS 6.7 *City Vehicles and Equipment. Purchase and use vehicles and equipment that are fuel efficient and meet or surpass state emissions requirements*

and/or use no- or low-emission sources of energy, if economically feasible.

COS 6.6 *Renewable Energy Resources. Work with other agencies and utility providers to encourage safe, economical, and renewable energy resources, and to reduce nonrenewable energy use through public education and participation in energy conservation programs.*

The *JVGP EIR* concluded that goals, policies, and programs, including those goals and policies listed above, were designed to conserve, and develop new energy resources within the City of Jurupa Valley as buildout per the JVGP, which the Project could potentially facilitate in part, occurs in the future. In addition to complying with the goals, policies, and programs of the JVGP, new development within Jurupa Valley would also be required to adhere to all federal, state, and local requirements for energy efficiency, including the Title 24 standards. For these reasons, The *JVGP EIR* concluded implementation of the JVGP would not result in the inefficient, wasteful, or unnecessary consumption of building energy at a programmatic level. (JVGP DEIR, p. 5-8.)

The Air Quality and Conservation and Housing Chapters of the EGP contains the following policies regarding energy efficiency and conservation, (EGP, pp. 7-12–7-13, 9-18.)

Policies

AQ-26 *Permit and encourage the use of passive solar devices and other state-of-the-art energy conservation measures.*

AQ-27 *Support and encourage voluntary efforts to provide active and passive solar access opportunities in new developments.*

AQ-28 *The City encourages energy-efficient materials and systems, including shade design technologies, for buildings.*

AQ-29 *Undertake proper maintenance of the City's physical facilities to ensure that optimum energy conservation is achieved.*

AQ-30 *Promote coordination of new public facilities with mass transit service and other alternative transportation services, including bicycles, and design structures to promote mass transit, bicycle, and pedestrian use.*

AQ-31 *The City encourages urban design measures that support alternatives to private automobile use.*

AQ-32 *Utilize source reduction, recycling, and other appropriate measures to reduce the amount of solid waste disposed of in landfills.*

AQ-33 *The City encourages the incorporation of energy-efficient design elements beyond code requirements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.*

AQ-34	*The City shall review all development proposals to ensure that all services and utilities can be provided in an energy-efficient and effective manner.*
AQ-35	*The City shall promote energy-efficient retrofit improvements in existing buildings.*
AQ-36	*The City shall support the inclusion of energy-efficient design and renewable energy technologies in public and private projects.*
H-24	*Encourage the use of energy conservation features in residential construction and remodeling.*

The *EGP EIR* concluded that development of Eastvale per the EGP would commit energy to the construction and maintenance of buildings and infrastructure when undeveloped land is converted to urban uses, such as housing, commercial, parks, roadways, etc. (EGP DEIR, p. 6.0-3.)

For the reasons set forth in the preceding paragraphs, direct impacts regarding the wasteful, inefficient, or unnecessary consumption of energy during Project construction or operation are less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

6b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Direct Impacts

Less than significant impact. Implementation of the Project will not result in inefficient, unnecessary, or wasteful consumption of energy, as outlined in the response to Threshold 6a. The proposed Project would be required to comply with state and federal energy conservation measures related to construction and operations, as applicable. As such, impacts to obstructing a state or local plan for renewable energy or energy efficiency during construction or operation will be less than significant. No mitigation measures are required.

Potential Reasonably Foreseeable Indirect Impacts

The JVGP and EGP contain policies programs and action items for renewable energy and energy and as such are the local plans for Jurupa Valley and Eastvale, respectively. Therefore, implementation of the JVGP and EGP would not conflict with a plan for renewable energy or energy efficiency.

JVGP policies COS 5.4 and COS 5.6, set forth in the response to Threshold 6a, require cooperation with state and local governments to accomplish energy conservation objectives and encourage energy savings that exceed Title 24 requirements. Because these policies support state plans for renewable energy and energy efficiency, implementation of the JVGP would not conflict with a state plan.

The EGP Housing Chapter contains the following action items regarding state plans for energy efficiency (EGP, p. 9-19.)

ACTION H-24.2 *Ensure Consistency with Green Building Standards. The City will annually ensure that local building codes are consistent with state-mandated green building standards*

ACTION H-24.3 *Implement State Energy Conservation Standards. The City's Building Department will be responsible for implementing the state's energy conservation standards (e.g., Title 24 Energy Standards). This includes checking building plans and other written documentation showing compliance and inspecting construction to ensure that the dwelling units are constructed according to those plans. Applicants for building permits must show compliance with the state's energy conservation requirements at the time building plans are submitted.*

Through compliance with the above action items, implementation of the EGP would not conflict with state plans for energy efficiency.

For the reasons set forth in the preceding paragraphs, direct impacts regarding obstructing a state or local plan for renewable energy or energy efficiency during Project construction or operation are less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

7. Geology and Soils	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 landslide, 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 waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

(Sources: DOC Alquist-Priolo Fault Zone and Seismic Hazard Zone Maps; EGP; Geoscience; JCSD Manual; JVGP; JVGP DEIR*; JVGP DEIR – Figure 4.5.2 Paleontological Sensitivity in Jurupa Valley; JVGP DEIR Figure 4.6.2 – Soils; JVGP DEIR Table 4.6.A Soils within the City of Jurupa Valley; JVGP Figure 8–4 − Mapped Fault Zones; JVGP Figure 8–5 − Liquefaction Susceptibility in Jurupa Valley; JVGP Figure 8-6: Landslide Susceptibility in Jurupa Valley; Project Description)*

7.a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

7a.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.

Direct Impacts

Less than significant impact. Surface rupture refers to the actual "tearing apart" of the ground surface along a fault trace resulting from an earthquake. The effects of surface rupture may be mitigated by placing structures a specific distance from the known fault trace. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) and to issue appropriate maps. Local agencies must then regulate most development projects within the zones.

The Project Site is situated in a seismically active region. As is the case for most areas of Southern California, ground-shaking resulting from earthquakes associated with nearby and more distant faults may occur at the Project Site. The Project Site is not located within an Alquist-Priolo Zone and does not contain any known faults. The closest fault is San Jacinto Fault, located approximately 14 miles southwest from the Project Site. Therefore, the potential for on-site fault rupture is very low. (JVGP, p. 8-5.) Moreover, Well 30 would be designed and constructed in conformance with California Waterworks Standards of California Administrative Code Title 22, and California Occupational Safety and Health Administration (Cal-OSHA) safety requirements. These standards and regulations are designed to reduce construction worker, maintenance worker, and the public's exposure to impacts related to earthquake faults. Therefore, the potential for substantial adverse effects regarding rupture of a known earthquake fault would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

The Community Safety, Services, and Facilities Element of the JVGP includes the following goals and policies addressing fault rupture and related seismic hazards: (JVGP, pp. 8-3, 8-8–8-9.)

Goal CSSF 1 *Minimize risks resulting from natural and manmade hazards to its residents and businesses.*

Policies

CSSF 1.1 *Fault Rupture Hazards. When reviewing new development, minimize fault rupture hazards through enforcement of Alquist-Priolo Earthquake Fault Zoning Act provisions and the following requirements:*

1. *Require geologic studies or analyses for new, critical structures, such as schools, medical facilities, senior or disabled housing, or other high-risk occupancies located within 0.5 mile of all active or potentially active faults.*
2. *Require geologic trenching studies for new developments within all designated Earthquake Fault Studies Zones, unless adequate evidence is presented and accepted by the City Engineer or a Building Official. The City may also require geologic trenching for new development located outside designated fault zones for especially critical or vulnerable structures or lifelines.*
3. *Require that critical infrastructure, including roads, bridges, and utilities be designed to resist, without failure, their crossing of a fault, if fault rupture occurs.*

4. *Encourage and support efforts by the geologic research community to better define the locations and risks of County faults. Such efforts could include data sharing and database development with regional entities, state and local governments, private organizations, utility agencies, or universities.*

According to the *JVGP EIR*, the new residential units and non-residential buildings resulting from implementation of the JVGP would expose more structures and people (residents and employees) to the effects of a fault rupture. Additionally, future development may result in the construction and occupation of structures, critical facilities, and pipelines adjacent to known and/or as yet undetected earthquake fault zones. Such development would increase the number of persons and the amount of developed property exposed to fault rupture hazards. (JVGP DEIR, p. 4.6-23.)

The JVGP DEIR concluded that with implementation of the above JVGP goals and policies and mitigation measure 4.6.5.1A as future development occurs potential impacts to future development in Jurupa Valley with respect to fault rupture would be reduced to less than significant levels. (JVGP DEIR, p. 4.6-24.)

4.6.5.1A Before a project is approved or otherwise permitted within an A-P Zone or within 150 feet of any other active or potentially active fault mapped in a published United States Geologic Survey (USGS) or CGS reports, or within other potential earthquake hazard area (as determined by the City), a site-specific geologic investigation shall be prepared to assess potential seismic hazards resulting from development of the project site. Where and when required, the geotechnical investigation shall address the issue(s), hazard(s), and geographic area(s) determined by the City of Jurupa Valley Planning and Building Departments to be relevant to each development. The site-specific geotechnical investigation shall incorporate up-to-date data from government and non-government sources.

Based on the site-specific geotechnical investigation, no structures intended for human occupancy shall be constructed across active faults. This site-specific evaluation and written report shall be prepared by a licensed geologist and shall be submitted to City of Jurupa Valley Planning and Building Departments for review and approval as part of the environmental and entitlement process and prior to the issuance of building permits. If an active fault is discovered, any structure intended for human occupancy shall be set back at least 50 feet from the fault. A larger or smaller setback may be established if such a setback is supported by adequate evidence as presented to and accepted by the City.

Because the Project site is not within 150 feet of an A-P zone or potentially active earthquake, mitigation measure 4.6.5.1A is not applicable to the proposed Project.

Regarding impacts associated with rupture of a known earthquake fault resulting from buildout per the EGP, the NOP for the *EGP EIR* concluded that impacts would be less than significant because project applicants for all future development projects identified on an Alquist-Priolo Earthquake Fault Zoning Map as being within a known earthquake fault, would be required to have a geologic investigation prepared for the subject site by a licensed geologist to determine if an active fault is located on the site. If an active fault is found to traverse any portion of the site, the proposed development would be required to be setback from the trace of the fault as recommended by the licensed geologist. (NOP, p. 18.)

For the reasons set forth in the preceding paragraphs, direct impacts would be less than significant. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

7a.ii. Strong seismic ground shaking?

Direct Impacts

Less than significant impact. As discussed in response to Threshold 7a.i, although the Project Site is not located within an Alquist-Priolo Zone, does not contain any known faults, and the closet fault is approximately 14 miles southwest from the Project Site, the Project Site, like all of Southern California, is situated in a seismically active region. Although the Project Site would be subject to seismic activity, the Project does not propose any structures, habitable or otherwise, that could pose a substantial risk to people or other structures in the event of strong seismic ground shaking. The proposed Project would be designed and constructed in conformance with California Waterworks Standards of California Administrative Code Title 22, and California Occupational Safety and Health Administration (Cal-OSHA) safety requirements, and the recommendations of the geotechnical investigation and report that would be prepared as part of the design phase. For these reasons, the Project's potential for substantial adverse effects from strong seismic ground shaking would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP Goal CSSF 1 set forth in the response to Threshold 7aii, the JVGP Community Safety, Services, and Facilities Element also includes the following policies addressing ground shaking and related risks: (JVGP, p. 8-9.)

Policies

CSSF 1.2 *Geologic Investigations. Require geological and geotechnical investigations as part of the environmental and development review process. This requirement shall apply to the development of any structure proposed for human occupancy or to unoccupied structures whose damage could cause secondary hazards in areas with potential for earthquake-induced liquefaction, landslides, or settlement.*

CSSF 1.3 *Structural/Non-Structural Assessment. Require structural and nonstructural assessment and, when necessary, mitigation for other types of potentially hazardous buildings that are undergoing substantial repair or improvements costing more than half of the assessed property value. Potential implementation measures could include:*

1. *Use of variances, tax rebates, fee waivers, credits, or public recognition as incentives.*
2. *Inventory and structural assessment of potentially hazardous buildings based on screening methods developed by the Federal Emergency Management Agency.*
3. *Development of a mandatory retrofit program for hazardous, high occupancy, essential, dependent, or high-risk facilities.*
4. *Development of a mandatory program requiring public posting of seismically vulnerable buildings.*

According to the *JVGP EIR*, Jurupa Valley has and would continue to be subject to ground shaking resulting on seismic activity on local and regional faults. Future development permitted by the JVGP may increase the potential for property loss, injury, or death resulting from this ground shaking hazard. The JVGP DEIR concluded that as future development occurs implementation of the above JVGP goals and policies along with mitigation measure 4.6.5.2A would help ensure potential impacts from ground shaking would be less than significant. (JVGP DEIR, p. 4.6-25–4.6-26.)

4.6.5.2A *If required by the City, a site-specific assessment shall be prepared to ascertain potential ground shaking impacts on development. The site-specific ground shaking assessment shall incorporate up-to-date data from government and non-government sources and may be included as part of any site-specific geotechnical investigation. The site-specific ground shaking assessment shall include specific measures to reduce the significance of potential ground shaking hazards. This site-specific ground shaking assessment shall be prepared by a licensed geologist and shall be submitted to the City of Jurupa Valley Planning and Building Departments for review and approval as part of the environmental and entitlement process and prior to the issuance of building permits.*

Regarding strong seismic ground shaking impacts associated with buildout of the EGP, the NOP for the *EGP EIR* indicates that Eastvale is located in seismically active Southern California in close proximity to multiple fault zones within the San Andreas Fault system and is expected to experience strong ground motions from earthquakes caused by both local and regional faults. The NOP further states that because all future development projects would be subject to the most stringent standards of the California Building Code (Seismic Zone 4) and compliance with these standards would minimize the exposure of people and structures to safety hazards and damage, impacts would be less than significant. (NOP, p. 18.)

For the reasons set forth in the preceding paragraphs, direct impacts would be less than significant. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

7a.iii. Seismic-related ground failure, including liquefaction?

Direct Impacts

Less than significant impact. Liquefaction occurs primarily in saturated, loose, fine- to medium grained soils in areas with a high groundwater table (usually within 50 ft. of subsurface). Shaking can cause the soils to lose strength and liquefy. The Project Site is in an area with moderate potential for liquefaction according to *Jurupa Valley General Plan Figure 8-5 - Liquefaction Susceptibility in Jurupa Valley.* (JVGP, p. 8-6.) The Project Site is composed of Delhi fine sand with ground water depth at approximately 240 feet. (Geoscience, p. 3; JVGP DEIR, pp. 4.6-5.) Due to ground water being at a depth greater than 50 feet, the liquefaction potential low. Regardless, engineering design and construction in conformance with California Waterworks Standards of California Administrative Code Title 22, Cal-OSHA safety requirements, and the recommendations of the geotechnical investigation and report that would be prepared as part of the design phase would reduce the Project's potential for substantial adverse effects from seismic-related ground failure, including liquefaction, to less than significant.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP goal CSSF 1 set forth in the response to Threshold 7a.i and policy CSSF 1.2 set forth in the response to Threshold 7a.ii, the JVGP Community Safety, Services, and Facilities Element also includes the following policy addressing liquefaction risks: (JVGP, pp. 8-9–8-10.)

> Policies
>
> *CSSF 1.4* *Structural Damage. Utilize the latest approaches to minimize damage to structures located in areas determined to have a high liquefaction potential during seismic events.*

The *JVGP EIR* concluded that implementation of the aforementioned JVGP policies would reduce the significance of seismic related liquefaction impacts associated with buildout of the JVGP to a less than significant level and no mitigation is required. (JVGP DEIR, p. 4.6-32.)

Regarding impacts associated with liquefaction, the NOP for the *EGP EIR* states that the majority of Eastvale is located in an area of moderate to very high liquefaction susceptibility. Chapter 17.16 of the Eastvale Municipal Code, requires preparation of a preliminary soils report by a registered soils engineer or geotechnical engineer for all development projects requiring a grading permit. The code requires that all recommendations specified in the soils report be incorporated into the project's grading plan. Incorporation of these recommendations would ensure that future development is designed and constructed to address any potential for liquefaction or other types of ground failure. Therefore, liquefaction impacts would be less than significant. (NOP, p. 18.)

For the reasons set forth in the preceding paragraphs, direct impacts would be less than significant. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

7a.iv. Landslides?

Direct Impacts

Less than significant impact. The Project Site is not susceptible to landslides, as shown on *Figure 8–6 − Landslide Susceptibility of the JVGP*. (JVGP, p. 8-7.) The Project Site is relatively flat and not within close proximity to any elevated terrain. Since the Project Site is not located within a landslide susceptible area the risk for a landslide is considerably low. Therefore, impacts with regard to substantial adverse effects from landslides would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP goal CSSF 1 set forth in the response to Threshold 7a.i and policy CSSF 1.2 set forth in the response to Threshold 7a.ii, the JVGP Community Safety, Services, and Facilities Element also includes the following policy addressing landslide risks: (JVGP, p. 8-10.)

> Policies
>
> *CSSF 1.5* *Hillside Development. Encourage and, where possible require, mitigation of potential erosion, landslide, and settlement hazards for existing public and private development located on unstable hillside areas, especially slopes with recurring failures where City property or public right-of-way is threatened from slope instability, or where considered appropriate and urgent by the City Engineer, CAL FIRE, or County Sheriff's Department.*

According to the *JVGP EIR*, future development permitted by the JVGP in the Jurupa Mountain and Pedley Hills may increase the potential for property loss, injury, or death resulting from landslides. The Jurupa Valley building code establishes specific site investigation requirements for hillside development to reduce risks from landslides, rock falls, and debris flows. (JVGP DEIR, P. 4.6-27.)

The *JVGP EIR* concluded implementation of the JVGP goals and policies as future development occurs within steep slopes and hillside areas, along with compliance with the latest building codes would help ensure potential impacts from landslides, rock falls and debris flows within Jurupa Valley would be less than significant. (JVGP DEIR, pp. 4.6-27–4.6-28.)

Regarding impacts associated with landslides resulting from buildout in Eastvale per the EGP, The NOP for the *EGP EIR* concluded this impact would be less than significant because the topography of Eastvale is generally flat and the potential for landslide as a result of future development is considered low. (NOP, p. 18.)

For the reasons set forth in the preceding paragraphs, direct impacts would be less than significant. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

7b. Result in substantial soil erosion or the loss of topsoil?

Direct Impacts

Less than significant impact. Grading and excavation at the Well 30 site and destruction of Well 19 may result in localized soil erosion as wind and water carry loose soils offsite. Compliance with current regulations and implementation of a State-required Storm Water Pollution Prevention Plan (SWPPP) that incorporates effective erosion and sediment control measures would reduce these impacts to less than significant. Permit coverage under the statewide Construction General Permit from the State Water Resources Control Board (SWRCB) and preparation of an effective SWPPP is required because the Project site and anticipated area of disturbance is greater than one-acre. The SWPPP shall incorporate applicable Best Management Practices (BMPs) to reduce loss of topsoil and prevent substantial soil erosion. Also, as discussed in the response to Threshold 3b, the Project will comply with SCAQMD Rule 403 to reduce fugitive dust emissions. Through implementation of a SWPPP the Project's potential for substantial adverse effects from soil erosion or the loss of topsoil would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP policy CSSF 1.5 set forth in the response to Threshold 7a.ii, the JVGP Air Quality Element includes the following policies related to soil erosion: (JVGP, p. 6-10.)

Policies

AQ 3.5 *Fugitive Dust Reduction Measures. Apply, as appropriate, measures contained in the County's Fugitive Dust Reduction to the entire City.*

AQ 3.6 *Grading in High Winds. Suspend all grading when wind speeds exceed 25 miles per hour.*

According to the *JVGP EIR*, soil erosion and loss of topsoil can be associated with groundbreaking excavation activities, such as grading or cut and fill for new development. These activities can expose unprotected soils to storm water runoff causing erosion and loss of topsoil. An increase in population anticipated by the JVGP would cause an increase in residential and non-residential structures, resulting with alterations and loss to existing topsoil. In addition, exposure of underlying soils during landform modifications substantially increases the potential for soil erosion. (JVGP DEIR, p. 4.6-28.)

Future development within Jurupa Valley and related off-site improvements that would involve the disturbance of more than one acre is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit. A Storm Water Pollution Prevention Plan (SWPPP) will also be required to address erosion and discharge impacts associated with the proposed on-site grading. Good housekeeping practices at a construction site would protect receiving waters from soil erosion and silt deposition during grading activities. (JVGP DEIR, p. 4.6-28.) Additionally, new development is required to prepare a site-specific Water Quality Management Plan that can contain post-construction measures to help reduce potential impacts to soil erosion. (JVGP DEIR, p. 4.6-29.)

The *JVGP EIR* concluded that with implementation of JVGP policies CSSF 1.5, AQ 3.5, and AQ 3.6 along with state, regional, and local regulations to protect soils, impacts regarding soil erosion and the loss of topsoil would be less than significant.

Regarding impacts associated with soil erosion or the loss of top soil in Eastvale, the Eastvale Municipal Code, requires preparation of an interim erosion control plan, for all development projects requiring a grading permit. The interim erosion control plan must identify the best management practices (BMPs) that will be implemented to minimize the potential for soil erosion. Compliance with this requirement of the municipal code would ensure that future development projects implement measures to control erosion. Therefore, impacts would be less than significant. (NOP, pp. 18–19.)

For the reasons set forth in the preceding paragraphs, direct impacts would be less than significant. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

7c. 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?

Direct Impacts

Less than significant impact. As mentioned above in responses to Thresholds 7a.iii and 7a.iv, the Project Site is located on land not typically associated with unstable soil conditions as shown on *JVGP Figure 8–5 − Liquefaction Susceptibility in Jurupa Valley* and *JVGP Figure 8–6 −Landslide Susceptibility in Jurupa Valley*. (JVGP, pp. 8-6, 8-7.) The Project Site is identified as land with low liquefaction potential and no landslide susceptibility. Further, the Project would not result in unstable soil. A geotechnical investigation and report would be prepared for Well 30 and any recommendations identified in that report shall be incorporated into the design. Construction of Well 30 would also follow proper engineering design and construction in conformance with JCSD's Standards Manual for Water and Sewer Facilities, California Waterworks Standards of California Administrative Code Title 22, and California Occupational Safety and Health Administration (Cal-OSHA) safety requirements. Therefore, potential impacts regarding landslide, lateral spreading, subsidence, liquefaction, or collapse would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

Regarding liquefaction, refer to the response to Threshold 7a.iii.

Regarding landslide, refer to the response to Threshold 7a.iv

Regarding impacts associated with unstable geologic units or soils, the Eastvale Municipal Code requires preparation of a preliminary soils report by a registered soils engineer or geotechnical engineer for all development projects requiring a grading permit. The code requires that all recommendations specified in the soils report be incorporated into the project's grading plan. Incorporation of these recommendations would ensure that future development is

design and constructed to address any potential for ground failure. Therefore, impacts would be less than significant. (NOP, p. 19.)

For the reasons set forth in the preceding paragraphs, direct impacts would be less than significant. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

7d. 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?

Direct Impacts

Less than significant impact. Expansive soils expand, or swell, when wet and shrink when dry. The amount or type of clay present in soil determines the shrink-potential. The Project has soils identified as Delhi fine sand (Db) according to *JVGP DEIR Figure 4.6.2 – Soils*. This type of soil has a low to moderate shrink-swell, potential. (JVGP DEIR, pp. 4.6-5–4.6-7.) Moreover, the Project will incorporate standard engineering and construction protocols in conformance with JCSD's Standards Manual for Water and Sewer Facilities, California Waterworks Standards of California Administrative Code Title 22, and California Occupational Safety and Health Administration (Cal-OSHA) which will incorporate all adequate and appropriate safety considerations. Additionally, Well 30 will be designed and constructed in accordance with the recommendations of the *Geotechnical Report*. For these reasons, direct impacts resulting from construction on expansive soils would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

JVGP goal CSSF 1 set forth in the response to Threshold 7a.i will help ensure that potential impacts from expansive soils will be less than significant.

According to the *JVGP EIR*, there is one soil type identified within Jurupa Valley that has a high shrink/swell potential, Monserate sandy loam, shallow, 5-15% slopes. Build out per the JVGP would increase the number of persons, residential units, and non-residential development that would occur on moderately expansive soils within Jurupa Valley. (JVGP DEIR, p. 4.6-32.)

The *JVGP EIR* concluded that while implementation of JVGP goal CSSF 1 would reduce the potential impacts from soil expansion within Jurupa Valley, it does not provide specific development standards for development within areas subject to potential soil expansion, nor does it provide adequate mitigation for potential soil expansion impacts. Therefore, to provide adequate mitigation for potential soil expansion hazards, development within Jurupa Valley with the Monserate sandy loam shallow, 5-15% slopes identified on JVGP Figure 4.6.2 shall implement mitigation measure 4.6.5.7A. Implementation of mitigation measure 4.6.5.7A would reduce impacts associated with development located on expansive soil to less than significant.

4.6.5.7A As determined by the City, a site-specific soil assessment shall be prepared to ascertain potential soil expansion on development within the Monserate sandy loam, 25 shallow, 5-15% slopes identified on Figure 4.6.2. The site-specific soil assessment shall incorporate up-to-date data from government and non-government sources and may be

included as part of any site-specific geotechnical investigation. The site specific soils assessment shall include specific measures to reduce the significance of potential soil swell/shrink potential.

This site-specific soils assessment shall be prepared by a licensed soils engineer or geologist and shall be submitted to the City of Jurupa Valley Planning and Building Departments for review and approval as part of the environmental and entitlement process and prior to the issuance of building permits.

Because the Project site has soils identified as Delhi fine sand (Db) according to *JVGP DEIR Figure 4.6.2 – Soils*, this mitigation measure is not applicable to the proposed Project.

Regarding impacts associated with expansive soils associated with buildout per the EGP, the Eastvale Municipal Code requires preparation of a preliminary soils report by a registered soils engineer or geotechnical engineer for all development projects requiring a grading permit. The code requires that all recommendations specified in the soils report be incorporated into the project's grading plan. Incorporation of these recommendations would ensure that future development is designed and constructed to address expansive soils. Therefore, impacts would be less than significant. (NOP, p. 19.)

For the reasons set forth in the preceding paragraphs, direct impacts would be less than significant. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

7e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Direct Impacts

No impact. The Project does not require or propose use of a septic tank or alternative waste water disposal systems. JCSD has sanitary sewers in the streets in proximity to the Project site. No impacts would occur.

Potential Reasonably Foreseeable Indirect Impacts

Sewer service is provided to Jurupa Valley by the Jurupa Community Services District and the Rubidoux Community Services District. According to the *JVGP EIR*, all new development within Jurupa Valley would be required to connect to the local Community Services District's sewer systems. Because septic tanks and alternative wastewater treatment systems would not be allowed there would be no impacts in this regard. (JVGP DEIR, p. 4.6-30.)

Regarding the use of septic tanks, according to the NOP prepared for the *EGP EIR*, all new development within Eastvale would be required to connect to the Jurupa Community Services District's water system. No new septic tanks would be anticipated to be installed within Eastvale; thus, no impact would occur. (NOP, p. 19.)

For the reasons set forth in the preceding paragraphs, there would be no direct impacts and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

7f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Direct Impacts

Less than significant with mitigation incorporated. Paleontological resources include fossils of plant and animal remains from prehistoric eras. The Jurupa Valley General Plan Environmental Impact Report classifies paleontological sensitivity into three categories, High A (Ha), High B (Hb) and Low (L). The Project Site is located within High B (Hb) paleontological sensitivity area. (JVGP DEIR, p. 4.5-7.) The proposed Project Site is approximately .90 acre located amongst a heavily disturbed and developed area. The Project Site is physically bordered by disturbed areas. Therefore, given the disturbed and developed nature of the surrounding area it is unlikely that paleontological resources would be discovered on the Project Site during construction activities. However, due to the depth of drilling for Well 30, mitigation measures **MM GEO 1**, **MM GEO 2**, and **MM GEO 3**, shall be implemented. These mitigation measures required a workers' environmental awareness program to educate construction crews about the types of resources that may be encountered, preparation of a paleontological mitigation monitoring plan, and sets forth the process in the event a paleontological resources is discovered. With implementation of these mitigation measures, direct and indirect impacts regarding destroying a unique paleontological resource or site would be less than significant.

> **MM GEO 1: Paleontological Resources Workers Environmental Awareness Program (WEAP).** To educate construction crews about the types of paleontological resources that may be encountered during drilling, JCSD shall retain a professional paleontologist (the "Project Paleontologist") to prepare a Paleontological Resources Workers Environmental Awareness Training. The Paleontological Resources WEAP shall provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the area, the role of the paleontological monitor, outline steps to follow in the event that a fossil discovery is made, and provide contact information for the Project Paleontologist. The Project Paleontologist or designee(s) shall present the Paleontological Resources WEAP to the construction contractor and each of the construction crews working on the Project during a preconstruction meeting. The Paleontological Resources WEAP shall be taped and presented to any construction crew members not present at the preconstruction meeting during which it was initially presented prior to such crew members working on the Project. This training may be conducted concurrently with other preconstruction training (e.g., biological resources, safety).
>
> **MM GEO 2: Paleontological Resources Mitigation Monitoring Plan (PRMMP).** Prior to the commencement of ground-disturbing activities for the Project, the Project Paleontologist retained under **MM GEO 1** shall prepare and implement a Paleontological Resources Mitigation Monitoring Plan (PRMMP) for the Project. The PRMMP shall describe the monitoring required during drilling. Paleontological Monitoring shall entail

the visual inspection of excavated or graded areas. If the Project Paleontologist determines full-time monitoring is no longer warranted, based on the geologic conditions at depth, the Paleontological Monitor may recommend that monitoring be reduced or cease entirely.

MM GEO 3: Fossil Discoveries. In the event that a paleontological resource is discovered, the Project Paleontologist shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following:

1. Salvage of Fossils. If fossils are discovered, all work in the immediate vicinity should be halted to allow the paleontological monitor, and/or Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the Project Paleontologist determines that the fossils are potentially significant, the Project Paleontologist (or paleontological monitor) should recover them following standard field procedures for collecting paleontological as outlined in the PRMMP prepared per EP MM GEO 2. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the Project Paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.

2. Fossil Preparation and Curation. The PRMMP shall identify the museum that has agreed to accept fossils that may be discovered during project-related excavations. Upon completion of fieldwork, all significant fossils collected shall be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossils specimens will be identified to the lowest taxonomic level practical prior to curation at an accredited museum. The fossil specimens must be delivered to the accredited museum or repository no later than 90 days after all fieldwork is completed. The cost of curation will be assessed by the repository and will be the responsibility JCSD.

3. Final Paleontological Mitigation Report. Upon completion of ground disturbing activity (and curation of fossils if necessary) for the Project, the Project Paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.

Potential Reasonably Foreseeable Indirect Impacts

JVGP goal COS 7 and policies COS 7.1 and COS 7.2 set forth in the response to Threshold 5a and policy COS 7.4 set forth in the response to Threshold 5b are related to paleontological resources.

According to the *JVGP EIR*, Riverside County mapping indicates Jurupa Valley is underlain by a variety of soils and shallow geologic formations that may contain fossils or other paleontological materials. The mapping also indicates these resources have a higher probability of being located in the northwestern and southeastern portions of the site, but are not concentrated in any one area of the City. It is even possible, although less likely, that fossils may be found in deeper alluvial deposits along the Santa Ana River and adjacent floodplain. The upland portions of Jurupa Valley (i.e., Jurupa Hills in the northern and central portions of Jurupa Valley) contain many rock outcroppings and boulders but these do not necessarily represent unique geologic features. Future development of vacant land throughout Jurupa Valley may uncover previously undiscovered fossiliferous materials. Since Western Riverside County has yielded megafaunal fossils and other important paleontological materials, this impact is potentially significant. (JVGP DEIR, p. 4.5-17.)

The *JVGP EIR* concluded that JVGP goal COS 7 and policies COS 7.1, COS 7.2, and COS 7.4 would provide sufficient programmatic protection for undiscovered paleontological resources that may be present within the City with implementation of mitigation measure 4.5.5.3A. (JVGP DEIR, p. 4.5-18.) Thus reasonably foreseeable impacts would be less than significant with mitigation.

> *4.5.5.3A Prior to issuance of a grading permit, a project applicant must provide an assessment, prepared by a qualified professional, of whether the proposed project grading will impact underlying soil units or geologic formations that have a moderate to high potential to yield fossiliferous materials. If the potential for fossil discovery is low, no pre-grading monitoring needs to be established. If the potential for fossil discovery is moderate to high, the applicant must provide a paleontological monitor during rough grading of the project. If a paleontologist is not onsite and possible fossil materials are found, work shall be halted in that area until the material can be assessed by a qualified professional. If materials are found onsite during grading, a qualified professional shall evaluate the find and determine if it represents a significant paleontological resource. If the resource is determined to be significant, the paleontologist shall supervise removal of the material and determine the most appropriate archival storage of the material. Appropriate materials shall be prepared, catalogued, and archived at the applicant's expense and shall be retained within Riverside County if feasible. This measure shall be implemented to the satisfaction of the City Planning Department.*
>
> *[NOTE: This shall become a standard Condition of Approval for development within the City.]*

Project mitigation measures **MM GEO 1, MM GEO 2,** and **MM GEO 3** satisfies the requirements of *JVGP EIR* mitigation measure 4.5.5.3A.

Regarding the direct or indirect destruction of a paleontological resource or unique geologic feature resulting from implementation of the EGP, the NOP for the *EGP EIR* concluded that

future development activities in Eastvale would be subject to individual, project-level CEQA review which would address the potential for a project to disturb known and unknown paleontological resources and would require mitigation. Therefore, this impact would be less than significant. (NOP, p. 16.)

For the reasons set forth in the preceding paragraphs, direct impacts would be less than significant with mitigation. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

8. Greenhouse Gas Emissions	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

(Sources: SCAQMD Greenhouse Gas CEQA Significance Threshold (SCAQMD-D); SCAQMD CEQA Draft Guidance Documents (SCAQMD-E); WEBB-A)

8a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Direct Impacts

Less Than Significant Impact. Greenhouse gases (GHG) are not presented in pounds per day (lbs/day) like criteria pollutants; they are typically evaluated on an annual basis using the metric system. Several agencies, at various levels, have proposed draft GHG significance thresholds for use in CEQA documents. SCAQMD has been working on GHG thresholds for development projects. In December 2008, the SCAQMD adopted a threshold of 10,000 metric tonnes per year of carbon dioxide equivalents ($MTCO_2E$/yr) for stationary source projects where SCAQMD is the lead agency. The most recent draft proposal was in September 2010 and included screening significance thresholds for residential, commercial, and mixed-use projects at 3,500, 1,400, and 3,000 $MTCO_2E$/yr, respectively. Alternatively, a lead agency has the option to use 3,000 $MTCO_2E$/yr as a threshold for all non-industrial projects. Although both options are recommended by SCAQMD, a lead agency is advised to use only one option and to use it consistently. The SCAQMD significance thresholds also recommends amortizing construction emission over an expected project life of 30 years.

The Air Quality and Greenhouse Gas Analysis prepared for the Project (WEBB-A) estimated GHG emissions from fuel usage by construction equipment and construction-related activities, like construction worker trips, for the Project. The analysis results for construction-related GHG emissions provide for carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and carbon dioxide equivalent (CO_2E) as shown in **Table 9 – Project Construction Equipment GHG Emissions** below:

Table 9 − Project Construction Equipment GHG Emissions

Year	Metric Tons per Year (MT/yr)			
	Total CO_2	Total CH_4	Total N_2O	Total CO_2E
2022	204.34	0.0567	0.00	206.23
2023	254.54	0.07	0.00	256.89
Total	**458.88**	**0.13**	**0.00**	**463.10**
			Amortized[1]	**8.05**

Source: WEBB-A, Table 4

Note: [1]Construction emissions were amortized over a 30-year period, as recommended by SCAQMD.

GHG – Greenhouse Gases, CO_2 – carbon dioxide, CH_4- methane, N_2O – nitrous oxide, CO_2E – carbon dioxide equivalent

Table 9 indicates that an estimated total of 463.10 $MTCO_2E$ per year will occur from Project construction equipment over the course of the estimated 17-month construction period. The draft SCAQMD GHG threshold guidance document released in October 2008 recommends that construction emissions be amortized for a project lifetime of 30 years to ensure that GHG reduction measures address construction GHG emissions as part of the operational reduction strategies. (SCAQMD-E.)

It is anticipated that JCSD personnel will visit the Well 30 site on a daily basis, which is the same frequency personnel are visiting Well 19. Therefore, no new operational activities are anticipated. Operational GHG emissions would only result from the electric pump at the new well site and infrequent visits by vehicles driven by maintenance personnel, which also occur under existing conditions and as such, the emissions from infrequent maintenance vehicles are considered negligible. GHG emissions from the operation of the electric pump for the new well were evaluated in the Air Quality and Greenhouse Gas Analysis prepared for the Project (WEBB-A) and calculated using the net increase in annual electricity consumption from the new well and the 2020 SCE carbon intensity data. In 2020, the existing well used approximately 618 MWh. Based on the estimated increase in well capacity, the electricity consumption is estimated to increase by 675 MWh per year. Therefore, the resulting net increase in GHG emissions from operation of the proposed well will be approximately 120 $MTCO_2E$ per year.

The proposed Project does not fit into the categories provided (industrial, commercial, and residential) in the draft thresholds from SCAQMD. The Project's emissions were compared to the 3,000 $MTCO_2E$/yr threshold for non-industrial projects because it is more conservative. Since the draft SCAQMD GHG threshold guidance document released in October 2008 (SCAQMD-E) recommends that construction emissions be amortized for a project lifetime of 30 years, the total GHG emissions from Project construction were amortized and added to the operational GHG emissions for the Project. The total Project-generated GHG emissions from amortized construction and operational activities described above are approximately 128 $MTCO_2E$ per year, which is below the SCAQMD recommended screening level of 3,000 $MTCO_2E$/yr. Due to the estimated amount of emissions from Project construction and increased well pump electricity usage as well as negligible operational emissions from infrequent maintenance vehicles, the proposed Project will not generate GHG emissions that exceed the screening threshold.

Thus, the proposed Project will not generate significant amounts of GHG emissions and this impact is considered to be less than significant. No mitigation is required.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP Air Quality Element goal AQ 1, which is set forth under the response to Threshold 3a, the JVGP includes the following policies to minimize GHG emissions to the greatest extent practicable: (JVGP p. 6-18.)

Policies

AQ 9.1 *State and Regional Plans and Programs. Monitor federal, state, and regional plans and programs to stay abreast on emerging information, practices, and strategies to address climate change.*

AQ 9.2 *Critical Infrastructure. Locate critical infrastructure in areas not subject to severe climate change impacts, such as flooding.*

AQ 9.3 *Climate Action Plan. Work with WRCOG to periodically monitor and update the Subregional Climate Action Plan.*

AQ 9.4 *Vulnerability. Develop strategies to reduce the City's vulnerability to climate change impacts.*

According to the *JVGP EIR*, human activities contribute to increasing concentrations of GHG in the atmosphere. Future new development per the JVGP could directly or indirectly contribute to the generation of GHG emissions from construction activities, gas, electricity, and water use, solid waste disposal, and motor vehicle use. The analysis in the *JVGP EIR* indicates Jurupa Valley is expected to generate a total of 717,018 $MTCO_2E$ at buildout, which is less than the City's GHG efficiency goal of 719,706 $MTCO_2E$.[10] The *JVGP EIR* concluded that although implementation of the above JVGP goal and policies along with the additional goals, policies, and programs in the JVGP regarding air quality, pollution, energy conservation, water conservation, etc. would substantially reduce potential GHG emissions from development per the JVGP, impacts would not be reduced to less than significant levels. Since no CEQA document was prepared for the Western Riverside County Sub-Regional Climate Action Plan, the *JVGP EIR* included mitigation measure 4.7.5.2A to reduce potential GHG emissions more effectively as Jurupa Valley builds out under the JVGP. (JVGP DEIR, pp. 4.7-29, 4.7-33–4.7-35.) Thus reasonably foreseeable impacts associated with implementation of the JVGP would be less than significant with mitigation.

4.5.7.2A *Within two years of General Plan approval, the City will prepare and adopt a Climate Action Plan (CAP) specifically for the City of Jurupa Valley, including a 2030 and 2035 reduction target and local emission inventory. The City CAP will be consistent with the WRCOG Subregional CAP but will identify specific additional measures in*

[10] Jurupa Valley efficiency goal is calculated by the Buildout service population (total residents plus workers) multiplied by 4.1. Service population = 126,000 residents + 49,538 employees = 175,538 multiplied by 4.1 = 719,706 (rounded to nearest whole number).

addition to those outlined in various elements of the General Plan for the reduction of future GHG emissions. The City CAP shall demonstrate how the City will reduce its greenhouse gas emissions to 50 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, consistent with State law and current guidance on GHG reduction planning.

Specific actions that may be included in the City CAP to help keep City-wide emissions below the SCAQMD service population significance threshold include but are not limited to requiring the installation of electrical and conduit improvements to support the installation of future roof-mounted photovoltaic solar systems and electrical vehicle charging stations for individual homes and businesses.

In addition to EGP Land Use policy LU-9, which is set forth under the response to Threshold 4b, and Land Use, Conservation and Air Quality policies LU-11, LU-12, LU-16, C-15 through C-21, C-25, C-26, and AQ-4, which are set forth under the response to Threshold 3a, these chapters of the EGP also include the following policies to address Eastvale's contribution to GHG emissions. (EGP DEIR p. 3.5-13–3.5-16.)

Policies

LU-16	*The City will allow mixed-use projects to develop in commercially designated areas in accordance with the guidelines of the Town Center land use designation and with special consideration of impacts to adjacent uses.*
LU-16	*The City supports the placement of community-oriented facilities, such as telecommuting centers, public meeting rooms, day care facilities, and cultural uses in Eastvale in locations compatible with surrounding uses and consistent with the goals and policies of this General Plan.*
LU-28	*The Land Use Map should provide for land use arrangements that reduce reliance on the automobile and improve opportunities for pedestrian, bicycle, and transit use in order to minimize congestion and air pollution.*
LU-29	*Employment and service uses should be located in areas that are easily accessible to existing or planned transportation facilities.*
LU-30	*Commercial uses should be located near transportation facilities and include facilities to promote the use of public transit (such as bus turnouts. bus shelters, etc.).*
C-6	*Support the Riverside County Transportation Commission (RCTC) on the development of the Short- and Long-Range Transit Plans.*

C-8	*Encourage the installation and use of HOV lanes on regional roadways and consider the use of HOV lanes when any widening project is undertaken on urban arterials.*
C-11	*Alternative levels of service may be allowed on intersections in planned development or simi/or identified mixed-use areas that demonstrate links to transit, trails, and alternative transportation and comfortable walking distance to goods and services.*
AQ-10	*The City encourages new cooperative relationships between employers and employees to reduce vehicle miles traveled.*
AQ-11	*The City encourages large employers and commercial/industrial complexes to create Transportation Management Associations.*
AQ-12	*The City encourages employee rideshare and transit incentives for employers with more than 25 employees at a single location.*
AQ-18	*Support local, regional, and statewide efforts to reduce emissions of greenhouse gases linked to climate change.*
AQ-19	*Analyze and mitigate, to the extent feasible, potentially significant increases in greenhouse gas emissions during project review, pursuant to the California Environmental Quality Act.*
AQ-20	*Continue to support the planting and maintenance of trees in the community to increase carbon sequestration.*
AQ-26	*Permit and encourage the use of passive solar devices and other state-of-the-art energy conservation measures.*
AQ-29	*Undertake proper maintenance of the City's physical facilities to ensure that optimum energy conservation is achieved.*
AQ-30	*Promote coordination of new public facilities with mass transit service and other alternative transportation services, including bicycles, and design structures to promote mass transit, bicycle, and pedestrian use.*
AQ-31	*The City encourages urban design measures that support alternatives to private automobile use.*
AQ-32	*Utilize source reduction, recycling, and other appropriate measures to reduce the amount of solid waste disposed of in landfills.*
AQ-33	*The City encourages the incorporation of energy-efficient design elements beyond code requirements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.*

AQ-34 *The City shall review all development proposals to ensure that all services and utilities can be provided in an energy-efficient and effective manner.*

AQ-35 *The City shall promote energy-efficient retrofit improvements in existing buildings.*

AQ-36 *The City shall support the inclusion of energy-efficient design and renewable energy technologies in public and private projects.*

According to the *EGP EIR*, all construction projects can produce GHG emissions; however, all future development projects under the EGP would be subject to SCAQMD rules and regulations in effect at the time of construction and comply with EGP policy AQ-19, which requires analysis and mitigation during project review pursuant to CEQA. (EGP DEIR, p. 3.5-17.)

Implementation of the EGP is anticipated to result in residential and non-residential (retail, commercial, office, industrial, and other uses) development, which will generate operational GHG emissions from gas, electricity, and water use, solid waste disposal, and motor vehicle use. The analysis in the *EGP EIR* indicates Eastvale is expected to generate a total of 919,872 $MTCO_2E$ at buildout. Based on a buildout service population of 68,671,[11] the resulting $MTCO_2E$ ratio per service population is 13.4, which is greater than the 6.6 $MTCO_2E$/service population ratio threshold. (EGP DEIR, p. 3.5-18.)

The majority of the estimated GHG emissions generated at Eastvale buildout result from mobile emissions. Although the EGP includes policies such as LU-14, LU-29, C-11 and C-29, to encourage projects located in proximity to transmit, trails, alternative transportation, and walking distance to goods and services to promote compact development. The intent of these policies are the reduce vehicle miles traveled and in turn reduce GHG emissions generated from mobile sources. Even with implementation of these and other EGP policies, GHG emissions at buildout would exceed emissions in excess of the SCAQMD threshold; and impacts regarding GHG emissions are considered a significant and unavoidable impact related to the buildout of the EGP. (EGP DEIR, p. 3.5-17–3.5-18.) This is not a direct significant impact resulting from the proposed Project.

For the reasons set forth in the preceding paragraphs, direct impacts regarding GHG emissions would be less than significant, and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

8b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Direct Impacts

Less Than Significant Impact. As the proposed Project involves the construction of public utility improvements, it is not considered a significant source of operational GHG emissions. The

[11] Service population at buildout = 61,698 population + 6.973 jobs = 68,671

Project will not result in any changes to the existing land use patterns within the Project area and its construction does not generate significant amounts of GHG (refer to **Table 9**); therefore, the Project will not conflict with any applicable plan, policy, or regulation for the reduction in GHG emissions. Impacts are considered to be less than significant. No mitigation is required.

Potential Reasonably Foreseeable Indirect Impacts

JVGP Air Quality Element goal AQ 1 and policies AQ 9.1, AQ 9.2, AQ 9.3, and AQ 9.4 which are set forth in the response to Threshold 3a are intended to reduce GHG emissions resulting from implementation of the JVGP to the greatest extent practicable.

The *JVGP EIR* concluded the JVGP is not considered to be in conflict with GHG reduction goals under Assembly Bill 32, the "Global Warming Solutions Act" or other state regulations. (JVGP DEIR, p. 4.7-25.). The *JVGP EIR* also concluded that with implementation of the JVGP goal and policies identified in the preceding paragraph, which will help Jurupa Valley comply with the requirements of the Western Riverside Council of Governments (WRCOG) Subregional Climate Action Plan, implementation of the JVGP would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. (JVGP DEIR, p. 4.7-28.)

According to the *EGP EIR*, the EGP identified two important steps to reduce climate change impacts, creation of an inventory of existing GHGs and a plan to reduce these emissions. A Climate Action Plan (CAP) is a guiding document to identify ways in which a city, county, or community adapt to the inevitable effects of climate change. The *EGP EIR* concluded that because Eastvale has not developed a CAP, the eventual requirements, and their resulting effects on future GHG impacts cannot be known; therefore the *EGP EIR* includes mitigation measure MM 3.5.2. (EGP DEIR, p. 3.5-20.)

MM 3.5.2 Add the following Implementation Item to the Air Quality and Conservation Chapter of the General Plan:

"Implementation Item AQ-18.1: As funding permits the City will prepare a greenhouse gas inventory and climate action plan designed to reduce greenhouse gasses. The City may also participate in a regional climate action plan prepared by other. Until a climate action plan is adopted each project shall evaluate its impact on greenhouse gasses as part of the environmental process."

The *EGP EIR* concluded that while implementation of an upcoming CAP could potentially mitigate GHG emissions projected for build-out conditions consistent with the reduction goal of AB 32, the proposed EGP has acknowledged that embarking on the process of CAP development is unable to occur at this time. Thus, this is considered a significant and unavoidable impact related to the buildout of the EGP. (EGP DEIR, p. 3.5-20.) This is not a direct significant impact resulting from the proposed Project.

For the reasons set forth in the preceding paragraphs, direct impacts regarding conflicts with an applicable plan, policy, or regulation for the reduction in GHG emissions would be less than significant, and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

9. Hazards/Hazardous Materials	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

(Sources: ALUC*, CCR Title 13 Sections 1160-1167; CFR Title 49 Parts 171-180;* DTSC EnviroStor; EGP, JVGP, JVGP DEIR*, JVGP Figure 8-10 − Wildfire Severity Zones in Jurupa Valley;* JUSD; NOP, ONT ALUCP; PRC*)*

9a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Direct Impacts

Less than significant impact. Construction of Well 30 and deconstruction of Well 19 would include the transport of fuels, lubricants, and various other liquids for operation of construction equipment. These materials will be transported to the Project Site by equipment service trucks. In addition, workers will commute to the Project via private vehicles and will operate construction vehicles and equipment on public streets. A number of federal and state agencies prescribe strict regulations for the safe transportation of hazardous materials. Hazardous material transport, storage and response to upsets or accidents are primarily subject to federal regulation by the U.S. Department of Transportation, Office of Hazardous Materials Safety in accordance with Title 49 of the Code of Federal Regulations (CFR). California regulations

applicable to hazardous material transport, storage, and response to upsets or accidents are codified in Title 13 (Motor Vehicles), Title 8 (Cal/OSHA), Title 22 (Management of Hazardous Waste), Title 26 (Toxics) of the California Code of Regulations (CCR), and the Chapter 6.95 of the Health and Safety Code (Hazardous Materials Release Response Plans and Inventory). These hazardous materials regulations were established at the state level to ensure compliance with federal regulations intended to reduce the risk to human health and the environment from the routine use of hazardous substances. Compliance with the measures is intended to significantly reduce a project's risk to the environment. To ensure that workers and others at the well sites encompassed by the Project are not exposed to unacceptable levels of risk associated with the use and handling of hazardous materials, JCSD is required to implement existing hazardous materials regulations, with compliance monitored by state (e.g., OSHA in the workplace or DTSC for hazardous waste) and local jurisdictions. Compliance with existing safety standards related to the handling, use, and storage of hazardous materials, and compliance with the safety procedures mandated by applicable federal, state, and local laws and regulations (as noted above) would be required for JCSD. Compliance with all applicable laws and regulations regarding the transportation, use, storage, and response to upsets or accidents that may involve hazardous materials would reduce the likelihood and severity of upsets and accidents during transit and storage. Therefore, potential impacts in this regard would be less than significant. No mitigation is required.

Potential Reasonably Foreseeable Indirect Impacts

The following goal and policies of the JVGP Community Safety, Services, and Facilities Element, Land Use Element, and Environmental Justice Element are intended to protect the public from potential impacts resulting from the routine transport, use, or disposal of hazardous materials. (JVGP, pp. 2-38, 2-41, 2-42, 8-3, 8-20–8-22, 9-10–9-11.)

Goal CSSF 1 *Minimize risks resulting from natural and manmade hazards to its residents and businesses.*

Policies

CSSF 1.31 *Federal/State Laws. Comply with federal and state laws regarding the management of hazardous waste and materials.*

CSSF 1.32 *Hazardous Waste Storage/Disposal. Identify, assess, and mitigate safety hazards from the storage, use, and disposal of hazardous materials.*

CSSF 1.33 *Hazardous Waste Collection. Encourage and, as resources allow, support household hazardous waste collection activities.*

CSSF 1.34 *Stringfellow Remediation Site. Encourage and support state and federal efforts to complete the clean-up of the Stringfellow Remediation Site and related groundwater and soil contamination.*

CSSF 1.35 *Information Dissemination. Disseminate information to the public on the storage, use, and disposal of hazardous materials through working with non-agencies, special districts and other agencies and organizations.*

CSSF 1.36 Multi-Hazard Functional Plan. Strengthen the Multi- Hazard Functional Plan and maintain mutual aid agreements with federal, state, local agencies and the private sector to assist in:

1. *clearance of debris in the event of widespread slope failures, collapsed buildings or structures, or other circumstances that could result in blocking emergency access or regress;*
2. *heavy search and rescue;*
3. *fire suppression;*
4. *hazardous materials response;*
5. *temporary shelter;*
6. *geologic and engineering needs;*
7. *traffic and crowd control; and*
8. *building inspection.*

CSSF 1.37 Hazardous Waste Handling. Require businesses, utilities, and industrial facilities that handle hazardous materials to:

1. *install automatic fire and hazardous materials detection, reporting, and shut-off devices; and*
2. *install an alternative communication system in the event power is out or telephone service is saturated following an earthquake.*

LUE 3.5 Residential Compatibility. Commercial uses abutting residential properties shall be designed to protect the residential use from the impacts of noise, vibration, light, fumes, odors, vehicular traffic, parking, and safety hazards.

LUE 3.17 Toxic Materials. Prohibit the development of industrial and business park uses that use, store, produce, or transport toxic substances, or that generate unacceptable levels of noise or air pollution.

LUE 4.3 Locations. Locate and design new public facilities to protect sensitive uses, such as schools and housing, from impacts due to noise, vibration, light, fumes, odors, and vehicular traffic, parking and safety hazards.

EJ 2.8 Separation of Uses. Build new sensitive land uses with sufficient buffering from industrial facilities and uses that pose a significant hazard to human health and safety. The California ARB recommends that sensitive land uses be located at least 1,000 feet from hazardous industrial facilities.

EJ 2.11 Toxic Emissions. Ensure that low-income and minority populations understand the effect of projects that may use or generate toxic materials or emissions.

According to the *JVGP EIR*, as buildout of Jurupa Valley occurs, there is a possibility that future development, especially industrial projects, could accidentally release hazardous materials

during routine use, transport, or disposal. The most likely method of release would be a traffic accident involving one or more vehicles hauling hazardous materials. Additionally, there are many vacant parcels which could be the site of earlier development or unknown dumping of potentially hazardous materials. Many properties in Jurupa Valley were developed prior to existing federal and state laws and regulations regarding hazardous materials. As redevelopment of such properties occur, there is a possibility that hazardous materials such as asbestos, lead-based paint, etc. could be encountered. (JVGP DEIR, p. 4.8-13.)

Regarding creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials resulting from buildout per the JVGP, the *JVGP EIR* concluded:

> *With implementation of the identified General Plan goals and policies above, in addition to enforcement of compliance with federal and state laws and regulations regarding transport, use, or disposal of hazardous materials, potential hazardous waste impacts to people and the environment from development within the City will be reduced to less than significant levels and no mitigation is required.* (JVGP DEIR, p. 4.8-14.)

Regarding creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials resulting from buildout per the EGP, the NOP for the *EGP EIR* states:

> *Construction and operation of new industrial and commercial businesses within the City could result in greater quantities of hazardous materials being transported on the City's roadway system (compared to existing levels). Transport of such materials would be subject to Federal Motor Carrier Safety Administration (FMCSA) regulations concerning highway routing of hazardous materials, hazardous materials endorsements for a commercial driver's license, highway hazardous material safety permits, and financial responsibility requirements for motor carriers of hazardous materials. CCR Title 26, Division 6, which would be enforced by the California Highway Patrol (CHP) on state highways, requires strict adherence to regulations designed to prevent leakage and spills of material in transit and provides detailed information to cleanup crews in the event of an accident. Compliance with these existing regulations would ensure that a significant hazard is not created through the transport of hazardous materials through the City.* (NOP, p. 22.)

For the reasons set forth above, direct impacts regarding a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

9b. 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?

Direct Impacts

Less than significant impact. Given that the Project site is approximately one acre in size and the types of hazardous materials needed during construction and operation, hazardous materials on site would not be present in any significant quantity and any spill is likely to be easily contained. Moreover, use of these materials will be conducted in accordance with all applicable federal and state laws, which includes requirements for secondary containment of hazardous materials and appropriate spill response procedures. Sodium hypochlorite (also known as chlorine) will be produced at a 0.8 percent solution as part of Project operations. This will take place in the chemical storage building on the proposed Well 30 Site. The chemical storage building will include 110 percent secondary containment so that in the event of an accidental release of chlorine, it will be totally contained within the chemical storage building until cleaned up by JCSD personnel. Additionally, the chemical storage building will be locked when JCSD personnel are not on site. Therefore, impacts regarding the release of hazardous materials would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

Regarding potential reasonably foreseeable indirect impacts resulting from buildout of Jurupa Valley per the JVGP, refer to the response to Threshold 9a.)

The following polices from the EGP Safety Chapter are intended to prevent foreseeable releases of hazardous materials into the environment and if such as release occurs, respond appropriately. (EGP, pp. 12-14–12-15.)

<u>Policies</u>	
S-12	*The City will work with responsible agencies to identify and prevent potential hazardous waste releases.*
S-15	*The City will coordinate with all appropriate local, county, state, and federal agencies in hazardous materials route planning, notifications, and incident response to ensure appropriate first response to hazardous material incidents.*

Regarding the reasonably foreseeable release of hazardous materials into the environment, the EGP includes policies that require identification and prevention of potentially hazardous waste releases, regulation of storage of hazardous materials, coordination with federal, state and other local agencies to assist in hazardous materials response, and specific requirements for private facilities that handle hazardous materials. The NOP for the *EGP EIR* concluded that implementation of the above EGP policies would ensure that a significant hazard is not created through reasonably foreseeable upset and accident conditions. Therefore, this impact would be less than significant. (NOP, p. 22.)

For the reasons set forth in the preceding paragraphs, direct impacts regarding the creation of significant hazards to the public or the environment through reasonably foreseeable release of

hazardous materials into the environment would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

9c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter-mile of an existing or proposed school?

Direct Impacts

No impact. The Project Site is within the boundaries of the Jurupa Unified School District (JUSD), however there are no schools within a one-quarter mile from the Project Site. The closest existing school is Colony High School, which is approximately 2.5 miles southwest of the Project Site. As such, no impacts would occur.

Reasonably Foreseeable Indirect Impacts

The following policies from the JVGP Land Use Element and Environmental Justice Element are intended to protect of sensitive land uses such as schools. (JVGP, pp. 2-42, 9-10.)

<u>Policies</u>	
LUE 4.3	*Locations. Locate and design new public facilities to protect sensitive uses, such as schools and housing, from impacts due to noise, vibration, light, fumes, odors, and vehicular traffic, parking and safety hazards.*
EJ 2.8	*Separation of Uses. Build new sensitive land uses with sufficient buffering from industrial facilities and uses that pose a significant hazard to human health and safety. The California ARB recommends that sensitive land uses be located at least 1,000 feet from hazardous industrial facilities.*

Neither the City of Jurupa Valley or the City of Eastvale has any authority regarding the location, design, or construction of school facilities as that authority rests with the Jurupa Valley Unified School District (JUSD) and the Corona-Norco Unified School District (CNUSD).

Jurupa Valley works cooperatively with JUSD and CNUSD in the design of roads, and other public improvements in and around school sites and are responsible for fire, police, and public safety concerns involving all facilities within Jurupa Valley, including schools. Regarding the emission of hazardous emissions or handling hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school, the *JVGP EIR* concluded:

> *Compliance with federal and state laws and regulations related to hazardous waste and implementation of JVGP policies above regarding the separation of new public facilities and sensitive land uses will reduce potential impacts to less than significant. (JVGP DEIR, pp. 4.8- 23–4.8-24.)*

The following policy from the EGP Land Use Chapter addresses siting new public facilities in proximity to sensitive uses, including schools. (EGP, p. 3-19.)

> Policy
> LU-36 *The City shall require that new public facilities protect sensitive uses, such as schools and residences, from the impacts of noise, light spillover, fumes, odors, vehicular traffic, parking, and operational hazards.*

The NOP for the *EGP EIR* concluded that buildout per the EGP would result in residential and nonresidential development that may use hazardous materials within one-quarter miles of an existing or proposed school. Through compliance with existing federal and state laws and EGP policies, impacts would be less than significant. (NOP, pp. 22-23.)

For the reasons set forth in the preceding paragraphs, there would be no direct impacts regarding handling hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

9d. 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?

Direct Impacts

No impact. The proposed Project Site is not listed in the Department of Toxic Substances Control (DTSC) EnviroStor Hazardous Waste and Substances Site List (Cortese). The DTSC's EnviroStor data management system for tracking cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known contamination does not identify active cases near within a one mile radius of the Project Site. As such, no impacts will occur.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP goal CCSF 1 and polices CSSF 1.31 and CSSF 1.34 set forth in the response to Threshold 9a, the JVGP Land Use Element also includes the following policy addressing potential projects on hazardous sites. (JVGP, p. 2-64.)

> Policy
> LUE 5.44 *Special Development Requirements. In addition to the commercial and industrial development policies within this text, development proposals within the Overlay must meet the following requirements:*
> 1. *Piped water and domestic sewer service shall be provided.*
> 2. *Clearance from the appropriate state authorities must be provided and must indicate that all significant hazards have been abated and the proposed project can occur without jeopardizing public health and safety, or that any proposed cleanup plans have been determined adequate by the state to permit development of the site.*

3. *In general, only commercial and industrial uses, which do not consist of a high concentration of people, shall be permitted within this area. A residence for an on-site caretaker shall not be permitted without clearance from the state.*

According the *JVGP EIR*, Jurupa Valley hazardous materials include petroleum products, solvents, pesticides and other substances used in or generated by commercial, industrial, agricultural or residential activities. State and federal laws govern the storage, transport and disposal of hazardous materials. Implementation of the JVGP goals and policies above and compliance with local, state, and federal laws and regulations regarding hazardous waste sites would further reduce impacts; mitigation is not required. (JVGP DEIR, pp. 4.8-14–4.8-15.)

The following policy from the EGP Safety Chapter is are associated with future buildout on hazardous materials sites. (EGP, p. 12-14.)

Policy	
S-14	*The City will work with responsible agencies to ensure that all industrial facilities are constructed and operated in accordance with the most current safety and environmental protection standards.*

The City of Eastvale will closely monitor sites to ensure that all facilities are constricted and operated in accordance with local, state and federal law. Through compliance with regulations and policies outlined in the EGP the impact would be less than significant. (EGP NOP, p. 23.)

For the reasons set forth in the preceding paragraphs, no significant hazard will be created to the public or the environment through hazardous material sites. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and EGP NOP.

9e. 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?

Direct Impacts

Less than significant impact. The Project Site is approximately 4 miles southeast of the Ontario International Airport (Airport) and is within Policy Boundaries of the *Ontario International Airport Policy Plan.* (ONT ALUCP, Policy Map 2-1.) The Project Site is not within an Airport Safety Zone. (ONT ALUCP, Policy Map 2-2.) The Project Site is within the Airport's 60 dB CNEL noise contour. (Policy Map 2-3.) The 60 dBA CNEL is not considered excessively loud. For these reasons, impacts regarding airport safety hazards or exposure to excessive noise would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

The following policies from the Land Use Element of the JVGP are specifically regarding airport compatibility and safety. (JVGP, p. 2-67–2-70, 2-74.)

Policies

LUE 5.55 *ALUP Compliance. Provide for the orderly operation and development of Flabob and Riverside Municipal Airports and the surrounding area by complying with the Airport Land Use Compatibility Plan as set forth in Appendix 4.0, as well as any applicable policies related to airports in the Land Use, Circulation, Safety, and Noise Elements of the 2017 General Plan, unless the City Council overrides the Plan as provided for in state law.*

LUE 5.56 *Development Review. Refer all major land use actions to the Airport Land Use Commission for review, pursuant to Policy 1.5.3 of the ALUP until: 1) the Commission finds the City's General Plan to be consistent with the ALUP, or 2) the City Council has overruled the Commission's determination of inconsistency, or 3) the Commission elects not to review a particular action.*

LUE 5.57 *Continued Airport Operation. Support the continued operation of Flabob and Riverside Municipal Airports to help meet airport services needs within the land-use compatibility criteria with respect to potential noise and safety impacts.*

LUE 5.58 *Consistency Requirement. Review all proposed projects and require consistency with any applicable provisions of the Riverside County Airport Land Use Compatibility Plan as set forth in Appendix A-4.0, and require General Plan and/or Zoning Ordinance amendments to achieve compliance, as appropriate.*

LUE 5.59 *ALUP Amendments. Review all subsequent amendments to any airport land-use compatibility plan and either adopt the plan as amended or overrule the Airport Land Use Commission as provided by law (California Government Code §65302.3).*

LUE 5.60 *General Plan Adoption or Amendment. Prior to the amendment of this General Plan or any specific plan, or the adoption or amendment of a zoning ordinance or a building regulation within the planning boundary of any airport land use compatibility plan, the City will refer such proposed actions for determination and processing as provided by the Airport Land Use Law.*

LUE 5.61 *Cluster Development. Allow the use of development clustering and/or density transfers to meet airport compatibility requirements as set forth in the applicable Airport Land Use Compatibility Plan.*

LUE 5.62 *Bird-attracting Uses. In accordance with FAA criteria, avoid locating sanitary landfills and other land uses that attract birds within 10,000 feet of any runway used by turbine-powered aircraft and within 5,000 feet of other runways. Also, avoid locating attractors of other wildlife that can be hazardous to aircraft operations in locations adjacent to airports.*

LUE 5.63 *Encroachment. Ensure that no structures or activities encroach upon or adversely affect the use of navigable airspace.*

LUE 5.64 *Voluntary Review. The City, from time to time, may elect to submit proposed actions or projects voluntarily that are not otherwise required to be submitted to the ALUC under the Airport Land Use Law in the following circumstances*

1. *Clarification: If there is a question as to the purpose, intent, or interpretation of an Airport Land Use Compatibility Plan (ALUCP) or its provisions; or*
2. *Advisory: If assistance is needed concerning a proposed action or project relating to Airport Land Use matters.*

LUE 5.65 *Airport Referrals. Submit all development proposals located within an Airport Influence Area to the affected airport for review.*

LUE 8.1 *Land Use Compatibility. Require land to be developed and used in accordance with the General Plan, specific plans, and community and town center plans to ensure compatibility and minimize impacts.*

The safety zones of two public airports, Riverside Municipal Airport and Flabob Airport overlap portions of Jurupa Valley. Flabob Airport is located in the eastern portion of the Jurupa Valley north of the Santa Ana River. Riverside Municipal Airport is located south of the eastern portion of Jurupa Valley across the Santa Ana River. (JVGP DEIR, p. 4.8-23.) The Riverside County Airport Land Use Commission has prepared Airport Land Use Compatibility Plans (ALUCPs) for both of these airports. (ALUC.)

The JVGP establishes clear parameters for planning and guidance for future development of vacant land or redevelopment of existing land within the influence areas of Flabob Airport and Riverside Municipal Airports. Specifically, JVGP policies LUE 5.53 and LUE 5.56 require new development to comply with the provisions of the airport land use compatibility plans. With implementation of these policies, and adherence to the local, state, and federal laws and regulations new development in Jurupa Valley will have less than significant impacts regarding airport compatibility and safety. (JVGP DEIR, pp. 4.8-16, 4.8-23.)

The following polices from the EGP Safety Chapter are associated with airport compatibility and safety and future development per the EGP. (EGP, p. 12-16.)

<u>Policies</u>

S-18 *The City shall consider the compatibility criteria in the Airport Land Use Compatibility Plan for Chino Airport in the review of potential land uses or projects within the area affected by the airport. Projects shall be approved only where consistency with the compatibility criteria in the Airport Land Use Compatibility Plan can be demonstrated.*

S-19 *The City shall ensure that new development near the Chino Airport is designed to protect public safety from airport operations consistent with recommendations and requirements of the Airport Land Use Commission, the Federal Aviation Administration, and other responsible agencies. It*

shall be the City's intent to comply with all state laws related to airport land use planning.

The northwestern corner of Eastvale is located within the Chino Airport Comprehensive Land Use Plan (CLUP). EGP policy S-18 sets forth Eastvale's intent to consider the recommendations provided by the CLUP. Through compliance with the recommendations stated in the CLUP and the above EGP polices, impacts regarding airport compatibility and safety would be less than significant. (EGP NOP, p. 23.)

For the reasons set forth in the preceding paragraphs, no impacts to airport compatibility and safety are anticipated. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and EGP NOP.

9f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Direct Impacts

Less than significant impact. Jurupa Valley's Emergency Operations Plan (EOP) addresses four primary phases of emergency operation including Preparedness, Response, Recovery, and Mitigation. (JVGP, p. 8-21.) The Jurupa Valley EOP does not identify evacuation routes. Other than connecting to an existing pipeline in Philadelphia Avenue, the Project does not include any off site improvements. Project-related construction and destruction activities would be largely confined to the Project Site and lane closures are not anticipated. In the event a lane closure is needed, JCSD would be required to obtain an encroachment permit(s) from the Jurupa Valley Public Works Department. As part of the encroachment permit process, a traffic control plan that provides adequate pass-by features for emergency vehicles would be prepared by JCSD and approved by Jurupa Valley. The traffic control plan shall provide adequate pass-by features for emergency vehicles. Through compliance with the conditions of the encroachment permit(s), the ability of emergency vehicles to pass by the Project Site safely, efficiently, and quickly would not be limited. Therefore, impacts related to the interference with an adopted emergency response plan or emergency evacuation plan would be less than significant and no mitigation is required.

Potential Reasonably Foreseeable Indirect Impacts

JVGP policy CSSF 1.36, set forth in the response to Threshold 9a, indicates Jurupa Valley's intent to strengthen the existing Multi-Hazard Functional Plan and continue to cooperate with federal, state, and local agencies regarding emergency response. Implementation of policy CSSF 1.36 and compliance with the California Emergency Services Act will facilitate the protection of health and safety and preserve the lives and property of the people of California. Therefore, impacts would e less than significant and mitigation is not required. (JVGP DEIR, pp. 4.8-24–4.8-25.)

The EGP NOP concluded that consistency of Land Use Map and Circulation Maps within City limits would not create any new conflicts with already adopted County's Emergency Operation Plan. Therefore, no impact would occur. (EGP NOP, p. 23.)

For the reasons set forth in the preceding paragraphs, direct impacts to evacuation plans and emergency routes would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

9g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*)*

Direct Impacts

Less than significant impact. As discussed in the response to Threshold 20, Wildfire, the Project Site is not within any wildfire hazard severity zone. (JVGP, p. 8-17.) The Project site is surrounded by existing industrial development and Project implementation would present no additional fire risk to these existing structures. Further, Project implementation is not likely to result in fires and would not include prohibited activities pursuant to Public Resources Code (PRC) Sections 4421-4446. The Project will replace Well 19 and serve JCSD's 980 PZ and 1110 PZ (**Figure 1 – Water System Pressure Zones)**. None of the 1110 PZ is within a wildfire hazard severity zone. The 980 PZ is adjacent to the Jurupa Mountains, which is a very high fire hazard zone. (CalFire; JVGP DEIR, Figure 4.8.5.) However; as shown on **Figure 1**, the Jurupa Mountains are not within JCSD's water service area.

As discussed under the Purpose and Need subheading in Section 1 Introduction, the Project is providing a potable water source to meet future water demand within the 980 PZ and 1110 PZ to accommodate planned and expected growth within JCSD's service area. Based on buildout of the General Plan Land Use Plans for Eastvale and the portion of Jurupa Valley within JCSD's service area and the updated information provided by the respective Planning Departments, JCSD's *2020 UWMP* projected the JCSD service area population at approximately 171,300 persons. This projection is based on buildout at medium or "mid-range" density. (JCSD 2020 UWMP, p. 3-20.)

Because JCSD's. Well 30 is expected to supply average year, single dry and multiple-dry year demands for growth planned within JCSD's water service area consistent with the land use plans of the cities of Eastvale and the portion of Jurupa Valley within the water service area (UWMP, pp. 6-24, 6-26), the Project will not directly induce unplanned population growth in fire-prone areas. Therefore, the Project's impacts with regard to exposing people or structures to wildland fire hazards would be less than significant. No mitigation is required.

Potential Reasonably Foreseeable Indirect Impacts

The following policies from the JVGP Community Safety, Services and Facilities Element are intended to reduce injury or death involving wildland fires. (JVGP, p. 8-18 - 8-19.)

Policies

CSSF 1.23 Fire Prevention. Develop and enforce construction and design standards that ensure that proposed development incorporates fire prevention features through the following:

1. All proposed construction shall meet minimum standards for fire safety as defined in the City Building or Fire Codes, or by City zoning, or as

dictated by the Building Official or the Transportation Land Management Agency based on building type, design, occupancy, and use.

2. *In addition to the fire safety provisions of the Uniform Building Code and the Uniform Fire Codes, apply additional standards for high risk, high occupancy hospital and health care facilities, dependent care, emergency operation centers, and other essential or "lifeline" facilities, per county or state standards. These shall include assurance that structural and nonstructural architectural elements of the building will not:*
   a. *impede emergency egress for fire safety staffing/personnel, equipment, and apparatus; nor*
   b. *hinder evacuation from fire, including potential blockage of stairways or fire doors.*
3. *Proposed development in Hazardous Fire areas shall provide secondary public access, unless determined unnecessary by CAL FIRE or City Building Official.*

CSSF 1.24 *Adjacent Natural Vegetation. Development that adjoins large areas of native vegetation will require drought tolerant landscaping that blends with the natural vegetation to the greatest extent possible.*

CSSF 1.25 *Wildfire Hazards. Encourage and, as resources allow support CAL FIRE and other agency efforts to reduce wildfire hazards and improve fire-fighting capacity to successfully respond to multiple fires.*

CSSF 1.29 *Water Resources. Encourage and, as resources allow, support efforts to utilize existing water bodies, tanks, and water wells in the City for emergency fire suppression water sources.*

CSSF 1.30 *Brush Clearance. Utilize ongoing brush-clearance fire inspections to educate homeowners on fire prevention tips.*

The JVGP DEIR concluded that implementation of the polices mentioned above would reduce risks of potential wildland fire to less than significant levels. (JVGP DEIR, p. 4.8-29.)

The EGP NOP stated that the City of Eastvale is located in an urbanized area with minimal undeveloped land that would be a significant wildland fire risk. Therefore, impacts resulting from buildout per of the EGP would be less than significant. (EGP NOP, p. 23.)

For the reasons set forth in the preceding paragraphs, direct impacts regarding injury or death involving wildland fires would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

10. Hydrology and Water Quality	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that 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 on- 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?	☐	☐	☐	☒

(Sources: Basin Plan; County of Riverside Department of Environmental Health; California Department of Public Health Geoscience B; EGP; EGP DEIR; JCSD Manual; Judgement; JVGP; JVGP DEIR; JVGP Figure 8-9 Flood Insurance Rate Map; JVGP Figure 8-10 − Wildfire Severity Zones in Jurupa Valley; NOP; OBMP; PRC)

10a. Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?

Direct Impacts

Less than significant impact. Water quality standards are the combination of water quality objectives (i.e. numeric and narrative thresholds) that are established to protect the beneficial uses of downstream receiving waters. Well 30 is proposed to replace Well 19, which is currently providing a source of potable water to JCSD. Construction of Well 30 and destruction of Well 19 may result in the discharge of sediment and other construction byproducts. These construction and operational activities are regulated with NPDES permits containing waste discharge requirements for project proponents meet in order to protect downstream water bodies and ensure that surface and groundwater water quality standards are not violated. Construction-

phase stormwater quality is regulated by a statewide NPDES permit with waste discharge requirements (the Construction General Permit, Order 2009-0009-DWQ, NPDES No. CAS000002). The Construction General Permit requires the development of a SWPPP, for certain types of projects, by a certified Qualified SWPPP Developer (QSD) and implemented onsite by a Qualified SWPPP Practitioner (QSP) for the duration of construction. Permit coverage under the statewide Construction General Permit from the State Water Resources Control Board (SWRCB) and preparation of an effective SWPPP is required because the Project site and anticipated area of disturbance is greater than one-acre. During operation of Well 30, fresh water may be released periodically. Such releases originating from drinking water pipelines are regulated by Order No. R8-2015-0004 (NPDES No. CAG998001), General Waste Discharge Requirements for Insignificant Threat Discharges to Surface Waters and Order WQ 2014-0194-DWQ (NPDES No. CAG140001), Drinking Water System Discharges to Waters of the United States. Further, the Project entails potable water facilities and is subject to all requirements of the County of Riverside Department of Environmental Health and the California Department of Public Health, whichever is more restrictive. Through compliance with existing regulations to protect surface and groundwater quality, impacts resulting from construction and operation of the proposed Project would be less than significant.

Reasonably Foreseeable Indirect Impacts

In addition to JVGP goal COS 3 set forth in the response to Threshold 4a, the following policies of the JVGP Conservation and Open Space Element are intended to protect water quality in Jurupa Valley. (JVGP, p. 4-19.)

Policies

COS 3.9 *Pollution Discharge. Minimize pollutant discharge into storm drainage systems and natural drainage and aquifers.*

COS 3.11 *Aquifer Protection. Require that aquifer water-recharge areas are preserved and protected.*

COS 3.12 *Drainage Systems in Development Projects. Require that developers and designers incorporate natural drainage systems into development projects where appropriate and feasible.*

COS 3.13 *Storm Water Retention. Retain storm water at or near the site of generation for percolation into the groundwater to conserve it for future uses and to mitigate adjacent flooding.*

COS 3.14 *Natural Channels. Collaborate with the Riverside County Flood Control District to promote natural approaches to managing streams and avoid lined, non-porous channels to the maximum extent possible where groundwater recharge is likely to occur.*

Grading of vacant land to support future development consistent with the JVGP would disturb surface soils and remove vegetative cover, which could potentially result in erosion and sedimentation. Stockpiles and excavated areas would be susceptible to high rates of erosion from wind and rain and, if not managed properly, could result in increased sedimentation in local watercourses, including the Santa Ana River. Additionally, the delivery, handling, and storage of

construction materials and wastes, as well as the use of on-site construction equipment would also introduce a risk for storm water contamination. Short-term storm water pollutant discharges from each development site within Jurupa Valley would be mitigated through compliance with the required NPDES permits, which ensures that federal and state standards for clean water are met. (JVGP DEIR, p. 4.9-36–4.9-37.)

During the operational phase of any urban use developed per the JVGP, the major source of pollution in storm water runoff will be contaminants that have accumulated on the land surface over which runoff passes. Storm runoff from the roadways, parking lots, and commercial and residential buildings can carry a variety of pollutants such as sediment, petroleum products, commonly utilized construction materials, landscaping chemicals, and (to a lesser extent) trace metals such as zinc, copper, lead, cadmium, and iron, which may lead to the degradation of storm water in downstream channels. Runoff from landscaped areas may contain elevated levels of phosphorus, nitrogen, and suspended solids. Oil and other hydrocarbons from vehicles are also expected in storm water runoff. Most new development is required to prepare a Water Quality Management Plan (WQMP) which identifies pollutants and hydrologic conditions of concern that may be associated with the implementation of a particular development project. Potential project pollutants that are also a concern in receiving waters are pathogens, nutrients, sediments, toxic compounds. A WQMP prepared for a project identifies Best Management Practices (BMPs) to be implemented that will minimize a project's effects on site hydrology, urban runoff flow rates, and pollutant loads. Site specific WQMPs are required to use the methodology outlined in the programmatic WQMP for the Santa Ana Region of Riverside County. This comprehensive water quality approach, which establishes a three-tier program for achieving water quality goals through the enforcement of site design, source control, and treatment control BMPs, would be implemented for future development within Jurupa Valley. (JVGP DEIR, p. 4.9-38–4.9-39.)

Although construction and operational water quality are project-level impacts, the JVGP goals and policies set forth above along with compliance with the NPDES permit programs would substantially reduce potential impacts, with the exception of long-term sediment control from large parking areas. To protect local surface and groundwater quality over the long term, Jurupa Valley shall make the following mitigation measure a standard condition of approval. (JVGP DEIR, p. 4.9-41.)

> *4.9.5.6A Upon issuance of an occupancy permit, all non-residential development shall be required to mechanically sweep its truck and vehicular parking areas at least once every two weeks to reduce particulate materials that can contribute to degradation of local surface and groundwater quality. This measure may also be applied to institutional uses on a discretionary basis depending on the amount of parking area required.*

The *JVGP EIR* concluded that with implementation of the JVGP goals and policies, compliance with NPDES requirements, preparation of WQMPs, and site-specific drainage control measures on new development, and *JVGP EIR* mitigation measure 4.9.5.6A, impacts regarding violation of water quality standards, waste discharge requirements or substantially degrading surface or ground water quality would be less than significant.

In addition to EGP Land Use policy LU-9 set forth under the response Threshold 4a, which requires Eastvale to participate in regional efforts to address water quality issues., the EGP also includes the following goal and policies to regarding water quality. (EGP, pp. 7-9, 7-12.)

Goal AQ-3 *Water supply and quality that is maintained and improved for the health of all city residents and visitors and for natural communities.*

Policies

AQ-22 *The City encourages the decrease of stormwater runoff by reducing pavement in development areas, and by design practices such as permeable parking bays and porous parking lots with bermed storage areas for rainwater detention.*

AQ-25 *Minimize pollutant discharge into storm drainage systems, natural drainages, and aquifers.*

According to the *EGP EIR*, the greatest threat to groundwater quality in the Chino Basin are from the use of pesticides and the raising of livestock on dairies which contribute to high levels of nitrate and total dissolved solids (TDS). Although replacing dairies with urban uses has reduced the agricultural threat to groundwater, urban uses present different potential contaminants to groundwater. Buildout of Eastvale per the EGP could generate runoff containing oils, grease, fuel antifreeze. byproducts of combustion (such as lead, cadmium, nickel. and other metals), household pollutants. nutrients (i.e. fertilizers), and other chemicals from landscaped areas if not property treated with water quality controls. (EGP DEIR, p. 3.4-7.)

Short-term storm water pollutant discharges from each development site within Eastvale would be mitigated through compliance with the required NPDES permits, which ensures that federal and state standards for clean water are met. Most new development is required to prepare a WQMP which identifies pollutants and hydrologic conditions of concern that may be associated with the implementation of a particular development project. Potential project pollutants that are also a concern in receiving waters are pathogens, nutrients, sediments, toxic compounds. A WQMP prepared for a project identifies BMPs to be implemented that will minimize a project's effects on site hydrology, urban runoff flow rates, and pollutant loads. Site specific WQMPs are required to use the methodology outlined in the programmatic WQMP for the Santa Ana Region of Riverside County. This comprehensive water quality approach would be implemented for future development within Jurupa Valley. Additionally, EGP policy AQ-22 seeks to decrease stormwater runoff in Eastvale by reducing pavement in development areas. and by design practices such as permeable parking bays, porous parking lots. and stormwater infiltration basins. Through compliance with the required NPDES permits and EGP policies, impacts would be less than significant.

For the reasons set forth in the preceding paragraphs, direct impacts regarding violation of water quality standards, waste discharge requirements, substantially degrading surface or ground water quality would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

10b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

Direct Impacts

Less than significant impact. The Project entails the destruction and abandonment of Well 19 and construction of Well 30 as a replacement for Well 19. Groundwater in the Chino Basin experiences a variety of fluxes based on the recharge and discharge components. *Geoscience* used a Baseline Scenario model to predict future changes in JCSD groundwater in *Updated Geohydrologic Analysis of Future Groundwater Production in JCSD*, (This report is included as Appendix D of this Initial Study.). The anticipated change in groundwater levels between 2020 and 2044 are an estimated 5 to 10 feet local drawdown which result in elevations ranging from approximately 720 feet above mean sea level (ft amsl) to 500 ft amsl. As a result, a decline of 5 to 10 feet in JCSD service area is not considered significant over a 25 year period. (Geoscience B, p. 11.)

Water rights to the Chino Basin were adjudicated by the Superior Court of the State of California for the County of San Bernardino on January 27, 1978 (Judgment). The principal function of the Judgment is to control the use of the water source in order to ensure the source is utilized in an optimum manner. The provisions of the Judgment and the monitoring of the basin are carried out by the court-appointed Chino Basin Watermaster (Watermaster or CBWM). Parties to the Judgment are grouped into three "pools" consisting of the Overlying Agricultural Pool, the Overlying Non-Agricultural Pool, and the Appropriative Pool. JCSD is a member of the Appropriative Pool and therefore has adjudicated production rights to the Chino Basin groundwater. As shown in the Watermaster's *2020/2021 Assessment Package (for Production Year 2019/2020)*, JCSD's annual production right is currently 19,547.9 AF with an additional 31,861.3 AF in storage. (UWMP, p. 6-6.)

The 1978 Judgment included a Safe Yield[12] of 140,000 AFY, an allocation of pumping rights among the Parties to the Judgment, and a physical solution that, among other things, requires the Watermaster to offset pumping that occurs in excess of pumping rights. The Safe Yield was reduced to 135,000 AFY for the period of 2015 through 2020. In July 2020, the court ordered that the safe yield be reduced by 3% and reset to 131,000 AFY for the period of July 1, 2020 to June 30, 2030. The Judgment allows parties to pump in excess of their allotted right but must pay a replenishment assessment to the Watermaster to cover the cost to replenish any overdraft caused by the excess pumping. The Watermaster files an annual report to the court that addresses pumping and replenishment. Further, the Watermaster files an annual report to DWR pursuant to the Sustainable Groundwater Management Act of 2014 (SGMA) that is required of adjudicated basins. This documents groundwater elevations, extractions, supplies

[12] Judgment (1978) defines Safe Yield as, "The long-term average annual quantity of groundwater (excluding replenishment or stored water but including return flow to the Basin from use of replenishment or stored water), which can be produced from the basin under cultural conditions of a particular year without causing an undesirable result."

available for recharge, total water use, change in groundwater storage, and the Watermaster's annual report submitted to the court. (UWMP, p. 6-7.)

Subject to certain localized physical limitations, reductions in Safe Yield with or without augmenting basin management measures affects the cost of groundwater production rather than the reliability of groundwater supplies. The Judgment evinces a clear expectation that parties, including JCSD would produce water in excess of their adjudicated production rights; provided, they pay a replenishment assessment. Therefore, JCSD's ability to produce water from the Basin is thus largely a matter of cost. Water produced in excess of production rights will cost more than water produced within a party's production rights. Thus, the quantity and reliability of water supplies is a matter of cost of the water produced from the Basin rather than limitations on JCSD's access to groundwater supply. (UWMP. P. 6-7.)

The Chino Basin Watermaster, at the direction of the court, developed the Optimum Basin Management Program (OBMP) as the central planning document for managing the basin. The Peace Agreement was subsequently reached in order to implement the OBMP. The OBMP was updated in 2020 and includes a 2020 Storage Management Plan.

An adjudicated water right has perhaps the most substantial indicia of reliability of any water right that currently exists in California. An adjudicated right is based upon long-term studies whose purpose it is to protect the long-term functionality of the water source. These rights are coordinated in an established and binding manner with all the other users of the basin and are overseen by a Watermaster which has the authority to mandate and proscribe activities whose purpose is to protect the water source and maximize its long-term beneficial use. (2020 UWMP, p. 6-11.)

JCSD's legal right to pump water in an amount necessary to meet all demands as sanctioned and protected by the Chino Basin Judgment, is buttressed by several programs and projects, including the OBMP, that are directed at ensuring the sufficiency of groundwater supplies from the Chino Basin particularly during dry years. The sufficiency of the Chino Basin groundwater supply that is available to JCSD is assured due to the abundance of groundwater in the central and southern portion of the Chino Basin, OBMP objectives that prioritize and assure production from the southern Chino Basin coupled with desalting and ion-exchange treatment facilities that enable the use of this abundant supply for municipal (potable) purposes. Southern basin production where JCSD is partially located, is the linchpin of several critical OBMP objectives. Thus, the sufficiency of groundwater is heightened and prioritized by the necessity of continued pumping from the southern Chino Basin under the OBMP, which is administered by the Watermaster and ultimately validated and enforced by continuing Court oversight. (2020 UWMP, pp. 6-11–6-12.)

For the reasons set forth above, Project implementation would not substantially deplete groundwater supplies and impacts are less than significant.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP goal COS 3 and policies CPS 3.2, 3.3, 3.4 set forth in the response to Threshold 4b, goal CSSF 1 set forth in the response to Threshold 7a.i, and policies COS 3.9,

COS 3.11 through 3.14 set forth in the response to Threshold 10a, the following policies of the JVGP Conservation and Open Space Element and Community Safety, Services, and Facilities Element address potential water supply and groundwater-related impacts in Jurupa Valley. (JVGP, pp. 4-19, 8-13–8.14, 8-40–8-41.)

Policies

COS 3.8 Wastewater Treatment. Encourage the use of innovative and creative techniques for wastewater treatment.

COS 3.10 Regional Cooperation. Support efforts to create additional water storage where needed, in cooperation with federal, state, community services districts, the Riverside County Flood Control District, and other water authorities. Additionally, support and/or engage in water banking in conjunction with these agencies where appropriate, as needed.

COS 3.15 Water Retention Incentives. Consider granting incentives to landowners to preserve natural ground water recharge areas, through measures such as density averaging.

CSSF 1.9 Permanent Structures. Prohibit construction of permanent structures for human housing or employment to the extent necessary to convey floodwaters without property damage or risk to public safety. Agricultural, recreational, or other similar, non-habitation uses are allowable if flood control and groundwater recharge functions are maintained.

CSSF 1.13 Environmental Protection. Ensure that any substantial modification to a watercourse is accomplished in the least environmentally damaging manner possible to maintain adequate wildlife corridors and linkages and maximize groundwater recharge

CSSF 2.43 Grey Water Systems. Facilitate the utilization of grey water systems.

CSSF 2.44 Drought-Tolerant Landscaping. Require the use of drought-tolerant landscaping in all new development.

CSSF 2.45 Reclaimed Water. Encourage the development and use of reclaimed water for landscape irrigation and other uses.

CSSF 2.46 Public Education. Support public education efforts to promote water conservation throughout the community.

CSSF 2.47 Water Storage. Encourage local water purveyors to expand local domestic water storage and recycling capabilities.

CSSF 2.48 Water Conservation Ordinance. Implement and enforce the City's Landscape Water Conservation ordinance.

Development per the JVGP would increase the demand for domestic water service in Jurupa Valley. Domestic water service is provided to Jurupa Valley by JCSD, RCSD, and the Santa Ana River Water Company. JCSD's main source of water supply is groundwater from the Chino Basin. RCSD's main source of supply is groundwater from the Riverside-Arlington Subbasin (also known as the Riverside Basin). (JVGP DEIR, pp. 4.9-28–4.9-30.)

As previously discussed under the Direct Impacts subheading, the Chino Basin is an adjudicated basin with an identified Safe Yield managed by the Watermaster in accordance with the OBMP

According to *RCSD's 2020 UWMP,* the Riverside Basin is adjudicated by two judgments; first, the judgment in Case No. 117628, Orange County Water District vs. City of Chino, et al., entered April 17, 1969 ("Orange County Judgment"). Second, the pumping rights to the San Bernardino, Colton and Riverside Groundwater Basins are set forth in the Judgment in Case No. 78426-County of Riverside, Western Municipal Water District of Riverside County et al., v. East San Bernardino County Water District et al., entered April 17, 1969 ("Western-San Bernardino Judgment").Section IX(b) of the Judgment, below, describes the aggregate pumping limit:

> *Over any five year period, there may be extracted from such Basin Area, without replenishment obligation, an amount equal to five times such annual average for the Basin Area; provided, however, that if extractions in any year exceed such average by more than 30 percent, Western* [Municipal Water District] *shall provide replenishment in the following year equal to the excess extractions over such 20 percent peaking allowance.*

The Judgment does not specify the volume of water in the Riverside Basin that RCSD can extract or is limited to. The base period average production from 1959-1963 in the Riverside South Basin[13] was 29,633 acre-feet and this is the base right for use in the basin. If annual production exceeds 20% of this average, or if a five-year period production exceeds five times the amount of 29,633 acre-feet, then Western shall provide replenishment. Pumping in the Riverside Basin has not exceeded the base right since the Judgment was entered into.

The *JVGP EIR* concluded that with implementation of JVGP goals, policies, and programs, which focus on water conservation and source augmentation, new development would not be expected to interfere with groundwater recharge activities or groundwater supplies, either directly or through the use of imported water and impacts would be less than significant. (JVGP DEIR, p. 4.9-35,)

In addition to EGP Goal AQ-3 set forth in the response to Threshold 10a regarding water supply, the EGP includes the following policies regarding water conservation and supply. (EGP, pp. 3-18–3-19, 7-12, 12-14.)

Policies

AQ-21 *The City encourages the installation of water-conserving systems such as dry wells and graywater systems, where feasible, especially in new developments. The installation of cisterns or infiltrators shall also be encouraged to capture rainwater from roofs for irrigation in the dry season and flood control during heavy storms.*

AQ-23 *The City encourages native, drought-resistant landscape planting.*

[13] The portion of the Riverside Basin in Riverside County is referred to as the Riverside South Basin.

AQ-24	*Support and engage in educational outreach programs with other agencies that promote water conservation and widespread use of water-saving technologies.*
LU-31	*The City will work with other agencies to coordinate development with supporting infrastructure and services, such as water and sewer service, libraries, parks and recreational facilities, transportation systems, and fire/police/medical services.*
LU 32	*Adequate and available circulation facilities, water supplies, and sewer facilities should be available to meet service demands as development occurs.*
S-9	*Any substantial modification to a watercourse shall be done in the least environmentally damaging manner possible in order to maintain adequate wildlife corridors and linkages and maximize groundwater recharge.*

According to the *EGP EIR*, development per the EGP would increase the demand for domestic water service to serve new residential and non-residential customers in Eastvale. JCSD provides domestic water service to Eastvale. JCSD's main source of water is the Chino Basin. As previously discussed under the Direct Impacts subheading, JCSD's main source of water is the Chino Basin and the Chino Basin is an adjudicated basin with an identified Safe Yield managed by the Watermaster in accordance with the OBMP

The *EGP EIR* concluded that with implementation of EGP goals and policies that focus on water conservation and supply, impacts to groundwater would be less than significant. (EGP DEIR, p. 3.4-9.)

For the reasons set forth in the preceding paragraphs, direct impacts regarding substantially decreasing groundwater supplies or substantially interfering with groundwater recharge such that the Project may impede sustainable groundwater management would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

10c.i –10c.iv. 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 on- 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?

Direct Impacts

Less Than Significant Impact. Impervious surface area would be added at the Well 30 site in the form of buildings concrete pads for the well head, electrical transformer. and the emergency generator. Design has not commenced for Well 30; however, based on the preliminary site layout in Plate 1, amount of impervious surface area that would be added is approximately 2,600 SF. If the Well 30 site is not accessed from the Well 19 driveway, a driveway would be constructed for access from Philadelphia Avenue. The proposed Well 30 Site is mostly flat, so site preparation would not substantially alter the contours of this site. Given the small impervious footprint and that the Well 30 site would be designed to drain into the existing storm drain system, implementation of the proposed Project will not substantially alter existing drainage patterns resulting in substantial erosion or siltation. Impacts would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP goal CSSF 1 set forth in the response to Threshold 7a.i, and policy CSSF 1.9 set forth in the response to Threshold 7b, the following policies of the JVGP Community Safety Services and Facilities Element address drainage and flooding in Jurupa Valley. (JVGP, pp. 8-13–8-15.)

Policies

CSSF 1.10 Floodway Alteration. Prohibit alteration of floodways and channelization unless alternative methods of flood control are not technically feasible or unless alternative methods are already utilized to the maximum extent practicable. The intent is to balance the need for protection with prudent land use solutions, recreation needs, and habitat preservation requirements, and as applicable to provide incentives for natural watercourse preservation. Preservation incentives may include density transfer programs as may be adopted.

CSSF 1.11 Modification of Water Courses. Prohibit substantial modification to water courses, unless modification does not increase erosion or adjacent sedimentation, or increase water velocities, so as to be detrimental to adjacent property, nor adversely affect adjacent wetlands or riparian habitat.

CSSF 1.12 Flood Control Improvements. Direct flood-control improvement measures toward the protection of existing and planned development.

CSSF 1.14 Ability to Withstand Flooding. Require development within the floodplain to be capable of withstanding flooding and to minimize use of fill. Compatible uses shall not, however, obstruct flows or adversely affect upstream or downstream properties with increased velocities, flood heights, erosion backwater effects, or concentrations of flows.

CSSF 1.15 Regional Storm Drain System. All proposed development projects shall address and mitigate any adverse impacts on the carrying capacity of local and regional storm drain systems.

CSSF 1.16 Neighboring Jurisdictions. Encourage neighboring jurisdictions to require development occurring adjacent to the City to consider the impact of flooding and flood control measures on properties within the City.

CSSF 1.19 Open Space Tools. Utilize various means of land acquisition tools and land use measures, such as density credit for open space and dedication of floodplain areas to the Riverside Conservation Agency, to create open space zoning in designated flood zones that are likely to be developed or redeveloped with uses that are more intensive.

CSSF 1.20 Risk Assessment. Continue to assess and upgrade inundation risk and protection in the City.

CSSF 1.21 Flood Hazard Zones. Encourage periodic reevaluation of the 500-year, 100-year, and 10-year flood hazard zones by state, federal, county, and other sources and use such studies to improve existing protection, review flood protection standards for new development and redevelopment, and update emergency response plans.

CSSF 1.22 Specific Plans. Encourage the use of specific plans to allow increased densities in certain areas of a proposed development and to transfer density to locate residential, commercial, industrial, and public facility uses outside of natural hazard areas; and to direct appropriate uses to these areas, such as open space, passive recreational uses, or other uses compatible with these hazards.

According to the *JVGP EIR*, there are several areas in Jurupa Valley within identified flood zones, including areas adjacent to the Santa Ana River and in the western portions of the Jurupa Valley. Future development in these areas may affect local runoff patterns or local drainages, some of which flow into the Santa Ana River. Since completion of the Seven Oaks Dam, the Jurupa Valley is no longer subject to catastrophic flooding along the Santa Ana River. However, many areas in Jurupa Valley are adjacent to or affected by small ephemeral drainages, and buildout of the JVGP may cause or be impacted by changes in runoff patterns or the capacity of local drainages. (JVGP DEIR, p. 4.9-42.)

The *JVGP EIR* concluded that implementation of the JVGP flood-related goals, policies, and programs would adequately address potential flooding issues within Jurupa Valley. Specifically,

JVGP policies CSSF 1.9 and CSSF 1.11 address impacts on local drainages by requiring the review of new construction and substantial improvements that could affect these drainages or overall runoff patterns in general. Additionally, policy CSSF 1.12 requires that flood control improvements be in place to protect both existing and future development in Jurupa Valley. Thus, the *JVGP EIR* concluded impact regarding flooding would be less than significant. (JVGP DEIR, p. 4.9-42.)

The Safety Chapter of the EGP contains the following goal and policies regarding flood hazards (EGP, pp. 12-11, .)

Goal S-2	*Reduce, to the extent possible, the risk and exposure of life, property, and the environment to hazardous conditions and events such as earthquakes, landslides, wildfires, floods, inundation, emergencies, and toxic releases.*
Policies	
S-4	*Development in floodplains or floodways shall not obstruct flows or adversely affect upstream or downstream properties with increased floodwater volumes, velocities, erosion backwater effects, or concentrations of flows.*
S-5	*Critical facilities shall not be permitted in floodplains unless the project design ensures that there are two routes for emergency egress and regress, and minimizes the potential for debris or flooding to block emergency routes, through the construction of dikes, bridges, or large-diameter storm drains under roads used for primary access.*
S-6	*All residential, commercial, and industrial structures shall be flood-proofed from the 200-year storm flow, and the finished floor elevation shall be constructed at such a height as to meet this requirement.*
S-7	*Critical facilities should be constructed at an elevation to the satisfaction of the Building Official, based on federal, state, or other reliable hydrologic studies.*
S-8	*Development using, storing, or otherwise involved with substantial quantities of onsite hazardous materials shall not be permitted, unless all standards for evaluation, anchoring, and flood-proofing have been satisfied, and hazardous materials are stored in watertight containers, not capable of floating, to the extent required by state and federal laws and regulations.*

The NOP for the *EGP EIR* concluded that through implementation of development standards, including the requirement for the preparation of erosion control plans and water quality

management plans, impacts regarding drainage and runoff would be less than significant. (NOP, p. 26.)

For the reasons set forth in the preceding paragraphs, direct impacts regarding flooding would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

10d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Direct Impacts

No impact. Seiche is a back and forth vibration of water which can be caused by wind or seismic activities. Tsunamis are tidal waves that occur in coastal areas. The Project Site is not located in a flood hazard zone as shown on JVGP Figure 8-9 Flood Insurance Rate Map. (JVGP, p. 8-12.) The Project Site is not located in an area that would be likely to be subject to seiche because the site is located approximately 40 miles northeast of the Pacific Ocean. Because are no large bodies of water (natural or manmade) in proximity to the Project Site and the Project does not include water storage facilities, the Project Site is not subject to seiche. For these reasons there would be no impacts regarding the release of pollutants due to Project inundation.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP goal CSSF 1 set forth in the response to Threshold 7a.i, and policies CSSF 1.14, CSSF 1.20, and CSSF 1.21 set forth in the response to Threshold 10c.i–10c.iv, the following policies of the JVGP Community Safety Services and Facilities Element address flood risks in Jurupa Valley. (JVGP, pp. 8-11, 8-13 – 8-15.)

Policies

CSSF 1.6 Flood Risk. In reviewing new construction and substantial improvements within the 100-year floodplain, the City shall disapprove projects that cannot minimize the flood risks to acceptable levels in areas mapped by FEMA or as determined by site-specific hydrologic studies for areas not mapped by FEMA. The City shall:

1. *Prohibit the construction, location, or substantial improvement of structures in areas designated as floodways, except upon approval of a plan that provides that the proposed development will not result in any significant increase in flood levels during the occurrence of a 100-year flood; and*
2. *Prohibit the filling or grading of land for nonagricultural purposes and for non-authorized flood control purposes in areas designated as floodways, except upon approval of a plan, which provides that the proposed development will not result in any significant increase in flood levels during the occurrence of a 100-year flood discharge.*

CSSF 1.8 Building Codes. Enforce provisions of the Building Code in conjunction with the following guidelines:

1. *Critical facilities shall not be permitted in floodplains unless the project design ensures that there are at least two routes for emergency ingress and egress, and minimizes the potential for debris or flooding to block emergency routes.*
2. *Development using, storing, or otherwise involved with substantial quantities of on-site hazardous materials shall not be permitted unless all standards for evaluation, anchoring, and flood-proofing have been satisfied; and hazardous materials are stored in watertight containers, not capable of floating, to the extent required by state and federal laws and regulations.*
3. *Specific flood-proofing measures that may be required include, but are not limited to: use of paints, membranes, or mortar to reduce water seepage through walls; installation of water tight doors, bulkheads, and shutters; installation of flood water pumps in structures; and proper modification and protection of all electrical equipment, circuits, and appliances so that the risk of electrocution or fire is eliminated. Fully enclosed areas that are below finished floors shall require openings to equalize the forces on both sides of walls.*

CSSF 1.17 Hazardous Materials Storage. Require that facilities storing substantial quantities of hazardous materials within designated 100- or 500-year flood zones be adequately flood-proofed and that hazardous materials containers be anchored and secured to prevent flotation and contamination.

CSSF 1.18 Emergency Response Plans. Periodically review and update emergency response plans to reflect current flood protection standards.

According to the *JVGP EIR*, Jurupa Valley is not at risk of inundation by a tsunami because it is located approximately 33 miles inland from the Pacific Ocean. Jurupa Valley is also not located downstream of or near any enclosed body of water and could be subject to a seiche during a seismic event. There are several small reservoirs and water tanks in Jurupa Valley, and residences or businesses immediately down slope may be impacted by seiche events or standing waves within the enclosed water facility if they were to fail during a large seismic event. However, this would likely be an isolated event and it is not considered a substantial risk to public health or safety. Therefore, impacts associated with seiche events are less than significant for implementation of the JVGP. Jurupa Valley is not located within a mapped dam inundation area. (JVGP DEIR, pp. 4.9-26 – 4.9-27.)

There are several areas in Jurupa Valley within identified flood zones, including areas adjacent to the Santa Ana River and in the western portions of the Jurupa Valley. JVGP policy CS 1.1.6 addresses flood risk by requiring the review of new construction and substantial improvements within the 100-year floodplain. It also requires projects to minimize its flood risks to acceptable levels in areas mapped by FEMA or as determined by site-specific hydrologic studies for areas not mapped by FEMA (i.e., the 100-year flood zone). In addition, JVGP Policy CS 1.1.12 requires flood control improvements be in place to protect not only existing development but

future development in Jurupa Valley. With implementation of these flood-related goals and policies impacts regarding flooding would be less than significant.

According to the NOP for the *EGP EIR*, Eastvale is not located in an area susceptible to tsunamis or seiches; therefore there would be no impacts in this regard. Regarding flooding, flood hazards in Eastvale are limited to the area along the Santa Ana River. The EGP has planned these areas fur uses consistent with periodic flooding such as opens space and parks. (EGP, p. 12-6.) Additionally, Eastvale is not in an area subject to inundation due to failure of an upstream dam. (EGP, p. 12-7.) Development per the EGP would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. Therefore, this impact is considered less than significant (NOP, p. 26.)

For the reasons set forth in the preceding paragraphs, there are no direct impacts regarding the risk of the release of pollutants due to project inundation from flood hazard, tsunami, or seiche. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

10e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Direct Impacts

No Impact. The Project consists of the replacement of a municipal production well within the Chino Groundwater Basin for the purpose of continuing the supply of potable water to JCSD customers. The Project is located within the boundary of the Water Quality Control Plan (aka "Basin Plan") for the California Regional Water Quality Control Board – Santa Ana Region (RWQCB). The RWQCB is a state agency that implements regulations to protect surface and ground water quality. The Basin Plan is the RWQCB's comprehensive plan of its regulatory programs to protect surface and ground water quality within the Santa Ana River Watershed, including Beneficial Uses and Water Quality Objectives for each waterbody. The Basin Plan identifies the Project as being located in the "Chino North" maximum benefit groundwater management zone. The term, maximum benefit, indicates higher water quality objectives (less restrictive) are allowed by the RWQCB only if the beneficial uses of the groundwater are fully protected and water quality consistent with maximum benefit to the people of the state is maintained. If these criteria are not being met, then the RWQCB would regulate according to a more stringent set of anti-degradation objectives.

The water rights to the Chino Groundwater Basin were adjudicated by the San Bernardino County Superior Court in 1978 ("Judgment"). JCSD is a Party to the Judgment and has appropriative water rights to the groundwater. The court designated a Chino Basin Watermaster to implement, monitor, and enforce the rules and regulations of the Judgment and to develop a groundwater management plan for the Parties to the Judgment. Therefore, the Chino Basin Watermaster manages the Chino Basin according to the Optimum Basin Management Program (OBMP). Because it is adjudicated, no groundwater sustainability plan (GSP) pursuant to the Sustainable Groundwater Management Act of 2014 (SGMA) is required for the Chino Basin.

The OBMP details, among other things, how the Watermaster and certain Parties to the Judgment will implement specific projects to meet the RWQCB's maximum benefit water quality criteria. As shown in Table 5-8a of the Basin Plan (Chino Basin Maximum Benefit Commitments, revised in 2012), said projects include: surface water monitoring, groundwater monitoring, expansion of Chino 1 and Chino 2 desalters, development of additional desalter capacity, recharge facilities, wastewater effluent quality for Inland Empire Utilities Agency, recycled water use, hydraulic control, and ambient groundwater quality determination (Basin Plan, pp. 5-45 to 5-50). The proposed Project would not conflict with said projects. Because JCSD is a Party to the Judgment and well decommissioning's and new well installations/production rates are monitored by the Watermaster pursuant to the rules and regulations of the Judgment, including the OBMP and maximum benefit water quality criteria, the Project will not conflict or obstruct with implementation of the Basin Plan, nor the OBMP, and impacts are less than significant.

Potential Reasonably Foreseeable Indirect Impacts

The water quality control plan for Jurupa Valley and Eastvale is the Basin Plan for the Santa Ana Region. The Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan: (a) designates beneficial uses for surface and ground waters; (b) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; and (c) describes implementation programs to protect all waters in the Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. (JVGP DEIR, p. 4.9-9.)

Violation of water quality standards would be in conflict with or and obstruct implementation of the Basin Plan. Refer to the discussion in response to Threshold 10a.

Regarding conflicts with a sustainable groundwater management plan, the Sustainable Groundwater Management Act of 2014 (SGMA) requires statewide groundwater management for the purpose of bringing groundwater basins into balanced levels of pumping and recharge. Basins ranked as high- or medium-priority by the Department of Water Resources are required to develop Groundwater Sustainability Plans (GSPs) or submit an alternative to a GSP. Alternatives to GSPs should demonstrate how water managers have already achieved or will achieve sustainable groundwater management. An alternative to a GSP may be groundwater management pursuant to an adjudication. (Alternatives to GSPs.)

As discussed in the response to Threshold 10b, buildout per the JVGP and EGP would increase demand for potable water from JCSD and RCSD. JCSD's main source of water supply is groundwater from the Chino Basin and RCSD's main source of supply is groundwater from the Riverside Basin. Because both these basins are adjudicated, a GSP or similar mechanism is not required. Since the affected basins are being managed consistent with judgements, potentially reasonably foreseeable and cumulative impacts resulting from buildout per the JVGP and EGP would be less than significant.

For the reasons set forth in the preceding paragraphs and in the response to Threshold 10a, direct impacts, reasonably indirect, and cumulative impacts regarding conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan would be less than significant.

11. Land Use and Planning	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

(Sources: EGP; EGP DEIR; JVGP: JVGP DEIR; NOP*. Project Description; JVGP Figure 2-5 – 2017 General Plan Land Use Plan*

11a. Physically divide an established community?

Direct Impacts

No impact. The physical division of an established community typically refers to the construction of a physical feature (such as a wall, interstate highway, or railroad tracks) or the removal of a means of access (such as a local road or bridge) that would impair mobility. The proposed Project does not include any component that would divide an established community, The proposed Well 30 Site is a vacant parcel adjacent to the Well 19 Site and is surrounded by industrial development. No direct impacts would occur.

Reasonably Foreseeable Indirect Impacts

Many of the goals and policies on the of the JVGP related to sidewalks, equestrian and pedestrian trails, are intended to maintain connectivity between the various communities within Jurupa Valley, which discourages dividing established communities. The following goal and policies of the JVGP Land Use Element are such examples. (JVGP, pp. 2-26, 2-39, 2-47, 2-53, 2-73, 2-75, 2-76, 2-78.)

Goal LUE 1 *To be a City that establishes and maintains a balance of land uses that enhances Jurupa Valley's equestrian lifestyle, with equestrian-friendly features such as extensive multi-use trails and a mix of passive and active recreational areas.*

Policies

LUE 3.10 *Pedestrian, Bicycle, and Transit Access. Require commercial projects to be designed to promote convenient access to and from nearby neighborhoods, transit facilities, bikeways, and other amenities.*

LUE 5.2 *Land Use and Circulation Planning. Within the [Equestrian Lifestyle Protection Overlay], give priority to preserving, facilitating, and improving equestrian uses, access, and safety, trails and other equestrian-serving facilities when planning public transportation, utilities, public buildings, and other public facilities.*

LUE 5.25 *Connectivity. Integrate pedestrian-, equestrian-, and bicycle-friendly street and trail networks connecting town centers with surrounding land uses.*

LUE 7.3 *Community Character. Accommodate a range of community types and character, from semi-rural equestrian properties, agricultural, and rural enclaves to traditional town center and suburban communities with a small-town "feel."*

LUE 10.4 *Street and Trail Connectivity. Create street and trail networks that directly connect local destinations and that promote use by pedestrians, equestrians, and bicyclists.*

LUE 10.5 *Residential/Commercial Connectivity. Maintain and/or provide connectivity between residential and commercial developments where appropriate.*

LUE 10.6 *Complete Streets. Promote compact growth and complete streets, where appropriate, that promote pedestrian, equestrian and bike trails, and that takes advantage of public transit routes and facilities.*

LUE 11.13 *Connectivity. Require development projects to be designed to provide adequate space for pedestrian connectivity and access, recreational trails, vehicular access, and parking, supporting functions, open space, and other amenities.*

The *JVGP EIR* concluded that implementation of the above JVGP goal and policies would not divide established neighborhoods, rather, they are intended to help connect neighborhoods within Jurupa Valley; thus no mitigation is required. (JVGP DEIR, p. 4.10-34).

Regarding the physical division of an established community as a result of implementation of the EGP, the NOP for the *EGP EIR* concluded that because the EGP does not propose changes to the planned land use or circulation system and provides policy provisions to promote greater connectivity among Eastvale's existing neighborhoods; there would be no impact in this regard. (NOP, p. 27.)

For the reasons set forth in the preceding paragraphs, there would be no direct impacts to physically dividing an established community and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

11b. Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Direct Impacts

No impact. The Project Site is within an area designated by the JVGP as Light Industrial (LI) and is subject to the Mira Loma Warehousing and Distribution Overlay (MLO) designation. The

JVGP contains policies for the provision of water service, and since the Project constitutes improvements to exisiting water facilities, implementation of the proposed Project would not conflict with any applicable land use plan, policy, or regulation. As such, no direct impacts would occur. No mitigation is required.

Potential Reasonably Foreseeable Indirect Impacts

Regarding conflicts with local plans, by definition, the JVGP and EGP are the local plans for Jurupa Valley and Eastvale, respectively. Therefore, implementation of the JVGP and EGP will not conflict with any local land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact. (JVGP DEIR, p. 4.10-34; NOP, p. 27.)

Regarding conflicts with regional plans, the JVGP DEIR evaluated the JVGP's consistency with the AQMP, MSHCP, Riverside County Airport Land Use Compatibility Plans (ALUP) for Flabob Airport and Riverside Municipal Airport, applicable Southern California Association of Governments (SCAG) Regional Plans (Regional Comprehensive Plan, Regional Transportation Plan and Sustainable Communities Strategy), and the Basin Plan.

Regarding consistency with the SCAQMD AQMP, refer to the response to Threshold 3a.

Regarding conflicts with the MSHCP refer to the response to Threshold 4f.

The Riverside County Airport Land Use Commission (ALUC) adopted ALUPs for Flabob Airport and Riverside Municipal Airport, on December 2004 and March 2005, respectively, (ALUC). The JVGP Land Use Element includes the following policies that are applicable within the Flabob Airport and Riverside Municipal Airport Overlay. (JVGP, p. 2-67.)

> *Policies*
>
> *LUE 5.55* *ALUP Compliance. Provide for the orderly operation and development of Flabob and Riverside Municipal Airports and the surrounding area by complying with the Airport Land Use Compatibility Plan as set forth in Appendix 4.0, as well as any applicable policies related to airports in the Land Use, Circulation, Safety, and Noise Elements of the 2017 General Plan, unless the City Council overrides the Plan as provided for in state law.*
>
> *LUE 5.56* *Development Review. Refer all major land use actions to the Airport Land Use Commission for review, pursuant to Policy 1.5.3 of the ALUP until: 1) the Commission finds the City's General Plan to be consistent with the ALUP, or 2) the City Council has overruled the Commission's determination of inconsistency, or 3) the Commission elects not to review a particular action.*

The *JVGP EIR*, concluded that with implementation of the above policies, impacts regarding new development per the JVGP would have less than significant impacts on airport facilities and operations, and no mitigation is needed. (JVGP DEIR, p. 4.10-37.) Therefore, through compliance with JVGP goals and policies, implementation of the JVGP would not conflict with the Flabob Airport ALUP or Riverside Municipal ALUP.

Regarding conflicts with the SCAG Regional Comprehensive Plan (the 2012 RCP) , the *JVGP EIR* evaluated implementation of the JVGP with the applicable goals, outcomes, and policies of the 2012 RCP to determine consistency with the 2012 RCP. The results of this evaluation are presented in detail on pages 4.10-39 through 4.10-44 of the JVGP DEIR, which is incorporated by reference to this initial study. The *JVGP EIR* concluded that the JVGP is consistent with the following 2012 RCP goals, outcomes, and policies.

2012 RCP Land Use and Housing Chapter

Goal	*Focusing growth in existing and emerging centers and along major transportation corridors.*
Goal	*Targeting growth in housing, employment, and commercial development within walking distance of existing and planned transit stations.*
Goal	*Inject new life into underused areas by creating vibrant new business districts, redeveloping old buildings, and building new businesses and housing on vacant lots.*
Outcome	*Significantly increase the number and percentage of new housing units and jobs created within the Compass Blueprint 2% Strategy Opportunity Areas by 2012 and improve the regional jobs-housing balance. (Tracking the number of new units will measure the region's progress in accommodating forecast growth. The percentage of housing and jobs developed within the Opportunity Areas will indicate the locational efficiency of growth.)*
Outcome	*Reduce total regional vehicle miles traveled (VMT) to 1990 levels by 2020. (The Land Use and Housing Action Plan can be expected to result in a 10% reduction in VMT in 2035 when compared to current trends. VMT serves as a proxy for jobs/housing balance, urban design, transit accessibility, and other urban form issues. VMT per household will decrease with Compass Blueprint implementation.)*

In addition to the above goals and outcomes, the JVGP is also consistent with 2012 RCP policy LU-6.2.

2012 RCP Open Space and Habitat Chapter

The JVGP is consistent with 2012 RCP policies OSC-8 and OCR-12.

2012 RCP Water Chapter

The JVGP is consistent with 2012 RCP policies WA-11 and WA-12.

2012 RCP Energy Chapter

The JVGP is consistent with 2012 RCP policies WA-11 and WA-12.

2012 Solid Water Chapter

The JVGP is consistent with 2012 RCP policies WA-11 and WA-12.

2012 RCP Transportation Chapter

Goal *A more efficient transportation system that reduces and better manages vehicle activity.*

2012 RCP Security and Emergency Preparedness Chapter

Goal *Ensure transportation safety, security, and reliability for all people and goods in the region.*

2012 RCP Economy Chapter

Goal *Enable business to be profitable and competitive (locally, regionally, nationally, and internationally).*

Goal *Promote sustained economic health through diversifying the region's economy, strengthening local self-reliance and expanding competitiveness.*

Regarding conflicts with SCAG's 2012 Regional Transportation Plan (RTP), the *JVGP EIR* concluded that the JVGP is consistent with the RTP in that it would bring many more jobs than housing to the Jurupa Valley, which would substantially improve the jobs/housing ratio, which in turn helps reduce VMT. (JVGP DEIR, p. 4.10-44.)

The *JVGP EIR* further stated that due to the amount of expected growth, traffic congestion would occur on major roadways and at a number of intersections. However, the JVGP contains goals and policies that aim to minimize traffic congestion, provide adequate transportation facilities, and require development to pay its share of costs. The goals and policies identified in the JVGP resemble those of the RTP that address mobility, traffic safety, environmental concerns, and land use consistency as the major traffic study factors to identify existing traffic conditions and to assess the future effects on area traffic patterns/flow. Therefore, the JVGP is consistent with the RTP. (JVGP DEIR, p. 4.10-44.)

Regarding conflicts with SCAG's Sustainable Communities Strategy (SCS) Plan, Table 4.10.C on pages 4.10-45 and 4.10-46 of the JVGP DEIR, provides a general discussion of the JVGP consistency with the relevant RTP outcomes and performance measures/indicators. The *JVGP EIR* concluded that the JVGP is generally consistent with the SCAG RTP/SCS performance measures because implementation of the JVGP would substantially improve Jurupa Valley's City's jobs/housing ratio compared to regional standards. (JVGP DEIR, p. 4.10-46.)

Regarding conflicts with the Basin Plan, which designates beneficial uses for surface and ground waters, the *JVGP EIR* concluded that future development would be required to comply with all applicable water quality standards and requirements established by the RWQCB, and would therefore be in compliance with the NPDES permitting system. Thus, the JVGP would be consistent with the Basin Plan, (JVGP, DEIR, p. 4.10-46.)

Regarding conflicts with land use plans, policies, or regulations adopted for the purposes of avoiding or mitigating an environmental impact resulting from buildout per the EGP, the NOP for the *EGP EIR* concluded that because no development beyond that previously considered in the 2003 Riverside County General Plan EIR would occur as a result of the EGP, implementation of

the EGP would not conflict with any applicable land use plans, policies, or regulations. Thus, there would be no impact in this regard. (NOP, p. 27.)

For the reasons set forth in the preceding paragraphs, there would be no direct impacts to conflicts with land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental impact. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

12. Mineral Resources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

(Sources: JVGP Figure 4-16 – Jurupa Valley Mineral Resources; Project Description)

12a. 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?

Direct Impacts

Less than significant impact. As shown on JVGP Figure 4-16 – Jurupa Valley Mineral Resources, the Project Site is within MRZ-2 zone, which is an area where geologic data indicate significant PCC-Grade aggregate resources are present. However, given the relatively small footprint of the proposed Project facilities and the amount of existing development in the immediate area, it is highly unlikely that any surface mining or mineral recovery operation could feasibly take place in these areas. Therefore, impacts with regard to the loss of availability of a known mineral resource would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

The JVGP Community Open Space and Land Use Element includes the following goal and polices to reduce the potential for the loss of known mineral resources. (JVGP, pp. 2-30, 4-7, 4-31–4-33.)

Goal COS 6 *To be a good steward of Jurupa Valley's natural resources, and protect and enhance open space by reducing consumption of non-renewable energy sources where possible and ensuring efficient use, development, and conservation of sustainable, non-polluting energy sources.*

Policies

COS 6.1 *Efficient Use of Non-Renewable Resources. Utilize nonrenewable resources efficiently in City buildings and facilities, services and operations, and encourage others to do the same.*

COS 6.2 *Compliance with SMARA. Require that the operation and reclamation of surface mines be consistent with the California Department of Conservation's Surface Mining and Reclamation Act (SMARA) and with the Municipal Code.*

COS 6.3 *Incompatible Uses. Restrict incompatible land uses within the impact area of legal existing or potential surface mining uses and*

within areas designated in the General Plan as Open Space-Mineral Resources.

COS 6.4 *Approval Conditions. Impose conditions as necessary on mining operations to minimize or eliminate the potential adverse impact of mining operations on surrounding properties and environmental resources.*

COS 6.5 *Buffers. Require that new non-mining land uses adjacent to existing mining operations be designed to provide a buffer between the new development and the mining operations. The buffer distance shall be based on an evaluation of noise, aesthetics, drainage, operating conditions, biological resources, topography, lighting, traffic, operating hours, and air quality.*

LUE 1.13 *SMARA Compliance. Require that surface mining activities and lands containing mineral deposits of statewide or regional significance comply with City ordinances and the SMARA.*

LUE 1.14 *Encroachment. Protect lands designated as Open Space-Mineral Resources from encroachment of incompatible land uses through buffer zones or visual screening.*

LUE 1.15 *Road Access. Protect road access to mining activities and prevent or mitigate traffic conflicts with surrounding properties.*

LUE 1.16 *Reclamation. Require the recycling and reclamation of mineral extraction sites to open space, recreational, or other uses that are compatible with the surrounding land uses.*

LUE 1.17 *Reuse Plan. Require an approved reclamation and reuse plan prior to issuing a permit to operate an extraction operation.*

According to the *JVGP EIR*, a portion of the land along the Santa Ana River in the southeastern portion of Jurupa Valley has been designated as MRZ-2. This area contains undetermined amounts of construction aggregate (i.e., sand and gravel) but is designated for public use associated with the Santa Ana River, and so aggregate deposits are not readily available for mining in this area. The rest of the City is designated as MRZ-3 which means the significance of any deposits is unknown. None of the vacant developable land remaining Jurupa Valley contains significant mineral resources. Further, because mining would be an incompatible land use with surrounding suburban land uses, future development in Jurupa Valley would not result in the loss of identified regional or local mineral resources, conversion of an identified mineral resource use, or conflict with existing mineral resource extraction activities. (JVGP DEIR, p. 4.11-7.)

The JVGP DEIR concluded that with implementation of the goals and polices identified above, which emphasize coordination and careful planning for mining activities within Jurupa Valley and provide adequate buffers for adjacent uses and important resource, impacts regarding the loss of availability of a known mineral resource resulting from buildout per the JVGP would be less than significant. (JVGP DEIR, p. 4.11-8.)

Regarding the loss of known mineral resources the NOP for the *EGP EIR* states that known concentrations of significant mineral resources were zoned either M-R (Mineral Resources) or M-R-A (Mineral Resources and Related Manufacturing) by the County of Riverside. Implementation of the EGP would not change the zoning designations. In fact, there are no properties in Eastvale zoned for surface mining or mineral extraction. Therefore, implementation of the EGP would not result in the loss of availability of any known mineral resources and there would be no impacts in this regard. (EGP NOP, p. 29.).

For the reasons set forth in the preceding paragraphs, impacts to known mineral resources would be less than significant. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

12b. 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?

Direct Impacts

No Impact. There are no locally-important mineral resources at the Project Site. (JVGP DEIR, p. 4-11-7.) Therefore, no impacts will occur. No mitigation is required.

Potential Reasonably Foreseeable Indirect Impacts

Refer to the response to Threshold 12a.

13. Noise	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient 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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

(Sources: FTA; JVGP; JVGP DEIR, JVMC; NOP, ONT-ALUCP*)*

13a. Generation of a substantial temporary or permanent increase in ambient 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?

Direct Impacts

Less Than Significant Impact. The standard unit of measurement of the loudness of sound is the decibel (dB). Decibels are based on a logarithmic scale. The logarithmic scale compresses the wide range in sound levels resulting in a more usable range of sound level values, similar to the Richter scale used to measure earthquakes. To humans, a sound 10 dB higher than another is considered to be twice as loud; a sound 20 dB higher than another is considered four times as loud. Because the human ear is not equally sensitive to sound at all frequencies, a special frequency dependent rating scale, the A-weighted decibel (dBA) scale, is used. Community noise levels are measured in terms of dBA. (JVGP DEIR, p. 4.12-1.)

Other noise rating scales of importance when assessing the annoyance factor include the peak or maximum noise level (L_{max}), which is the highest exponential, time-averaged sound level that occurs during a stated period. Short-term noise impacts in this discussion are specified in terms of maximum levels, denoted by L_{max} which reflects acoustical peaks during operational conditions and addresses the annoying aspects of constant noise.

Temporary increases to ambient noise levels would occur during construction of Well 30 and deconstruction of Well 19. Noise would derive from the use of various types of construction equipment such as compactors, cranes, excavators, generators, drills, and from a worker-related increase in traffic in the vicinity of the Project site. Once Well 30 is operational, noise sources would be emergency generators, pumps, and traffic associated with maintenance. Sensitive receptors are residences, educational institutions, and public parks. Because the Project Site is within an industrial area; there are no sensitive receptors in proximity to the Project Site.

Since the Project Site is within Jurupa Valley, the applicable noise standards are set forth in the JVGP Noise Element and Jurupa Valley Municipal Code Title 11.05 Noise Regulations. The JVGP Noise Element goals and policies are intended to prevent and mitigate the adverse effects of excessive noise exposure on its residents, employees, visitors, and other persons. (JVGP, p. 7-1.)

The JVGP Noise Element policies grouped into the following four categories:

- NE 1 – Land Use Compatibility,
- NE 2 – Mobile Noise Sources,
- NE 3 – Stationary Noise Sources, and
- NE 4 – Ground-Borne Vibration

Because the proposed project will not generate new vehicular trips, the Project's consistency with the JVGP Noise Element goals and policies NE 1, NE 3, and NE 4 are presented in **Table 10**.

Table 10 – Project Consistency with Jurupa Valley General Plan Noise Element Goals and Policies

Goals/Policies:		Project Consistency
Goals: To be a City that effectively manages noise in order to:		
NE 1	*To protect individual freedoms while preventing noise and vibration from degrading the safety and well-being of our community.*	**Consistent.** These are City responsibilities. However, as demonstrated in this table and the response to Threshold 13b, the Project is consistent with the applicable goals and policies regarding noise and vibration. The Project Site is surrounded by developed industrial uses and there are no sensitive receptors adjacent to the Project Site and as such is compatible with adjacent land uses. The Project will not generate new vehicular trips and as such will not generate new mobile noise sources. The stationary noise generated by operation of replacement Well 30 will be consistent with that is generated by the existing Well 19 and as such does not constitute a new source of stationary noise.
NE 2	*Ensure adjacent land uses are compatible, and protect sensitive receptors from outside sources of noise and vibration*	
NE 3	*Minimize excessive noise levels and community health risks due to mobile noise sources.*	
NE 4	*Minimize excessive noise levels and community health risks due to stationary noise sources.*	
NE 5	*Minimize excessive noise levels and community health risks due to ground-borne vibration.*	
NE 1 – Land Use Compatibility		
NE 1.1	*Land Use/Noise Compatibility. Utilize the Land Use/Noise Compatibility Matrix, Figure 7-3,[14] to determine the compatibility of proposed general plan amendments and rezones with existing noise-sensitive land*	**Not Applicable.** The Project does not include a general plan amendment or rezoning. Further, the Project Site is not within a noise sensitive area. Nonetheless, as shown on *Land Use/Noise Compatibility Matrix, Figure 7-3*, the

[14] This figure is on page 182 of this Initial Study.

Table 10 – Project Consistency with Jurupa Valley General Plan Noise Element Goals and Policies

Goals/Policies:		Project Consistency
	uses and/or noise exposure due to transportation sources.	proposed Project would fall into the "Industrial, Manufacturing, Utilities, Agriculture" Land Use Category, which has a Normally Acceptable Community Noise Exposure (CNEL) range from 50 dB to 75 dB. Normally Acceptable means , the specified land use is satisfactory, based upon the assumption that any building involved are of normal conventional construction, without any special noise insulation requirements. Since, according to the JVGP, the Project is not subject to existing or future noise sources in excess of 75 dB CNEL (JVGP Figure 7-5, . Figure 7-6; ONT ALUP), the Project is consistent with JVGP Noise Element Policy NE 1.1.
NE 1.2	*New Development and Stationary Noise Sources. New development of noise sensitive land uses near existing stationary noise sources may be permitted only where their location or design allow the development to meet the standards listed in Figure 7-3.*	**Not Applicable.** The proposed Project Site is not a noise sensitive land use.
NE 1.3	*New or Modified Stationary Noise Sources. New development of noise-sensitive land uses near existing stationary noise sources may be permitted only where their location or design allows the development to meet the standards listed in Figure 7-3.*	**Not Applicable.** The Project is not a noise sensitive use.
NE 1.4	*Acoustical Assessment. Require an acoustical assessment for proposed General Plan amendments and rezones that exceed the "Normally Acceptable" thresholds of the Land Use/Noise Compatibility Matrix.*	**Not Applicable.** The Project does not include a General Plan amendment or rezone.
NE 1.5	*Noise-Sensitive Uses. Consider the following uses noise sensitive and discourage these uses in areas in excess of 65 CNEL: schools, hospitals, assisted living facilities, mental care facilities, residential uses, libraries, passive recreational uses, and places of worship.*	**Not Applicable.** The Project does not propose a noise sensitive use.

Table 10 – Project Consistency with Jurupa Valley General Plan Noise Element Goals and Policies

Goals/Policies:		Project Consistency
NE 1.6	*Protection of Noise-Sensitive Uses. Protect noise sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise producing land uses cannot be relocated, then measures such as building techniques, setbacks, landscaping, and noise walls should be considered.*	**Not Applicable.** The Project Site is not located on or in proximity to noise sensitive land uses.
NE 1.7	*Noise-Tolerant Uses. Guide new or relocated noise tolerant land uses into areas irrevocably committed to land uses that are noise producing, such as along major transportation corridors or within the projected noise contours of area airports.*	**Consistent**. The proposed Project is a noise tolerant land use that is located within a developed industrial area in proximity to noise producing uses.
NE 1.8	*Airport Noise Compatibility. Ensure that new land use development within Airport Influence Areas complies with airport land use noise compatibility criteria contained in the applicable Airport Land Use Compatibility (ALUC) plan for the area.*	**Consistent.** As discussed in response to Threshold 9e, the Project Site is within the Airport's 60 dB CNEL noise contour.
NE 1.9	*Acoustic Site Planning and Design. Incorporate acoustic site planning into the design and placement of new development, particularly large scale, mixed-use, or master-planned development, including building orientation, berming, special noise-resistant walls, window and door assemblies, and other appropriate measures.*	**Not Applicable.** The Project does not constitute large scale development.
NE 1.10	*Mixed Uses. Require that mixed commercial and residential development minimizes the transfer or transmission of noise from the commercial land use to the residential land use.*	**Not Applicable.** The Project does not propose mixed-use development.
NE 3 – Stationary Noise Sources		
NE 3.1	*Noise Analysis. Require that a noise analysis be conducted by an acoustical specialist for all proposed development projects that have the potential to generate significant noise near a noise-sensitive land use, or on or near land designated for noise-sensitive land uses, and ensure that recommended mitigation measures are implemented.*	**Not Applicable.** The Project site is not near a noise-sensitive land use or near land designated for noise-sensitive land uses.

Table 10 – Project Consistency with Jurupa Valley General Plan Noise Element Goals and Policies

Goals/Policies:		Project Consistency
NE 3.2	*Truck Loading, Shipping, and Parking. Require that the loading, shipping or parking facilities of commercial and industrial land uses that abut or are within 200 feet of residential parcels, be located and designed to minimize potential noise impacts upon residents. Overnight commercial truck parking areas shall be regulated in the Zoning Ordinance as a commercial use.*	**Not Applicable.** The proposed Project does not include truck loading, shipping, or parking, The Project site is not adjacent to or within 200 feet of residential property. The Project site is surrounded by industrial development.
NE 3.3	*Noise Buffers. Require major stationary noise generating sources to install noise buffering or reduction mechanisms within their facilities to reduce noise generation levels to the lowest level practical as a condition of the approval or renewal of project entitlements.*	**Not Applicable.** This policy establishes a City responsibility. Additionally, the proposed Project is not a major stationary noise generator. The replacement of aging Well 19 with new Well 30 will not result in a new noise source in the Project area.
NE 3.4	*Construction Equipment. Require that all construction equipment utilize noise reduction features (i.e., mufflers and engine shrouds) that are at least as effective as those originally installed by the equipment's manufacturer.*	**Consistent.** The contract documents for the proposed Project shall require the construction contractor to maintain all construction equipment used during construction to be maintained in good condition and in property tuning per manufacturers' specifications, including, but not limited to mufflers and engine shrouds.
NE 3.5	*Construction Noise. Limit commercial construction activities adjacent to or within 200 feet of residential uses to weekdays, between 7:00 a.m. and 6:00 p.m., and limit high-noise-generating construction activities (e.g., grading, demolition, pile driving) near sensitive receptors to weekdays between 9:00 a.m. and 3:00 p.m.*	**Not Applicable.** The Project Site is not adjacent to or within 200 feet of any residential uses. Further, the Project is a capital improvement project, not commercial construction.
NE 3.6	*Commercial Truck Idling. Restrict truck idling near noise sensitive receptors.*	**Consistent.** The Project Site is surrounded by developed industrial uses and not near noise sensitive receptors. Additionally, implementation of the proposed Project would not entail trucks idling on, or queuing up to enter the Project Site.
NE 3.7	*Automobile-Oriented Uses. Require that parking structures, terminals, drive-through restaurants, automobile sales and repair, fueling stations, mini-marts, car washes, and similar automobile-oriented uses be sited*	**Not Applicable.** This is a City responsibility. Additionally, the proposed Project is not an automobile-oriented use.

Table 10 – Project Consistency with Jurupa Valley General Plan Noise Element Goals and Policies

Goals/Policies:		Project Consistency
	and designed to minimize potential noise impacts on adjacent land uses.	
NE 3.8	*Entertainment Uses. Minimize the generation of excessive noise from entertainment and restaurant/bar establishments into adjacent residential or noise sensitive uses.*	**Not Applicable.** The proposed Project is not an entertainment use. Further, the Project Site is surrounded is surrounded by industrial uses and not adjacent to residential or other noise sensitive uses.
NE 3.9	*Neighborhood Noise. Support efforts of the Sheriff's Department, Animal Control, and Code Enforcement to curb nuisance noise from private parties, barking dogs, and illegal firework use.*	**Not Applicable.** This is a City responsibility. However, the proposed Project is a capital improvement and is not a generator of nuisance noise. The Project Site will be surrounded by a chain link fence or solid wall with access via a locked gate. The site will be visited daily by JCSD personnel.
NE 4 – Ground-Borne Vibration		
NE 4.1	*Sensitive Land Uses. Avoid the placement of sensitive land uses adjacent to or within one-quarter mile of vibration-producing land uses.*	**Consistent.** The proposed Project is a capital improvement and not a sensitive land use.
NE 4.2	*Vibration Producing Land Uses. Avoid the placement of vibration-producing land uses adjacent to or within one quarter mile of sensitive receptors.*	**Consistent.** The proposed Project is surrounded by developed industrial uses and is not adjacent to or within one quarter mile of any sensitive receptors.
NE 4.3	*Truck Idling. Restrict truck idling near sensitive vibration receptors.*	**Consistent.** The Project Site is surrounded by developed industrial uses and not near noise sensitive receptors. Additionally, implementation of the proposed Project would not entail trucks idling on, or queuing up to enter the Project Site.
NE 4.4	*Passing Trains. Prohibit exposure of residential dwellings to perceptible ground vibration from passing trains as perceived at the ground or the second floor. Perceptible motion shall be presumed to be a motion velocity of 0.01 inches per second over a range of 1 to 100 Hz.*	**Not Applicable.** The Project does not propose residential uses.
NE 4.5	*Mining Operations. Require measures to protect properties adjacent to mining or construction sites that will entail blasting as part of the operation when considering land use entitlement applications.*	**Not Applicable.** This is a City responsibility. Additionally, blasting is not proposed as part of Project construction or operation.

As shown in the above table, the proposed Project is consistent with all applicable JVGP Noise Element goals and policies intended to prevent and mitigate adverse effects of excessive noise exposure and is therefore consistent with the noise standards set forth in the Jurupa Valley General Plan.

Jurupa Valley Municipal Code (JVMC) Title 11.05 Noise Regulations, is intended to establish city-wide standards regulating noise; however, this chapter of the Municipal Code is not intended to establish thresholds of significance for the purpose of CEQA analysis and no such thresholds are established. (JVMC, Section 11.05.010.) JVMC Section 11.05.040, states 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 levels standards set forth in Table 1 of this section or that violates the special sound source standards set forth in Section 11.050.060.[15] The Project Site has a General Plan land use designation of LI–Light Industrial. According to said Table 1, the maximum decibel level for the Light Industrial land use designation is 75 dB from 7 a.m.–10 p.m. and 55 dB from 10 p.m.–7 a.m.

JVMC Section 11.05.020(D) states that capital improvement projects of a governmental agency, maintenance or repair of public properties, and motor vehicles, are exempt from provisions of this chapter of the Municipal Code. (JVMC.). Since the proposed Project is a capital improvement project that will be constructed and operated by JCSD, Project-generated construction noise as well as noise from construction vehicles are exempt from Jurupa Valley's Noise Ordinance and Regulations.

Maximum noise levels (L_{max}) associated the construction equipment expected to be used during Project construction ranges from 80 dBA L_{max} at 50 feet to 90 dBA L_{max} at 50 feet. Depending upon the location of where this equipment is operating on the Project Site, for example if grading equipment was being operated in close proximity to the west, south, or east property lines of the Project Site, the maximum noise level in JVMC Section 11.050.040 could be exceeded. However, JVMC Section 11.05.070 has a process by which an application for a construction-related exception shall be made to and considered by the Building Official of the Jurupa Valley on forms provided by the Building and Safety Division and accompanied by the appropriate filing fee. Thus, even though the Project is exempt from the provisions of the JVMC, with granting of a construction-related exception the Project would not exceed the standards set forth in the JVMC Section 11.05.040.

Once Project facilities are installed, operational noise impacts would be limited to periodic repair and maintenance and would not exceed the standards set forth in JVMC Section 11.05.040.

Because the Project would not generate noise in excess of the standards set forth in the Jurupa Valley Municipal Code, impacts would be less than significant. No mitigation is required.

[15] The special sound sources identified in Section 11.05.060 are motor vehicles, power tools and equipment, audio equipment, and sound-amplifying equipment and live music,

Potential Reasonably Foreseeable Indirect Impacts

The following goals and policies of the JVGP Noise Element are intended to reduce impacts resulting from increased ambient noise levels. (JVGP, pp. 7-6–7-12, 7-16–7-19.)

To be a City that effectively manages noise to:

Goal NE 1 *Protect individual freedoms while preventing noise and vibration from degrading the safety and well-being of our community.*

Goal NE 3 *Minimize excessive noise levels and community health risks due to mobile noise sources.*

Goal NE 4 *Minimize excessive noise levels and community health risks due to stationary noise sources.*

Policies

NE 1.1 *Land Use/Noise Compatibility. Utilize the Land Use/Noise Compatibility Matrix, Figure 7-3,[16] to determine the compatibility of proposed development, including General Plan amendments, specific plan amendments, town center plans, and rezonings, with existing land uses and/or noise exposure due to transportation sources.*

NE 1.2 *New Development and Stationary Noise Sources. New development of noise-sensitive land uses near existing stationary noise sources may be permitted only where their location or design allows the development to meet the standards listed in Figure 7-3.[15]*

NE 1.3 *New or Modified Stationary Noise Sources. Noise created by new stationary noise sources, or by existing stationary noise sources that undergo modifications that may increase noise levels, shall be mitigated so as not exceed the noise level standards of Figure 7-3.[15] This policy does not apply to noise levels associated with agricultural operations existing in 2017.*

NE 1.4 *Acoustical Assessment. Require an acoustical assessment for proposed General Plan amendments and rezones that exceed the "Normally Acceptable" thresholds of the Land Use/Noise Compatibility Matrix.*

NE 1.5 *Noise-Sensitive Uses. Consider the following uses noise sensitive and discourage these uses in areas in excess of 65 CNEL: schools, hospitals, assisted living facilities, mental care facilities,*

[16] This figure is on page 182 of this Initial Study.

residential uses, libraries, passive recreational uses, and places of worship.

NE. 1.6 *Protection of Noise-Sensitive Uses. Protect noise sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise producing land uses cannot be relocated, then measures such as building techniques, setbacks, landscaping, and noise walls should be considered.*

NE 1.7 *Noise-Tolerant Uses. Guide new or relocated noise tolerant land uses into areas irrevocably committed to land uses that are noise producing, such as along major transportation corridors or within the projected noise contours of area airports.*

NE 1.8 *Airport Noise Compatibility. Ensure that new land use development within Airport Influence Areas complies with airport land use noise compatibility criteria contained in the applicable Airport Land Use Compatibility (ALUC) plan for the area.*

NE 1.9 *Acoustic Site Planning and Design. Incorporate acoustic site planning into the design and placement of new development, particularly large scale, mixed-use, or master-planned development, including building orientation, berming, special noise-resistant walls, window and door assemblies, and other appropriate measures.*

NE 1.10 *Mixed Uses. Require that mixed commercial and residential development minimizes the transfer or transmission of noise from the commercial land use to the residential land use.*

NE 2.1 *Roadway Projects. Include noise mitigation measures in the design and construction of new roadway projects in the City. Noise mitigation may include speed reduction, roadway design, noise-reducing materials or surfaces, edge treatments and parkways with berms and landscaping, and other measures.*

NE 2.2 *Commercial Truck Deliveries. Require commercial or industrial truck delivery hours be limited to least sensitive times of the day when adjacent to noise sensitive land uses, unless there is no feasible alternative or there are overriding transportation benefits, as determined by the Planning Director.*

NE 2.3 *Off-Road Vehicles. Restrict the use of motorized trail bikes, mini-bikes, and other off-road vehicles except where designated for that purpose. Enforce strict operating hours for these vehicles where they are located to minimize noise impacts on sensitive land uses adjacent to public trails and parks.*

NE 2.4 *Rail Noise. Minimize the noise effect of rail transit (freight and passenger) on residential uses and other sensitive land uses through the land use planning and discretionary approval process.*

NE 2.5 *Rail Noise Mitigation. Encourage and, where possible, require the rail service provider to install noise mitigation features where rail operations impact existing adjacent residential or other noise-sensitive uses.*

NE 2.6 *Noise Contours. Check all proposed development projects for possible location within roadway, railroad, and airport noise contours.*

NE 2.7 *Airport Compatibility. Comply with applicable noise mitigation policies contained in the Airport Land Use Compatibility (ALUC) Plans for Flabob Airport, Riverside Municipal Airport, and the LA/Ontario International Airport.*

NE 2.8 *Preferred Noise Mitigation Methods. When approving new development of noise-sensitive uses or noise generating uses, the City will require noise mitigation in the order of preference, as listed below, with "1" being most preferred. For example, when mitigating outdoor noise exposure, providing distance between source and recipient is preferred to providing berms and walls. Before approving a less desirable approach, the City approval body must make a finding that more desirable approaches are not effective or that it is not practical to use the preferred approaches consistent with other design criteria based on the General Plan.*

1. *Mitigating Noise Generation*
   a. *Design the site of the noise-producing project so that buildings or other solid structures shield neighboring noise-sensitive uses;*
   b. *Limit the operating times of noise-producing activities;*
   c. *Provide features, such as walls, with a primary purpose of blocking noise.*
2. *Mitigating Outdoor Noise Exposure*
   a. *Provide distance between noise source and recipient;*
   b. *Provide distance plus planted earthen berms;*
   c. *Provide distance and planted earthen berms, combined with sound walls;*
   d. *Provide earthen berms combined with sound walls;*
   e. *Provide sound walls only;*
   f. *Integrate buildings and sound walls to create a continuous noise barrier.*

NE 2.9 *Noise Mitigation in Town Centers. In the City's town center areas, building orientation and acoustical construction techniques may be utilized as a first order of preference to mitigate noise levels.*

NE 2.10 *Noise Walls. Noise mitigation walls (sound walls) should be used only when it is shown that preferred approaches are not effective or that it is not practical to use the preferred approaches consistent*

with other design criteria in the General Plan. Where noise walls are used, they should be designed to enhance community character, protect significant views, discourage graffiti, and help create an attractive pedestrian-friendly residential setting through features such as setbacks, changes in vertical and horizontal alignment, detail and texture, public art, walkways or trails, and landscaping. The height of such walls should be minimized, and where sound attenuation requires that a buffer that exceeds 10 feet in height, the sound buffer should consist of a combination of berms and a wall, or two or more retaining walls stepped back to allow intervening landscaping.

NE 3.1 *Noise Analysis. Require that a noise analysis be conducted by an acoustical specialist for all proposed development projects that have the potential to generate significant noise near a noise-sensitive land use, or on or near land designated for noise-sensitive land uses, and ensure that recommended mitigation measures are implemented.*

NE 3.2 *Truck Loading, Shipping, and Parking. Require that the loading, shipping or parking facilities of commercial and industrial land uses that abut or are within 200 feet of residential parcels, be located and designed to minimize potential noise impacts upon residents. Overnight commercial truck parking areas shall be regulated in the Zoning Ordinance as a commercial use.*

NE 3.3 *Noise Buffers. Require major stationary noise generating sources to install noise buffering or reduction mechanisms within their facilities to reduce noise generation levels to the lowest level practical as a condition of the approval or renewal of project entitlements.*

NE 3.4 *Construction Equipment. Require that all construction equipment utilize noise reduction features (i.e., mufflers and engine shrouds) that are at least as effective as those originally installed by the equipment's manufacturer.*

NE 3.5 *Construction Noise. Limit commercial construction activities adjacent to or within 200 feet of residential uses to weekdays, between 7:00 a.m. and 6:00 p.m., and limit high-noise-generating construction activities (e.g., grading, demolition, pile driving) near sensitive receptors to weekdays between 9:00 a.m. and 3:00 p.m.*

NE 3.6 *Commercial Truck Idling. Restrict truck idling near noise sensitive receptors.*

NE 3.7 *Automobile-Oriented Uses. Require that parking structures, terminals, drive-through restaurants, automobile sales and repair, fueling stations, mini-marts, car washes, and similar automobile-*

oriented uses be sited and designed to minimize potential noise impacts on adjacent land uses.

NE 3.8 *Entertainment Uses. Minimize the generation of excessive noise from entertainment and restaurant/bar establishments into adjacent residential or noise sensitive uses.*

NE 3.9 *Neighborhood Noise. Support efforts of the Sheriff's Department, Animal Control, and Code Enforcement to curb nuisance noise from private parties, barking dogs, [and illegal firework use.*

Short-term increases in ambient noise would occur during the construction of future development projects as buildout of the JVGP occurs. Construction crews commuting and the transport of construction equipment and materials to a project site would incrementally increase noise levels on access roads in the particular project area. In addition, noise would be generated during excavation, grading, and building construction on various portions of a specific development site. (JVGP DEIR, pp. 4.12.)

Each step of the construction process has its own mix of equipment, and consequently, its own noise characteristics. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. The site preparation phase, which includes excavation and grading of a site, tends to generate the highest noise levels, because the noisiest construction equipment is earthmoving equipment, which includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. The peak noise level for the majority of the equipment that would be used during construction of typical development projects will range from 68-105 dBA. (JVGP DEIR, pp. 4.12.)

Construction noise is exempt from the standards set forth in the JVMC; however, the type of construction activity is limited. JVGP policy N-1 requires future development projects provide site specific noise impact studies when a project site is adjacent to a residential land use to demonstrate there would be no project specific noise impacts. (JVGP DEIR, p. 4.12.)

Long term increases in ambient noise in Jurupa Valley would be generated by mobile sources (i.e. vehicles and rail) and stationary sources. The results of the traffic and noise modeling completed as part of the JVGP DEIR analysis noise sensitive land uses along certain roadway links may be exposed to traffic noise exceeding Jurupa Valley's exterior noise standards. (JVGP DEIR, p. 4.12-45.) Refer to JVGP DEIR Table 4.12.5: Year 2035 Noise Levels in the City for a list of the affected roadway links.

Regarding impacts from roadway noise, the *JVGP EIR* concluded that although implementation of the JVGP goals, and policies would help reduce vehicular noise levels in Jurupa Valley as build out occurs, due to the level of growth and location of major roadways, there would still be significant impacts and no additional feasible mitigation is available to reduce these impacts. (JVGP DEIR, p. 4.15-52.) This is considered a significant and unavoidable impact related to the buildout of the JVGP. This is not a direct significant impact resulting from the proposed Project.

Regarding rail noise, although implementation of the JVGP would not result in potential measurable increases in railroad noise there could be new proposed sensitive land uses along and adjacent to existing rail lines that could be exposed to excessive train-related noise. The *JVGP EIR* concluded implementation of the JVGP Noise Element goals and policies would reduce the effect of rail noise on sensitive land uses and include mechanisms to ensure appropriate review and placement of noise reduction requirements into new development. As a result, impacts from railroad noise would be reduced to less than significant levels. (JVGP DEIR, pp. 4.12-45, 4.12-52)

Regarding stationary noise, new development resulting from implementation of the JVGP could expose existing and/or new sensitive uses to stationary noise sources from new commercial and industrial uses. The *JVGP EIR* concluded implementation of the JVGP Noise Element goals and policies would reduce the effect of stationary noise on sensitive land uses and include mechanisms to ensure appropriate review and placement of noise reduction requirements into new development. As a result, impacts from stationary noise would be reduced to less than significant levels. (JVGP DEIR, pp. 4.12-45, 4.12-52)

The following goals and policies from the EGP Noise Chapter are intended to reduce temporary or permanent increase in ambient noise levels to sensitive land uses. (EGP, pp. 10-7–10-13.)

Goal N-1 *Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Eastvale.*

Goal N-4 *Locate noise sources away from existing noise sensitive land uses unless appropriate noise control measures are provided.*

Policies

N-1 *Protect noise-sensitive land uses from high levels of noise by restricting noise producing land uses from these areas.*

N-2 *Continue to work with other agencies such as Caltrans and school districts to ensure that newly proposed facilities do not negatively affect existing noise sensitive land uses.*

N-3 *Consider the following uses to be sensitive to noise and vibration, and discourage these uses in areas where existing or projected future noise levels would be in excess of 65 CNEL and/or vibration would be more than 0.0787 Peak Particle Velocity (inches/second):*

- *Schools;*
- *Hospitals;*
- *Rest Homes;*
- *Long Term Care Facilities;*
- *Mental Care Facilities;*
- *Residential Uses;*
- *Libraries;*
- *Passive Recreation Uses; and*
- *Places of worship*

N-4	*Require noise sensitive land uses proposed in areas where existing or projected future noise levels would be in excess of 65 CNEL to have an acoustical specialist prepare a study of the noise problems and recommend structural and site design features that will adequately mitigate the noise problem.*
N-6	*Mitigate exterior noise to the levels shown in EGP Table N-3 to the extent feasible.*
N-11	*Developers of new residential or other noise-sensitive uses which are placed in environments subject to existing or projected noise that exceeds the "completely compatible" guidelines in EGP Table N-3: Noise Compatibility by Land Use Designation shall be responsible for ensuring that acceptable exterior and interior noise levels will be achieved.*
N-14	*Ensure compatibility between industrial and commercial development and adjacent land uses. To achieve compatibility, industrial and commercial development projects may be required to include noise mitigation measures to avoid or minimize project impacts on adjacent uses.*
N-18	*Natural buffers, setbacks or other noise attenuation shall be established between freeways and urban arterial roadways and adjoining noise-sensitive areas.*

According to the NOP for the *EGP EIR*, because he EGP would not change existing land uses, no development would occur within Eastvale beyond what was previously considered in the 2003 Riverside County General Plan. As such, noise impacts related to construction and operational noise under the EGP would not worsen beyond what was already considered. Therefore impacts would be less than significant. (NOP, p. 30.)

According to the 2003 Riverside County General Plan EIR short-term noise impacts would occur during the construction of future development projects as buildout of the Riverside County General Plan occurs. Long term ambient noise increases would result from mobile sources (vehicles and rail) and stationary sources from new commercial and industrial development. The 2003 Riverside County General Plan concluded that with implementation of General Plan policies and mitigation measures that require conformance with noise exposure standards and preparation of acoustical studies, impacts would be less than significant. (RCIP EIR, Section 4.13.3)

The above identified EGP goals and polices mirror the policies and mitigation measures from the 2003 Riverside County General Plan and its EIR and when implemented would reduce temporary and permanent increases in ambient noise levels to less than significant levels.

For the reasons set forth above, direct impacts regarding temporary or permanent increases in ambient noise levels would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the EGP.

13b. Generation of excessive groundborne vibration or groundborne noise levels?

Direct Impacts

Less than significant impact. Construction projects can generate ground-borne vibration, and in general, demolition of structures preceding construction generates the highest vibrations. However other construction equipment such as vibratory compactors or rollers, pile drivers, and pavement breakers can generate perceptible vibration during construction activities. Heavy trucks can also generate ground-borne vibrations that vary depending on vehicle type, weight and pavement conditions.

Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of vibration. Man-made vibration issues are therefore, usually confined to short distances (i.e., 500 feet or less) from the source. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and the sick), and vibration sensitive equipment. Ground vibrations from construction activities do not often reach the levels that can damage structures, but they can achieve the audible and feelable ranges in buildings very close to the site.

Various types of construction equipment have been measured under a wide variety of construction activities with an average of source levels reported in terms of velocity as shown in **Table 11 – Vibration Source Levels for Construction Equipment**. Although the table gives one level for each piece of equipment, it should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provide a reasonable estimate for a wide range of soil conditions.

Table 11 – Vibration Source Levels for Construction Equipment[a]

Equipment	PPV at 25 feet (inches/second)	RMS[b] at 25 feet
Large Bulldozer	0.089	87
Caisson Drill	0.089	87
Loaded Truck	0.076	86
Small Bulldozer	0.003	58

Notes:

[a] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018. Table 7-4

[b] RMS velocity in decibels (VdB) re 1 micro-inch/second.

Regarding impacts from ground-borne vibration, neither JCSD or Jurupa Valley have significance thresholds for non-residential land uses;[17] thus, this analysis is based on guidance

[17] The only vibration standard in Jurupa Valley is in JVGP Noise Element policy NE 4.4, which prohibits the exposure of residential dwellings to perceptible ground vibration from passing trains as perceived at the ground or the second floor. According to JVGP policy NE 4.4, perceptible motion shall be presumed to be a motion velocity of 0.01 inches per second (or PPV) over a range of 1 to 100 Hz.

published by the Federal Transit Administration (FTA) in its document titled *Transit Noise and Vibration Impact Assessment*. According to the FTA, although the perceptibility threshold for humans is approximately 65 VdB, human response to vibration is not usually significant unless the vibration exceeds 70 VdB. If the vibration level at a residence reaches 85 VdB, most people would be strongly annoyed by the vibration.

Table 12– Typical Human Reaction and Effect on Buildings Due to Groundborne Vibration, displays some of the common human reactions to various levels of groundborne vibration (expressed in PPV) and its effect on buildings.

Table 12 – Typical Human Reaction and Effect on Buildings Due to Groundborne Vibration[a]

Vibration Level (PPV[b]) (inches/second)	Human Reaction	Effect on Buildings
0.006-0.019	Threshold of perception	Vibrations unlikely to cause damage of any type
0.08	Vibration readily perceptible	Recommended upper level of vibration to which ruins ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e., not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings
0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Notes:
[a] Source: California Department of Transportation, Compiled from Table 5 (p. 22) and Table 12 (p. 24).
[b] PPV = Peak Particle Velocity.

Construction of Well 30 and destruction of Well 19 would require standard construction equipment and methods that could produce ground-borne vibrations as shown in **Table 11** above. Operation of Well 30 is not anticipated to result in substantial ground-borne vibrations or ground-borne noise. Because the Project Site is within a developed industrial area, there are no sensitive receptors, residences, or historic structures within 25 feet. At approximately 25 feet from the Project Site, ground-borne vibration generated during Project construction from a large bull dozer or caisson drill would be approximately 0.89 PPV which, based on the information in **Table 12,** would be considered readily perceptible, but would not reach the threshold of beginning to annoy people. For these reasons, impacts regarding the exposure and generation of excessive ground-borne vibration or ground-borne noise levels would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP goal NE-1 set forth in the response to Threshold 13a, the JVGP Noise Element also includes the following goal and policies intended to reduce excessive groundborne vibration or groudborne noise levels . (JVGP, p. 7-6, 7-20.)

Goal NE 5 *To be a City that effectively manages noise to minimize excessive noise levels and community health risks due to ground-borne vibration.*

Policies

NE 4.1 *Sensitive Land Uses. Avoid the placement of sensitive land uses adjacent to or within one-quarter mile of vibration-producing land uses.*

NE 4.2 *Vibration Producing Land Uses. Avoid the placement of vibration-producing land uses adjacent to or within one quarter mile of sensitive receptors.*

NE 4.3 *Truck Idling. Restrict truck idling near sensitive vibration receptors.*

NE 4.4 *Passing Trains. Prohibit exposure of residential dwellings to perceptible ground vibration from passing trains as perceived at the ground or the second floor. Perceptible motion shall be presumed to be a motion velocity of 0.01 inches per second over a range of 1 to 100 Hz.*

NE 4.5 *Mining Operations. Require measures to protect properties adjacent to mining or construction sites that will entail blasting as part of the operation when considering land use entitlement applications.*

According to the *JVGP EIR*, buildout of Jurupa Valley could generate substantial noise and vibration from construction of new development if large construction projects are located adjacent to residential or other sensitive uses. However, implementation of the above JVGP Noise Element goals and policies, would help the City reduce potential noise and vibration impacts, especially to sensitive receptors, to less than significant levels (i.e. within City standards). (JVGP DEIR, pp. 4.12-54–4.12-55.)

EGP policy N-3 set forth in the response to Threshold 13a, is intended to protect sensitive receptors from excessive groundborne vibration and groundborne noise levels.

According to the NOP for the *EGP EIR*, because the EGP would not change existing land uses, no development would occur within Eastvale beyond what was previously considered in the 2003 Riverside County General Plan. As such, impacts from groundborne vibration under the EGP would not worsen beyond what was already considered. Therefore impacts would be less than significant. (NOP, p. 30.)

For the reasons set forth above, direct impacts regarding excessive groundborne vibration and groundborne noise levels would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the EGP EIR.

13c. 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?

Direct Impacts

Less than significant impact. Refer to the response to Threshold 9e.

Potential Reasonably Foreseeable Indirect Impacts

The JVGP Land Use Element policies LUE 5.55 through LUE 5.61, LUE 5.64, LUE 5.65, and LUE 8.1 as set forth in the response to Threshold 9e, along with JVGP Noise Element goal NE 1, goal NE 3, and polices NE 1.7, NE 1.8, NE 2.6, and NE 2.7 as set forth in the response to Threshold 13a, are intended reduce exposure to people from excessive noise levels within the vicinity of the airstrip or an airport land use plan.

Jurupa Valley is affected by the noise contours of two airports, Flabob Airport and Riverside Municipal Airport (RMA). The Flabob Airport is located in the eastern portion of the Jurupa Valley and its noise contours overlap both developed uses and vacant land. To minimize land use conflicts with adjacent uses, much of the remaining undeveloped area adjacent to the airport is designated as Estate Density Residential, with most of the developed land designated and used for Medium-Density Residential. RMA is south of the eastern portion of Jurupa Valley across the Santa Ana River. Portions of Jurupa Valley are within RMA's 65 dBA CNEL noise contour. If future residential land uses were to be located where airport activities exceeded the applicable residential noise standards, which is within the 65 dBA CNEL noise contour of Flabob Airport or RMA, buildout per the JVGP could contribute to significant noise impacts in the future. (JVGP DEIR, p. 4.12-52.)

The JVGP DEIR concluded that implementation of the goals and policies identified above will prevent existing and future land uses from experiencing significant noise impacts from airport operations and activities. Impacts on this regard will be less than significant. (JVGP DEIR, p. 4.12-54.)

The Chino Airport is located immediately northwest of Eastvale. All future development projects located in Eastvale and in close proximity to this airport would be subject to the policies and standards contained in the CLUP. The CLUP includes restrictions on the types of uses that can be developed within the noise contours for the airport as well as noise abatement standards for the design and construction of new surrounding development. Compliance with these existing standards would ensure that people are not exposed to excessive noise levels associated with airport operations. (NOP, p. 31.)

For the reasons set forth in the preceding paragraphs, direct impacts regarding the exposure of people to noise levels withing the vicinity of an airstrip or an airport would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

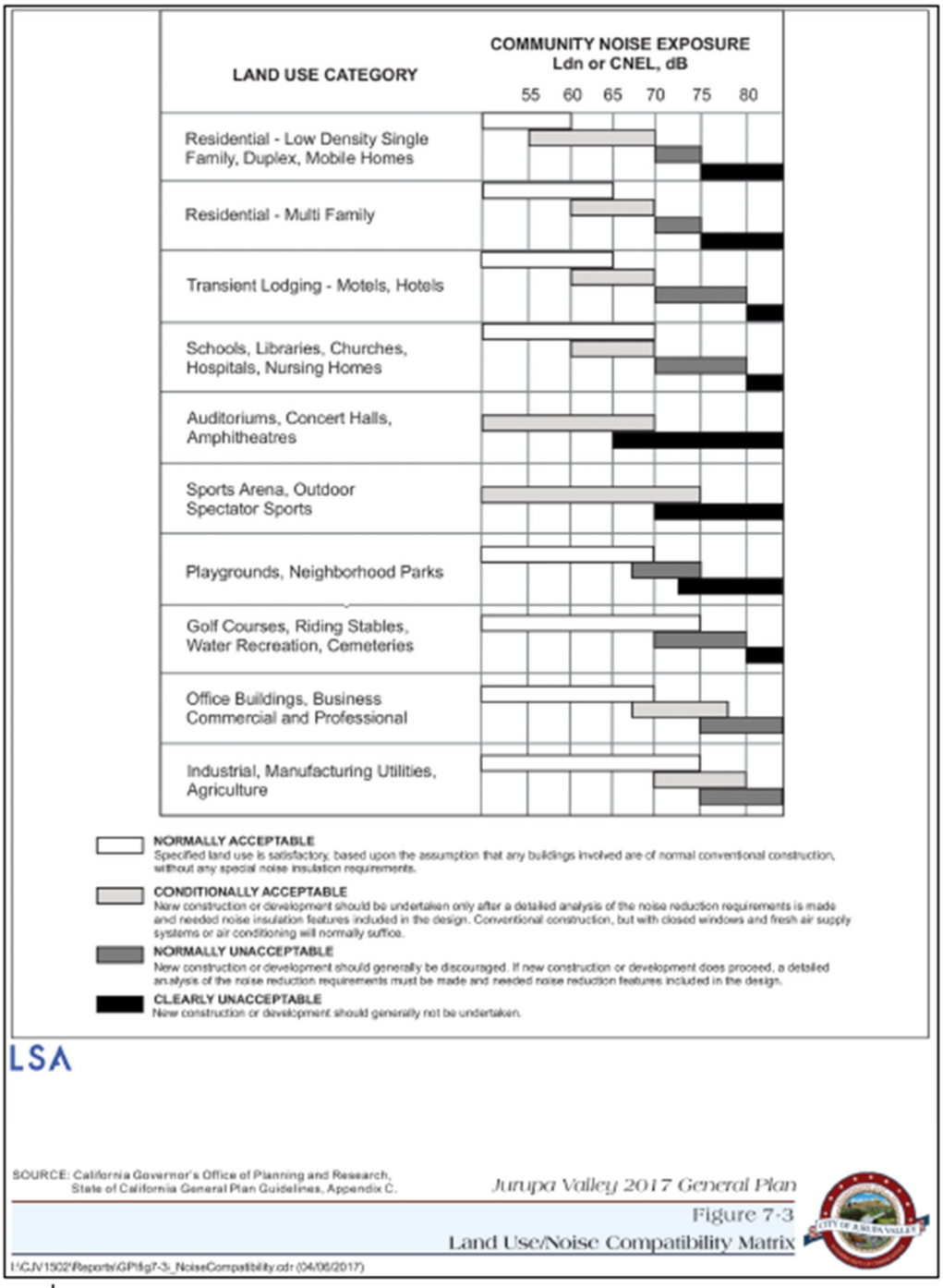


Figure 7-3: Land use/noise compatibility matrix

14. Population and Housing	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

(Source: Project Description)

14a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?

Direct Impacts

No impact. The construction of Well 30 as a replacement for Well 19 are part of the facilities identified in the JCSD *2020 Water Master Plan* and JCSD *2020 UWMP.* JCSD met with Planning Department staff from the cities of Eastvale and Jurupa Valley as part of the *2020 Water Master Plan* effort in 2019 and met again with these agencies (via teleconference) in 2021 during preparation of the JCSD *2020 UWMP* as required by California Water Code Section 10631(a). During the 2021 teleconferences, both Eastvale and Jurupa Valley provided updated land use information and informed JCSD of three general plan amendments that occurred after JCSD's water demand projections were calculated. (UWMP, p. 3 24–3-26.)

Based on buildout of the General Plan Land Use Plans for Eastvale and the portion of Jurupa Valley within JCSD's service area and the updated information provided by the respective Planning Departments, JCSD's *2020 UWMP* projected the JCSD service area population at approximately 171,300 persons. This projection is based on buildout at medium or "mid-range" density. These projections assume buildout of Jurupa Valley by 2036 and buildout of Eastvale by 2031, which is consistent with JCSD's *2020 Water Master Plan*. (UWMP, p. 3-20.)

Based on JCSD's most recent water duty factors from the 2020 Water Master Plan, these changes would result in an increase in overall water demand of 57.3 AF per year, or an increase of 0.16 percent to ultimate buildout water demand. Because this is within the margin of error of the buildout projections for water demand, the effect of these three land use designation changes to future demands is considered negligible. Thus, the improvements identified in the JCSD *2020 Water Master Plan* and JCSD *2020 UWMP* are sized to serve planned development within JCSD's water service area.

JCSD's. Well 30 is expected to supply average year, single dry and multiple-dry year demands for growth within JCSD's water service area consistent with the land use plans of the cities of Eastvale and the portion of Jurupa Valley within the water service area. (UWMP, pp. 6-24, 6-26.)

The Project will provide continuous access to JCSD's superior ground water supply in order to maintain service to the 980 and 1110 PZs and does not include new residential or commercial development. Because the destruction of Well 19 and construction of replacement Well 30 are part of the JCSD *2020 Water Master Plan* and JCSD *2020 UWMP*, which identifies facilities to serve planned growth within JCSD's service area, the Project would not indirectly induce substantial unplanned population growth within JCSD's service area. Additionally, the proposed Project would not extend water availability to an area where it is not currently available. Due to the nature of the proposed Project, once complete it will not require personnel on-site, aside from the daily maintenance, which is currently being performed at the Well 19 site. Although temporary employment opportunities may be created during Project construction, this would not induce substantial population growth in Jurupa Valley or Western Riverside County as there exists an ample and available regional labor force. For these reasons the Project would not result in direct or unplanned population growth within JCSD's service area.

Potential Reasonably Foreseeable Indirect Impacts

The JVGP Land Use Element and Housing Element contains the following goals and policies related to consistency with regional planning to accommodate growth within Jurupa Valley. (JVGP, pp. 2-35, 5-18, 5-19, 11-5.)

Goal HE 1 *Encourage and, where possible, assist in the development of quality housing to meet the City's share of the region's housing needs for all income levels and for special needs populations.*

Policies

HE 1.1 *Regional Housing Needs Allocation. Changes to the General Plan and the Zoning Ordinance and Map shall provide and/or maintain sufficient land at appropriate densities to meet the City's Regional Housing Needs Allocation for the 2014-2021 Planning Period.*

LUE 2.1 *Residential Development. Accommodate the development of single-family and multi-family residential units in areas appropriately designated by the General Plan, specific plans, the Equestrian Lifestyle Protection Overlay, and community and town center plans land use maps.*

LUE 2.2 *Higher Density Residential. Accommodate higher density residential development in walkable, pedestrian oriented areas near major transportation corridors, concentrated employment areas, and community and town centers, and promote the development of high quality apartments and condominiums that will encourage local investment and pride of ownership.*

LUE 2.5 *Connectivity. Integrate residential development with a continuous network of parks, open space, public areas, bicycle trails, equestrian trails, public transit routes, and pedestrian paths to connect neighborhoods and communities with key nodes. Key nodes include parks and recreation facilities, schools, town and*

neighborhood centers, and other in-city communities and surrounding cities and points of interest.

According to the *JVGP EIR*, direct growth from implementation of the JVGP would be employees from new commercial or industrial development and new population from new residential development. Future development projects could indirectly induce growth by reducing or removing barriers to growth, or by creating a condition that attracts additional population or new economic activity. It is expected that any future development that would indirectly induce growth would occur consistent with planned growth identified in the JVGP or applicable specific plans. (JVGP DEIR, pp. 4.13-12–4.13-13)

Future development within the Jurupa Valley resulting from implementation of the JVGP is anticipated to add between 37,622 and 53,745 new residents to Jurupa Valley at buildout, which is a substantial amount of population growth for the area. However, the amount of housing, population, and employment growth anticipated under the JVGP would be consistent with the projections developed by SCAG and utilized by other regional planning organizations. The JVGP DEIR concluded that because planned growth under the JVGP is consistent with regional population, housing, and employment projections by SCAG, which are used by other regional planning organizations in their planning processes, impacts regarding unplanned population growth would be less than significant. (JVGP DEIR, pp. 4.13-13–4.13-14.).

Regarding direct or indirect growth inducement, the NOP for the *EGP EIR* concluded that because the EGP would not change existing land use designations or circulation diagrams, no development or infrastructure beyond that previously identified and addressed in the 2003 Riverside County General Plan Update EIR would occur. Therefore, implementation of the EGP would not result in any new direct or indirect population growth and this impact would be less than significant. (NOP, p. 32.)

According to the 2003 Riverside County General Plan EIR, because the build out year (2040) population and employment projections are based on projected annual SCAG population increases, annual and build out population increases associated with the 2003 Riverside County General Plan would be consistent with SCAG projections. Therefore, impacts regarding unplanned population growth from implementation of the 2003 Riverside County General Plan would be less than significant. (RCIP Sections 4.3.3, 4.3.4,)

For the reasons set forth in the preceding paragraphs, there would be no direct impacts regarding unplanned population growth. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

14b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. Project construction and operation will not necessitate the demolition or relocation of existing housing units. Since no housing will be displaced, no people will be displaced as a result of Project implementation, no impacts will occur.

Potential Reasonably Foreseeable Indirect Impacts

The JVGP Housing Element includes the following goals and policies to protect existing housing and reduce the potential for the displacement of people from housing. (JVGP, pp. 5-18, 5-23–5-24.(

Goal HE 2 *Conserve and improve the housing stock, particularly housing affordable to lower income and special housing needs households/*

Policies

HE 2.1 *Retain Housing. Where feasible and appropriate, older, sound housing should be retained, rehabilitated, and maintained as a significant part of the City's affordable housing stock, rather than demolishing it. Demolition of non-historic housing may be permitted where conservation of existing housing would preclude the achievement of other housing objectives or adopted City goals.*

HE 2.2 *Removal of Affordable Housing. Discourage the removal or replacement of sound housing that is affordable to extremely low, very-low, low- and moderate income households, and avoid discretionary approvals or other municipal actions that remove or adversely impact such housing unless: 1) it can be demonstrated that rehabilitation of lower-cost units at risk of replacement is financially or physically infeasible, or 2) an equivalent number of new units comparable or better in affordability and amenities to those being replaced is provided, or 3) the project will remove substandard, blighted, or unsafe housing.*

HE 2.3 *Public Housing. Encourage the Riverside County Housing Authority to pursue federal and state funds to modernize public housing affordable to very low and low-income households.*

HE 2.8 *At-Risk Housing Preservation. Work with Riverside County Housing Authority and other housing agencies to preserve the affordability of assisted housing and other affordable housing resources at risk of conversion to market rate housing utilizing federal, state, and local financing and subsidies, as City resources allow.*

According to the *JVGP EIR*, the JVGP is a programmatic document that sets forth the regulatory groundwork for future growth of housing and employment in the Jurupa Valley and mew development must be consistent with the JVGP goals, policies, and programs. It is unknown if or to what degree existing developed land within housing or residents may be redeveloped and displaced by future development. In most cases, new development occurs on vacant land, but it is possible that some new development would result in the demolition of older structures, and some of these structures may be occupied residences. However, the JVGP Land Use and

Housing Elements contain goals, policies, and programs that discourage such displacement. Additionally, due to the wide variety of housing found in Jurupa Valley, displaced residents would have opportunities to find adequate replacement housing within Jurupa Valley either by purchasing or renting an existing unoccupied residence or by renting or purchasing new housing. In the coming years, Jurupa Valley is expected to add from 9,198 to 13,140 new residential units to meet a wide variety of needs within the housing market (e.g., single family homes, condominiums, apartments, etc.) (JVGP DEIR, p. 4.13-10.)

The *JVGP EIR* concluded that with implementation of the JVGP goals and policies identified above, implementation of the JVGP would not result in the significant displacement of housing or people as development occurs within the City. Impacts would be less than significant and no mitigation is required. (JVGP DEIR, p. 4.13-11.)

Regarding the displacement of people or housing as a result of implementation of the EGP, the EGP is a long-range policy document that would guide the growth and development of Eastvale over the next 20 years, but does not include any specific development or redevelopment projects. As such, implementation of the EGP would not directly result in the demolition or conversion of any housing units or otherwise displace any existing residents. Therefore, there would be no impacts in this regard. (NOP, p. 32.)

For the reasons set forth in the preceding paragraphs, there would be no direct impact regarding the displacement of people or housing necessitating the construction of replacement housing elsewhere. No new foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

15. Public Services	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government 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?	☐	☐	☐	☒

(Source: Project Description)

15a. Fire protection?

Direct Impacts

No impact. As discussed in the response to Threshold 14a above, the Project will not directly or indirectly generate new development or persons to Jurupa Valley. As such, the Project does not necessitate the construction of new governmental facilities or increase the demand for fire protection services in Jurupa Valley. No impacts will occur.

Potential Reasonably Foreseeable Indirect Impacts

The JVGP Community Safety, Services and Facilities Element and Land Use Element includes the following goal and policies addressing regarding the provision of fire protection services. (JVGP, pp. 2-72, 2-80, 8-3, 8-25, 8-29.)

Goal CSSF 2 *Honor and support our public safety professionals.*

Goal CSSF 3 *Provide a high level of community services and facilities to meet the existing and future needs of Jurupa Valley.*

Policies

CSSF 2.1 *Provide Facilities and Services. Work with community services agencies and districts on the planning and provision of adequate community facilities and services.*

CSSF 2.2 *Concurrency with Development. Ensure the provision of sufficient public facilities and services prior to, or concurrently with, new development.*

CSSF 2.4 Fair Share. Ensure that new development pays its fair share of public facilities and service costs.

CSSF 2.5 Joint Use. Promote the joint use of public facilities to meet multiple needs of the community.

CSSF 2.13 Fire Safety Techniques. Incorporate fire-safety techniques in new development

CSSF 2.14 Fire Department Review. Involve the Fire Department in the review of development applications in fire prone areas.

CSSF 2.15 Coordination. Coordinate with the Fire Marshal on fire prevention throughout the community.

CSSF 2.16 Adequate Facilities. Work with the Fire Department to ensure the provision of adequate fire stations, personnel, and equipment to meet the City's needs over time.

LUE 6.4 Agency Coordination. Coordinate with local agencies, such as community service districts (CSDs), special districts, school districts, Riverside County Fire and Sheriff Departments, and others to ensure to ensure adequate service provision for development.

LUE 12.1 Service Capacity. Ensure that development does not exceed the City's or the community services districts' or special districts' ability to adequately provide supporting infrastructure and services, such as water, wastewater treatment, energy, solid waste and public services such as police/ fire/emergency medical services, recreational facilities, and transportation systems.

LUE 12.2 Monitoring. Monitor the capacities of infrastructure and services in coordination with service providers, utilities, and outside agencies and jurisdictions to ensure that housing and population growth does not reduce levels of service below acceptable levels.

LUE 13.1 Fair Share Infrastructure Funding. Require that new development contribute its fair share to fund infrastructure and public facilities, such as police and fire facilities, parks, streets, and trail improvements.

Development per the JVGP would result in new residential units and non-residential structures and new fire stations and equipment could be required as Jurupa Valley builds out per the JVGP. The above JVGP goals and policies are designed to assure Jurupa Valley would have adequate services, including fire protection, as development occurs and Jurupa Valley's population increases. (JVGP DEIR, pp. 4.14-7–4.17-8.)

According to the *JVGP EIR*, with implementation of the JVGP policies identified above, particularly policy CSSF 2.4, which requires new development to pay its related costs for public facilities and services, along with the standard conditions of construction imposed on new

developments and Fire Marshall review to ensure compliance with fire standards, impacts to fire protection services associated with implementation of the JVGP would be less than significant. (JVGP DEIR, p. 4.14-8–4.14-9.)

In addition to EGP Land Use policy LU-31 set forth in the response to Threshold 10b, the Safety Chapter includes the following policies regarding fire protection services. (EGP, p. 12-14.):

Policies	
S-10	*All proposed construction shall meet minimum standards for fire safety as defined in the City's Building or Fire codes, based on building type, design, occupancy, and use.*
S-11	*Development in hazardous fire areas shall include secondary public access, unless determined otherwise by the Fire Chief.*

According to the *EGP EIR*, implementation of EGP could result in the need for additional fire protection services facilities in order to maintain acceptable service ratios and response times. The provision of these facilities could cause environmental impacts. However, future fire protection/emergency medical services facilities would be subject to project-level CEQA review at such time as an application for a project was submitted to the appropriate agency. The typical environmental effects regarding the construction and operation of a fire protection facility may involve issues with noise (sirens), air quality (during the construction of the facility), biological resources (depending on location), cultural resources (depending on location), public utilities (demand for electric, water, and wastewater service), and traffic on a local level due to the interruption of traffic light timing by fire engines. The environmental effects of construction of such facilities within Eastvale have been programmatically evaluated in the technical analyses of the *EGP EIR* as part of overall development of Eastvale. The *EGP EIR* concluded impacts regarding the provision of fire protection facilities resulting from implementation of the EGP would be less than significant. (EGP DEIR, pp. 3.6-4–3.6-5.)

For the reasons set forth above, there will be no direct impacts regarding fire re protection services and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

15b. Police protection?

Direct Impacts

No impact. As discussed in the responses to Thresholds 14a and 15a above, the Project would not directly or indirectly generate new development or persons to Jurupa Valley. Therefore, the Project will not increase the demand for police protection services in the City and no impacts will occur.

Potential Reasonably Foreseeable Indirect Impacts

In addition to Community Safety, Services and Facilities Element goals CSSF 2 and CSSF 3 and policies CSSF 2.1, CSSF 2.2, and CSSF 2.4 and Land Use policies LUE 6.4, LUE 12.1, LUE 12.2, and LUE 13.1 set forth in the response to Threshold 15a, the JVGP also includes the following policies regarding the provision of police protection services. (JVGP, p. 8-28.)

Policies

CSSF 2.7 *Community Safety. Coordinate with the Riverside County Sheriff's Department on an ongoing basis to ensure the continued safety of the City.*

CSSF 2.8 *Criminal Activity. Support efforts to develop innovative methods to reduce criminal activity and increase safety in the community.*

CSSF 2.9 *Graffiti. Support efforts of the Sheriff's Department and the JCSD to identify and remove graffiti and prosecute graffiti vandals.*

CSSF 2.12 *Crime Prevention through Environmental Design (CPTED) .Incorporate CPTED principles in the design of new development to encourage natural surveillance and reduce crime.*

Development per the JVGP would result in new residential units and non-residential structures, which would result in in a need for expanded police protection services routinely associated with residential and commercial growth, including routing patrols and responding to calls for service. The number of additional service calls and call response times would slowly increase and overall service levels would decrease incrementally.(JVGP DEIR, p. 4.14-9.)

According to the *JVGP EIR*, the JVGP policies regarding public services were designed to assure Jurupa Valley would have adequate services now and as the Jurupa Valley grows, including adequate police protection. Through compliance with the JVGP public service policies set forth above and in the response to Threshold 15a, particularly policy CSSF 2.4, which requires new development to pay its related costs for public facilities and services, impacts to police protection services resulting from implementation of the JVGP would be less than significant. (JVGP DEIR, p. 1.14-10.)

In addition to EGP policy LU-31 set forth in the response to Threshold 15 a, the EGP Safety Chapter includes the following policies regarding law enforcement services. (EGP, pp. 12-16–12-17.)

Policies

S-21 *The City shall ensure the safety and protection of Eastvale and its community members by providing appropriate first response to emergencies and ensuring that sufficient resources are available to provide adequate protection as the community grows.*
ACTION S-21.1: The City will maintain and enhance community safety through coordinated regional emergency, law-enforcement, and protective services systems.
ACTION S-21.2: The City will work with the Police Department through the review of proposed development projects to ensure that public safety issues are considered prior to construction and occupancy.

S-22 *The City will seek to maintain and enhance communications between community residents and the police through regular meetings and a visible community policing program.*

S-24 *The City encourages the use of Crime Prevention Through Environmental Design (CPTED) principles in the design of private development projects and public facilities. These basic principles include:*
Natural Surveillance: A design concept directed primarily at keeping intruders easily observable. Promoted by features that maximize visibility of people, parking areas, and building entrances: doors and windows that look out on to streets and parking areas; pedestrian-friendly sidewalks and streets; front porches; and adequate nighttime lighting.
Territorial Reinforcement: Physical design can create or extend the area in which users develop a sense of territorial control. Potential offenders, perceiving this control, are discouraged. This experience is promoted by features that define property lines and distinguish private spaces from public spaces by using landscape plantings, pavement designs, gateway treatments, and CPTED fences.
Natural Access Control: A design concept directed primarily at decreasing crime opportunity by denying access to crime targets and creating a perception of risk in the mind of the offender. This is gained by designing streets, sidewalks, building entrances, and neighborhood gateways to clearly indicate public routes and discouraging general access to private areas through structural and design elements.
Target Hardening: Target hardening is accomplished by features that prohibit entry or access (such as window locks, deadbolts for doors, and interior door hinges). Offenders will seek easier targets, reducing crime in areas where these features are used.

According to the *EGP EIR*, implementation of EGP would not result in increased demand for law enforcement services that would result in the need for new or physically altered law enforcement facilities. (EGP DEIR, p. 3.6-9.)

For the reasons set forth above, there will be no direct impacts regarding police protection services and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

15c. Schools?

Direct Impacts

No impact. As noted in the responses to Thresholds 14a and 15a above due to the Project not directly or indirectly generating an increase of population, the Project will not increase the

demand for school services in the Jurupa Unified School District, where the Project facilities are located. No impacts will occur.

Potential Reasonably Foreseeable Indirect Impacts

Development per the JVGP would result in an increase in the number of students to be enrolled in the Jurupa Unified School District (JUSD) and the Corona-Norco Unified School District (CNUSD), which are the two school districts that serve Jurupa Valley. School services and facilities are the responsibility of the JUSD and CNUSD which are separate governmental entities from Jurupa Valley (JVGP DEIR, p. 4.14-10), nonetheless, the JVGP Community Safety, Services, and Facilities Element and Land Use Element includes the following policies regarding educational facilities. (JVGP, p. 8-30–8-31.)

Policies

CSSF 2.18 Coordination with School Districts. Coordinate with JUSD and CNUSD in planning for the current and future needs of Jurupa Valley students.

CSSF 2.19 Modernization. Encourage efforts of JUSD to modernize and renovate schools within the district.

CSSF 2.20 Safe Routes to School. Work with the school districts to ensure the safety of travel routes to and from schools.

CSSF 2.21 Schools as Neighborhood Centers. Develop new schools, as needed, that also serve as neighborhood centers and that are pedestrian- and bicyclist-friendly.

CSSF 2.22 Joint Use. Encourage school districts to allow joint use of schools for after-school sports, classes, childcare, or other uses to maximize the community value of these important public investments.

CSSF 2.23 Review of Development Proposals. Involve the school districts in the review of large residential development proposals to ensure that adequate schools are provided without affecting existing facilities.

CSSF 2.24 Higher Education. Encourage institutions of higher education, and other adult education providers, to locate facilities and programs in Jurupa Valley.

CSSF 2.25 Vocational and Trade Schools. Encourage and accommodate to the greatest extent possible the development and location of vocational and trade schools to broaden the local pool of skilled and technical workers.

In addition to the above education specific policies, the JVGP also includes policies LUE 6.4, 12.1, and 13.1 set forth under the response to Threshold 15a, that also address school facilities.

The *JVGP EIR* concluded that because the developers of new projects would be required to pay development impact fees to offset project-related demand on public school services, newly proposed projects would not adversely impact school services. Therefore, through impact fees on new development and implementation of the JVGP goals and policies, impacts to public school services from implementation of the JVGP would be less than significant. (JVGP DEIR, p. 4.14-12.)

Eastvale is located within the CNUSD. All future development projects would be required to pay established school impact mitigation fees to address the facility impacts created by new residential, commercial, and industrial development projects. Because payment of these fees would fully mitigate for any potential direct or indirect impacts to school facilities, impacts to school facilities would be less than significant. (NOP, p. 33.)

For the reasons set forth above, there will be no direct impacts regarding schools and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

15d. Parks?

Direct Impacts

No impact. As noted in the responses to Thresholds 14a and 15a above due to the Project not directly or indirectly generating an increase in population, the Project will not increase the demand for new park facilities or increase demand for park services. No impacts will occur.

Potential Reasonably Foreseeable Indirect Impacts

For the reasonably foreseeable indirect impacts discussion regarding Jurupa Valley and Eastvale parks, refer to the responses under Thresholds 16a and 16b (Recreation).

15e. Other public facilities?

Direct Impacts

No impact. As noted in the responses to Thresholds 14a and 15a above, the Project will not increase the demand on other public services or facilities. No impacts will occur.

Potential Reasonably Foreseeable Indirect Impacts

The *JVGP EIR* includes a discussion of impacts to libraries.

In addition to Community Safety, Services and Facilities Element goal and CSSF 3 and policies CSSF 2.1, CSSF 2.2, and CSSF 2.4 and Land Use Element policies LUE 12.1,12.2, and 13.1, the JVGP also includes the following policies specific to the provision of libraries and library services. (JVGP, pp. 8-31–8-32.)

> *Policies*
> *CSSF 2.26 Provide Adequate Facilities. Work with the Riverside County Library System to provide adequate facilities and services for the*

current and future population of Jurupa Valley and to promote and use the libraries for community meetings and events.

CSSF 2.27 *New Libraries. Encourage the development of new libraries in underserved areas of the city.*

CSSF 2.28 *Libraries as Community Centers. Design new library facilities as community centers with access to pedestrian and bicycle routes as well as public transit.*

CSSF 2.29 *Educational Programming. Encourage the County of Riverside to provide reading and literacy programs and other educational programs at the local library branch or via other means for those who cannot visit library facilities.*

CSSF 2.30 *Funding. Encourage County of Riverside efforts to provide adequate funding for improvements to local library facilities and programs through county, state, and federal funding, private and corporate donations, or other resources.*

CSSF 2.31 *Technology. Encourage the adoption of technological advances that can provide improved access to library resources.*

Development per the JVGP would increase population, which could result in a need for new or expanded library services as Jurupa Valley grows. The above JVGP goals and policies are designed to assure Jurupa Valley would have adequate services, including libraries, as development occurs and Jurupa Valley's population increases. (JVGP DEIR, p. 4.14-13.)

According to the *JVGP EIR*, with implementation of the JVGP policies identified above, particularly policy CSSF 2.4, which requires new development to pay its related costs for public facilities and services, impacts to library services associated with implementation of the JVGP would be less than significant. (JVGP DEIR, p 4.14-13.)

The *EGP EIR* did not evaluate impacts to public facilities other than fire protection, police protection, and parks.

For the reasons set forth above, there will be no direct impacts regarding other public facilities and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

16. Recreation	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would/does the project:				
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?	☐	☐	☐	☒

(Source: Project Description)

16a. 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?

Direct Impacts

No impact. As discussed in the response to Threshold 15d above the Project will not directly or indirectly generate an increase of population therefore, the Project will not increase the use of existing neighborhood and regional parks or recreational facilities. No impacts will occur.

Potential Reasonably Foreseeable Indirect Impacts

The following goal and policies of the JVGP Community Safety, Services, and Facilities Element are related providing neighborhood and regional parks and recreation programs. (JVGP, pp. 8-3, 8-38–8-39.)

Goal CSSF 3 Provide a high level of community services and facilities to meet the existing and future needs of Jurupa Valley.

Policies

CSSF 2.32 Evaluation of User Needs. Encourage park and recreation service providers to evaluate user feedback, track facility use, and utilize projections to understand park and recreation facility needs and plan for future acquisition and development.

CSSF 2.33 Park and Recreation Facilities Maintenance. Encourage park and recreation service providers to maintain parks, trails, and other recreation facilities in good condition and strive to meet Council-adopted community parks and recreation goals.

CSSF 2.34 Joint Use Agreements. Maintain and improve joint-use recreational agreements with school districts and public agencies and seek new opportunities for joint recreational uses.

CSSF 2.35 Universal Access. Encourage responsible agencies to provide, where feasible, inclusive recreation facilities that meet or exceed

accepted standards for universal access for all persons and abilities, and encourage others to do likewise.

CSSF 2.36 *Users. Encourage responsible agencies to provide parks and recreation facilities and programs that meet the needs of all residents, regardless of income levels, ages, and abilities, and encourage others to do likewise.*

CSSF 2.37 *Historic Sites. Celebrate historic sites with recreational learning opportunities in parks and recreation facilities.*

CSSF 2.38 *Natural Environment. Protect and, where possible, utilize parks, trails, and open spaces for learning opportunities and passive recreation in conjunction with our environmental goals.*

CSSF 2.39 *Street Closures/Public Spaces. Support temporary and, where safe and appropriate, long-term street closures to create or expand public spaces and to accommodate street fairs, farmers' markets, art shows, and other special community events.*

CSSF 2.40 *Equestrian Heritage. Work with community groups to encourage, promote, and as resources allow, help support projects that celebrate the City's equestrian heritage, such as trails, staging areas, hitching posts, corrals, exercise areas, and performance arena.*

Jurupa Valley's primary park provider is the Jurupa Area Recreation and Parks District (JARPD). Based on JARPD's parkland service ratio goal of 5.0 acres per 1,000 residents and the JVGP proposed land use plan, implementation of the JVGP would create a demand for up to approximately 246 acres of parkland. Eventually, Jurupa Valley may need up to 751 total acres of parkland. (JVGP DEIR, p. 4.15-13–4.15-14.)

The JVGP goal and policies mentioned above emphasize the proper care and maintenance of existing park facilities to avoid substantial physical deterioration. Implementation of the JVGP goal and policies regarding recreational facilities and programs will reduce potential impacts related to recreation and parks to less than significant levels and no mitigation is required. (JVGP DEIR, pp. 4.15-14–4.15-15.)

In addition to EGP Land Use policy LU-31 set forth in the response to Threshold 10b, the Open Space Chapter includes the following policies regarding the provision of parks and recreation facilities. (EGP, pp. 3-8, 11-4–11-6.)

Policies

OS-2 *Require the provision of recreation facilities concurrent with the development they serve.*

OS-3 *Require new development to provide implementation strategies for the funding of both active and passive parks and recreational sites.*

OS-4 *The City of Eastvale supports the development, maintenance, and enhancement of parks and trails serving a variety of needs at the neighborhood, community, and citywide level. To accomplish this, the City will work with the Jurupa Community Services District and the Jurupa Area Recreation and Park District to transition responsibility for public parks in Eastvale to the City.*

OS-5 *Until the City establishes its own parks operation in fulfillment of Policy OS-4, the City will work with the Jurupa Community Services District and the Jurupa Area Recreation and Park District to provide parks, recreation, and trails.*

OS-6 *New residential developments may be required to, at a minimum, provide parks consistent with the Quimby Act (CA Govt. Code Section 66477), through land dedication, fees in lieu, or on-site improvements at a standard of five (5} acres of land for parks per I ,000 residents. Land dedication and/or payment of in-lieu fees shall be required consistent with state law. Land dedication and/or fees may be required pursuant to other policies in this Chapter with or without the use of the authority provided in the Quimby Act, or in combination with the Quimby Act and other legal authority.*

According to the EGP DEIR, future buildout per the EGP would result in an increase in population that would require the construction of new or expansion of existing park and recreational facilities. Based on JCSD's and JARPD's standards for dedication of five acres of parkland per 1,000 population and EGP policy OS-6, future development, that is buildout, of the EGP would require an additional approximately 40 acres of parkland to meet anticipated demand. The provision of these additional park and recreation areas could result in adverse physical effect on the environment, which would be identified as part of a project-specific environmental review for each park project. (EGP DEIR, pp. 3.6-13–3.6-14.)

Regarding impacts to recreation and park facilities, the *EGP EIR* concluded that through implementation of the above identified EGP polices (particularly policies OS-2 and OS-3), along with project-level environmental review, would ensure that future development under the EGP would provide and maintain adequate park and recreation facilities consistent with parkland standards. Project level environmental review would also ensure that site-specific environmental impacts associated with the provision of such facilities would be identified and mitigated. Impacts would be less than significant. (EGP DEIR, p. 3.6-14.)

For the reasons set forth in the preceding paragraphs, there would be no direct impact to the provision of new or expanded park and recreation facilities will be less than significant through compliance with the polices mentioned above. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

16b. 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?

Direct Impacts

No impact. The Project does not include new public recreational facilities and as noted in the response to Threshold 15d above, the Project will not result in a need for construction or expansion of recreational facilities. No impacts would occur.

Potential Reasonably Foreseeable Indirect Impacts

Regarding construction and expansion of Recreational Facilities, refer to the response to Threshold 16a.

For the reasons set forth in the preceding paragraphs, direct impacts to recreation facilities would be less than significant. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and *EGP EIR*.

17. Transportation	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

(Sources: CEQA Guidelines; EGP, EGP DEIR, JVGP DEIR*, Project Description)*

17a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Direct Impacts

Less than significant impact. Project implementation would not conflict with any program, plan, ordinance, or policy addressing the circulation system. The Project would not alter existing roadway configurations or geometrics or significantly alter the City's transit roadway, bicycle, and pedestrian facilities. As discussed in the response to Threshold 17b, the Project is not a trip generator. As discussed in response to Threshold 9f, if a lane closure is necessary during construction, JCSD would prepare a traffic control plan and obtain an encroachment permit(s) from the Jurupa Valley Public Works Department. For these reasons, impacts regarding conflicts with circulation system programs, plans, ordinances, or policies would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

The JVGP Mobility Element would establish the local circulation plan to guide growth in Jurupa Valley. All of the goals and policies of the Mobility Element are generally consistent and do not conflict with the Riverside County Jurupa Area Plan that was the Circulation Element and has guided growth within Jurupa Valley up to adoption of the 2017 General Plan. Once adopted, the JVGP Mobility Element would become the circulation plan for Jurupa Valley; thus, there would be no significant impacts regarding conflicts with applicable plans. (JVGP DEIR, pp. 4.16-72–*4.16-73.)*

The analysis in the *EGP EIR* for this threshold focused on maintaining a Level of Service (LOS) C on City roadway facilities at buildout. In 2013, the State of California passed Senate Bill (SB) 743, which mandates that lead agencies can no longer use automobile delay – commonly known LOS – as a method for conducting transportation analysis under CEQA. The State later issued guidelines for the use of a broader measure called Vehicle Miles Traveled (VMT), which measures the total amount of driving over a given distance and is intended to better align transportation analysis with the State's Greenhouse Gas reduction goals. These changes

became mandatory on July 1, 2020, and lead agencies are now required to analyze transportation impacts under VMT, not LOS. Thus, the following discussion is provided for informational purposes since LOS is no longer a threshold of significance for CEQA purposes.

In evaluating the LOS, the *EGP EIR* took the following EGP Circulation Chapter policies into consideration. *(*EGP, pp. 4-8–4-11.*)*

Policies

C-1	*Provide for new roadways in accordance with the Circulation Plan.*
C-2	*New roadways within the Circulation Plan shall be consistent with Table C-1 [See EGP page 4-3]*
C-3	*The cumulative and indirect traffic impacts of development may be mitigated through the payment of impact mitigation fees.*
C-4	*Align right-of-way dedications with existing dedications along adjacent parcels and maintain widths consistent with the ultimate design standard of the road, including required turning lanes and utilities.*
C-9	*Private developers are responsible for the construction of new streets and providing access to highways for developing commercial, industrial. And residential areas.*
C-10	*Seek to maintain the following target levels of service: "C" along all City maintained roads. A peak hour level of service of "D" may be allowed in commercial and employment areas, and at intersections of any combination of major highways, urban arterials, secondary highways, or freeway ramp intersections.*
C-12	*Limit access points, parking, turn lanes, and intersections of streets and highways based upon the rood's classification and function. Access points must be located a sufficient distance away from major intersections to allow for safe, efficient operation.*
C-13	*Construct and improve traffic signals at appropriate intersections. Traffic signals should be spaced and operated as part of coordinated systems to optimize traffic operation.*
C-15	*Following the principles of complete streets, maximum visibility and access for pedestrians and encourage the removal of barriers {walls, easements, and fences) for safe and convenient movement of pedestrians. Ensure that the entire travel way is included in the design from building facade.*
C-16	*Pedestrian access shall be provided from developments to existing and future transit routes, pork and ride lots, terminal facilities, etc.*
C-17	*All development located along planned trails shall provide access to the trails system. All developments shall allow for trails to pass*

their boundaries and shall provide connections to existing and proposed trails in Eastvale and adjacent jurisdictions.

C-19 *Require, where feasible, the construction of overpasses or under crossings where trails intersect urban arterials or freeways.*

C-20 *Review all existing roadways without pedestrian facilities when they are considered for improvements (whether maintenance or upgrade) to determine if new pedestrian facilities are warranted.*

C-25 *Incorporate the potential for public transit service in the design of developments that are identified as major trip attractions (i.e., retail and employment centers).*

C-26 *Design the physical layout of urban arterials, major and secondary highways, and collectors to facilitate bus operations, including turnouts and shelters.*

The traffic projections in the *EGP EIR* represent a conservative assumption of development as proposed policies listed above seek to improve roadway connections, increase travel choice, reduce vehicle miles traveled, support economic development, accommodate efficient goods movement. and support other community goals. Despite these policy provisions all City roadway facilities would operate acceptably with the exception of three roadway segments:

- Cantu-Galleano Ranch Road from S. Milliken Avenue to Interstate 15,
- Limonite Avenue from Hamner Avenue to Interstate 15, and
- Schleisman Road from Hamner Avenue to Interstate 15,

The *EGP EIR* concluded, based on pre-SB 743 thresholds, that impacts would be significant and unavoidable. (EGP DEIR, pp. 3.2-12–3.2-15.) This was considered a significant and unavoidable impact related to buildout of the EGP prior to implementation of SB 743. This is not a direct significant impact resulting from the Project.

For the reasons set forth in the preceding paragraphs, direct impacts regarding conflicts with related circulations plans will be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

17b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Direct Impacts

Less than significant impact. CEQA Guidelines section 15064.3(a) describes specific considerations for evaluating a project's transportation impacts and states "Generally, vehicle miles traveled is the most appropriate measure of transportation impacts." As stated in CEQA Guidelines section 15064.3(b)(2), "projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact." Construction of Well 30 and destruction of Well 19 would temporarily increase traffic in the area as a result of construction-related vehicles; however this impact is temporary and short term. Water facilities are not trip generators, and any trips associated with maintenance of Well 19 would be diverted to the Well 30 site for maintenance of Well 30; thus, there would be no net

increase in vehicle miles traveled. For these reasons, Project implementation would not conflict with or be inconsistent with CEQA Guidelines section 15064.3. subdivision (b). Impacts would be less than significant.

Reasonably Foreseeable Indirect Impacts

The JVGP includes the following policies and program to reduce VMTs and measure that performance. (JVGP, pp. 3-35, 6-13, 6-16, 6-17.)

> *AQ 6.7* *Job Creation. Emphasize job creation and reductions in vehicle miles traveled to improve air quality over other less efficient methods.*
>
> *AQ 7.1* *Cooperative Relationships. Seek new cooperative relationships between employers and employees to reduce vehicle miles traveled such as creating Transportation Management Associations.*
>
> *AQ 7.1.1* *Trip Reduction Programs. Pursue grant funding to establish an incentive program to encourage the use of trip reduction programs to decrease automotive vehicle miles traveled.*

Regarding VMTs resulting from implementation of the JVGP, the JVGP EIR determined buildout per the JVGP would result in an additional 1,731.2 million VMT. This represents an approximately 29% increase in VMT, (JVGP DEIR, pp. 4.16-11, 6-7,) The JVGP DEIR concluded the JVGP is consistent with SCAG's RTP in that it would bring many more jobs Jurupa Valley than housing to Jurupa Valley in the future, which would substantially improve Jurupa Valley's jobs/housing ratio in turn helps reduce VMT generated by the City. (JVGP DEIR, p, 4.10-44.)

The EGP includes the following policies to reduce VMTs. (JVGP, p. 3-35, 6-13, 6-16, 6-17.)

> *Policies*
>
> *AQ-3* *Reduce vehicle miles traveled and motor vehicle emissions through local job creation.*
>
> *AQ-4* *Attain performance goals and/or vehicle miles traveled reductions consistent with SCAG's Growth Management Plan.*
>
> *AQ-10* *The City encourages new cooperative relationships between employers and employees to reduce vehicle miles traveled.*

Regarding VMTs and implementation of the EGP, the EGP DEIR states:

> *The 2003 Riverside County General Plan EIR determined that implementation of the 2003 Riverside County General Plan is consistent with SCAG's Regional Growth Management Plan and SCAQMD's 2007 AQMP, and the VMT growth rate under the Riverside County General Plan is consistent with SCAG's projected population growth. The proposed EGP would result in a new General*

Plan that blends existing (County of Riverside) goals and policies and new, Eastvale-specific goals and policies. As stated in Section 2.0, Project Description, the proposed General Plan retains the existing land use designations in the current Riverside County General Plan and, similarly, roadway classifications and other physical planning in the Riverside County General Plan will remain unchanged. (EGP DEIR, p. 3.3-15.)

According to the *EGP EIR*, the EGP would not conflict with or obstruct implementation of the 2007 AQMP. The EGP would not include changes to the existing County of Riverside Land Use Map and, as a result, no development beyond that previously considered in the 2003 Riverside County General Plan EIR would occur with implementation of the EGP. Therefore, while implementation of the EGP is anticipated to result in residential and nonresidential) development which would contribute to the VMT growth rate, such growth would not occur to on extent beyond that previously considered in the 2003 Riverside County General Plan EIR.

No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

17c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Direct Impacts

No impact. The Project will not result in changes to the existing roadway configurations and geometrics. The Project does not include any component that will result in an incompatible use of the existing roadways. Therefore, implementation of the proposed Project will not result in a substantial increase in hazards. No impact would occur. No mitigation is required.

Reasonably Foreseeable Indirect Impacts

The following goals and polices of the JVGP Mobility Element are indented to reduce impacts associated with hazards due to geometric design features or incompatible uses. (JVGP, pp. 3-9–3-10, 3-39–3-40, 3-65, 3-72.)

Policies

ME 1.1 Mobility Corridors. Require that the City's mobility corridors:

1. *Accommodate public transit, motor vehicles, bicyclists, equestrians and pedestrians within the public right of way wherever feasible, using multimodal, "complete streets" design strategies.*
2. *Maintain at least a Level of Service (LOS) D or better at all intersections, except where flexibility is warranted based on a multi-modal LOS evaluation, or where LOS E is deemed appropriate to accommodate complete streets/multi-modal facilities.*
3. *Be designed to meet the needs of the existing population and business activities, as designated by the Land Use Element and in accordance with the Mobility Corridor concept and to*

maintain consistency with the Master Plan of Streets and Trails (to be developed).

4. *Be designed so that new roadways, ramps, traffic control devices, bridges or similar facilities, and significant changes to such facilities, are designed to accommodate multi-modal facilities in an attractive and safe manner.*
5. *Be maintained in accordance with best practices and the City's Street Improvement Program.*

ME 1.2 *Corridor Design. When existing mobility corridors require modification or new corridors are established, their design shall be consistent with the following standards:*

1. *Roadway designs shall maintain no more than two through travel lanes wherever possible and shall not exceed four through travel lanes except within Express Mobility Corridors, or where a transition is required for roadways that connect to roads in other jurisdictions at the City boundaries.*
2. *Existing improvements and rights of way within mobility corridors may establish the general design criteria for the relevant segment in order to avoid replacing existing street improvements or right of way acquisitions for street widening.*
3. *Where sidewalks are appropriate, they should be detached and separated from the roadway by landscaped parkways. Where sidewalks are adjacent to curb on an existing roadway within a mobility corridor, sidewalks on either side of the relevant segment may be continued to a reasonable transition point.*
4. *Where two-lane roadways exist within a mobility corridor in low density, semi-rural areas, widening the existing through lanes for safety may be determined appropriate by the City Council on a case-by-case basis. Adding lanes to accommodate additional vehicular traffic shall require a finding by the City Council that the need for additional capacity takes precedence over preserving the existing corridor character.*
5. *Provisions for bus turnouts, bus shelters and connectivity to the Pedley Metrolink Station shall be included.*
6. *Houses along Secondary, Neighborhood Collector and Local Corridors shall have street access.*

ME 1.3 *Preserving Community Character in Mobility Corridors. Mobility corridors shall be designed to consider the land use and aesthetic contexts of their surroundings and shall include the following features unless determined infeasible or inconsistent with General Plan goals and policies:*

1. *Mobility corridors shall include parkways, street trees and where appropriate, medians that include substantial landscape*

treatments and that separate pedestrians and equestrians from vehicle traffic and provide a pleasant and inviting traveling experience for non-vehicular travel.

2. *Express and Primary Mobility Corridors shall include a landscaped raised median wherever possible and shall include substantial setbacks and landscape buffers to protect adjacent noise-sensitive uses.*
3. *Mobility corridors shall be designed to produce an attractive, safe and high-quality environment of treelined streets within a semi-rural, small town community.*

ME 3.3 *Design Standards. In determining the appropriate street or intersection design standard to apply, the City will seek to balance cyclists' and pedestrians' safety and convenience with that of other roadway users.*

ME 3.9 *Pedestrian Facilities. Public streets shall provide pedestrian facilities in accordance with adopted City standards. Sidewalks shall be separated from the roadway by a landscaped parkway, except where the Planning Director determines that attached sidewalks are appropriate due to existing sidewalk location, design or other conditions.*

ME 3.10 *Accessible Pedestrian Facilities. All new streets shall have provisions for the adequate and safe movement of pedestrians, including improvements for the elderly and disabled.*

ME 4.4 *Safe Crossings. City will plan for and implement pedestrian and equestrian access that is consistent with road design standards, including provisions for interconnected pedestrian and equestrian paths, sidewalks, crosswalks, timing and actuation of traffic signals, in street annunciators or other features necessary for safe street crossing.*

ME 6.6 *Grade Separations and Crossings. As resources allow, support construction of grade separations and crossings; or reconstruct existing grade separations and crossings as necessary for the smooth flow of traffic within the City, consistent with plans developed by the Western Riverside Council of Governments (WRCOG) and other responsible agencies.*

ME 8.3 *Driveways along Highways. Discourage driveways taken directly off General Plan designated highways. Access may be permitted off of General Plan designated highways only if such access poses no traffic hazards or impacts to local streets.*

ME 8.5 City Standards. Design, construct, and maintain streets as specified in the City Street Improvement Standards and Engineering Specifications.

The *JVGP EIR* concluded that with adherence to goals and polices of the Mobility Element listed above, and compliance with existing requirements of Jurupa Valley and other agencies, reduce potential impacts associated with unsafe design or incompatible uses would be less than significant. (JVGP DEIR, p. 4.16-119.)

The EGP Circulation chapter policies C-12 and C-15 listed in the response to Threshold 17a are intended to reduce impacts associated with hazards due to geometric design features or incompatible uses. According to the *EGP EIR*, as Eastvale develops, the ability to access existing neighborhoods is anticipated to be reviewed. An enhanced roadway network that accommodates pedestrian access needs would also address potential traffic hazards. Implementation of EGP policy C-12 would locate vehicular access points at a sufficient distance away from major intersections to allow for safe, efficient operation. EGP policy C-15 requires visibility and access for safe and convenient movement of pedestrians. (EGP DEIR, p. 3.2-17.)

Build-out of Eastvale per the EGP would increase the amount of vehicle traffic which would require improvement and expansion of Eastvale's roadway system. However, new and upgraded roadways would be designed according to applicable federal. state, and local design appropriate standards, which would minimize traffic hazards. Additionally the EGP does not contain any provisions that would exacerbate a hazardous situation associated with roadway hazards. Therefore, impact would be less than significant. (*EGP EIR*, p. 3.2-17.)

For the reasons set forth above, there would be no direct impact associated with unsafe design or incompatible uses. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

17d. Result in inadequate emergency access?

Direct Impacts

Less than significant impact. Operation of the proposed Project will not impact emergency access because operational activities will take place on the Project Site. As discussed in the response to Threshold 9f, other than connecting to existing pipelines in Philadelphia Avenue, the Project does not include any off-site improvements and lane closures are not anticipated. In the event a lane closure is needed during construction, JCSD would prepare a traffic control plan and obtain an encroachment permit(s) from the Jurupa Valley Public Works Department. Through compliance with the conditions of the encroachment permit(s), the ability of emergency vehicles to pass by the Project Site safely, efficiently, and quickly would not be limited. Therefore, impacts regarding emergency access would be less than significant and no mitigation is required

Reasonably Foreseeable Indirect Impacts

The following JVGP Mobility Element policy is indented to maintain adequate emergency access. (JVGP, p. 3-75.)

Policies

ME 8.22 *Emergency Response Routes. Provide a street network with quick and efficient routes for emergency vehicles, meeting necessary street widths, turn-around radii and other factors as determined by the City Engineer in consultation with emergency responders.*

Future development per the JVGP would be required to design, construct, and maintain structures, roadways, and facilities to provide adequate emergency access and evacuation. Construction activities, which may temporarily restrict vehicular traffic, would be required to implement measures to facilitate the passage of persons and vehicles through/around any required road closures. Future development plans would be submitted to and approved by the Jurupa Valley Fire and Police Departments prior the issuance of building permits. The JVGP DEIR concluded that with implementation of the JVGP goals and policy will result in less than significant impacts related to emergency access as growth occurs. (JVGP DEIR, p. 4.16-114.)

Future buildout per the EGP would increase the amount of vehicle traffic in Eastvale, new and upgraded roadways would be designed according to applicable federal. state, and local design appropriate standards, minimizing conflicts with emergency access . Additionally, all development proposals in Eastvale are reviewed by the City engineering and planning staff to ensure that they meet all applicable standards including the minimum turnaround area for emergency vehicles. For these reasons this impact is considered less than significant. (EGP DEIR, p. 3.2-17.)

For the reasons set forth above, direct impacts to emergency access would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

18. Tribal Cultural Resources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, 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 a California Native American tribe, and that is:				
i.) 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	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision(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.	☐	☒	☐	☐

(Sources: Assembly Bill (AB) 52 Consultation; JVGP DEIR, PaleoWest*)*

18a(i)–(ii) Cause a substantial adverse change in the significance of a tribal cultural resource, 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 a California Native American tribe, and that is:

i.) 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

ii.) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (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.

Direct Impacts

Less than significant with mitigation incorporated. JCSD provided "Notification of Consultation Opportunity" letters dated July 21, 2021 pursuant to AB 52 to Tribes that have previously requested such a notice. Letters were sent from JCSD to two tribes: Morongo Band of Mission Indians (MBMI) and San Manuel Band of Mission Indians (SMBMI). As of October 15, 2021, none of the contacted Tribes have responded to JCSD. As discussed in the response to Threshold 5b, the SMBMI informed PaleoWest that the Project Site is within Serrano territory and SMBMI would not be requesting consulting party status. The results of the sacred land file search conducted by the Native American Heritage Commission at the request of PaleoWest yielded negative results. (PaleoWest, p. 15.) As discussed in the response to Threshold 5a

above, there are no resources listed or eligible for listing in the CRHR on the Project Site. Although no tribal cultural resources were identified during the Project's AB 52 process, the Project will implement, mitigation measure **MM CR 1**, which requires the construction in the vicinity of a find be halted until a qualified archaeologist makes a determination as to the significance of the find, will be implemented. Mitigation measure MM CR 1 also requires, the Gabrielino Tongva Indians of California Tribal Council be notified regarding any pre-contact and/or historic-era finds and be provided information after the Project Archaeologist makes the initial assessment of the nature of the find, in order to provide Tribal input with regard to significance and treatment. For these reasons, Project implementation would not result in a substantial adverse change in the significance of a tribal cultural resource and impacts would be reduced to less than significant.

Potential Reasonably Foreseeable Indirect Impacts

Of the 23 Native American tribal groups contacted as part of the SB 18 and AB 52 consultation for the JVGP, three Native American groups expressed interest in the JVGP process in terms of Native American Monitoring and formal government to government consultation: Gabrieleno Band of Mission Indians – Kizh Nation, Morongo Band of Mission Indians, Soboba Tribe. In addition, the Agua Caliente Band of Mission Indians stated Jurupa Valley is outside the boundaries of that band's traditional use area and no further consultation is necessary. (JVGP DEIR, p. 4.5-16.)

In addition to Conservation and Open Space goal COS 7.1 and policies COS 7.1, COS 7.2, COS 7.6, and COS 7.10 set forth in the response to Threshold 5a and policies COS 7.3 through COS 7.5, COS 7.8, and COS 7.9 set forth in the response to Threshold 5b, the JVGP includes the following policy regarding Native American participation. (JVGP, p. 4-38.)

> *Policy*
> *COS 7.8* *Native American Monitoring. Include Native American participation in the City's guidelines for resource assessment and impact mitigation. Native American representatives should be present during archaeological excavation and during construction in an area likely to contain cultural resources. The Native American community shall be consulted as knowledge of cultural resources expands and as the City considers updates or significant changes to its General Plan.*

As discussed in the response to Threshold 5a, the land in Jurupa Valley has the potential to yield tribal cultural resources from past Native American activities. Lands along the Santa Ana River may contain tribal cultural resources from past human activities, however, this area is an active floodplain and contains deep alluvial soils so the potential for finding undisturbed artifacts is relatively low. Additionally, the Jurupa Hills contains rock outcroppings and boulders that may represent resources. (JVGP DEIR, p. 4.5-16.)

The *JVGP EIR* concluded through implementation of the above mentioned JVGP goals and policies, which require consultation and coordination with local Native American tribal

representatives prior to grading for future development, along with the regulatory requirements of the federal and state resource agencies, potential impacts to tribal cultural resources from future development within Jurupa Valley would be less than significant. (JVGP DEIR, p. 4.5-17.)

Regarding effects on cultural resources resulting from buildout per the EGP, the NOP for the *EGP EIR* concluded that future development projects would be subject to individual, project-level CEQA review which would address the potential for a project to disturb known and unknown archaeological resources and would require mitigation. (NOP, p. 16.)

For the reasons set forth in the preceding paragraphs, direct impacts to tribal cultural resources would be less than significant. Further, no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and EGP EIR.

19. Utilities and Service Systems	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electrical 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 inadequate 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?	☐	☐	☒	☐

(Sources: Project Description, AB 939; JCSD's Standards Manual for Water and Sewer Facilities; JCSD 2020 MWP, JCSD 2020 UWMP; JVGP, JVGP DEIR; CalRecycle)

19a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Direct Impacts

Less than significant with mitigation incorporated. The construction and operation of Well 30 is a new water facility for JCSD. Impacts resulting from the construction and operation this new well and destruction of existing Well 19 have been evaluated in this Initial Study and determined to be less than significant with implementation of mitigation measures for biological resources, cultural resources, and geology and soils. Construction of Well 30 also includes the construction of an onsite electrical transformer and electrical meter as shown on **Plate 1**. No off-site electrical facilities to serve the Project Site are proposed. Well 30 would connect to existing JCSD facilities and no off-site facilities are proposed at this time. The Project will not result in the generation of wastewater and thus will not require new or expanded wastewater treatment facilities. The Project would use existing storm drain facilities. The Project would not use natural gas. The Project would include SCADA antenna on the Well 30 Site. For the reasons set forth above, Project impacts regarding utilities would be less than significant with implementation of mitigation **measures MM BIO 1, MM BIO 2, MM CR 1, and MM GEO 1 through MM GEO 3**.

Potential Reasonably Foreseeable Indirect Impacts

In addition to JVGP Conservation and Open Space Element goal COS 3, set forth in the response to Threshold 4b; policy COS 3.12 set forth in the response to Threshold 10a; Community Safety, Services, and Facilities Element policies CSSF 2.43 through CSSF 2.48 and Land Use Element Policies LUE 12.1 and LUE 12.2 set forth in the response to Threshold 10b; and JVGP policy CSSF 1.15 set forth in the response to Threshold 10c.i–10c.iv, the JVGP includes the following policies regarding new or expanded water, wastewater treatment or storm water drainage, electrical power, natural gas, or telecommunications facilities. (JVGP, pp. 2-42–2-43, 2-80, 8-41–8-43.)

Policies

CSSF 2.49 Water Conservation. Make use of state-of-the-art water conservation technology in all City facilities and landscaping, and require new developments to include drought-tolerant landscaping, permeable paving and water-saving systems and fixtures.

CSSF 2.50 Adequate Wastewater Conveyance. Work with the Jurupa Community Services District and the Rubidoux Community Services District to ensure sufficient wastewater conveyance and pumping capacity to meet the existing and future needs of the City.

CSSF 2.51 Septic Systems. Work with the Jurupa Community Services District to convert areas of the City relying on septic systems to municipal wastewater service.

CSSF 2.52 Recycled Water. Encourage the continued production and expansion of recycled water for irrigation and other purposes.

CSSF 2.53 Wastewater Treatment Capacity. Encourage efforts of the City of Riverside and the Western Riverside County Regional Wastewater Authority (WRCRWA) to provide adequate wastewater treatment capacity to serve the existing and future needs of the City.

CSSF 2.54 Fair-Share Costs. Require new development to contribute fair-share costs for the provision of wastewater infrastructure and treatment.

CSSF 2.55 Brine Line. Support the continued maintenance and use of the Inland Empire Brine Line to transport salty wastewater to the ocean and maintain the quality of the Santa Ana River Watershed.

CSSF 2.56 Adequate Facilities. Work with the Riverside County Flood Control and Water Conservation District to develop and maintain adequate flood control facilities to reduce the potential for flooding and protect the quality of the Santa Ana River and other natural drainage courses.

CSSF 2.57 *New Development. Require new development to implement on-site measures to clean and contain storm water runoff.*

LUE 4.6 *Public Utilities, Easements, and Rights of Way. New development and conservation land uses shall not infringe upon existing public utility corridors, including fee owned rights of way and permanent easements whose true land use is that of public facilities. This policy will ensure that the "public facilities" designation governs what otherwise may be inferred from large-scale General Plan maps.*

LUE 4.8 *Impact Mitigation of New Public Facilities. Planning and development of new public facilities, such as public buildings, utility transmission lines (water, sewer, communications and power), roads, bridges, storage and equipment yards, and flood control channels, shall avoid adverse impacts to prime residential or commercial properties, or areas with residential and commercial development potential, and shall not adversely affect the character and quality of life in the City's residential neighborhoods.*

LUE 12.3 *Urban Water Management Plans. Review all projects for consistency with the appropriate community services district's urban water management plans.*

Regarding the relocation or construction or new or expanded water facilities to support buildout per the JVGP, buildout per the JVGP would result in new development that would require new water service. As discussed in the response to Threshold 10b, water service is provided to Jurupa Valley by JCSD, RCSD, and the Santa Ana River Water Company. JCSD and RCSD each own and operate water storage (i.e, tanks/reservoirs), water treatment facilities, booster stations, and transmission and distribution pipelines throughout Jurupa Valley. (JCSD 2020 UWMP, RCSD 2020 UWMP.)

The *JVGP EIR* concluded because the above identified JVGP goals and policies along with other JVGP goals, policies, and programs would support the JCSD and RCSD UWMPs, implementation of the JVGP would have less than significant impacts regarding the expansion of water and water treatment facilities; therefore no mitigation is required. (JVGP DEIR, pp. 4.17-9–4.17-11.)

Regarding the relocation or construction or new or expanded wastewater treatment facilities, wastewater collection and treatment service, buildout per the JVGP would result in new development that would generate wastewater that would require treatment. Wastewater treatment is provided to Jurupa Valley by JCSD and RCSD. Wastewater generated within the portion of Jurupa Valley served by JCSD is treated at the City of Riverside Regional Water Quality Control Plant (RWQCP), the Western Riverside County Regional Wastewater Authority (WRCRWA), and industrial wastewater is conveyed via the Inland Empire Brine Line (IEBL) for treatment at the Orange County Sanitation District (OCSD) Fountain Valley Plant. JCSD currently has 4 million gallons per day (MGD) treatment capacity at RWQCP, which will increase

to 5 MGD after 2030; 6 MGD treatment capacity at WRCRWA; 3.493 MGD conveyance in the IEBL and 1.155 MGD treatment at OCSD. According to the JCSD 2020 WWMP, average daily flows at buildout within JCSD's service area (which includes portions of Jurupa Valley and all of Eastvale), would be 4.74 MGD to the RWQCP, 5.22 MGD to the WRCRWA, and 1.32 MGD in the IEBL for treatment at OCSD. The average predicted flow to OCSD is greater than JCSD's contracted treatment capacity; therefore, JCSD may need to purchase addition treatment capacity in the future if the need arises. (JCSD 2020 WWMP, pp. 4-19–4-20, 5-32.) Wastewater within the portion of Jurupa Valley served by RCSD's is conveyed to the RWQCP for treatment.

The *JVGP EIR* concluded that implementation of the JVGP policies along with compliance with federal, state, and local regulations would ensure that wastewater treatment requirements are met and there would be sufficient capacity for wastewater treatment and disposal. Therefore, impacts would be less than significant and no mitigation is required. (JVGP DEIR, pp. 4.17-11–4.17-12.) Additionally, because sufficient capacity exists at the RWQCP, WRCRWA, and OCSD Fountain Valley plant, no expansion of wastewater treatment facilities is needed.

Regarding the relocation or construction or new or expanded storm water drainage facilities, development within the watershed per the JVGP would result in an increase in impervious surfaces in addition to changes in land use and associated pollutant runoff characteristics, which are to alter existing hydrology and increase potential pollutant loads. However, all future development in the Jurupa Valley will be required to comply with the requirements of the NPDES permit program. In addition, development within Jurupa Valley must comply with Chapter 6.10, Storm Water/Urban Runoff Management and Discharge Controls of the Jurupa Valley Municipal Code. The JVGP DEIR concluded, that through implementation of the above referenced JVGP policies along with enforcement of established Jurupa Valley regulations and requirements, stormwater drainage impacts would be reduced to a less than significant level. (JVGP DEIR, pp. 4.17-14–4.17-15.)

In addition to EGP policy LU-31 set forth in the response to Threshold 10b, the Land Use Chapter and Circulation and Infrastructure Chapter contains the following policies regarding the provision of utilities. (EGP, p. 4-12.)

Policy	
C-28	*Promote and encourage efficient provisions of utilities such as water, wastewater, natural gas, and electricity that support the Land Use Map.*

Regarding the relocation or construction of new or expanded water facilities to support buildout per the EGP, as discussed in the response to Threshold 10b, water service is provided to Eastvale by JCSD. JCSD owns and operate water storage (i.e., tanks/reservoirs), treatment, booster stations, and transmission and distribution pipelines throughout Eastvale. (JCSD 2020 UWMP) The NOP for the *EGP EIR* concluded that impacts regarding the construction of new or expanded water facilities would be less than significant because the EGP would not include any changes to the existing land use plan, and impacts would be less than significant. (NOP, p. 37.)

Regarding the relocation or construction or new or expanded wastewater treatment facilities, wastewater collection and treatment service is provided to Eastvale by JCSD. Wastewater generated within Eastvale is treated at WRCRWA and industrial wastewater is conveyed via the IEBL for treatment at the OCSD Fountain Valley Plant. As previously discussed, according to the JCSD 2020 WWMP, at buildout within JCSD's service area, which includes portions of Jurupa Valley and all of Eastvale, with the purchase of additional treatment capacity at OCSD if needed for industrial wastewater, there are sufficient wastewater treatment facilities to serve buildout per the EGP. (JCSD 2020 WWMP, pp. 4-19–4-20, 5-32.)

Regarding the relocation or construction or new or expanded storm water drainage facilities, the NOP for the *EGP EIR* concluded that impacts in this regard would be less than significant because the EGP would not include any changes to the existing land use plan. (NOP, p. 36.)

For the reasons set forth in the preceding paragraphs, direct impacts regarding the construction of new or the expansion of existing facilities would be less than significant and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

19b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Direct Impacts

No Impact. The construction and operation of Well 30, as a replacement for Well 19, will increase water supply from Well 19's current production of 1,195 gpm to 2,500 gpm to the 980 PZ and 1110 PZ to meet future demands within the District's service area. (JCSD WMP, p. 7-5.) According to JCSD's *2020 UWMP* Well 30 would contribute to JCSD's ability to provide average year, single-dry, and multiple-dry year water demands within its service area. (JCSD 2020 UWMP, p. 6-26.) The Project does not propose growth that was not accounted for in the JCSD's *2020 UWMP*. As such, no impacts will occur.

Potential Reasonably Foreseeable Indirect Impacts

The JVGP Conservation and Open Space Element contains goal COS 3 set forth in the response to Threshold 4b to coordinate with the water providers to meet Jurupa Valley's urban water needs. JVGP Community Safety, Services, and Facilities Element policies CSSF 2.43 through CSSF 2.48 set forth in the response to Threshold 10b, address means of water conservation. JVGP Land Use policy LUE 12.3 set forth in the response to Threshold 19a, requires Jurupa Valley to review all projects for consistency with JCSD's UWMP or RCSD's UWMP as appropriate.

In addition to EGP policy LU-31, set forth in the response to Threshold 10b, which indicates Eastvale will work with other agencies, such as JCSD, to coordinate development with supporting water services. The EGP Land Use Chapter includes policy LU-32 regarding the availability of water supplies to meet service demands.

Policy

LU-32 *Adequate and available circulation facilities, water supplies, and sewer facilities should be available to meet service demands as development occurs.*

Water is provided to Jurupa Valley and Eastvale by JCSD, RCSD, and the Santa Ana River Water Company. The Santa Ana River Water Company does not meet the definition of an urban water supplier and as such does not have to prepare an UWMP. This discussion is based on the analysis contained in the JCSD 2020 UWMP and the RCSD UWMP.

According to the JCSD *2020 UWMP*, JCSD has had a reliable water supply to meet demands during normal, single-dry, and multiple-dry years.[18] Notably, JCSD had sufficient local water supplies during the statewide drought from 2.012 to 2017. Because total water supply exceeds total projected demand, as shown below in **Table 13, Table 14, and Table 15**, JCSD's 2020 UWMP demonstrates that JCSD has sufficient water supplies to meet the normal, single-dry, and multiple-dry years scenarios for the years 2025, 2030, 2035, 2040, and 2045. (JCSD 2020 UWMP, pp. 7-7–7-12.)

Table 13 – JCSD Normal Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Total Water Supply	42,093 AF	44,093 AF	44,093 AF	44,093 AF	44,093 AF
Total Projected Demand	31,525 AF	34,035 AF	35,825 AF	37,795 AF	37,795 AF
Difference	10,568 AF	10,058 AF	8,268 AF	6,298 AF	6,298 AF

Source: *JCSD 2020 UWMP,* Submittal Table 7-2

Notes: AF = acre-feet. Demand includes 660 acre-feet per year (AFY) of recycled water and 640 AFY of non-potable water.

Table 14 – JCSD Single Dry Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Total Water Supply	42,303 AF	44,534 AF	44,446 AF	44,402 AF	44,313 AF
Total Projected Demand	31,714 AF	34,477 AF	36,506 AF	38,740 AF	39,004 AF
Difference	10,589 AF	10,057 AF	7,940 AF	5,992 AF	5,309 AF

Source: *JCSD 2020 UWMP,* Submittal Table 7-3

Notes: AF = acre-feet. Demand includes 660 acre-feet per year (AFY) of recycled water and 640 AFY of non-potable water.

[18] These terms are defined as follows. Normal year represents the water supplies a supplier considers available during normal conditions. Single-dry year represents the lowest water supply available to the water supplier. Multiple-dry years is the driest five-year historical sequence for the water supplier.

Table 15 – JCSD Multiple Dry Years Supply and Demand Comparison

		2025	2030	2035	2040	2045
First Year	Supply Totals	41,883 AF	43,608 AF	43,432 AF	43,255 AF	43,079 AF
	Demand Totals	31,462 AF	34,443 AF	36,470 AF	38,702 AF	38,928 AF
	Difference	10,420 AF	9,165 AF	6,962 AF	4,554 AF	4,150 AF
Second Year	Supply Totals	41,883 AF	43,608 AF	43,432 AF	43,255 AF	43,079 AF
	Demand Totals	28,316 AF	30,999 AF	32,823 AF	34,832 AF	35,036 AF
	Difference	13,567 AF	12,609 AF	10,609 AF	8,424 AF	8,043 AF
Third Year	Supply Totals	41,883 AF	43,608 AF	43,432 AF	43,255 AF	43,079 AF
	Demand Totals	25,170 AF	27,554 AF	29,176 AF	30,961 AF	31,143 AF
	Difference	16,713 AF	16,054 AF	14,256 AF	12,294 AF	11,936 AF
Fourth Year	Supply Totals	41,883 AF	43,608 AF	43,432 AF	43,255 AF	43,079 AF
	Demand Totals	22,024 AF	24,110 AF	25,529 AF	27,091 AF	27,250 AF
	Difference	19,859 AF	19,428 AF	17,903 AF	16,164 AF	15,829 AF
Fifth Year	Supply Totals	41,883 AF	43,608 AF	43,432 AF	43,255 AF	43 079 AF
	Demand Totals	18,877 AF	20,666 AF	21,882 AF	23,221 AF	23,357 AF
	Difference	23,005 AF	22,942 AF	21,550 AF	20,034 AF	19,722 AF

Source: *JCSD 2020 UWMP,* Submittal Table 7-4

Notes: AF = acre-feet. Demand includes 660 AFY of recycled water and 640 AFY of non-potable water, climate change demand factors for multiple dry years and reductions of 10%–40% from water conservation commencing in year 2.

As with JCSD, RCSD does not have land use authority within its service area. Since the majority of RCSD's service area is within Jurupa Valley, that authority rests with the city of Jurupa Valley. The best guide for future land use within any city or county is that jurisdiction's General Plan Land Use Element; thus, the basis for land use and population projections used in RCSD's *2020 UWMP* are the current General Plan land use plans for these agencies. (UWMP, p. 3-25; MWP 2-3.) RCSD met with Jurupa Valley Planning Department in 2021 during preparation of the RCSD *2020 UWMP,* as required by California Water Code Section 10631(a). This meeting was held for the specific purpose of coordinating on the most appropriate land use data to use for RCSD's *2020 UWMP (*RCSD 2020 UWMP*, p. 2-5.)*

According to the RCSD *2020 UWMP*, RCSD has had a reliable water supply to meet demands during normal, single-dry, and multiple-dry years and to-date has not experienced a water shortage. Further, RCSD had sufficient water supplies during the statewide drought from 2012 to 2017. Because total water supply exceeds total projected demand, as shown below in **Table 16, Table 17, and Table 18**, RCSD's 2020 UWMP demonstrates that RCSD has

sufficient water supplies to meet the normal, single-dry, and multiple-dry years scenarios for the years 2025, 2030, 2035, 2040, and 2045. (JCSD 2020 UWMP, pp. 7-7–7-12.)

Table 16 – RCSD Normal Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Total Water Supply	10,582 AF	14,302 AF	14,345 AF	14,592 AF	14,643 AF
Total Projected Demand	8,812 AF	10,914 AF	11,649 AF	12,388 AF	13,130 AF
Difference	2,400 AF	3,388 AF	2,696 AF	2,204 AF	1,512 AF

Source: *RCSD 2020 UWMP,* Submittal Table 7-2

Notes: AF = acre-feet. Includes potable and non-potable water in a normal year scenario. Assumes future supply projects are in place and a pump run time of 50%.

Table 17 – RCSD Single Dry Year Supply and Demand Comparison

	2025	2030	2035	2040	2045
Total Water Supply	10,582 AF	14,302 AF	14,345 AF	14,592 AF	14,673 AF
Total Projected Demand	8,182 AF	10,914 AF	11,649 AF	12,388 AF	13,130 AF
Difference	2,400 AF	3,388 AF	2,696 AF	2,204 AF	1,512 AF

Source: *RCSD 2020 UWMP,* Submittal Table 7-3

Notes: AF = acre-feet. Demand includes 660 acre-feet per year (AFY) of recycled water and 640 AFY of non-potable water.

Table 18 – RCSD Multiple Dry Years Supply and Demand Comparison

		2025	2030	2035	2040	2045
First Year	Supply Totals	10,582 AF	14,302 AF	14,345 AF	14,592 AF	14,643 AF
	Demand Totals	8,182 AF	10,914 AF	11,649 AF	12,388 AF	13,130 AF
	Difference	2,400 AF	3,388 AF	2,696 AF	2,204 AF	1,152 AF
Second Year	Supply Totals	10,582 AF	14,302 AF	14,345 AF	14,592 AF	14,643 AF
	Demand Totals	8,182 AF	10,914 AF	11,649 AF	12,388 AF	13,130 AF
	Difference	2,400 AF	3,388 AF	2,696 AF	2,204 AF	1,152 AF
Third Year	Supply Totals	10,582 AF	14,302 AF	14,345 AF	14,592 AF	14,643 AF
	Demand Totals	8,182 AF	10,914 AF	11,649 AF	12,388 AF	13,130 AF
	Difference	2,400 AF	3,388 AF	2,696 AF	2,204 AF	1,152 AF
Fourth Year	Supply Totals	10,582 AF	14,302 AF	14,345 AF	14,592 AF	14,643 AF
	Demand Totals	8,182 AF	10,914 AF	11,649 AF	12,388 AF	13,130 AF
	Difference	2,400 AF	3,388 AF	2,696 AF	2,204 AF	1,152 AF
Fifth Year	Supply Totals	10,582 AF	14,302 AF	14,345 AF	14,592 AF	14,643 AF
	Demand Totals	8,182 AF	10,914 AF	11,649 AF	12,388 AF	13,130 AF
	Difference	2,400 AF	3,388 AF	2,696 AF	2,204 AF	1,152 AF

Source: *RCSD 2020 UWMP,* Submittal Table 7-4

Notes: AF = acre-feet.

As shown in the above tables, based on JCSD's *2020 UWMP* and RCSD's *2020 UWMP.* JCSD and RCSD has sufficient water supplies available to serve Jurupa Valley and Eastvale at buildout for the normal, dry, and multiple dry years scenarios. Therefore, reasonably foreseeable indirect or cumulative impacts to water supplies would be less than significant.

19c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments

Direct Impacts

No Impact. JCSD is the wastewater treatment provider. The construction of Well 30 and the destruction of Well 19 once Well 30 is operational would not generate wastewater. No impacts would occur.

Potential Reasonably Foreseeable Indirect Impacts

Wastewater treatment in Jurupa Valley and Eastvale is provided by JCSD and RCSD. Wastewater generated in Jurupa Valley and Eastvale is treated at the RWQCP, WRCRWA, and OCSD's Fountain Valley plant. As discussed in the response to Threshold 19a, there is sufficient capacity in these treatment facilities to treat existing wastewater and projected wastewater at buildout of Jurupa Valley and Eastvale.

For the reasons set forth in the preceding paragraphs, there would be no direct impacts to wastewater capacity. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

19d. 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?

Direct Impacts

Less Than Significant Impact. Construction waste would be generated during deconstruction of Well 19 and construction of Well 30, some of which may be recycled. Standard conditions in JCSD construction specification, require the contractors to dispose of construction waste in facilities licensed to accept such waste. The materials recovery facilities (MRFs) and landfills closest to JCSD's service area are the Agua Mansa MRF (Riverside), El Sobrante Sanitary Landfill in Corona (estimated close date 2047) and the Badlands Sanitary Landfill in Moreno Valley (estimated close date 2024). Project-generated solid waste would be delivered via private haulers to an MRF or licensed landfill. Once construction/deconstruction is complete, the Project is not a use that would generate substantial amounts of solid waste during operations. Given the number of landfills in proximity to JCSD's service areas and estimated closure dates in excess of 20 years, sufficient capacity is expected for the temporary increase of solid waste to be disposed of at nearby landfills. Impacts would be less than significant.

Reasonably Foreseeable Indirect Impacts

In addition to Land Use Element policies LUE 4.8 set forth in the response to Threshold 19a and policies LUE 12.1 and 12.2 set forth in the response to Threshold 15a, the JVGP includes the following policies regarding solid waste. (JVGP, pp. 8-44–8-45.)

Policies

CSSF 2.59 Solid Waste Services. Work with private disposal companies to ensure the continued provision of adequate solid waste and recycling services in Jurupa Valley, including the availability of adequate landfill capacity to meet the City's future needs.

CSSF 2.60 Waste Reduction. Encourage the diversion of waste from landfills through reduction, reuse, and recycling efforts.

CSSF 2.61 Waste Management. Encourage new development to employ construction waste management techniques to divert construction materials and debris away from landfills.

CSSF 2.62 Public Education. Encourage and, as resources allow, support public education efforts to inform the public about waste reduction, reuse, and recycling.

CSSF 2.63 Neighborhood Clean-Up Efforts. Sponsor and/or participate in neighborhood clean-up efforts and antilittering campaigns/strategies.

CSSF 2.64 Commercial Recycling. Expand mandatory recycling for commercial customers consistent with state requirements.

CSSF 2.65 Rubberized Asphalt. Consider using rubberized asphalt and recycled aggregate for City street projects, as appropriate.

CSSF 2.66 Waste Diversion. Achieve at least the minimum construction and demolition waste diversion requirement of 75%.

CSSF 2.67 Litter and Recycling Containers. Place public litter and recycling containers at key locations in the public right of way, as resources allow. Encourage other responsible agencies and service districts to do likewise.

Solid waste from the Jurupa Valley would be hauled by Burrtec Waste Industries or Waste Management and transferred to the Agua Mansa Materials Recovery Facility (MRF)/Transfer Station. From the MRF the non-recyclable material would be transferred to regional landfills (most likely the Badlands Sanitary Landfill or the El Sobrante Landfill) as available. According to the *JVGP EIR*, adequate daily surplus capacity existing at the receiving regional landfills and buildout of the JVGP would not significantly affect current operations or the expected lifetime of the area landfills. The JVGP DEIR concluded that with implementation of the JVGP policies regarding solid waste, impacts to landfills and solid waste disposal would be less than significant. (JVGP DEIR, pp. 4.17-13–4.17-14.)

The Air Quality and Conservation Chapter of the EGP includes policy AQ-32 set forth in the response to Threshold 6a regarding the reduction of solid waste to be disposed of in landfills. Regarding the generation of solid waste, the NOP for the *EGP EIR* concluded that impacts in this regard would be less than significant because the EGP would not include any changes to the existing land use plan. (NOP, p. 36.)

For the reasons set forth in the preceding paragraphs, direct impacts to landfills and solid waste disposal would be less than significant and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

19e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Direct Impacts

No Impact. Assembly Bill 939 mandates the reduction of solid waste disposal in landfills by requiring a minimum 50 percent diversion goal. The proposed Project must comply with waste

disposal requirements outlined in JCSD's Standards Manual for Water and Sewer Facilities. As such, the proposed Project will not conflict with any Federal, State, or local regulations related to solid waste. No impacts will occur.

Reasonably Foreseeable Indirect Impacts

JVGP policies regarding solid waste include policy LUE 4.8 set forth in the response to Threshold 19a, policies LUE 12.1 and LUE 12.2 set forth in the response to Threshold 15a, and policies CSSF 2.59 through CSSF 2.67 set forth in the response to Threshold 19d.

Jurupa Valley requires its solid waste haulers to comply with Assembly Bill 341 (Chapter 476, Statutes of 2011), as amended by Senate Bill 1018, which became effective July 1, 2012 by providing the necessary education, outreach and monitoring programs and by processing the solid waste from the Jurupa Valley's commercial customers through its waste haulers' material recovery facility. The *JVGP EIR* concluded that with implementation of the JVGP policies, impacts regarding compliance with solid waste reduction statutes and regulations would be less than significant. (JVGP DEIR, pp. 4.17-13–4.17-14.)

Regarding the compliance with solid waste reduction statutes and regulations, the NOP for the *EGP EIR* concluded that impacts in this regard would be less than significant because the EGP would not include any changes to the existing land use plan. (NOP, p. 36.)

For the reasons set forth in the preceding paragraphs, there would be no direct impacts regarding compliance with solid waste reduction statues and regulations and no new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

20. Wildfire	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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 a 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?	☐	☐	☒	☐

(Sources: Project Description; JVGP, JVGP EIR*, JVGP – Figure 8-10 − Wildfire Severity Zones in Jurupa Valley; CalFire)*

The Project Site is not located within or near a state responsibility area. As shown on JVGP Figure 8-10 Wildfire Severity Zones, the Project Site is not within any wildfire hazard severity zone.

20a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

Direct Impacts

Less than significant impact. Jurupa Valley has an Emergency Operations Plan (EOP) that addresses how the city would respond to emergency situations ranging from minor incidents to large-scale disasters. The plan addresses four primary phases of emergency operation including Preparedness, Response, Recovery, and Mitigation. (JVGP, p. 8-21.) The Jurupa Valley EOP does not identify evacuation routes. Because construction of Well 30 and destruction of Well 19 would take place within the Project Site, with the exception of any work that may take place in Philadelphia Avenue along the Project Site frontage or to connect to an existing pipeline in Philadelphia Avenue, the Project is not anticipated to require any lane closures. In the event a lane closure is required during construction, JCSD would be required to obtain an encroachment permit from Jurupa Valley. Though compliance with conditions of the encroachment permit, the ability of emergency vehicles to pass by the Project Site safely, efficiently, and quickly would not be limited. Therefore, impacts related to impairing an adopted emergency response plan or emergency evacuation plan would be to be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

The JVGP Community Safety, Services, and Facilities Element policy CSSF 1.36, set forth in the response to Threshold 9a. addresses strengthening Jurupa Valley's Multi-Hazard Functional Plan. The Multi-Hazard Functional Plan addresses, among other things, debris clearance to

maintain emergency access or regress and traffic and crowd control. (JVGP, pp. 8-21–8-22.). Additionally, the Mobility Element contains numerous goals, policies, and programs to help assure Jurupa Valley has a safe and efficient road network, which will facilitate safe and efficient emergency travel. (JVGP DEIR, p. 4.8-25.) As stated in the Direct Impacts discussion above, the Jurupa Valley EOP identifies four primary phases of emergency operation including Preparedness, Response, Recovery, and Mitigation, but does not identify evacuation routes.

According to the *JVGP EIR*, as future development occurs in the future within the Jurupa Valley, additional traffic may create congestion on local streets and intersections to the degree that emergency response by local police and fire vehicles is delayed. This could be a significant impact if local roads and intersections are not planned to accommodate projected traffic. However, the JVGP Mobility Element contains numerous goals, policies, and programs to assure Jurupa Valley has a safe and efficient road network, which will facilitate safe and efficient emergency travel throughout the City. (JVGP DEIR, p. 4.8-24–4.8-25.)

The *JVGP EIR* concluded that implementation of JVGP policy CSSF 1.36 and compliance with the California Emergency Services Act would facilitate the protection of health and safety and preserve the live and property of Jurupa Valley residents and business. Impacts would be less than significant. (JVGP DEIR, p. 4.8-25.).

Eastvale has an Emergency Operations Plan (EOP) that addresses how the city would respond to a broad range of large-scale emergencies and disasters including: major earthquakes, hazardous materials, wildfire, flooding, civil unrest, power outage, terrorism, and public health emergencies. Eastvale's EOP encompasses four primary phases of emergency operation including Preparedness, Response, Recovery, and Mitigation. (Eastvale EOP, pp. 1, 4.) The Eastvale EOP does not identify evacuation routes.

The NOP for the *EGP EIR* concluded that because the EGP would include adoption of the existing Riverside County General Plan Land Use Map and Circulation Map for land within Eastvale's city limits, implementation of the EGP would not impair implementation of an adopted emergency response plan or emergency evacuation plan. (NOP, p. 22.)

For the reasons set forth in the preceding paragraphs, direct impacts regarding substantially impairing an adopted emergency response plan or emergency evacuation plan would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

20b. 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 a wildfire?

Direct Impacts

Less than significant impact. The Project Site is relatively flat, not within a wildfire hazard severity zone, and surrounded by industrial development; thus, wildfire risk is low. Construction of Well 30 and destruction of Well 19 would not entail grading that would create new or change existing slopes. Therefore, implementation of the proposed Project would not exacerbate

wildfire risks. Because Well 30 is a replacement for Well 19 Project implementation would not increase the number or frequency of JCSD personnel or other humans at the Project Site after construction is complete. For these reasons, Project implementation would not result in an increased exposure to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire and impacts would be less than significant.

Potential Reasonably Foreseeable Indirect Impacts

JVGP goal CSSF 1 set forth in the response to Threshold 7a.i indicates Jurupa Valley is committed to minimizing risks from natural and manmade hazards. The JVGP Community Safety, Services, and Facilities Element includes policies intended to prevent fire through, design and construction (policy CSSF 1.23), reduction of wildfire hazards (policy CSSF 1.25), and brush clearance and education (policy 1.30) all of which are set forth in the response to Threshold 9g. The JVGP also includes the programs CSSF 1.1.9 through CSSF 1.1.11 regarding fire safety. (JVGP, pp. 8-19–8-20.)

Programs

CSSF 1.1.10 *CSSF 1.1.9 Fire Safety Planning. Conduct and implement long-range fire safety planning, including updating building, fire, subdivision, and municipal code standards, improved infrastructure, and improved mutual aid agreements with the private and public sectors.*

CSSF 1.1.10 *Fire Response Agreements. Review inter-jurisdictional fire response agreements, and improve firefighting resources as recommended in the County Fire Protection Master Plan, to keep pace with development and to ensure that:*

1. *Fire reporting and response times do not exceed those listed in the County Fire Protection Master Plan identified for each of the development densities described;*
2. *Fire flow requirements (water for fire protection) are consistent with Insurance Service Office (ISO) recommendations; and*
3. *The planned deployment and height of aerial ladders and other specialized equipment and apparatus are sufficient for the intensity of development anticipated.*

CSSF 1.1.11 *Fire Safety Education. Work with the California Fire Safety Council, CAL Fire, FEMA and others to educate and promote fire safety practices.*

Jurupa Valley contains several areas within moderate, high, and very high fire severity zones that are located in state responsibility areas (SRAs). Isolated upland areas in the east-central portion of Jurupa Valley have a high fire danger. Future development within the very high fire hazard severity zones may expose people to the threat of wildland fires. The Santa Ana winds, which blow throughout Jurupa Valley, could disperse air contaminants, including smoke and ash, throughout the city. The *JVGP EIR* concluded with implementation of JVGP policies CSSF

1.24 through 1.30 and programs CSSF 1.1.9 through 1.1.11, potential wildland fire impacts would be less than significant. (JVGP DEIR, pp. 4.3-1, 4.8-25, 4.8-29.)

The area of Eastvale near the Santa Ana River has a moderate susceptibility to wildfire due to the presence of wild vegetation along the river. Due to the presence of dry vegetation combined with Santa Ana winds the fire danger for Eastvale and much of Riverside County is considered extremely high for approximately 25 percent of the year. (EGP, p. 12-8.) The NOP for the *EGP EIR* concluded that because Eastvale is an urbanized area with minimal undeveloped land that would be at significant risk, impacts regarding the exposure of people to risks from wildland fires would be less than significant.

For the reasons set forth in the preceding paragraphs, direct impacts regarding expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would be less than significant. No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

20c. 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?

Direct Impacts

No impact. Project implementation does not propose the installation or maintenance of roads, fuel breaks, emergency water sources, power lines, or other utilities. As discussed in response to Threshold 20b, implementation of the Project would not change the current level of fire risk that exists within the area. There would be no impacts in this regard.

Potential Reasonably Foreseeable Indirect Impacts

Implementation of the JVGP Mobility Element would result in the construction and maintenance of mobility corridors consisting of roads and trails for use by motor vehicles, bicycles, pedestrians, and equestrians throughout Jurupa Valley. Portions of these mobility corridors may pass through or adjacent to very high fire severity zones. The JVGP Land Use Map shows low density residential or open space uses in the very high fire severity zones, thus some infrastructure would be needed to serve those uses. However, through implementation of JVGP policies CSSF 1.24 through 1.30 and programs CSSF 1.1.9 through 1.1.11, impacts regarding exacerbation of the current level of fire risk would be less than significant. (JVGP DEIR, pp. 4.3-1, 4.8-25, 4.8-29.)

Implementation of the EGP Circulation and Infrastructure Chapter would result in the construction and maintenance of roads, sidewalks, and trails throughout Eastvale. Although portions of these facilities may be adjacent to areas with a moderate susceptibility to wildfire, construction and maintenance of these facilities would not exacerbate the fire risk.

For the reasons set forth in the preceding paragraphs, there would be no direct, cumulatively considerable or reasonably foreseeable indirect impact from the installation or maintenance of infrastructure that would exacerbate fire risk.

20d. 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?

Direct Impacts

Less than significant impact. As discussed in the responses to Threshold 10c and Threshold 7a.(iv) above, the proposed Project will not change existing drainage patterns and the Project site is on relatively flat land. Also, as noted in the response to Threshold 20a. above, the Project Site is not in or near any of the Fire Hazard Severity Zones (Moderate, High, Very High) within the State Responsibility Area. For these reasons, impacts related to exposing people or structures to significant risk including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes related to flooding or landslide will not occur. No mitigation is required.

Potential Reasonably Foreseeable Indirect Impacts

Future development permitted by the JVGP in the Jurupa Mountains and Pedley Mountains , may expose people or structures to post-fire landslides. However, as discussed in the response to Threshold 7a.iv, the Jurupa Valley building code establishes specific site investigation requirements for hillside development to reduce risks from landslides, rock falls, and debris flows. (JVGP DEIR, p. 4.6-27.) Additionally, the JVGP includes goal CSSF 1 set forth in the response to Threshold 7a.i and policy CSSF 1.5 set forth in the response to Threshold 7a.iv to reduce impacts regarding landslide risks

The *JVGP EIR* concluded implementation of the JVGP goals and policies as future development occurs within steep slopes and hillside areas, along with compliance with the latest building codes would help ensure potential impacts from landslides, rock falls and debris flows within Jurupa Valley would be less than significant. (JVGP DEIR, pp. 4.6-27–4.6-28.)

Impacts regarding the exposure of 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 resulting from buildout per the EGP would be less than significant because the topography of Eastvale is generally flat and the potential for is considered low. (NOP, p. 18.)

For the reasons set forth in the preceding paragraphs, there would be no direct, cumulative or reasonably foreseeable impacts regarding the exposure of 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.

21. Mandatory Findings of Significance	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Does the project:				
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 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 would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

(Sources: Above Environmental Checklist; BRTR, PaleoWest*)*

21a. 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 rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Direct Impacts

Less than significant with mitigation incorporated.

Potential to Degrade Quality of Environment: Implementation of the proposed Project would not have the potential to degrade the quality of the environment. As indicated in the foregoing analysis, either no impacts, less than significant impacts, or less than significant impacts with mitigation incorporated would occur with regard to each to the environmental issues analyzed in this Initial Study.

Potential to Impact Biological Resources*:* As discussed in in the responses to Threshold 4, Biological Resources, implementation of the proposed Project would not:

- substantially reduce the habitat of a fish or wildlife species;
- cause a fish or wildlife population to drop below self-sustaining levels; or
- threaten to eliminate a plant or animal community.

The results of the *Biological Resources Technical Report* and the analysis in response to Threshold 4a indicate that with implementation of mitigation measures **MM BIO 1** and **MM BIO 2**, impacts to biological resources would be less than significant.

Potential to Eliminate Important Examples of the Major Periods of California History or Prehistory: As discussed in the response to Threshold 5, Cultural Resources, the only historic period built-environment resource present on the Project Site is Well 19. Because Well 19 is not eligible for listing on the CRHR, destruction of Well 19 would not eliminate an important example of California History. Although there is a low potential for an inadvertent discovery of significant cultural resources on the Project Site, with implementation of mitigation measure **MM CR 1**, potential impacts regarding the elimination of important examples of California History or Prehistory would be less than significant.

Potentially Foreseeable Indirect Impacts

Potential to Degrade Quality of Environment

As indicated in the analysis in the *JVGP EIR*, implementation of the JVGP would result in no impacts, less than significant impacts, or less than significant impacts with mitigation to the following environmental issues: aesthetics, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, transportation, and utilities and services systems, The *JVGP EIR* concluded that implementation of the JVGP would result in significant and unavoidable impacts to agricultural resources (refer to the discussion in Threshold 2), air quality (refer to the discussion in Threshold 3), noise (refer to the discussion in Threshold 13a), and transportation. (JVGP DEIR, pp, 1-6–1-16.). The impacts to transportation were regarding level of service (LOS), which is no longer considered a significance threshold for CEQA purposes. These are significant and unavoidable impacts related to buildout of the JVGP. These are not direct significant impacts resulting from the proposed Project.

As indicated in the analysis in the *EGP EIR*, implementation of the EGP would result in no impacts, less than significant impacts, or less than significant impacts with mitigation to the following environmental issues: aesthetics, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, and utilities and services systems, The *EGP EIR* concluded that implementation of the EGP would result in significant and unavoidable impacts to agricultural resources (refer to the discussion in Threshold 2), air quality (refer to the discussion in Threshold 3), and transportation. (EGP DEIR, pp, ES-6–ES-12.). The impacts to transportation were regarding level of service (LOS), which is no longer considered a significance threshold for CEQA purposes. These are significant and unavoidable impacts related to buildout of the EGP. These are not direct significant impacts resulting from the proposed Project.

Potential to Impact Biological Resources

As discussed in in the responses to Threshold 4, Biological Resources, implementation of the JVGP and EGP would not:

- substantially reduce the habitat of a fish or wildlife species;
- cause a fish or wildlife population to drop below self-sustaining levels; or
- threaten to eliminate a plant or animal community..

Potential to Eliminate Important Examples of the Major Periods of California History or Prehistory

Regarding the potential to eliminate important periods of California History or Prehistory resulting from buildout per the JVGP or EGP, refer to the responses to Threshold 5 and Threshold 18.

For the reasons set forth in the analysis in this Initial Study, the proposed Project would not 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 rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.

21b. 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)?

Less than significant impact. The construction and operation of Well 30 as a replacement for Well 19 would provide JCSD with continual access to superior water quality in the northern portion of JCSD's service area for customers served by JCSD's 980 PZ and 1110 PZ (**Figure 1 – Water System Pressure Zones**). The proposed Project is consistent with local and regional plans, and the Project's mitigated air quality emissions do not exceed established thresholds of significance. The Project adheres to all other land use plans and policies within JCSD's service area, and would not increase VMTs within JCSD's service area. As discussed previously in this Initial Study, the Project is identified in JCSD's 2*020 UWMP,* which was based on the General Plan Land Use Plans for Eastvale and the portion of Jurupa Valley within JCSD's service area and updated information provided by the respective Planning Departments in 2021. (UWMP, p. 3 24 – 3-26.) The Project is not considered growth-inducing as defined by *CEQA Guidelines* Section 15126.2(d) and would not induce, either directly or indirectly, population and/or housing growth beyond what is envisioned by the Eastvale General Plan and Jurupa Valley General Plan and updated information provided by the Eastvale and Jurupa Valley Planning Departments during preparation of the *2020 UWMP*. Therefore, impacts would be less than significant.

Potentially Foreseeable Indirect Impacts

The *JVGP EIR* concluded buildout of Jurupa Valley with rural and suburban land uses would contribute to the following significant cumulative impacts. (JVGP DEIR, p. 5-1.)

- Cumulative loss of agricultural activities and resources within western Riverside County due to the conversion of agricultural land to rural and suburban land uses.
- Cumulative air quality impacts from long-term emissions from future development.
- Cumulative noise increases sourced from new development-related traffic increases on local roads.

These cumulative impacts are related to buildout of the JVGP. These are not direct significant impacts resulting from the proposed Project and the proposed Project does not make a cumulatively considerable contribution to any of these impacts.

The *EGP EIR* concluded buildout of Eastvale with rural and suburban land uses would contribute to the following significant cumulative impacts. (EGP DEIR, pp. 6.0-4–6.0-5.)

- Cumulative loss of agricultural activities and resources within western Riverside County due to the conversion of agricultural land to rural and suburban land uses.
- Cumulative GHG emissions generated in excess of SCAQMD thresholds from future development
- Cumulative conflicts with the GHG reduction goals of AB 32.

These cumulative impacts are related to buildout of the EGP. These are not direct significant impacts resulting from the proposed Project and the proposed Project does not make a cumulatively considerable contribution to any of these impacts.

No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

21c. Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?

Less than significant impact. Effects on human beings were evaluated as part of the aesthetics, air quality, cultural resources as it relates to human remains, geology and soils, GHGs, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, recreation, transportation, and utilities and service systems sections in this Initial Study. All direct impacts would be less than significant.

Potentially Foreseeable Indirect Impacts

As discussed in the response to Threshold 21b, buildout per the JVGP would result in significant and unavoidable cumulative impacts to air quality and noise, which would expose residents in Jurupa Valley to air quality emissions in excess of SCAQMD standards and noise levels in excess of Jurupa Valley standards, These are not direct impacts resulting from the proposed Project and the proposed Project does not make a cumulatively considerable contribution to these impacts. All other issues that could affect human beings were determined to be less than significant or less than significant with mitigation.

As discussed in the response to Threshold 21b, buildout the EGP would result in significant and unavoidable cumulative impacts regarding GHG emissions, and not meeting state GHG emissions targets. These are not direct impacts resulting from the proposed Project and the proposed Project does not make a cumulatively considerable contribution to these impacts. All other issues that could affect human beings were determined to be less than significant or less than significant with mitigation.

No new reasonably foreseeable indirect or cumulative impacts would occur beyond those previously studied and disclosed in the *JVGP EIR* and the *EGP EIR*.

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APPENDIX A

Jurupa Community Services District Well Site Assessment



Jurupa Community Services District Well Site Assessment

PREPARED FOR:

Jurupa Community Services District

May 8, 2019

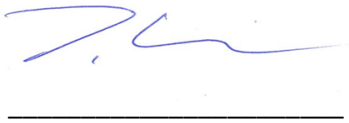
PREPARED BY:

GEOSCIENCE Support Services, Inc., **Ground Water Resources Development**

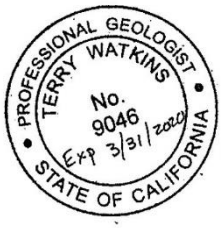
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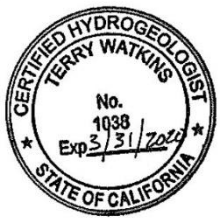
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THIS SITE ASSESSMENT HAS BEEN PREPARED FOR JURUPA COMMUNITY SERVICES DISTRICT BY OR UNDER THE DIRECTION OF THE FOLLOWING PROFESSIONALS LICENSED BY THE STATE OF CALIFORNIA.



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JURUPA COMMUNITY SERVICES DISTRICT
WELL SITE ASSESSMENT

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JURUPA COMMUNITY SERVICES DISTRICT
WELL SITE ASSESSMENT

1.0 INTRODUCTION

1.1 Background

The Jurupa Community Services District (JCSD) wishes to drill and construct up to two (2) new ground water production wells in the near future. These wells could be implemented into JCSD's 980 blend zone program, which is currently used to blend water from several ground water production wells in order to meet regulatory compliance standards for municipal drink water. New wells are necessary for the 980 blend zone program as several existing wells are experiencing reduced production and/or increases in ground water contaminates, most notably nitrate. The new wells will increase reliability in JCSD's ability to provide potable water to their customers without purchasing water from outside agencies. To that end, GEOSCIENCE Support Services, Inc. (GEOSCIENCE) and JCSD have identified the following four (4) sites as potential locations for the drilling and construction of new high-capacity production wells (see Figure 1). For the purposes of this investigation, these sites have been assigned the following designations:

- JCSD Well 19 Site: The site of existing Well 19, located near the intersection of Philadelphia Street and Vintage Avenue
- JCSD Well 20 Site: The site of existing Well 20, located near the loading dock of a warehouse facility north of Venture Drive
- Wineville North: Undeveloped lot near the intersection of Wineville Avenue and Hasting Boulevard. Previously referred to as the IDI 3A location where test drilling has been performed and design recommendation provided by GEOSCIENCE (2010)
- Cantu South: Undeveloped lot near the intersection of Wineville Avenue and Cantu-Galleano Ranch Road. Previously referred to as the IDI 5A location where test drilling has been performed and design recommendation provided by GEOSCIENCE (2010)

1.2 Purpose and Scope

The purpose of this site assessment report is to present the results of an initial assessment and ranking of each potential well site. Each site was evaluated as to its suitability for installation of a municipal water supply well, including, but not limited to, the following factors:

- Aquifer production potential
- Well interference
- Ground water quality and benefit to the 980 blend zone program
- Point sources of contamination
- Operational input and concerns
- Access and area constraints for well drilling, equipping, and well maintenance activities
- Potential impacts to the public
- Proximity to discharge access during drilling
- Proximity to water source for use during construction activities
- Proximity to sanitary hazards
- Land use/ownership

1.3 Project Location and Regional Geohydrologic Setting

The JCSD service area is located within the Chino Basin, a structural depression located between the San Gabriel Mountains on the north and the Chino and La Sierra Hills on the south. The San Gabriel Mountains are part of the Transverse Range province and are composed primarily of granitic and metamorphic rocks. The Chino Hills, Pedley Hills, La Sierra Hills, and Jurupa Mountains are part of the Peninsular Range province and are all composed of granitic rock, except Chino Hills, which is comprised of sedimentary rock.

1.3.1 Stratigraphic Units

Weathering of the mountains surrounding the Chino Basin has resulted in the deposition of alluvial sediments that have filled the basin. Where these sediments are saturated in the subsurface, they form the basin's aquifers. Surface exposures of alluvial sediments are Quaternary in age and have been grouped into alluvial wash deposits (youngest) and alluvial fan deposits of various ages. Evaluation of driller's and geophysical borehole logs from the wells in the JCSD area indicate the subsurface alluvial sediments consist of alternating layers of sand, gravel, silt, and clay in varying proportions. The thickest sequences of saturated alluvium aquifer material (including both permeable and non-permeable sediments) occur in the western-most portion of the JCSD service area, where there is as much as 600 feet of saturated alluvium.

The surface exposures of bedrock within the JCSD service boundary are the Jurupa Mountains and the Pedley Hills. The Jurupa Mountains consist of granitic and metasedimentary bedrock and the Pedley Hills consist of granitic bedrock. In the San Gabriel Mountains, surface outcrops are composed of granitic and metamorphic rocks.

Where bedrock is not exposed at the ground surface, it occurs beneath the alluvium at elevations ranging from approximately 700 feet above mean sea level (amsl) in the eastern portion of the JCSD, to approximately less than 200 feet amsl in the western portion. For purposes of this evaluation, the bedrock is assumed to be impermeable and, thus, represents the effective base of the aquifers within the JCSD service area.

1.3.2 Aquifer Systems and Yield

As with any alluvial basin, many different interconnected water-bearing zones make up the aquifer system underlying the JCSD service area. However, no significant confining (i.e., impermeable) layers have been encountered in the area, and the aquifer system is generally considered unconfined to semi-confined. This aquifer system is present across the entire JCSD area.

Specific capacity is defined as the amount of drawdown measured within a well pumping at a known rate and is expressed as the pumping rate divided by the drawdown (gpm/ft). Generally, the specific capacity of a well is a measure of its ability to yield water and can be used to estimate the potential yield of an aquifer when aquifer pumping test data are not available (Ferris, 1963). However, it should be noted that specific capacity is somewhat variable and is affected by pumping rate, static water level decline, and well inefficiencies (e.g., improper well development and/or clogging of well perforations and aquifer materials from corrosion and/or bacterial infestation).

Wells in and around the JCSD service area have specific capacities that range from less than 10 gpm/ft to 140 gpm/ft (GEOSCIENCE, 2003). Wells with high specific capacities (greater than 100 gpm/ft) are located in the western portion of the service area where the alluvial thickness is the greatest. It should be noted that higher specific capacities are generally associated with wells that are deeper and have longer perforation intervals (e.g., screen).

1.3.3 Ground Water Occurrence

Ground water within the JCSD service area occurs at depths ranging from approximately 240 feet below ground surface (ft bgs) in the northern portion (i.e., JCSD Wells 19 and 20) to approximately 10 ft bgs (i.e., Sewer Plant #1) in the southern portion where the Santa Ana River crosses the JCSD boundary. Ground water in the JCSD area flows from the northeast to the southwest.

Figures 2 and 3 show historical static and pumping groundwater levels for selected wells located throughout the JCSD service area. This data shows groundwater levels over the period of record shown (i.e., 2008 to 2016) have remained generally stable with no significant upward or downward trends.

1.4 Sources of Data

Data used for this analysis were obtained from multiple sources, and a complete list of references cited is provided in Section 6. The primary sources and types of data are summarized as follows:

- California State Water Resources Control Board GeoTracker Website (2019): Point sources of contamination.
- California Department of Public Health: Historic water quality data.
- GEOSCIENCE (2015): Potential Interference Analysis – Jurupa Community Services District Wells 29 and 30. Prepared for Albert A. WEBB Associates, February 17, 2015.
- GEOSCIENCE (2014): Chino Basin Ground Water Flow Model Update and Evaluation of Potential Production Well Sites. Prepared for Chino Basin Desalter Authority, June 20, 2014.
- GEOSCIENCE (2010): Recommendations Regarding the Feasibility of Well Construction at the Jurupa Community Services District IDI 3A Test Borehole. Prepared for Jurupa Community Services District, April 5, 2010.
- GEOSCIENCE (2010): Recommendations Regarding the Feasibility of Well Construction at the Jurupa Community Services District IDI 5A Test Borehole. Prepared for Jurupa Community Services District, April 5, 2010.
- GEOSCIENCE (2003): Evaluation of Ground Water Production Potential. Prepared for Jurupa Community Services District, September 10, 2003.
- Jurupa Community Services District: Recent groundwater elevations, groundwater production, and groundwater nitrate data (2010–2016).
- Jurupa Community Services District: Potable water well, raw water well, and water main by pressure zone locations.

2.0 SITE DESCRIPTIONS

2.1 JCSD Well 19 Site

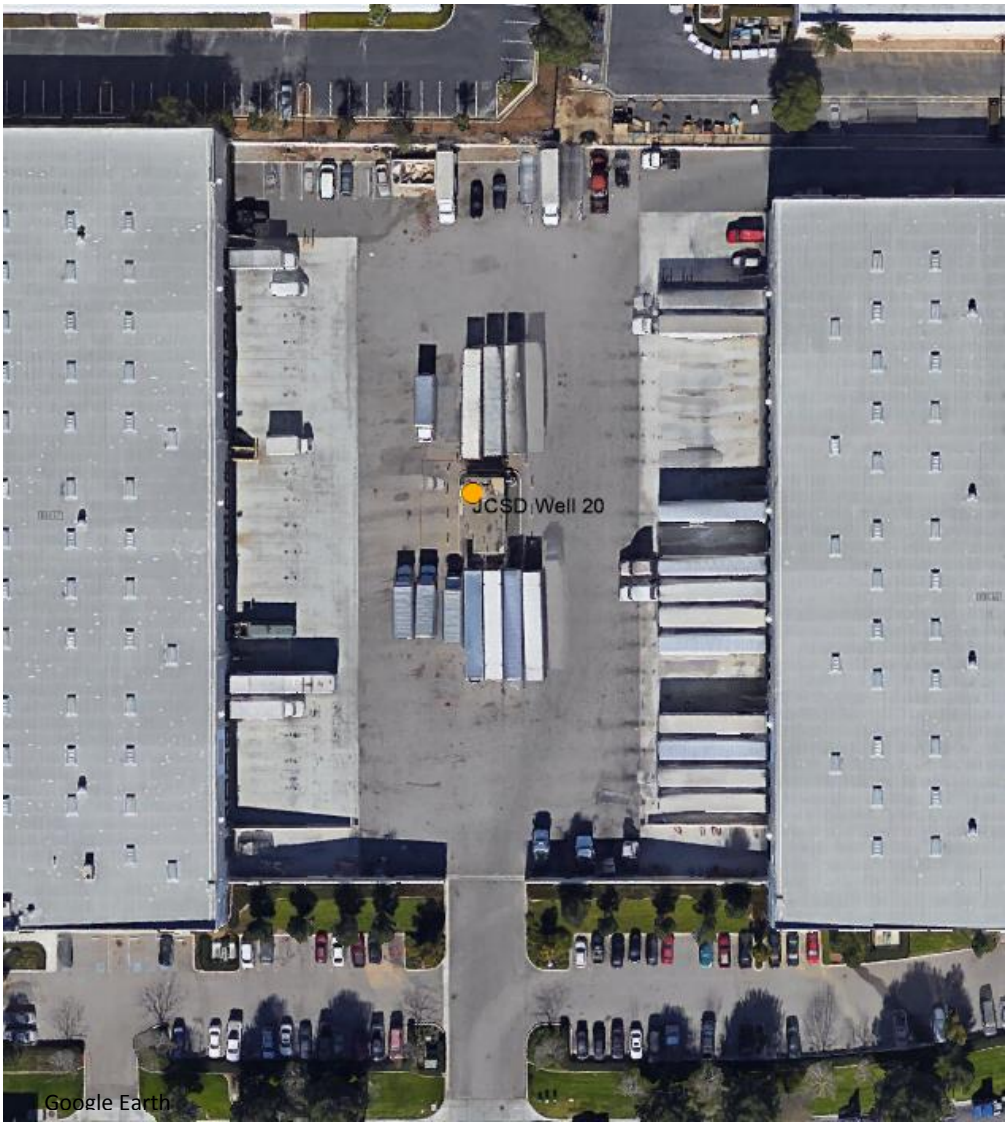
This site is the current location of JCSD active Well 19 and is located southeast of the intersection of Philadelphia Street and Vintage Avenue (see Figures 1 and 4). This parcel is owned by JCSD and measures approximately 100 feet long by 50 feet wide. It is adjacent to a large vacant lot to the south and east. A well constructed at this site could utilize JCSD's existing infrastructure to convey groundwater produced to their distribution system, but not to the 980 pressure zone directly. While this well has been a reliable source of good quality groundwater, its advanced age (drilled in 1917) makes it a candidate for replacement. Also, its current production rate of approximately 1,100 gallons per minute (gpm) would likely be significantly increased by the construction of a new well at this location.



JCSD Well 19 Site: Well 19 site looking northwest toward Philadelphia Street.

2.2 JCSD Well 20 Site

This site is located in the parking lot of a shipping and receiving center at the current location of JCSD Well 20 (see Figures 1 and 5). Well 20 is currently offline due to low production rates, high sand production, and elevated nitrate levels in excess of permitting requirements. Its current status as inactive, coupled with its less than desirable location in a high traffic area make it a candidate for replacement. However, construction of a new well at this location would be exceedingly difficult.



JCSD Well 20 Site: Well 20 is located in the parking lot of a shipping and receiving center.

2.3 Wineville North (formerly IDI 3A)

This site is located in the northwest corner of a vacant lot located at the intersection of Hastings Boulevard and Wineville Avenue (see Figures 1 and 6). The lot is undeveloped and is currently owned by JCSD. Test drilling, including lithologic sample collection and classification, geophysical logging, and aquifer zone testing, was performed at this site in 2010. The results of this test drilling showed the site to be suitable for the construction of a municipal groundwater supply well, and well design recommendations have been developed.



Wineville North: Vacant lot on Wineville Avenue. View is from northeast corner looking toward the southwest.

2.4 Cantu South (formerly IDA 5A)

This site is located on the north side of Cantu-Galleano Ranch Road, approximately 1,000 feet west of Wineville Avenue. The location is an undeveloped wedge-shaped lot surrounded by a combination of agriculture and industrial land use. Like the Wineville North Site, test drilling, including lithologic sample collection and classification, geophysical logging, and aquifer zone testing, was performed at this site in 2010. The results of this test drilling showed the site to be suitable for the construction of a municipal groundwater supply well, and well design recommendations have been developed.



Cantu South: Vacant lot on Cantu-Galleano Ranch Road near the intersection of Wineville Avenue. View is toward the east. Photo taken during test drilling activities in 2010.

3.0 WELL SITE EVALUATION

3.1 Ranking Methodology

Each of the four sites was evaluated as to its suitability for installation of a new municipal water supply well in terms of both geohydrology and engineering factors. Specifically, this evaluation included an assessment of the following criteria:

Geohydrology:

- Aquifer Production Potential
- Interference with Existing Production Wells
- Groundwater Quality
- Proximity to Open-Case Sites of Environmental Concern

Engineering:

- Operational Input and Concern
- Site Access and Logistical Constraints
- Public Impacts
- Proximity to Storm Drains or Other Discharge Access
- Proximity to Construction Water Source
- Proximity to Sanitary Hazards
- Current Ownership

Each of the four potential well sites was ranked from 1 to 4 in order of favorability (1 being most favorable). The ranking of each site was based on the evaluation criteria discussed in the following sections and reflects the site's overall suitability as a potential site for installation of a municipal production well. The 12 siting criteria (well production, well interference, etc.) were given a weighting factor of 1 to 7 (7 being most important). For example, the production potential of a well was considered an important factor and, thus, was given a weighting factor of 5. The four potential sites were then assessed individually as to their respective site-specific criteria by being assigned a raw criteria score between 1 and 3 (3 being best). The product of the individual site-specific criteria scores and their respective weighting factors were totaled to obtain the total weighted and ranking scores.

3.2 Geohydrologic Evaluation

3.2.1 Production Potential

Historic data from initial development of wells near JCSD Wells 19 and 20 shows specific capacity values between 91 and 152 gpm/ft of drawdown with pumping rates between 3,500 and 4,000 gpm. Historic data from initial development of wells near Wineville North and Cantu South shows specific capacity values between 86 and 160 gpm/ft at pumping rates between 3,500 and 4,000 gpm. Specific capacities and pump rates were obtained from well drillers' logs and aquifer pumping tests performed following construction. Recent instantaneous production rates for nearby active wells were provide by JCSD (2016) and ranged from approximately 580 to 3,500 gpm. Historical data shows that some of JCSD's wells have experienced declining production rates and specific capacities, likely due to issues associated with the advanced age of the wells. Newly constructed wells would likely produce at the higher rates.

Production Potential (Weighting Factor 5)

Score	Description
3	Sites located within an area of wells with specific capacities of 100 gpm/ft or greater.
2	Sites located within an area of wells with specific capacities ranging from 50 to 99 gpm/ft.
1	Sites located within an area of wells with specific capacities ranging from 0 to 49 gpm/ft.

Based on the hydrogeology of this area, it is not expected that there will be significant variation in production potential among each of the proposed well sites. However, each site was assigned a score for production potential based on the distribution of specific capacity data throughout the JCSD service area. JCSD Wells 19 and 20 were each assigned a score of 3 points based on their proximity to existing JCSD Wells 13, 22, and 25, where historic specific capacities ranged from 91 to 152 gpm/ft. Wineville North and Cantu South were each assigned a score of 3 points based on their proximity to existing JCSD Wells 23, 28, and 27, where historic specific capacities ranged from 86 to 160 gpm/ft. A relative weighting factor of 5 was assigned to production potential.

3.2.2 Interference with Existing Production Wells

It is generally not advisable to site a new production well within close proximity to an existing production well, as interference may cause excessive drawdown, resulting in decreased capacity and increased pumping costs. The potential additional drawdown at each proposed well site from pumping of active wells within a ½-mile radius of the proposed sites was estimated using the Theis equation (Theis, 1935):

$$s(r,t) = \frac{114.6Q}{T} W(u) \qquad \text{“Theis Equation”}$$

and

$$u = \frac{1.87r^2S}{Tt}$$

where:

s(r,t) = drawdown, [ft]
r = distance from pumping well, [ft]
t = time after pumping started, [days]
Q = discharge rate of pumping well, [gpm]
T = transmissivity of aquifer, [gpd/ft]
W(u) = “Well function of Theis”
S = storativity [fraction]

It was assumed that the anticipated pumping rate of the new well would be 2,500 gpm and that the well would be operated for approximately 70% of one year. An estimated aquifer transmissivity of approximately 500,000 gallons per day per foot (gpd/ft) was used based on specific capacity data and estimates used in the most recent Chino Basin groundwater model update, a well efficiency of 70%, and an aquifer storativity of 0.1 (GEOSCIENCE, 2014). Based on these assumptions, the predicted additional long-term (i.e., one year of pumping at 70% operational status) total drawdown was estimated for each proposed site and is summarized in the following table. Actual water level interference may vary somewhat depending upon pumping schedules, aquifer parameters, well construction details, and other factors. However, it is considered reasonable to utilize these values as a metric for determining relative magnitude of interference between the various potential well sites.

Estimated Magnitude of Water Level Interference

Proposed Well Site	Active Wells Within ½-mile of Proposed Site	Distance to Existing Well from Proposed Site [ft]	Pumping Rate at Existing Well [gpm]	Assumed Pumping Rate at Proposed Well Site [gpm]	Estimated Total Interference [ft]
JCSD Well 19	JCSD Well 20	965	1,000	2,500	4.9
JCSD Well 19	JCSD Well 6	2,300	1,800	2,500	4.3
JCSD Well 20	JCSD Well 6	2,610	1,800	2,500	4.0
Wineville North	JCSD Well 28	2,200	3,575	2,500	6.0
Cantu South	-	-	-	-	-

The scoring for additional drawdown due to pumping interference with existing wells is detailed in the table below.

Interference from Existing Production Wells (Weighting Factor 5)

Score	Description
3	Sites with no active wells within a ½-mile radius.
2	Sites with an estimated total well interference ranging from 0 to 10 feet.
1	Sites with an estimated total well interference greater than 10 feet.

JCSD Wells 19, 20, and Wineville North sites show estimated total interference ranging from 4 to 6 feet and were each assigned a score of 2 points. Cantu South does not show interference within a ½-mile radius and was assigned a score of 3 points. A relative weighting factor of 5 was assigned to water level interference.

3.2.3 Groundwater Quality

The primary non-point source of groundwater contamination in the JCSD area is historic and current agricultural activity. This has resulted in widespread nitrate impacts to the groundwater from deep percolation of nitrogen-based fertilizers applied to agricultural orchards and row crops. In addition, nitrate contamination occurs from the manure associated with cattle feed lots. In the northern JCSD area (north of State Highway 60), the area has been almost completely urbanized, and residual nitrate in the groundwater is a result of historical agricultural practices. South of State Highway 60, land use still includes both dairy farming and irrigated crops.

Select groundwater quality data was obtained for wells near the prospective sites and is summarized in the following tables for the period of 2000 to 2016. JCSD Wells 6, 13, 19, 20, and 25 exhibit groundwater quality for the section of the service district near the prospective JCSD Wells 19 and 20. Water quality data for the Wineville North and the Cantu South sites were obtained from zone testing of three zones when test boreholes were drilled at their respective sites.

While the primary maximum contamination level (MCL) for nitrate (as NO_3) concentration is 45 milligrams per liter (mg/L), permitting requires JCSD to meet concentrations below 35 mg/L for water server to its constituents. Nitrate concentrations from 2000 to 2016 were obtained from JCSD and the State of California Water Resources Control Board (SCWRCB) Division of Drinking Water (DDW) for JCSD Wells 6, 13, 19, 20, and 25. Historically, nitrate concentrations equal to or greater than 35 mg/L were reported in JCSD Wells 6, 13, and 20. Figure 8 provides a plot of recent nitrate concentrations in the 980 blend zone between 2010 and 2016.

Water quality data for Wineville North and Cantu South were obtained from zone testing during the drilling of the test boreholes in 2010. Nitrate levels were reported well below 35 mg/L in all three zones tested at each location. Based on these results, and considering nitrate concentration of other nearby wells, nitrate levels are expected to be at expectable concentrations at these two locations. A summary of select parameters is listed in the Table below.

Chino Basin Desalter Authority (CDA) wells to the south of the proposed well locations are known to have poor water quality due to high nitrate levels. The CDA wells are located down gradient of the proposed sites, and modeling has shown that pumping from any of the proposed sites will not likely result in a change in groundwater flow direction negatively impacting water quality.

There have been reported occurrences of high total dissolved solids (TDS) concentrations in the northern section of the JCSD service area. JCSD Wells 6, 13, and 19 have each reported TDS concentrations in excess of the lower limit of the secondary MCL of 500 mg/L for TDS, with JCSD Well 6 having the highest reported concentration at 1,100 mg/L. Perchlorate has been detected in concentrations below the primary MCL of 6 micrograms per liter (µg/L) in Wells 6 and 25. JCSD Well 20 has reported a single occurrence of perchlorate concentrations in excess of MCL (reported at 10 µg/L).

Summary of Selected Historical Groundwater Quality Data (2000–2016)

Well Name	Nitrate[1] [mg/L]		TDS[2] [mg/L]		Perchlorate[3] [µg/L]	
	Min	Max	Min	Max	Min	Max
Well 6	15	**53**	250	**1,100**	4	**5**
Well 13	6	35	210	**720**	ND	ND
Well 19	4	18	120	**740**	ND	ND
Well 20	11	36	140	380	ND	**10**
Well 25	16	32	220	470	2.8	4.3
Wineville North[4]	12	21	240	370	1.1	2.1
Cantu South[4]	12	21	240	320	1.1	1.9

Data Source: DDW, JCSD, and GSSI WQ data, 2016.

[1] DDW primary MCL for nitrate (as NO_3) = 45 mg/L.

[2] Lower limit of DDW secondary MCL for TDS = 500 mg/L.

[3] DDW primary MCL for perchlorate = 6 µg/L.

[4] Data from zone testing at three isolated aquifer zones for each borehole.

ND Not detected above laboratory detection limits.

BOLD Results are equal to or exceed the DDW MCL or Drinking Water Notification Level.

Groundwater Quality (Weighting Factor 4)

Score	Description
3	Nitrate well below 35 mg/L and no other water quality constituents in excess of MCL.
2	Nitrate well below 35 mg/L but in close proximity to known areas of concern.
1	In an area with nitrate concentration above 35 mg/L that would degrade blend water.

Despite a single occurrence of TDS concentration reported in excess of the lower limit of secondary MCL for TDS, JCSD Well 19 has favorable water quality and was assigned a score of 3 points. JCSD Well 20 has recently reported nitrate levels at or above 35 mg/L on several occasions and was assigned a score of 1 point. Wineville North and Cantu South are expected to have favorable water quality but have not yet been tested long term. Also considering their locations in the southern portion of the JCSD service area and relative closeness to the CDA wells, these wells were assigned a score of 2 points. A relative weighting factor of 4 was assigned to anticipated groundwater quality.

3.2.4 Proximity to Open-Case Sites of Environmental Concern

Point sources of contamination are specific sites or locations where contaminants have been, or have the potential to be, released to the subsurface from leaking underground storage tanks (LUST) or localized spills. The primary risk to groundwater from point sources of contamination is from vertical migration of contaminants into the shallow aquifer system. In areas where no aquitards (i.e., fine grained, relatively impermeable sediments) exist, separating shallow aquifers from deeper aquifers, there is the potential for contaminants to migrate from point sources into the deeper aquifer system. In addition, cross-contamination can also occur from vertical flow within existing wells that are perforated in both the shallow and deeper aquifer systems.

The locations of potential point sources of contamination were obtained from the California State Water Resources Control Board GeoTracker database (CSWRCB, 2019). The CSWRCB has records of two unique cases of environmental concern within a ½-mile of the Well 19 and Well 20 well sites.

Due to their relatively close proximity to each other, both of the listed sites of environmental concern are common to JCSD Wells 19 and 20. However, these two sites of environmental concern are designated case closed.

Proximity to Open-Case Sites of Environmental Concern (Weighting Factor 3)

Score	Description
3	No open-case sites of environmental concern within a ½-mile.
2	One open-case site of environmental concern within a ½-mile.
1	Multiple open-case sites of environmental concern within a ½-mile.

All potential well sites were assigned 3 points, as there are no open-case sites of environmental concern within a ½-mile. A relative weighting factor of 3 was assigned to this assessment criterion.

3.3 Engineering Evaluation

The geohydrologic evaluation focused on the water production, water quality, and proximity/ interference from nearby existing wells. The engineering evaluation focuses on the operational considerations, logistics of drilling, proximity to existing services, project cost, and other well site constraints. For these factors, the following initial steps were taken to evaluate the alternative sites:

1. A team meeting with JCSD personnel was held to identify potential new well sites.
2. A combination of site visits and aerial map reviews was conducted to observe nearby utilities, potential sanitary hazards, and general site constraints.
3. Additional utility maps provided by JCSD were utilized to evaluate existing infrastructure relative to evaluation sites (i.e., pressure zone water mains).

Based on the information gathered, the potential well sites were ranked according to the following criteria:

- Operational Input/Concerns
- Site Access and Logistical Constraints
- Public Impacts
- Proximity to Storm Drains or Other Discharge Access
- Proximity to Construction Water Source
- Proximity to Sanitary Hazards
- Property Ownership

3.3.1 Operational Input/Concerns

The ability for a well to benefit the overall system is a main factor in choosing a location. The viability of each site will be judged on its ability to provide water to multiple zones with favorable water quality. This takes into consideration accessibility to existing pipelines. A relative weighting factor of 7 was given to this criterion.

Operational Input/Concerns (Weighting Factor 7)

Score	Description
3	Ability to influence all 7 zones and has favorable water quality.
2	Can only influence 5 of the zones not including the 980 or 1110 zones but still has favorable water quality.
1	Can only influence 5 of the zones not including the 980 or 1110 zones and has unfavorable water quality and would need a treatment process.

JCSD Well 20 has water-quality concerns with respect to nitrate (see Figure 8) and would require boosting to provide water to all JCSD pressure zones. For these reasons, it was assigned a score of 1 point. The Wineville North and Cantu South well locations are expected to have good water quality but would be tied into the 870 pressure zone and would not influence the 1110 zone without infrastructure modifications. These sites were given a score of 2 points. JCSD Well 19 can influence all 7 zones and has favorable water quality. This site was given a score of 3 points.

3.3.2 Site Access and Constraints

An evaluation of overall site constraints at each alternative well site was factored into the rankings. This evaluation took into account site accessibility and available area for construction, maintenance, treatment, or other ancillary facilities. This criterion was given a relative weighting factor of 3.

Site Access and Logistical Constraints Scoring Criteria (Weighting Factor 3)

Score	Description
3	Sites that are readily accessible and have ample room for construction and additional facilities without significantly impacting current use.
2	Sites that have minor to moderate, but solvable, access and available area limitations.
1	Sites that cannot be readily accessed or do not have ample room for construction or ancillary facilities.

JCSD Well 19 will require drilling on a small lot measuring approximately 100 feet long by 50 feet wide. This limited space would prove difficult to fit a drilling rig and associated equipment. A large vacant lot is

located adjacent to the property. If access were granted to this lot, there would be ample room for construction. This site was given a score of 2 points. JCSD Well 20 is located on a small lot in the center of a busy distribution center. There would not be sufficient room for construction without disturbing the surrounding business. Due to the location and limited space, this site was given a score of 1 point. Wineville North is a rectangular-shaped lot measuring approximately 200 feet long by 60 feet wide in the northwest corner of a vacant lot. There are no structures that would require removal, and drilling activities have been performed there previously. This site was given a score of 3 points. Cantu South is a relatively large wedge-shaped lot with no structures that would require removal. Additionally, drilling activities have been performed there previously. This site was given a score of 3 points.

3.3.3 Public Impacts

An evaluation of public impacts at each site was factored into the rankings. This evaluation took into account impacts due to well site-associated truck traffic and noise, as well as impacts incurred during construction and maintenance of the wells. This criterion was given a relative weighting factor of 3 due to the significant noise impacts associated with drilling and construction, but the temporary/infrequent nature of the traffic and noise associated with operation and maintenance.

Public Impacts Scoring Criteria (Weighting Factor 3)

Score	Description
3	Sites located in non-residential, industrial areas.
2	Sites that have a fractional residential component adjacent to or very near the site, or primarily residential with an existing active well.
1	Sites located in primarily residential areas without an existing active well.

JCSD Wells 19 and 20 are located in industrial areas. Wineville North is located in an area largely surrounded by industry and agriculture. A commercial winery and a few secluded houses are located within a ¼-mile of this location. Cantu South is located near industrial and agricultural areas. All four sites were given a score of 3 points.

3.3.4 Proximity to Storm Drains

During the construction and testing of the new well, large volumes of groundwater will be generated, which will require disposal. For this reason, access to storm drain channels will be required throughout the construction process. The proximity of the proposed sites to existing storm drain access points was evaluated for all four sites. This criterion was given a relative weighting factor of 3.

Proximity to Storm Drain or Other Discharge Location (Weighting Factor 3)

Score	Description
3	Proposed well location is within 1,000 feet of storm drain facilities.
2	Proposed well location is between 1,000 and 2,000 feet of storm drain facilities or has several busy streets and driveway crossings to get to storm drain facilities.
1	Proposed well location is greater than 2,000 feet from storm drain facilities.

JCSD Wells 19, 20, Wineville North, and Cantu South have storm drain facilities located less than 1,000 feet away. These sites were given a score of 3 points.

3.3.5 Proximity to Construction Water Source

A continuous source of fresh, potable water is necessary for drilling and construction of new water wells. In highly developed urban areas, this water is usually facilitated through a street-side fire hydrant. The proposed wells sites were evaluated for proximity to a water source that could be utilized during drilling and construction. This criterion was given a relative weighting factor of 2.

Proximity to Construction Water Source (Weighting Factor 2)

Score	Description
3	Proposed well location is within 1,000 feet of construction water source.
2	Proposed well location is between 1,000 and 2,000 feet of construction water source, or has several busy streets and driveway crossings to get to water source.
1	Proposed well location is greater than 2,000 feet from water source.

JCSD Wells 19, 20, Wineville North, and Cantu South have water sources (i.e., fire hydrants) near the proposed site and were each given a score of 3 points.

3.3.6 Proximity to Sanitary Hazards

An evaluation of the sanitary hazards near the four well sites was evaluated. DDW publishes a list of wellhead setback requirements from potential hazards, which includes the following:

- Sewage Facilities,
- Industrial Facilities,
- Solid Waste Disposal Sites, and
- Others as determined by DDW.

Existing utility plans were reviewed and site visits were conducted at each site for determination of existing and potential sanitary hazards. Issues related to the hazards encountered can likely be dealt with by locating the new well away from a potential hazard and/or by the design of the well (i.e., extended sanitary well seal). The proximity to sanitary hazards category was given a relative weighting factor of 3.

Proximity to Sanitary Hazards Scoring Criteria (Weighting Factor 3)

Score	Description
3	Well site is located outside of required setbacks from sanitary hazards. No relocation of well head, utilities, or additional design requirements will be imposed by DDW to permit the well.
2	Well site is located near, but outside required setbacks from, sanitary hazards. Some additional permit conditions and/or design elements may be imposed by DDW to permit the well.
1	Well site is located within the defined hazards setback areas. Additional design requirements will be imposed, or waivers will be required, by DDW to permit the well.

A new well constructed at the JCSD Well 19 site will likely be within 50 feet of the destroyed well. A sewer manhole is also located in the street near JCSD Well 19. There would be room along the south side of the site to drill a new well while maintaining the proper distance of 100 feet from the sewer manhole. For these reasons, the site was given a score of 2 points. JCSD Well 20, Wineville North, and Cantu South sites can be located outside of DDW setbacks and were each given a score of 3 points.

3.3.7 Property Ownership

Land acquisition is a significant cost to consider for any construction project. Property already owned by JCSD will reduce the amount of up-front capital required for the project and can aid in expediting the project schedule. City-owned property can potentially be negotiated for with benefits of the construction project being shared in exchange for easements. Private property is likely the most

expensive and is dependent on the owner's willingness to sell. This criterion was given a relative weighting factor of 3.

Property Ownership Scoring Criteria (Weighting Factor 3)

Score	Description
3	Property owned by JCSD
2	Property owned by other public agency
1	Private property

JCSD Well 19, Wineville North, and Cantu South sites are owned by JCSD and were given a score of 3 points. JCSD Well 20 is located on a JCSD easement in a commercial shipping and receiving lot. A land swap would need to be considered in order to further pursue this location as a competitive option, whereby the easement would be returned to the shipping and receiving company in exchange for a less trafficked and more spacious location. This site was given a score of 1 point.

4.0 RESULTS

Each of the four potential well sites was ranked based on the methodology described for the geohydrologic and engineering criteria. Results of the analysis and ranking of potential well sites are summarized in the table below.

Jurupa Community Services District
Potential Well Site Decision Matrix

Criteria		Weighting Factor (1-7)	Potential Well Site							
			Well 19 Site		Well 20 Site		Wineville North (IDI 3A)		Cantu South (IDI 5A)	
			Pts	Tot	Pts	Tot	Pts	Tot	Pts	Tot
1	Production Potential	5	3	15	3	15	3	15	3	15
2	Interference with Existing Wells	5	2	10	2	10	2	10	3	15
3	Groundwater Quality/Benefit to 980 Blend Program	4	3	12	1	4	2	8	2	8
4	Proximity to Open-Case Environmental Sites	3	3	9	3	9	3	9	3	9
5	Operational Input/Concerns	7	3	21	1	7	2	14	2	14
6	Site Access and Logistical Constraints	3	2	6	1	3	3	9	3	9
7	Public Impacts	3	3	9	3	9	3	9	3	9
8	Proximity to Storm Drains or Other Discharge Access	3	3	9	3	9	3	9	3	9
9	Proximity to Construction Water Source	2	3	6	3	6	3	6	3	6
10	Proximity to Sanitary Hazards	3	2	6	3	9	3	9	3	9
11	Property Ownership	3	3	9	1	3	3	9	3	9
Overall Score			**112**		**84**		**107**		**112**	
RANK			**1**		**4**		**3**		**1**	

The two highest-ranked well sites resulting from the analysis were the JCSD Well 19 site and the Cantu South (IDI 5A) site. Both sites final scores are the same.

5.0 RECOMMENDATIONS

Based on this analysis, either the JCSD Well 19 site or the Cantu South site are the preferred location for a new groundwater production well. Wineville North also ranked favorably and would make a suitable alternative. JCSD Well 20 site has both water quality and spatial constraints. Drilling at this location would not be beneficial or feasible. However, if an agreement can be made to return the easement to the distribution center in exchange for a more suitable location, it could become a realistic option.

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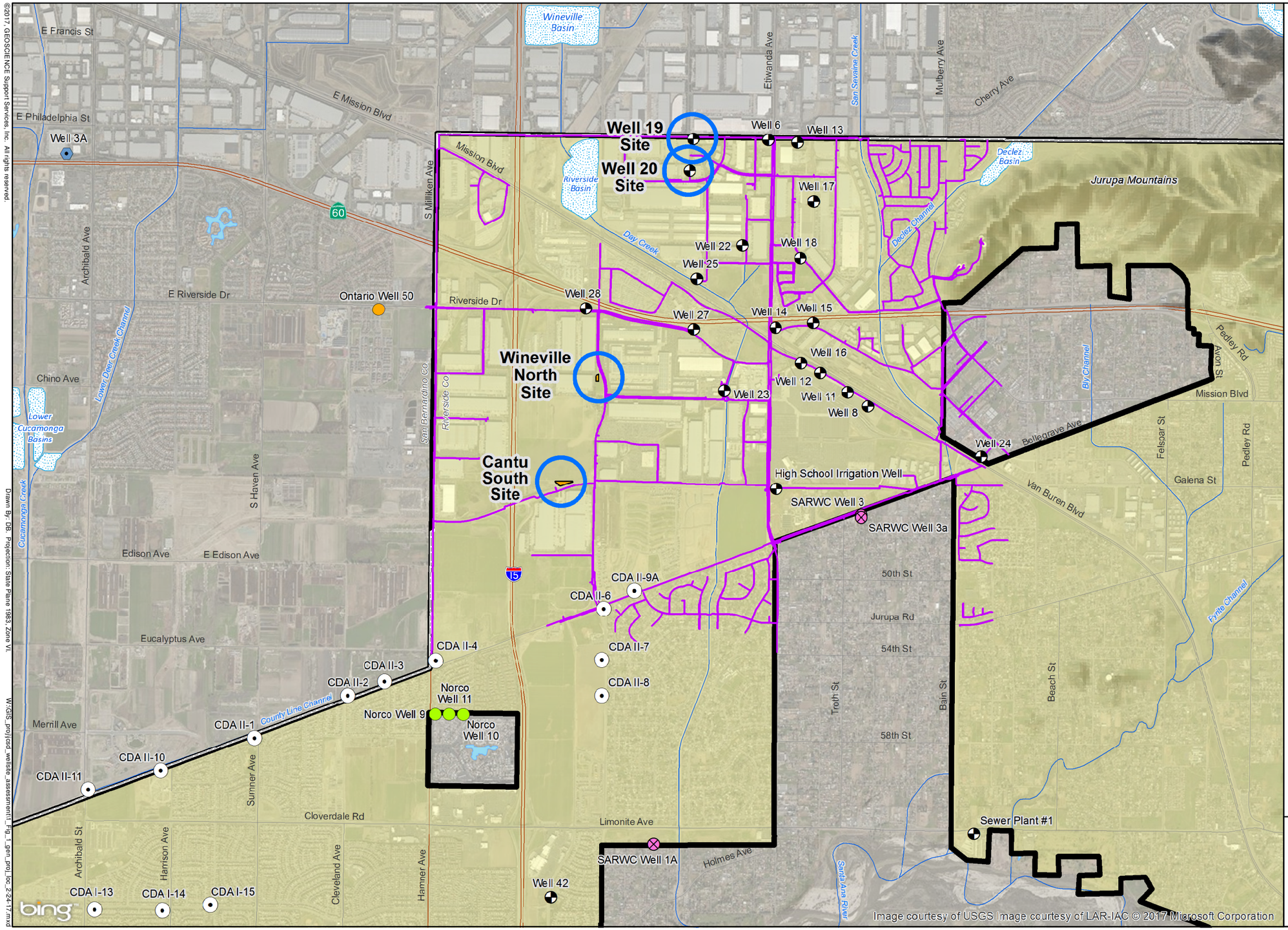
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FIGURES

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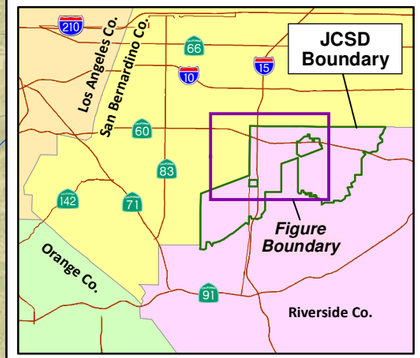


EXPLANATION

- JCSD Service Area Boundary

Active Municipal Well

- Active Well
- Chino Basin Desalter Authority
- City of Norco
- City of Ontario
- Niagara Bottling, LLC
- Santa Ana River Water Company
- Potential Well Site Location
- Potential Well Site Location
- JCSD Water Main
- Recharge Basin
- County Boundary



N

0 3,000 6,000

Feet

GENERAL PROJECT LOCATION

Drawn By: DB. Projection: State Plane 1983, Zone VI.

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8-May-19

JURUPA COMMUNITY SERVICES DISTRICT

JURUPA COMMUNITY SERVICES DISTRICT WELL SITE ASSESSMENT

FIGURE 1

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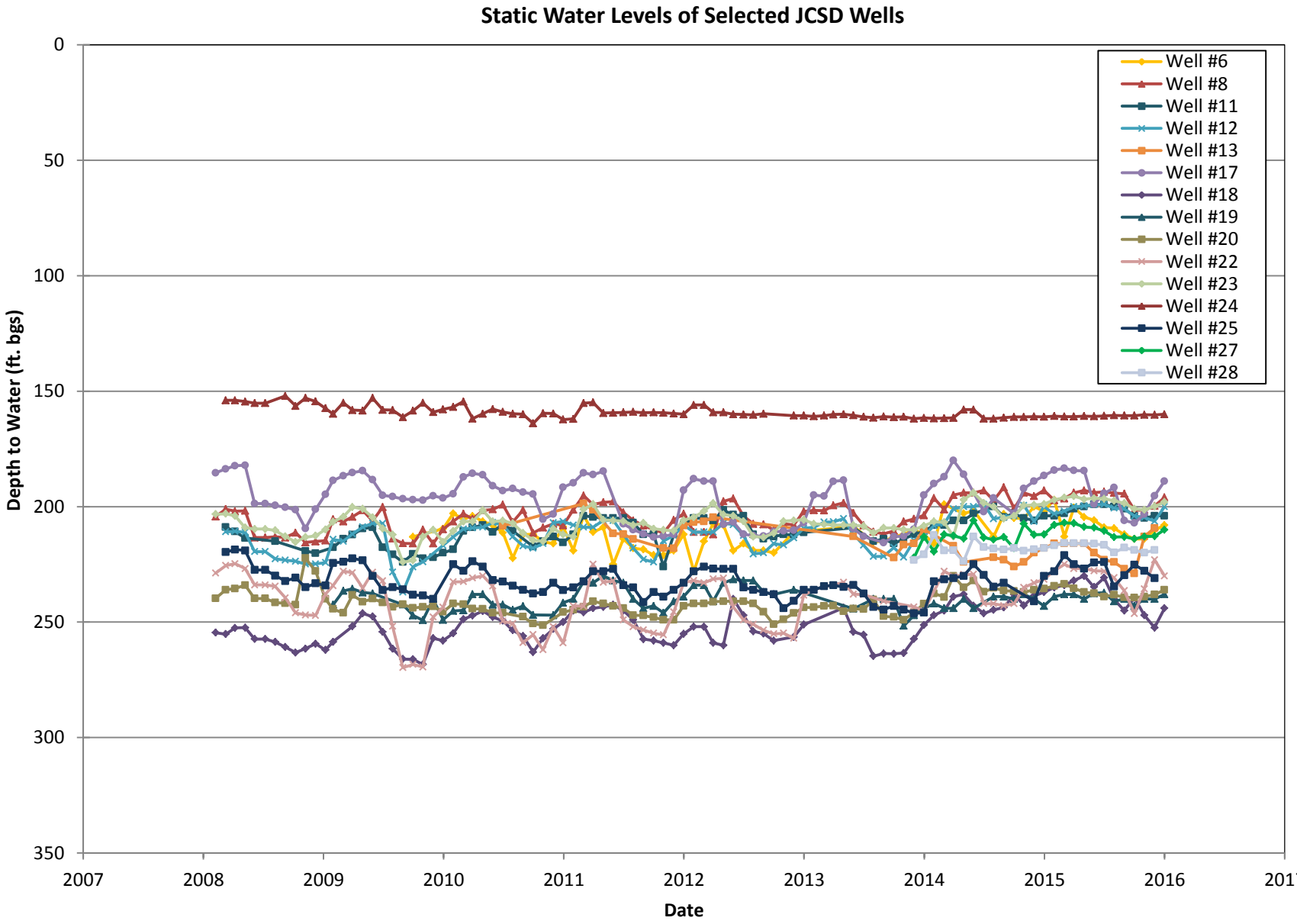

Static Water Levels of Selected JCSD Wells
Depth to Water (ft. bgs)
0
50
100
150
200
250
300
350
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Well #6
Well #8
Well #11
Well #12
Well #13
Well #17
Well #18
Well #19
Well #20
Well #22
Well #23
Well #24
Well #25
Well #27
Well #28

Figure 2

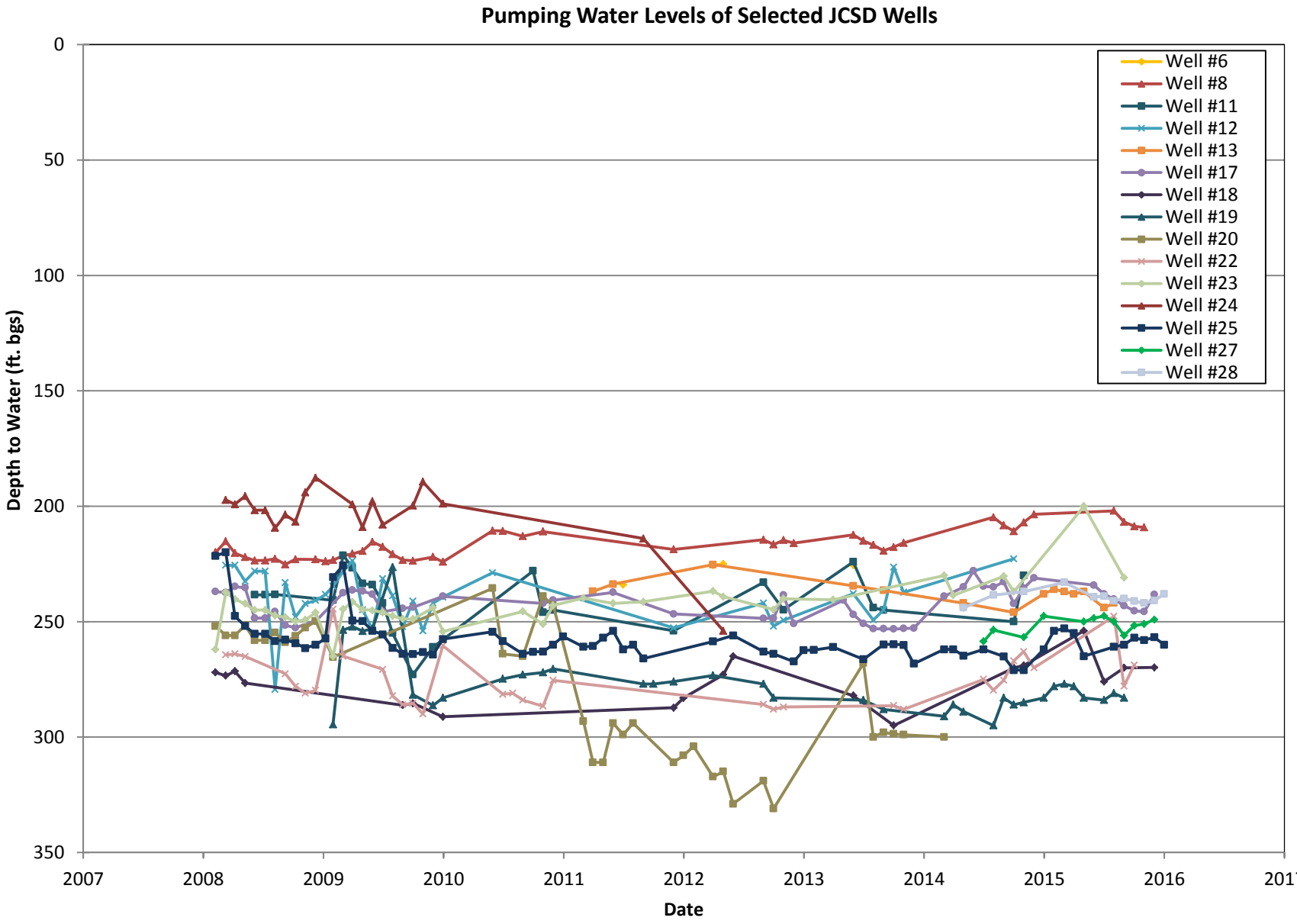

Pumping Water Levels of Selected JCSD Wells
Depth to Water (ft. bgs)
0
50
100
150
200
250
300
350
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Well #6
Well #8
Well #11
Well #12
Well #13
Well #17
Well #18
Well #19
Well #20
Well #22
Well #23
Well #24
Well #25
Well #27
Well #28

Figure 3

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EXPLANATION

- Well 19 Site Location
- Proposed New Well
- JCSD Well 19
- Sewer Manhole
- Fire Hydrant
- Storm Drain
- 1110 Pressure Zone Water Main
- County Boundary

N

0 50 100

Feet

JCSD WELL 19 SITE

Drawn By: DB Projection: State Plane 1983, Zone VI.

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8-May-19

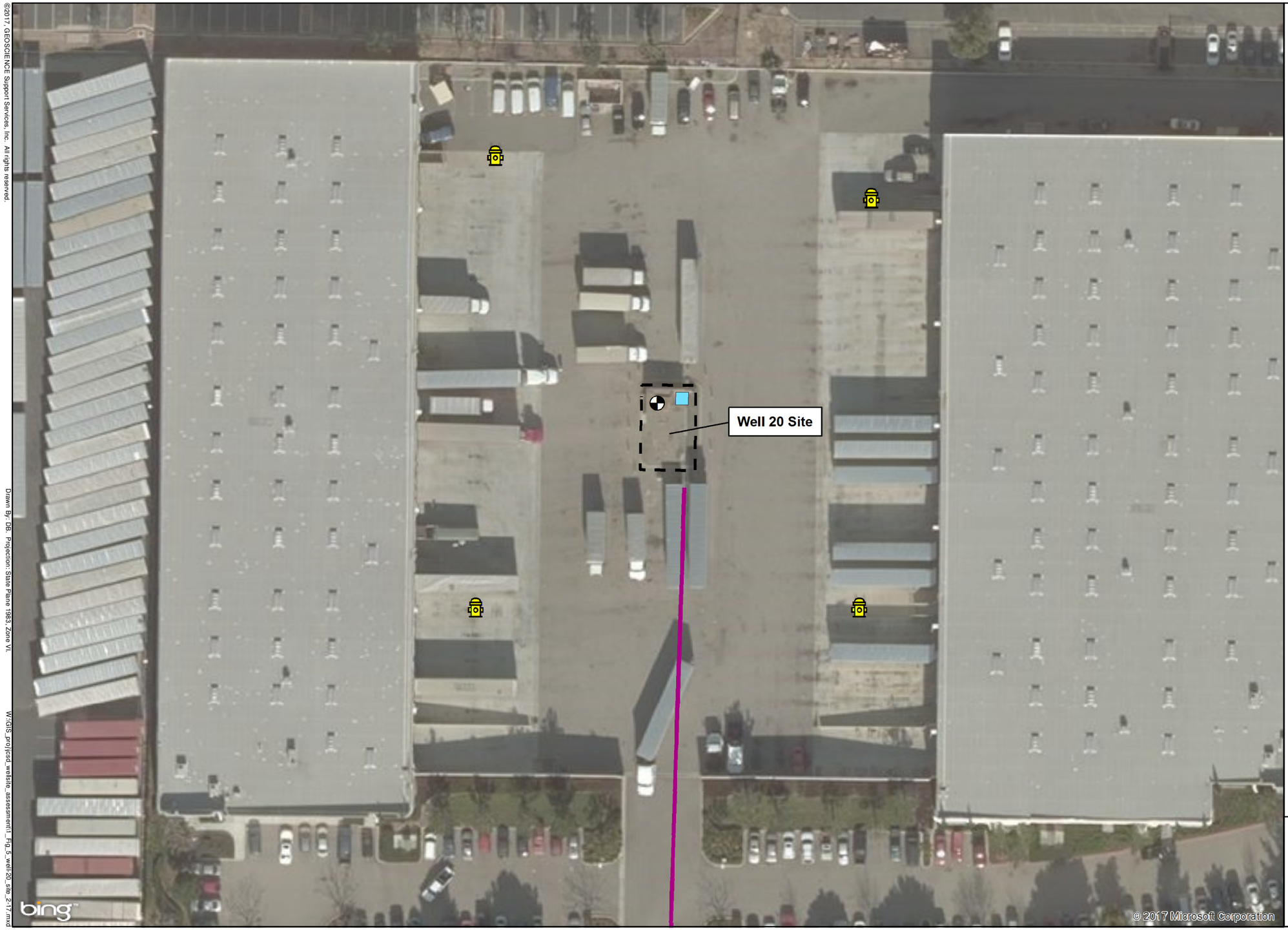
JURUPA COMMUNITY SERVICES DISTRICT

JURUPA COMMUNITY SERVICES DISTRICT WELL SITE ASSESSMENT

FIGURE 4

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EXPLANATION

- Well 20 Site Location
- JCSD Well 20
- Fire Hydrant
- Storm Drain
- 980 Pressure Zone Water Main

N

0 50 100

Feet

JCSD WELL 20 SITE

Drawn By: DB. Projection: State Plane 1983, Zone VI.

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8-May-19

JURUPA COMMUNITY SERVICES DISTRICT

JURUPA COMMUNITY SERVICES DISTRICT WELL SITE ASSESSMENT

FIGURE 5

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EXPLANATION

- Well 19 Site Location
- Proposed New Well / Wineville North (IDA-3A Test Borehole)
- Sewer Manhole
- Fire Hydrant
- Storm Drain
- 1110 Pressure Zone Water Main
- 1010 Pressure Zone Water Main (CDA)
- 870 Pressure Zone Water Main

N

0 100 200

Feet

JCSD WINEVILLE NORTH SITE

Drawn By: DB. Projection: State Plane 1983, Zone VI.

W:\GIS_proj\jcsd_wellsite_assessment\1_Fig_6_Wineville_North_site_2-17.mxd

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JURUPA COMMUNITY SERVICES DISTRICT

JURUPA COMMUNITY SERVICES DISTRICT WELL SITE ASSESSMENT

FIGURE 6

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EXPLANATION

- Cantu South Location
- Proposed New Well / Cantu South (IDA-5A Test Borehole)
- Sewer Manhole
- Fire Hydrant
- Storm Drain
- 1110 Pressure Zone Water Main

N

0 60 120

Feet

JCSD CANTU SOUTH SITE

Drawn By: DB Projection: State Plane 1983, Zone VI.

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8-May-19

JURUPA COMMUNITY SERVICES DISTRICT

JURUPA COMMUNITY SERVICES DISTRICT WELL SITE ASSESSMENT

FIGURE 7

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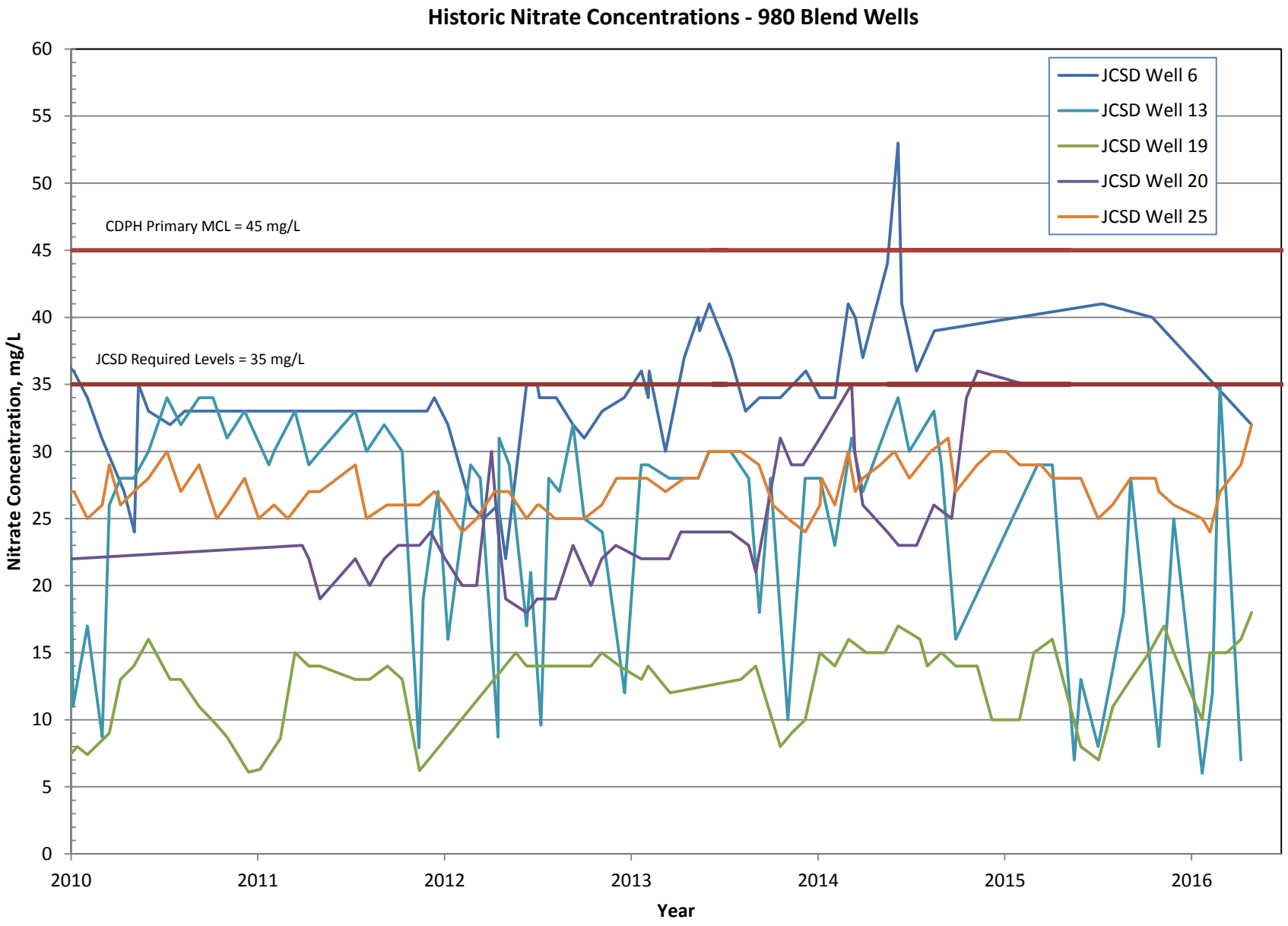

Historic Nitrate Concentrations - 980 Blend Wells
Nitrate Concentration, mg/L
Year
JCSD Well 6
JCSD Well 13
JCSD Well 19
JCSD Well 20
JCSD Well 25
CDPH Primary MCL = 45 mg/L
JCSD Required Levels = 35 mg/L
0
5
10
15
20
25
30
35
40
45
50
55
60
2010
2011
2012
2013
2014
2015
2016

Figure 8



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APPENDIX B

Air Quality/Greenhouse Gas Analysis

ALBERT A. WEBB ASSOCIATES

Technical Memorandum

To: Keith Backus, Jurupa Community Services District

From: Eliza Laws, Senior Environmental Analyst
Noemi Avila, Assistant Environmental Analyst

Date: September 16, 2021

Re: Air Quality/Greenhouse Gas Analysis for the Well 30 Project for Jurupa Community Services District (JCSD), District Project No. C195054

The following air quality assessment was prepared to evaluate whether the expected criteria air pollutant emissions generated as a result of construction and operation of the proposed Project would cause exceedances of the South Coast Air Quality Management District's (SCAQMD) thresholds for air quality in the Project area. The greenhouse gas (GHG) assessment was prepared to evaluate whether the expected criteria GHG emissions generated as a result of construction and operation of the proposed Project would exceed the SCAQMD draft screening significance thresholds. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 et seq.). The methodology follows the *CEQA Air Quality Handbook* prepared by the SCAQMD for quantification of emissions and evaluation of potential impacts to air resources. As recommended by SCAQMD staff, the **Cal**ifornia **E**missions **E**stimator **Mod**el® version 2020.4.0 (CalEEMod) was used to quantify Project-related emissions.

The analysis herein evaluates the Well 30 Project("Project") located on approximately one acre south of Philadelphia Avenue in the City of Jurupa Valley. The Project consists of the decommissioning and demolition of the Jurupa Community Services District's (JCSD's) Well 19 and site acquisition, drilling, construction, and operation of a new groundwater well identified as Well 30. The construction of proposed Well 30 would include two buildings, a detached chemical storage building and an electrical building, totaling approximately 1,355 square feet. The well will be equipped with a 400 to 600 horsepower electric motor with a standby diesel backup generator. Well 30 will replace Well 19 and increase supply of up to 1,500 gallons per minute (gpm) for a total of 2,500 gpm to meet future demand.

▪ Regional Significance Thresholds

The thresholds contained in the *SCAQMD CEQA Air Quality Handbook*[1] (SCAQMD 1993) are considered regional thresholds and are shown in **Table 1 – SCAQMD CEQA Daily Regional Significance Thresholds**, below. These regional thresholds were developed based on the SCAQMD's treatment of a major stationary source.

Table 1 – SCAQMD CEQA Daily Regional Significance Thresholds

Emission Threshold	Units	VOC	NO_x	CO	SO_x	PM-10	PM-2.5
Construction	lbs/day	75	100	550	150	150	55
Operation	lbs/day	55	55	550	150	150	55

[1] South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993. (Available at SCAQMD.)

Air quality impacts can be described in a short- and long-term perspective. Short-term impacts occur during site grading and Project construction and consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by construction-related vehicles. Long-term air quality impacts occur once the Project is in operation. The Project consists of a replacement groundwater well and appurtenances. Operational emissions would only be from the electric pump at the new well site and would be primarily from the infrequent visits by vehicles driven by maintenance personnel and are considered negligible; therefore, only short-term impacts were evaluated.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as the application of water or chemical stabilizers to disturbed soils, reducing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 or more acres or more of soil, or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of this Project's disturbance area (approximately 1.01 acres total), a Fugitive Dust Control Plan or a Large Operation Notification Form would not be required.

Short-Term Analysis

Short-term emissions from Project construction were evaluated using the CalEEMod program. The estimated construction period for the proposed Project is approximately 17 months as identified below. The default parameters within CalEEMod were used, except as identified below, and these default values generally reflect a worst-case scenario, which means that Project emissions are expected to be equal to or less than the estimated emissions. In addition to the default values used (shown in the CalEEMod output Attachment to this memo), assumptions for the Project relevant to model inputs for short-term construction emission estimates used are:

- Construction is anticipated to begin no sooner than April 2022. The modeled construction schedule for the Project is shown below:

Construction Activity	Start Date	End Date	Total Working Days
Demolition	April 1, 2022	May 3, 2022	23 days
Well Drilling	May 4, 2022	August 4, 2022	67days
Well Testing	August 5, 2022	September 6, 2022	23 days
Well Construction	September 4, 2022	September 4, 2023	261 days
Paving	August 28, 2023	September 4, 2023	6 days
Architectural Coating	August 28, 2023	September 4, 2023	6 days

- The off-road equipment to be used by each crew during the construction of the Project is shown below based on engineering estimates and assumes all equipment operate 8-hours per day:

Construction Activity	Off-Road Equipment	Unit Amount
Demolition	Concrete/Industrial Saw	1
	Rubber Tired Dozer	1
	Tractor/loader/backhoes	2
Well Drilling	Bore/Drill Rig	1
	Crane	1
	Tractor/loader/backhoes	1
Well Testing	No Off-road equipment	
Well Construction	Crane	1
	Grader	1
	Rubber Tired Dozer	1
	Welder	1
	Tractor/loader/backhoes	2
Paving	Pavers	1
	Paving Equipment	1
	Rollers	1
Architectural Coating	Air Compressor	1

- Demolition of the structures associated with the existing well was estimated to be 532 square feet.
- To evaluate Project compliance with SCAQMD Rule 403 for fugitive dust control, the Project utilized the mitigation option of watering the Project site three times daily which achieves a control efficiency of 61 percent for PM-10 and PM-2.5 emissions.
- Two (2) one-way vendor trips per day were added to the demolition, well drilling and paving activities to account for water truck trips.
- To be conservative the entire construction footprint (minus the building footprint) was assumed to be paved.

The results of this analysis are summarized below in **Table 2**.

Table 2 –Unmitigated Estimated Daily Construction Emissions

Activity	Peak Daily Emissions (lb/day)					
	VOC	NO_X	CO	SO_2	PM-10	PM-2.5
SCAQMD Daily Construction Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Demolition-2022	1.57	15.07	12.15	0.02	0.88	0.74
Well Drilling-2022	0.80	8.24	6.52	0.02	0.44	0.34
Well Testing-2022	0.08	0.36	0.82	0.00	0.25	0.07
Well Construction-2022	2.31	23.41	14.19	0.03	1.25	1.00
Well Construction-2023	**2.05**	**20.37**	**13.53**	**0.03**	**1.09**	**0.84**
Paving-2023	**0.98**	**5.18**	**7.61**	**0.01**	**0.36**	**0.26**
Architectural Coating-2023	**4.34**	**1.75**	**2.56**	**0.01**	**0.14**	**0.11**
Maximum	**7.37**	**27.30**	**23.70**	**0.05**	**1.59**	**1.21**
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Note: Maximum emissions are the greater of either: Demolition, Well Drilling, Well Testing, or Well Construction alone in 2022 or the sum of Well Construction, Paving, and Architectural Coating in 2023 because these activities overlap. Maximum emissions are shown in bold.

As shown in **Table 2**, above, the emissions from construction of the Project are below the SCAQMD daily construction thresholds for all the criteria pollutants in 2022 and 2023.

Long-Term Analysis

Long-term air quality impacts occur once the Project is in operation. Operations emissions refer to a full range of activities that can or may generate pollutant emissions when the development is functioning in its intended use, and typically include vehicle emissions, area source emissions that include stationary combustion of natural gas used for space and water heating, landscape maintenance, use of consumer products, and energy use.

Operational emissions related to the new replacement well would be primarily from the infrequent visits by vehicles driven by maintenance personnel and are considered negligible. In addition, this location is currently operating a well and the additional facilities constructed are not anticipated to increase the frequency of ongoing maintenance activities.

▪ Localized Significance Threshold Analysis

Background

As part of the SCAQMD's environmental justice program, attention has been focused on localized effects of air quality. Staff at SCAQMD has developed localized significance threshold (LST) methodology[2] that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts (both short- and long-term). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA). The Project is located in SRA 23.

Short-Term Analysis

According to the LST methodology, only on-site emissions need to be analyzed. Emissions associated with vendor and worker trips are mobile source emissions that occur off site. The emissions analyzed under the LST methodology are NO_2, CO, PM-10, and PM-2.5. SCAQMD has provided LST lookup tables[3] to allow users to readily determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts for projects five acres or smaller. The LST tables can be used as a screening tool to determine if dispersion modeling would be necessary. If project-related emissions are below the LST table emissions, no further analysis is necessary. The Project disturbance area is approximately 1.01 acres. Consistent with SCAQMD guidance, the LST for a one-acre site was used.[4]

The LST thresholds are estimated using the maximum daily disturbed area (in acres) and the distance of the Project to the nearest sensitive receptors (in meters). The Project site is surrounded with light industrial buildings. The nearest sensitive receptors are residential uses located more than 1,500 meters east of the Project site. LST methodology applies to sensitive receptors within 500 meters,. Therefore, to provide a conservative analysis, a receptor distance of 500 meters (1,640 feet) was used. The results are summarized in **Table 3**.

---

[2] South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, Revised July 2008. (Available at http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds, accessed September 2021.)

[3] http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds

[4] http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2

Table 3 –Unmitigated LST Results for Daily Construction Emissions

Pollutant	Peak Daily Emissions (lb/day)			
	NO_X	CO	PM-10	PM-2.5
LST for 1-acre at 500 meters	**652**	**17,640**	**178**	**86**
Demolition-2022	14.95	11.72	0.76	0.70
Well Drilling-2022	8.13	6.17	0.34	0.31
Well Testing-2022	0.00	0.00	0.00	0.00
Well Construction-2022	23.05	13.37	0.03	1.00
Well Construction-2023	**20.09**	**12.77**	**0.84**	**0.78**
Paving-2023	**5.10**	**7.29**	**0.01**	**0.26**
Architectural Coating-2023	**1.74**	**2.41**	**0.09**	**0.09**
Maximum[2]	**26.92**	**22.48**	**0.94**	**1.12**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Note: Maximum emissions are the greater of either Demolition, Well Drilling, Well Testing, or Well Construction alone in2022 or the sum of Well Construction, Paving, and Architectural Coating in 2023 because these activities overlap. Maximum emissions are shown in bold.

As shown in **Table 3,** emissions from construction of the Project are below the most conservative LST established by SCAQMD.

Long-Term Analysis

The Project involves construction of a new well replacing an existing well. The long-term emissions from the pipeline, as discussed previously, are primarily in the form of mobile source emissions, with no stationary sources of emissions present. The new well will be similar to the existing well and is electric powered. The new well will have a diesel-powered emergency generator, similar to the existing well. According to the LST methodology, LSTs only apply to the operational phase if a project includes stationary sources or on-site mobile equipment generating on-site emissions. The proposed Project does not include such uses. Therefore, no long-term LST analysis is needed.

▪ Greenhouse Gas Analysis

Greenhouse gases (GHG) are not presented in lbs/day like criteria pollutants; they are typically evaluated on an annual basis using the metric system. Several agencies, at various levels, have proposed draft GHG significance thresholds for use in CEQA documents. SCAQMD has been working on GHG thresholds for development projects. In December 2008, the SCAQMD adopted a threshold of 10,000 metric tonnes per year of carbon dioxide equivalents ($MTCO_2E$/yr) for stationary source projects where SCAQMD is the lead agency. The most recent draft proposal was in September 2010[5] and included screening significance thresholds for residential, commercial, and mixed-use projects at 3,500, 1,400, and 3,000 $MTCO_2E$/yr, respectively. Alternatively, a lead agency has the option to use 3,000 $MTCO_2E$/yr as a threshold for all non-industrial projects. Although both options are recommended by SCAQMD, a lead agency is advised to use only one option and to use it consistently. The SCAQMD significance thresholds also evaluate construction emissions by amortizing them over an expected project life of 30 years. If emissions are above the screening level threshold, additional analysis may be required. The analysis herein uses the threshold of 3,000 $MTCO_2E$/yr.

Short-Term Analysis

Construction-Related Emissions

The CalEEMod model calculates GHG emissions from fuel usage by construction equipment and construction-related activities, like construction worker trips, for the Project. The CalEEMod estimate does

[5] http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2

not analyze emissions from construction-related electricity or natural gas. Construction-related electricity and natural gas emissions vary based on the amount of electric power used during construction and other unknown factors which make them too speculative to quantify. The CalEEMod output results for construction-related GHG emissions provide for CO_2, methane (CH_4), nitrous oxide (N_2O), and CO_2E[6] as shown on **Table 4**.

Table 4 – Project Construction Equipment GHG Emissions

Year	Metric Tons per year (MT/yr)			
	Total CO_2	Total CH_4	Total N_2O	Total CO_2E
2022	204.34	0.0567	0.00	206.23
2023	254.54	0.07	0.00	256.89
Total	**458.88**	**0.13**	**0.00**	**463.10**
			Amortized[1]	**15.44**

Note: [1]Construction emissions were amortized over a 30-year period, as recommended by SCAQMD.

Results indicate that an estimated 463.10 $MTCO_2E$ will occur from Project construction equipment over the course of the estimated approximately 17-month construction period. The draft SCAQMD GHG threshold guidance document released in October 2008[7] recommends that construction emissions be amortized for a project lifetime of 30 years to ensure that GHG reduction measures address construction GHG emissions as part of the operational reduction strategies.

Long-Term Analysis

Energy-Related Emissions

GHG emissions from the operation of the electric pump for the new well were calculated outside of CalEEMod using the net increase in annual electricity consumption from the new well and the 2020 Southern California Edison (SCE) carbon intensity data from CalEEMod (393 pounds of CO_2E per megawatt-hour). In 2020, the existing well used approximately 618 megawatt-hours (MWh). A factor of 2.09 was derived assuming the existing well capacity increases from 1,195 gpm to 2,500 gpm. Based on the estimated increase in well capacity, the estimated increase in electricity consumption is 675 MWh per year. Therefore, the estimated increase in GHG emissions from operation of the proposed well will be approximately 120 $MTCO_2E$ per year.

The proposed Project does not fit into the categories provided (industrial, commercial, and residential) in the draft thresholds from SCAQMD. The Project's emissions were compared to whichever threshold is more conservative. Since the draft SCAQMD GHG threshold Guidance document released in October 2008 recommends that construction emissions be amortized for a project lifetime of 30 years to, the total GHG emissions from Project construction and operation and are below the SCAQMD recommended screening level of 3,000 $MTCO_2E$/yr. Due to the estimated amount of emissions from Project construction and increase well pump electricity usage as well as the negligible operational emissions from infrequent maintenance vehicles, the proposed Project will not generate GHG emissions that exceed the screening threshold.

▪ Conclusion

The conclusion of this analysis indicates that construction of the proposed Project will not exceed criteria pollutant thresholds established by SCAQMD on a regional or localized level. The Project will not generate GHG emissions that exceed the SCAQMD screening threshold. No mitigation is required.

Should you have any questions, please contact me at (951) 686-1070.

---

[6] CO_2E is the sum of CO_2 emissions estimated plus the sum of CH_4 and N_2O emissions estimated multiplied by their respective global warming potential (GWP).

[7] http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2

CALEEMOD OUTPUT FILES

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Well 19 Project

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.36	User Defined Unit	0.03	1,355.00	0
Other Asphalt Surfaces	42.64	1000sqft	0.98	42,640.60	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Engineer

Construction Phase - Per Engineers

Off-road Equipment - 8hr/day

Off-road Equipment - Per Engineer

Off-road Equipment - Per Engineer, 8hr/day

Off-road Equipment - Per Engineer, 8hr/day

Off-road Equipment - Per Engineer

Off-road Equipment - No Offsite Equipment required.

Trips and VMT - 2 daily water truck trips added to demo, well drilling, and paving. Well testing workers trips.

Demolition -

Well 19 Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation - Water site 3x daily per Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	200.00	23.00
tblConstructionPhase	NumDays	200.00	261.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	10.00	6.00
tblLandUse	LandUseSquareFeet	0.00	1,355.00
tblLandUse	LandUseSquareFeet	42,640.00	42,640.60
tblLandUse	LotAcreage	0.00	0.03
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

Well 19 Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.3958	23.7336	15.0068	0.0359	0.4921	1.0130	1.5050	0.1325	0.9374	1.0699	0.0000	3,476.9056	3,476.9056	0.8874	0.0492	3,513.7543
2023	7.3666	27.2825	23.6996	0.0496	0.3930	1.1914	1.5844	0.1055	1.1082	1.2137	0.0000	4,781.2280	4,781.2280	1.2612	0.0317	4,822.1981
Maximum	**7.3666**	**27.2825**	**23.6996**	**0.0496**	**0.4921**	**1.1914**	**1.5844**	**0.1325**	**1.1082**	**1.2137**	**0.0000**	**4,781.2280**	**4,781.2280**	**1.2612**	**0.0492**	**4,822.1981**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.3958	23.7336	15.0068	0.0359	0.4921	1.0130	1.5050	0.1325	0.9374	1.0699	0.0000	3,476.9056	3,476.9056	0.8874	0.0492	3,513.7543
2023	7.3666	27.2825	23.6996	0.0496	0.3930	1.1914	1.5844	0.1055	1.1082	1.2137	0.0000	4,781.2280	4,781.2280	1.2612	0.0317	4,822.1981
Maximum	**7.3666**	**27.2825**	**23.6996**	**0.0496**	**0.4921**	**1.1914**	**1.5844**	**0.1325**	**1.1082**	**1.2137**	**0.0000**	**4,781.2280**	**4,781.2280**	**1.2612**	**0.0492**	**4,822.1981**

Well 19 Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Well 19 Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0490	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6300e-003	9.6300e-003	3.0000e-005		0.0103
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0490**	**4.0000e-005**	**4.4900e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**		**9.6300e-003**	**9.6300e-003**	**3.0000e-005**	**0.0000**	**0.0103**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0490	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6300e-003	9.6300e-003	3.0000e-005		0.0103
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0490**	**4.0000e-005**	**4.4900e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**		**9.6300e-003**	**9.6300e-003**	**3.0000e-005**	**0.0000**	**0.0103**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2022	5/3/2022	5	23	
2	Well Drilling	Trenching	5/4/2022	8/4/2022	5	67	
3	Well Testing	Building Construction	8/5/2022	9/6/2022	5	23	
4	Well Construction	Building Construction	9/4/2022	9/4/2023	5	261	
5	Paving	Paving	8/28/2023	9/4/2023	5	6	
6	Architectural Coating	Architectural Coating	8/28/2023	9/4/2023	5	6	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.98

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,033; Non-Residential Outdoor: 678; Striped Parking Area: 2,558 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Well Drilling	Bore/Drill Rigs	1	8.00	221	0.50
Well Drilling	Cranes	1	8.00	231	0.29

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Well Drilling	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Well Testing	Cranes	0	6.00	231	0.29
Well Testing	Forklifts	0	6.00	89	0.20
Well Testing	Generator Sets	0	8.00	84	0.74
Well Testing	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Well Testing	Welders	0	8.00	46	0.45
Well Construction	Cranes	1	8.00	231	0.29
Well Construction	Forklifts	0	8.00	89	0.20
Well Construction	Generator Sets	0	8.00	84	0.74
Well Construction	Graders	1	8.00	187	0.41
Well Construction	Rubber Tired Dozers	1	8.00	247	0.40
Well Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Well Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	2.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Drilling	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Testing	0	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Construction	6	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0229	0.0000	0.0229	3.4700e-003	0.0000	3.4700e-003			0.0000			0.0000
Off-Road	1.5242	14.9461	11.7226	0.0210		0.7478	0.7478		0.7000	0.7000		2,022.1779	2,022.1779	0.4947		2,034.5445
Total	**1.5242**	**14.9461**	**11.7226**	**0.0210**	**0.0229**	**0.7478**	**0.7707**	**3.4700e-003**	**0.7000**	**0.7034**		**2,022.1779**	**2,022.1779**	**0.4947**		**2,034.5445**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.7000e-004	0.0111	2.4700e-003	5.0000e-005	1.5200e-003	1.3000e-004	1.6500e-003	4.2000e-004	1.2000e-004	5.4000e-004		5.3335	5.3335	7.0000e-005	8.4000e-004	5.5857
Vendor	3.2500e-003	0.0846	0.0294	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.5891	38.5891	4.1000e-004	5.7200e-003	40.3046
Worker	0.0394	0.0255	0.3981	1.0200e-003	0.1118	5.6000e-004	0.1123	0.0296	5.1000e-004	0.0302		102.6894	102.6894	2.5600e-003	2.5400e-003	103.5109
Total	**0.0429**	**0.1212**	**0.4300**	**1.4300e-003**	**0.1261**	**1.9100e-003**	**0.1280**	**0.0338**	**1.8000e-003**	**0.0356**		**146.6120**	**146.6120**	**3.0400e-003**	**9.1000e-003**	**149.4012**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.9300e-003	0.0000	8.9300e-003	1.3500e-003	0.0000	1.3500e-003			0.0000			0.0000
Off-Road	1.5242	14.9461	11.7226	0.0210		0.7478	0.7478		0.7000	0.7000	0.0000	2,022.1779	2,022.1779	0.4947		2,034.5445
Total	**1.5242**	**14.9461**	**11.7226**	**0.0210**	**8.9300e-003**	**0.7478**	**0.7567**	**1.3500e-003**	**0.7000**	**0.7013**	**0.0000**	**2,022.1779**	**2,022.1779**	**0.4947**		**2,034.5445**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.7000e-004	0.0111	2.4700e-003	5.0000e-005	1.5200e-003	1.3000e-004	1.6500e-003	4.2000e-004	1.2000e-004	5.4000e-004		5.3335	5.3335	7.0000e-005	8.4000e-004	5.5857
Vendor	3.2500e-003	0.0846	0.0294	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.5891	38.5891	4.1000e-004	5.7200e-003	40.3046
Worker	0.0394	0.0255	0.3981	1.0200e-003	0.1118	5.6000e-004	0.1123	0.0296	5.1000e-004	0.0302		102.6894	102.6894	2.5600e-003	2.5400e-003	103.5109
Total	**0.0429**	**0.1212**	**0.4300**	**1.4300e-003**	**0.1261**	**1.9100e-003**	**0.1280**	**0.0338**	**1.8000e-003**	**0.0356**		**146.6120**	**146.6120**	**3.0400e-003**	**9.1000e-003**	**149.4012**

3.3 Well Drilling - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7618	8.1263	6.1714	0.0183		0.3366	0.3366		0.3097	0.3097		1,773.6301	1,773.6301	0.5736		1,787.9708
Total	**0.7618**	**8.1263**	**6.1714**	**0.0183**		**0.3366**	**0.3366**		**0.3097**	**0.3097**		**1,773.6301**	**1,773.6301**	**0.5736**		**1,787.9708**

Well 19 Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Well Drilling - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2500e-003	0.0846	0.0294	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.5891	38.5891	4.1000e-004	5.7200e-003	40.3046
Worker	0.0315	0.0204	0.3185	8.1000e-004	0.0894	4.4000e-004	0.0899	0.0237	4.1000e-004	0.0241		82.1515	82.1515	2.0500e-003	2.0300e-003	82.8087
Total	**0.0348**	**0.1050**	**0.3479**	**1.1700e-003**	**0.1022**	**1.6600e-003**	**0.1039**	**0.0274**	**1.5800e-003**	**0.0290**		**120.7406**	**120.7406**	**2.4600e-003**	**7.7500e-003**	**123.1134**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7618	8.1263	6.1714	0.0183		0.3366	0.3366		0.3097	0.3097	0.0000	1,773.6301	1,773.6301	0.5736		1,787.9708
Total	**0.7618**	**8.1263**	**6.1714**	**0.0183**		**0.3366**	**0.3366**		**0.3097**	**0.3097**	**0.0000**	**1,773.6301**	**1,773.6301**	**0.5736**		**1,787.9708**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Well Drilling - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2500e-003	0.0846	0.0294	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.5891	38.5891	4.1000e-004	5.7200e-003	40.3046
Worker	0.0315	0.0204	0.3185	8.1000e-004	0.0894	4.4000e-004	0.0899	0.0237	4.1000e-004	0.0241		82.1515	82.1515	2.0500e-003	2.0300e-003	82.8087
Total	**0.0348**	**0.1050**	**0.3479**	**1.1700e-003**	**0.1022**	**1.6600e-003**	**0.1039**	**0.0274**	**1.5800e-003**	**0.0290**		**120.7406**	**120.7406**	**2.4600e-003**	**7.7500e-003**	**123.1134**

3.4 Well Testing - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Well 19 Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Well Testing - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0114	0.2960	0.1029	1.2700e-003	0.0448	4.2700e-003	0.0491	0.0129	4.0800e-003	0.0170		135.0617	135.0617	1.4300e-003	0.0200	141.0661
Worker	0.0709	0.0460	0.7166	1.8300e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		184.8409	184.8409	4.6100e-003	4.5800e-003	186.3197
Total	**0.0823**	**0.3420**	**0.8195**	**3.1000e-003**	**0.2460**	**5.2700e-003**	**0.2513**	**0.0663**	**5.0000e-003**	**0.0713**		**319.9027**	**319.9027**	**6.0400e-003**	**0.0246**	**327.3858**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Well Testing - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0114	0.2960	0.1029	1.2700e-003	0.0448	4.2700e-003	0.0491	0.0129	4.0800e-003	0.0170		135.0617	135.0617	1.4300e-003	0.0200	141.0661
Worker	0.0709	0.0460	0.7166	1.8300e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		184.8409	184.8409	4.6100e-003	4.5800e-003	186.3197
Total	**0.0823**	**0.3420**	**0.8195**	**3.1000e-003**	**0.2460**	**5.2700e-003**	**0.2513**	**0.0663**	**5.0000e-003**	**0.0713**		**319.9027**	**319.9027**	**6.0400e-003**	**0.0246**	**327.3858**

3.5 Well Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2312	23.0497	13.3678	0.0297		1.0024	1.0024		0.9274	0.9274		2,837.1003	2,837.1003	0.8753		2,858.9827
Total	**2.2312**	**23.0497**	**13.3678**	**0.0297**		**1.0024**	**1.0024**		**0.9274**	**0.9274**		**2,837.1003**	**2,837.1003**	**0.8753**		**2,858.9827**

Well 19 Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Well Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0114	0.2960	0.1029	1.2700e-003	0.0448	4.2700e-003	0.0491	0.0129	4.0800e-003	0.0170		135.0617	135.0617	1.4300e-003	0.0200	141.0661
Worker	0.0709	0.0460	0.7166	1.8300e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		184.8409	184.8409	4.6100e-003	4.5800e-003	186.3197
Total	**0.0823**	**0.3420**	**0.8195**	**3.1000e-003**	**0.2460**	**5.2700e-003**	**0.2513**	**0.0663**	**5.0000e-003**	**0.0713**		**319.9027**	**319.9027**	**6.0400e-003**	**0.0246**	**327.3858**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2312	23.0497	13.3678	0.0297		1.0024	1.0024		0.9274	0.9274	0.0000	2,837.1003	2,837.1003	0.8753		2,858.9827
Total	**2.2312**	**23.0497**	**13.3678**	**0.0297**		**1.0024**	**1.0024**		**0.9274**	**0.9274**	**0.0000**	**2,837.1003**	**2,837.1003**	**0.8753**		**2,858.9827**

Well 19 Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Well Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0114	0.2960	0.1029	1.2700e-003	0.0448	4.2700e-003	0.0491	0.0129	4.0800e-003	0.0170		135.0617	135.0617	1.4300e-003	0.0200	141.0661
Worker	0.0709	0.0460	0.7166	1.8300e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		184.8409	184.8409	4.6100e-003	4.5800e-003	186.3197
Total	**0.0823**	**0.3420**	**0.8195**	**3.1000e-003**	**0.2460**	**5.2700e-003**	**0.2513**	**0.0663**	**5.0000e-003**	**0.0713**		**319.9027**	**319.9027**	**6.0400e-003**	**0.0246**	**327.3858**

3.5 Well Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9767	20.0876	12.7740	0.0297		0.8378	0.8378		0.7752	0.7752		2,837.3058	2,837.3058	0.8732		2,859.1352
Total	**1.9767**	**20.0876**	**12.7740**	**0.0297**		**0.8378**	**0.8378**		**0.7752**	**0.7752**		**2,837.3058**	**2,837.3058**	**0.8732**		**2,859.1352**

Well 19 Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Well Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.8900e-003	0.2287	0.0942	1.2200e-003	0.0448	1.9900e-003	0.0468	0.0129	1.9100e-003	0.0148		129.6897	129.6897	1.3200e-003	0.0192	135.4337
Worker	0.0657	0.0406	0.6586	1.7700e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		178.8733	178.8733	4.1400e-003	4.2200e-003	180.2350
Total	**0.0736**	**0.2693**	**0.7527**	**2.9900e-003**	**0.2460**	**2.9300e-003**	**0.2490**	**0.0663**	**2.7800e-003**	**0.0690**		**308.5630**	**308.5630**	**5.4600e-003**	**0.0234**	**315.6687**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9767	20.0876	12.7740	0.0297		0.8378	0.8378		0.7752	0.7752	0.0000	2,837.3058	2,837.3058	0.8732		2,859.1352
Total	**1.9767**	**20.0876**	**12.7740**	**0.0297**		**0.8378**	**0.8378**		**0.7752**	**0.7752**	**0.0000**	**2,837.3058**	**2,837.3058**	**0.8732**		**2,859.1352**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Well Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.8900e-003	0.2287	0.0942	1.2200e-003	0.0448	1.9900e-003	0.0468	0.0129	1.9100e-003	0.0148		129.6897	129.6897	1.3200e-003	0.0192	135.4337
Worker	0.0657	0.0406	0.6586	1.7700e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		178.8733	178.8733	4.1400e-003	4.2200e-003	180.2350
Total	**0.0736**	**0.2693**	**0.7527**	**2.9900e-003**	**0.2460**	**2.9300e-003**	**0.2490**	**0.0663**	**2.7800e-003**	**0.0690**		**308.5630**	**308.5630**	**5.4600e-003**	**0.0234**	**315.6687**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5164	5.0958	7.2921	0.0114		0.2551	0.2551		0.2347	0.2347		1,103.7921	1,103.7921	0.3570		1,112.7168
Paving	0.4279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9443**	**5.0958**	**7.2921**	**0.0114**		**0.2551**	**0.2551**		**0.2347**	**0.2347**		**1,103.7921**	**1,103.7921**	**0.3570**		**1,112.7168**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2500e-003	0.0653	0.0269	3.5000e-004	0.0128	5.7000e-004	0.0134	3.6900e-003	5.4000e-004	4.2300e-003		37.0542	37.0542	3.8000e-004	5.4800e-003	38.6954
Worker	0.0292	0.0181	0.2927	7.9000e-004	0.0894	4.2000e-004	0.0898	0.0237	3.8000e-004	0.0241		79.4992	79.4992	1.8400e-003	1.8800e-003	80.1045
Total	**0.0315**	**0.0834**	**0.3196**	**1.1400e-003**	**0.1022**	**9.9000e-004**	**0.1032**	**0.0274**	**9.2000e-004**	**0.0283**		**116.5534**	**116.5534**	**2.2200e-003**	**7.3600e-003**	**118.7998**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5164	5.0958	7.2921	0.0114		0.2551	0.2551		0.2347	0.2347	0.0000	1,103.7921	1,103.7921	0.3570		1,112.7168
Paving	0.4279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9443**	**5.0958**	**7.2921**	**0.0114**		**0.2551**	**0.2551**		**0.2347**	**0.2347**	**0.0000**	**1,103.7921**	**1,103.7921**	**0.3570**		**1,112.7168**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2500e-003	0.0653	0.0269	3.5000e-004	0.0128	5.7000e-004	0.0134	3.6900e-003	5.4000e-004	4.2300e-003		37.0542	37.0542	3.8000e-004	5.4800e-003	38.6954
Worker	0.0292	0.0181	0.2927	7.9000e-004	0.0894	4.2000e-004	0.0898	0.0237	3.8000e-004	0.0241		79.4992	79.4992	1.8400e-003	1.8800e-003	80.1045
Total	**0.0315**	**0.0834**	**0.3196**	**1.1400e-003**	**0.1022**	**9.9000e-004**	**0.1032**	**0.0274**	**9.2000e-004**	**0.0283**		**116.5534**	**116.5534**	**2.2200e-003**	**7.3600e-003**	**118.7998**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.0703					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944		375.2641	375.2641	0.0225		375.8253
Total	**4.3259**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**		**375.2641**	**375.2641**	**0.0225**		**375.8253**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0146	9.0200e-003	0.1464	3.9000e-004	0.0447	2.1000e-004	0.0449	0.0119	1.9000e-004	0.0121		39.7496	39.7496	9.2000e-004	9.4000e-004	40.0522
Total	**0.0146**	**9.0200e-003**	**0.1464**	**3.9000e-004**	**0.0447**	**2.1000e-004**	**0.0449**	**0.0119**	**1.9000e-004**	**0.0121**		**39.7496**	**39.7496**	**9.2000e-004**	**9.4000e-004**	**40.0522**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.0703					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944	0.0000	375.2641	375.2641	0.0225		375.8253
Total	**4.3259**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**	**0.0000**	**375.2641**	**375.2641**	**0.0225**		**375.8253**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0146	9.0200e-003	0.1464	3.9000e-004	0.0447	2.1000e-004	0.0449	0.0119	1.9000e-004	0.0121		39.7496	39.7496	9.2000e-004	9.4000e-004	40.0522
Total	**0.0146**	**9.0200e-003**	**0.1464**	**3.9000e-004**	**0.0447**	**2.1000e-004**	**0.0449**	**0.0119**	**1.9000e-004**	**0.0121**		**39.7496**	**39.7496**	**9.2000e-004**	**9.4000e-004**	**40.0522**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
User Defined Commercial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
User Defined Commercial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
User Defined Commercial	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468

5.0 Energy Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0490	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6300e-003	9.6300e-003	3.0000e-005		0.0103
Unmitigated	0.0490	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6300e-003	9.6300e-003	3.0000e-005		0.0103

Well 19 Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.6900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0419					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6300e-003	9.6300e-003	3.0000e-005		0.0103
Total	**0.0490**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.6300e-003**	**9.6300e-003**	**3.0000e-005**		**0.0103**

Well 19 Project - Riverside-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.6900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0419					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6300e-003	9.6300e-003	3.0000e-005		0.0103
Total	**0.0490**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.6300e-003**	**9.6300e-003**	**3.0000e-005**		**0.0103**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Well 19 Project

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.36	User Defined Unit	0.03	1,355.00	0
Other Asphalt Surfaces	42.64	1000sqft	0.98	42,640.60	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Engineer

Construction Phase - Per Engineers

Off-road Equipment - 8hr/day

Off-road Equipment - Per Engineer

Off-road Equipment - Per Engineer, 8hr/day

Off-road Equipment - Per Engineer, 8hr/day

Off-road Equipment - Per Engineer

Off-road Equipment - No Offsite Equipment required.

Trips and VMT - 2 daily water truck trips added to demo, well drilling, and paving. Well testing workers trips.

Demolition -

Well 19 Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation - Water site 3x daily per Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	200.00	23.00
tblConstructionPhase	NumDays	200.00	261.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	10.00	6.00
tblLandUse	LandUseSquareFeet	0.00	1,355.00
tblLandUse	LandUseSquareFeet	42,640.00	42,640.60
tblLandUse	LotAcreage	0.00	0.03
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

Well 19 Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.3855	23.7688	14.7430	0.0356	0.4921	1.0130	1.5051	0.1325	0.9374	1.0699	0.0000	3,442.3751	3,442.3751	0.8873	0.0495	3,479.3082
2023	7.3590	27.3028	23.4973	0.0493	0.3930	1.1914	1.5844	0.1055	1.1082	1.2137	0.0000	4,753.6467	4,753.6467	1.2612	0.0319	4,794.6891
Maximum	**7.3590**	**27.3028**	**23.4973**	**0.0493**	**0.4921**	**1.1914**	**1.5844**	**0.1325**	**1.1082**	**1.2137**	**0.0000**	**4,753.6467**	**4,753.6467**	**1.2612**	**0.0495**	**4,794.6891**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.3855	23.7688	14.7430	0.0356	0.4921	1.0130	1.5051	0.1325	0.9374	1.0699	0.0000	3,442.3750	3,442.3750	0.8873	0.0495	3,479.3082
2023	7.3590	27.3028	23.4973	0.0493	0.3930	1.1914	1.5844	0.1055	1.1082	1.2137	0.0000	4,753.6467	4,753.6467	1.2612	0.0319	4,794.6891
Maximum	**7.3590**	**27.3028**	**23.4973**	**0.0493**	**0.4921**	**1.1914**	**1.5844**	**0.1325**	**1.1082**	**1.2137**	**0.0000**	**4,753.6467**	**4,753.6467**	**1.2612**	**0.0495**	**4,794.6891**

Well 19 Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Well 19 Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0490	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6300e-003	9.6300e-003	3.0000e-005		0.0103
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0490**	**4.0000e-005**	**4.4900e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**		**9.6300e-003**	**9.6300e-003**	**3.0000e-005**	**0.0000**	**0.0103**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0490	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6300e-003	9.6300e-003	3.0000e-005		0.0103
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0490**	**4.0000e-005**	**4.4900e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**		**9.6300e-003**	**9.6300e-003**	**3.0000e-005**	**0.0000**	**0.0103**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2022	5/3/2022	5	23	
2	Well Drilling	Trenching	5/4/2022	8/4/2022	5	67	
3	Well Testing	Building Construction	8/5/2022	9/6/2022	5	23	
4	Well Construction	Building Construction	9/4/2022	9/4/2023	5	261	
5	Paving	Paving	8/28/2023	9/4/2023	5	6	
6	Architectural Coating	Architectural Coating	8/28/2023	9/4/2023	5	6	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.98

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,033; Non-Residential Outdoor: 678; Striped Parking Area: 2,558 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Well Drilling	Bore/Drill Rigs	1	8.00	221	0.50
Well Drilling	Cranes	1	8.00	231	0.29

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Well Drilling	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Well Testing	Cranes	0	6.00	231	0.29
Well Testing	Forklifts	0	6.00	89	0.20
Well Testing	Generator Sets	0	8.00	84	0.74
Well Testing	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Well Testing	Welders	0	8.00	46	0.45
Well Construction	Cranes	1	8.00	231	0.29
Well Construction	Forklifts	0	8.00	89	0.20
Well Construction	Generator Sets	0	8.00	84	0.74
Well Construction	Graders	1	8.00	187	0.41
Well Construction	Rubber Tired Dozers	1	8.00	247	0.40
Well Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Well Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	2.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Drilling	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Testing	0	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Construction	6	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0229	0.0000	0.0229	3.4700e-003	0.0000	3.4700e-003			0.0000			0.0000
Off-Road	1.5242	14.9461	11.7226	0.0210		0.7478	0.7478		0.7000	0.7000		2,022.1779	2,022.1779	0.4947		2,034.5445
Total	**1.5242**	**14.9461**	**11.7226**	**0.0210**	**0.0229**	**0.7478**	**0.7707**	**3.4700e-003**	**0.7000**	**0.7034**		**2,022.1779**	**2,022.1779**	**0.4947**		**2,034.5445**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.6000e-004	0.0117	2.5400e-003	5.0000e-005	1.5200e-003	1.3000e-004	1.6500e-003	4.2000e-004	1.2000e-004	5.4000e-004		5.3376	5.3376	7.0000e-005	8.4000e-004	5.5899
Vendor	3.1200e-003	0.0891	0.0305	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.6312	38.6312	4.0000e-004	5.7300e-003	40.3497
Worker	0.0368	0.0265	0.3226	9.2000e-004	0.1118	5.6000e-004	0.1123	0.0296	5.1000e-004	0.0302		93.0158	93.0158	2.5400e-003	2.6000e-003	93.8548
Total	**0.0402**	**0.1273**	**0.3557**	**1.3300e-003**	**0.1261**	**1.9100e-003**	**0.1280**	**0.0338**	**1.8000e-003**	**0.0356**		**136.9845**	**136.9845**	**3.0100e-003**	**9.1700e-003**	**139.7945**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.9300e-003	0.0000	8.9300e-003	1.3500e-003	0.0000	1.3500e-003			0.0000			0.0000
Off-Road	1.5242	14.9461	11.7226	0.0210		0.7478	0.7478		0.7000	0.7000	0.0000	2,022.1779	2,022.1779	0.4947		2,034.5445
Total	**1.5242**	**14.9461**	**11.7226**	**0.0210**	**8.9300e-003**	**0.7478**	**0.7567**	**1.3500e-003**	**0.7000**	**0.7013**	**0.0000**	**2,022.1779**	**2,022.1779**	**0.4947**		**2,034.5445**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.6000e-004	0.0117	2.5400e-003	5.0000e-005	1.5200e-003	1.3000e-004	1.6500e-003	4.2000e-004	1.2000e-004	5.4000e-004		5.3376	5.3376	7.0000e-005	8.4000e-004	5.5899
Vendor	3.1200e-003	0.0891	0.0305	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.6312	38.6312	4.0000e-004	5.7300e-003	40.3497
Worker	0.0368	0.0265	0.3226	9.2000e-004	0.1118	5.6000e-004	0.1123	0.0296	5.1000e-004	0.0302		93.0158	93.0158	2.5400e-003	2.6000e-003	93.8548
Total	**0.0402**	**0.1273**	**0.3557**	**1.3300e-003**	**0.1261**	**1.9100e-003**	**0.1280**	**0.0338**	**1.8000e-003**	**0.0356**		**136.9845**	**136.9845**	**3.0100e-003**	**9.1700e-003**	**139.7945**

3.3 Well Drilling - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7618	8.1263	6.1714	0.0183		0.3366	0.3366		0.3097	0.3097		1,773.6301	1,773.6301	0.5736		1,787.9708
Total	**0.7618**	**8.1263**	**6.1714**	**0.0183**		**0.3366**	**0.3366**		**0.3097**	**0.3097**		**1,773.6301**	**1,773.6301**	**0.5736**		**1,787.9708**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Well Drilling - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1200e-003	0.0891	0.0305	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.6312	38.6312	4.0000e-004	5.7300e-003	40.3497
Worker	0.0294	0.0212	0.2581	7.4000e-004	0.0894	4.4000e-004	0.0899	0.0237	4.1000e-004	0.0241		74.4126	74.4126	2.0300e-003	2.0800e-003	75.0838
Total	**0.0326**	**0.1103**	**0.2887**	**1.1000e-003**	**0.1022**	**1.6600e-003**	**0.1039**	**0.0274**	**1.5800e-003**	**0.0290**		**113.0438**	**113.0438**	**2.4300e-003**	**7.8100e-003**	**115.4336**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7618	8.1263	6.1714	0.0183		0.3366	0.3366		0.3097	0.3097	0.0000	1,773.6301	1,773.6301	0.5736		1,787.9708
Total	**0.7618**	**8.1263**	**6.1714**	**0.0183**		**0.3366**	**0.3366**		**0.3097**	**0.3097**	**0.0000**	**1,773.6301**	**1,773.6301**	**0.5736**		**1,787.9708**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Well Drilling - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1200e-003	0.0891	0.0305	3.6000e-004	0.0128	1.2200e-003	0.0140	3.6900e-003	1.1700e-003	4.8600e-003		38.6312	38.6312	4.0000e-004	5.7300e-003	40.3497
Worker	0.0294	0.0212	0.2581	7.4000e-004	0.0894	4.4000e-004	0.0899	0.0237	4.1000e-004	0.0241		74.4126	74.4126	2.0300e-003	2.0800e-003	75.0838
Total	**0.0326**	**0.1103**	**0.2887**	**1.1000e-003**	**0.1022**	**1.6600e-003**	**0.1039**	**0.0274**	**1.5800e-003**	**0.0290**		**113.0438**	**113.0438**	**2.4300e-003**	**7.8100e-003**	**115.4336**

3.4 Well Testing - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Well 19 Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Well Testing - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.3118	0.1069	1.2800e-003	0.0448	4.2800e-003	0.0491	0.0129	4.0900e-003	0.0170		135.2090	135.2090	1.4100e-003	0.0201	141.2241
Worker	0.0662	0.0477	0.5807	1.6600e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		167.4284	167.4284	4.5800e-003	4.6800e-003	168.9386
Total	**0.0771**	**0.3595**	**0.6876**	**2.9400e-003**	**0.2460**	**5.2800e-003**	**0.2513**	**0.0663**	**5.0100e-003**	**0.0713**		**302.6374**	**302.6374**	**5.9900e-003**	**0.0248**	**310.1627**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Well Testing - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.3118	0.1069	1.2800e-003	0.0448	4.2800e-003	0.0491	0.0129	4.0900e-003	0.0170		135.2090	135.2090	1.4100e-003	0.0201	141.2241
Worker	0.0662	0.0477	0.5807	1.6600e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		167.4284	167.4284	4.5800e-003	4.6800e-003	168.9386
Total	**0.0771**	**0.3595**	**0.6876**	**2.9400e-003**	**0.2460**	**5.2800e-003**	**0.2513**	**0.0663**	**5.0100e-003**	**0.0713**		**302.6374**	**302.6374**	**5.9900e-003**	**0.0248**	**310.1627**

3.5 Well Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2312	23.0497	13.3678	0.0297		1.0024	1.0024		0.9274	0.9274		2,837.1003	2,837.1003	0.8753		2,858.9827
Total	**2.2312**	**23.0497**	**13.3678**	**0.0297**		**1.0024**	**1.0024**		**0.9274**	**0.9274**		**2,837.1003**	**2,837.1003**	**0.8753**		**2,858.9827**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Well Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.3118	0.1069	1.2800e-003	0.0448	4.2800e-003	0.0491	0.0129	4.0900e-003	0.0170		135.2090	135.2090	1.4100e-003	0.0201	141.2241
Worker	0.0662	0.0477	0.5807	1.6600e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		167.4284	167.4284	4.5800e-003	4.6800e-003	168.9386
Total	**0.0771**	**0.3595**	**0.6876**	**2.9400e-003**	**0.2460**	**5.2800e-003**	**0.2513**	**0.0663**	**5.0100e-003**	**0.0713**		**302.6374**	**302.6374**	**5.9900e-003**	**0.0248**	**310.1627**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2312	23.0497	13.3678	0.0297		1.0024	1.0024		0.9274	0.9274	0.0000	2,837.1003	2,837.1003	0.8753		2,858.9827
Total	**2.2312**	**23.0497**	**13.3678**	**0.0297**		**1.0024**	**1.0024**		**0.9274**	**0.9274**	**0.0000**	**2,837.1003**	**2,837.1003**	**0.8753**		**2,858.9827**

Well 19 Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Well Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.3118	0.1069	1.2800e-003	0.0448	4.2800e-003	0.0491	0.0129	4.0900e-003	0.0170		135.2090	135.2090	1.4100e-003	0.0201	141.2241
Worker	0.0662	0.0477	0.5807	1.6600e-003	0.2012	1.0000e-003	0.2022	0.0534	9.2000e-004	0.0543		167.4284	167.4284	4.5800e-003	4.6800e-003	168.9386
Total	**0.0771**	**0.3595**	**0.6876**	**2.9400e-003**	**0.2460**	**5.2800e-003**	**0.2513**	**0.0663**	**5.0100e-003**	**0.0713**		**302.6374**	**302.6374**	**5.9900e-003**	**0.0248**	**310.1627**

3.5 Well Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9767	20.0876	12.7740	0.0297		0.8378	0.8378		0.7752	0.7752		2,837.3058	2,837.3058	0.8732		2,859.1352
Total	**1.9767**	**20.0876**	**12.7740**	**0.0297**		**0.8378**	**0.8378**		**0.7752**	**0.7752**		**2,837.3058**	**2,837.3058**	**0.8732**		**2,859.1352**

Well 19 Project - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Well Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.3100e-003	0.2425	0.0973	1.2300e-003	0.0448	2.0000e-003	0.0468	0.0129	1.9100e-003	0.0148		130.0116	130.0116	1.3000e-003	0.0192	135.7739
Worker	0.0616	0.0421	0.5348	1.6000e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		162.0762	162.0762	4.1200e-003	4.3200e-003	163.4672
Total	**0.0689**	**0.2847**	**0.6321**	**2.8300e-003**	**0.2460**	**2.9400e-003**	**0.2490**	**0.0663**	**2.7800e-003**	**0.0690**		**292.0878**	**292.0878**	**5.4200e-003**	**0.0236**	**299.2411**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9767	20.0876	12.7740	0.0297		0.8378	0.8378		0.7752	0.7752	0.0000	2,837.3058	2,837.3058	0.8732		2,859.1352
Total	**1.9767**	**20.0876**	**12.7740**	**0.0297**		**0.8378**	**0.8378**		**0.7752**	**0.7752**	**0.0000**	**2,837.3058**	**2,837.3058**	**0.8732**		**2,859.1352**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Well Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.3100e-003	0.2425	0.0973	1.2300e-003	0.0448	2.0000e-003	0.0468	0.0129	1.9100e-003	0.0148		130.0116	130.0116	1.3000e-003	0.0192	135.7739
Worker	0.0616	0.0421	0.5348	1.6000e-003	0.2012	9.4000e-004	0.2021	0.0534	8.7000e-004	0.0542		162.0762	162.0762	4.1200e-003	4.3200e-003	163.4672
Total	**0.0689**	**0.2847**	**0.6321**	**2.8300e-003**	**0.2460**	**2.9400e-003**	**0.2490**	**0.0663**	**2.7800e-003**	**0.0690**		**292.0878**	**292.0878**	**5.4200e-003**	**0.0236**	**299.2411**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5164	5.0958	7.2921	0.0114		0.2551	0.2551		0.2347	0.2347		1,103.7921	1,103.7921	0.3570		1,112.7168
Paving	0.4279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9443**	**5.0958**	**7.2921**	**0.0114**		**0.2551**	**0.2551**		**0.2347**	**0.2347**		**1,103.7921**	**1,103.7921**	**0.3570**		**1,112.7168**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0900e-003	0.0693	0.0278	3.5000e-004	0.0128	5.7000e-004	0.0134	3.6900e-003	5.5000e-004	4.2300e-003		37.1462	37.1462	3.7000e-004	5.4900e-003	38.7926
Worker	0.0274	0.0187	0.2377	7.1000e-004	0.0894	4.2000e-004	0.0898	0.0237	3.8000e-004	0.0241		72.0339	72.0339	1.8300e-003	1.9200e-003	72.6521
Total	**0.0295**	**0.0880**	**0.2655**	**1.0600e-003**	**0.1022**	**9.9000e-004**	**0.1032**	**0.0274**	**9.3000e-004**	**0.0283**		**109.1800**	**109.1800**	**2.2000e-003**	**7.4100e-003**	**111.4446**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5164	5.0958	7.2921	0.0114		0.2551	0.2551		0.2347	0.2347	0.0000	1,103.7921	1,103.7921	0.3570		1,112.7168
Paving	0.4279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9443**	**5.0958**	**7.2921**	**0.0114**		**0.2551**	**0.2551**		**0.2347**	**0.2347**	**0.0000**	**1,103.7921**	**1,103.7921**	**0.3570**		**1,112.7168**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0900e-003	0.0693	0.0278	3.5000e-004	0.0128	5.7000e-004	0.0134	3.6900e-003	5.5000e-004	4.2300e-003		37.1462	37.1462	3.7000e-004	5.4900e-003	38.7926
Worker	0.0274	0.0187	0.2377	7.1000e-004	0.0894	4.2000e-004	0.0898	0.0237	3.8000e-004	0.0241		72.0339	72.0339	1.8300e-003	1.9200e-003	72.6521
Total	**0.0295**	**0.0880**	**0.2655**	**1.0600e-003**	**0.1022**	**9.9000e-004**	**0.1032**	**0.0274**	**9.3000e-004**	**0.0283**		**109.1800**	**109.1800**	**2.2000e-003**	**7.4100e-003**	**111.4446**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.0703					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944		375.2641	375.2641	0.0225		375.8253
Total	**4.3259**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**		**375.2641**	**375.2641**	**0.0225**		**375.8253**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0137	9.3600e-003	0.1188	3.6000e-004	0.0447	2.1000e-004	0.0449	0.0119	1.9000e-004	0.0121		36.0169	36.0169	9.2000e-004	9.6000e-004	36.3260
Total	**0.0137**	**9.3600e-003**	**0.1188**	**3.6000e-004**	**0.0447**	**2.1000e-004**	**0.0449**	**0.0119**	**1.9000e-004**	**0.0121**		**36.0169**	**36.0169**	**9.2000e-004**	**9.6000e-004**	**36.3260**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.0703					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944	0.0000	375.2641	375.2641	0.0225		375.8253
Total	**4.3259**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**	**0.0000**	**375.2641**	**375.2641**	**0.0225**		**375.8253**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0137	9.3600e-003	0.1188	3.6000e-004	0.0447	2.1000e-004	0.0449	0.0119	1.9000e-004	0.0121		36.0169	36.0169	9.2000e-004	9.6000e-004	36.3260
Total	**0.0137**	**9.3600e-003**	**0.1188**	**3.6000e-004**	**0.0447**	**2.1000e-004**	**0.0449**	**0.0119**	**1.9000e-004**	**0.0121**		**36.0169**	**36.0169**	**9.2000e-004**	**9.6000e-004**	**36.3260**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
User Defined Commercial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
User Defined Commercial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
User Defined Commercial	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468

5.0 Energy Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0490	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6300e-003	9.6300e-003	3.0000e-005		0.0103
Unmitigated	0.0490	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6300e-003	9.6300e-003	3.0000e-005		0.0103

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.6900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0419					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6300e-003	9.6300e-003	3.0000e-005		0.0103
Total	**0.0490**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.6300e-003**	**9.6300e-003**	**3.0000e-005**		**0.0103**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.6900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0419					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.2000e-004	4.0000e-005	4.4900e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		9.6300e-003	9.6300e-003	3.0000e-005		0.0103
Total	**0.0490**	**4.0000e-005**	**4.4900e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**9.6300e-003**	**9.6300e-003**	**3.0000e-005**		**0.0103**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Well 19 Project - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Well 19 Project

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.36	User Defined Unit	0.03	1,355.00	0
Other Asphalt Surfaces	42.64	1000sqft	0.98	42,640.60	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Engineer

Construction Phase - Per Engineers

Off-road Equipment - 8hr/day

Off-road Equipment - Per Engineer

Off-road Equipment - Per Engineer, 8hr/day

Off-road Equipment - Per Engineer, 8hr/day

Off-road Equipment - Per Engineer

Off-road Equipment - No Offsite Equipment required.

Trips and VMT - 2 daily water truck trips added to demo, well drilling, and paving. Well testing workers trips.

Demolition -

Well 19 Project - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation - Water site 3x daily per Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	200.00	23.00
tblConstructionPhase	NumDays	200.00	261.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	10.00	6.00
tblLandUse	LandUseSquareFeet	0.00	1,355.00
tblLandUse	LandUseSquareFeet	42,640.00	42,640.60
tblLandUse	LotAcreage	0.00	0.03
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1434	1.4483	0.9628	2.3300e-003	0.0181	0.0628	0.0810	4.8500e-003	0.0582	0.0630	0.0000	204.3359	204.3359	0.0567	1.5500e-003	206.2166
2023	0.1957	1.8134	1.2125	2.9200e-003	0.0217	0.0750	0.0968	5.8600e-003	0.0695	0.0753	0.0000	254.5399	254.5399	0.0712	1.9100e-003	256.8877
Maximum	**0.1957**	**1.8134**	**1.2125**	**2.9200e-003**	**0.0217**	**0.0750**	**0.0968**	**5.8600e-003**	**0.0695**	**0.0753**	**0.0000**	**254.5399**	**254.5399**	**0.0712**	**1.9100e-003**	**256.8877**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1434	1.4483	0.9628	2.3300e-003	0.0180	0.0628	0.0808	4.8300e-003	0.0582	0.0630	0.0000	204.3357	204.3357	0.0567	1.5500e-003	206.2164
2023	0.1957	1.8134	1.2124	2.9200e-003	0.0217	0.0750	0.0968	5.8600e-003	0.0695	0.0753	0.0000	254.5396	254.5396	0.0712	1.9100e-003	256.8875
Maximum	**0.1957**	**1.8134**	**1.2124**	**2.9200e-003**	**0.0217**	**0.0750**	**0.0968**	**5.8600e-003**	**0.0695**	**0.0753**	**0.0000**	**254.5396**	**254.5396**	**0.0712**	**1.9100e-003**	**256.8875**

Well 19 Project - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.40**	**0.00**	**0.09**	**0.19**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-1-2022**	**6-30-2022**	0.3831	0.3831
2	**7-1-2022**	**9-30-2022**	0.3657	0.3657
3	**10-1-2022**	**12-31-2022**	0.8450	0.8450
4	**1-1-2023**	**3-31-2023**	0.7206	0.7206
5	**4-1-2023**	**6-30-2023**	0.7282	0.7282
6	**7-1-2023**	**9-30-2023**	0.5631	0.5631
		Highest	0.8450	0.8450

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.9300e-003	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.9300e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0900e-003**	**1.0900e-003**	**0.0000**	**0.0000**	**1.1600e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.9300e-003	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.9300e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0900e-003**	**1.0900e-003**	**0.0000**	**0.0000**	**1.1600e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2022	5/3/2022	5	23	
2	Well Drilling	Trenching	5/4/2022	8/4/2022	5	67	
3	Well Testing	Building Construction	8/5/2022	9/6/2022	5	23	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Well Construction	Building Construction	9/4/2022	9/4/2023	5	261	
5	Paving	Paving	8/28/2023	9/4/2023	5	6	
6	Architectural Coating	Architectural Coating	8/28/2023	9/4/2023	5	6	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.98

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,033; Non-Residential Outdoor: 678; Striped Parking Area: 2,558 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Well Drilling	Bore/Drill Rigs	1	8.00	221	0.50
Well Drilling	Cranes	1	8.00	231	0.29
Well Drilling	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Well Testing	Cranes	0	6.00	231	0.29
Well Testing	Forklifts	0	6.00	89	0.20
Well Testing	Generator Sets	0	8.00	84	0.74
Well Testing	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Well Testing	Welders	0	8.00	46	0.45
Well Construction	Cranes	1	8.00	231	0.29
Well Construction	Forklifts	0	8.00	89	0.20
Well Construction	Generator Sets	0	8.00	84	0.74
Well Construction	Graders	1	8.00	187	0.41
Well Construction	Rubber Tired Dozers	1	8.00	247	0.40
Well Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Well Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	2.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Drilling	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Testing	0	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Construction	6	18.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6000e-004	0.0000	2.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0175	0.1719	0.1348	2.4000e-004		8.6000e-003	8.6000e-003		8.0500e-003	8.0500e-003	0.0000	21.0966	21.0966	5.1600e-003	0.0000	21.2256
Total	**0.0175**	**0.1719**	**0.1348**	**2.4000e-004**	**2.6000e-004**	**8.6000e-003**	**8.8600e-003**	**4.0000e-005**	**8.0500e-003**	**8.0900e-003**	**0.0000**	**21.0966**	**21.0966**	**5.1600e-003**	**0.0000**	**21.2256**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.3000e-004	3.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0557	0.0557	0.0000	1.0000e-005	0.0583
Vendor	4.0000e-005	1.0200e-003	3.4000e-004	0.0000	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.4028	0.4028	0.0000	6.0000e-005	0.4207
Worker	4.0000e-004	3.1000e-004	3.9100e-003	1.0000e-005	1.2600e-003	1.0000e-005	1.2700e-003	3.4000e-004	1.0000e-005	3.4000e-004	0.0000	0.9931	0.9931	3.0000e-005	3.0000e-005	1.0020
Total	**4.4000e-004**	**1.4600e-003**	**4.2800e-003**	**1.0000e-005**	**1.4300e-003**	**2.0000e-005**	**1.4500e-003**	**3.8000e-004**	**2.0000e-005**	**4.1000e-004**	**0.0000**	**1.4515**	**1.4515**	**3.0000e-005**	**1.0000e-004**	**1.4810**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0175	0.1719	0.1348	2.4000e-004		8.6000e-003	8.6000e-003		8.0500e-003	8.0500e-003	0.0000	21.0966	21.0966	5.1600e-003	0.0000	21.2256
Total	**0.0175**	**0.1719**	**0.1348**	**2.4000e-004**	**1.0000e-004**	**8.6000e-003**	**8.7000e-003**	**2.0000e-005**	**8.0500e-003**	**8.0700e-003**	**0.0000**	**21.0966**	**21.0966**	**5.1600e-003**	**0.0000**	**21.2256**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.3000e-004	3.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0557	0.0557	0.0000	1.0000e-005	0.0583
Vendor	4.0000e-005	1.0200e-003	3.4000e-004	0.0000	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.4028	0.4028	0.0000	6.0000e-005	0.4207
Worker	4.0000e-004	3.1000e-004	3.9100e-003	1.0000e-005	1.2600e-003	1.0000e-005	1.2700e-003	3.4000e-004	1.0000e-005	3.4000e-004	0.0000	0.9931	0.9931	3.0000e-005	3.0000e-005	1.0020
Total	**4.4000e-004**	**1.4600e-003**	**4.2800e-003**	**1.0000e-005**	**1.4300e-003**	**2.0000e-005**	**1.4500e-003**	**3.8000e-004**	**2.0000e-005**	**4.1000e-004**	**0.0000**	**1.4515**	**1.4515**	**3.0000e-005**	**1.0000e-004**	**1.4810**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Well Drilling - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0255	0.2722	0.2067	6.1000e-004		0.0113	0.0113		0.0104	0.0104	0.0000	53.9018	53.9018	0.0174	0.0000	54.3377
Total	**0.0255**	**0.2722**	**0.2067**	**6.1000e-004**		**0.0113**	**0.0113**		**0.0104**	**0.0104**	**0.0000**	**53.9018**	**53.9018**	**0.0174**	**0.0000**	**54.3377**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	2.9700e-003	1.0000e-003	1.0000e-005	4.2000e-004	4.0000e-005	4.6000e-004	1.2000e-004	4.0000e-005	1.6000e-004	0.0000	1.1733	1.1733	1.0000e-005	1.7000e-004	1.2255
Worker	9.4000e-004	7.3000e-004	9.1200e-003	3.0000e-005	2.9500e-003	1.0000e-005	2.9600e-003	7.8000e-004	1.0000e-005	8.0000e-004	0.0000	2.3143	2.3143	6.0000e-005	6.0000e-005	2.3350
Total	**1.0500e-003**	**3.7000e-003**	**0.0101**	**4.0000e-005**	**3.3700e-003**	**5.0000e-005**	**3.4200e-003**	**9.0000e-004**	**5.0000e-005**	**9.6000e-004**	**0.0000**	**3.4876**	**3.4876**	**7.0000e-005**	**2.3000e-004**	**3.5605**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Well Drilling - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0255	0.2722	0.2067	6.1000e-004		0.0113	0.0113		0.0104	0.0104	0.0000	53.9018	53.9018	0.0174	0.0000	54.3376
Total	**0.0255**	**0.2722**	**0.2067**	**6.1000e-004**		**0.0113**	**0.0113**		**0.0104**	**0.0104**	**0.0000**	**53.9018**	**53.9018**	**0.0174**	**0.0000**	**54.3376**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	2.9700e-003	1.0000e-003	1.0000e-005	4.2000e-004	4.0000e-005	4.6000e-004	1.2000e-004	4.0000e-005	1.6000e-004	0.0000	1.1733	1.1733	1.0000e-005	1.7000e-004	1.2255
Worker	9.4000e-004	7.3000e-004	9.1200e-003	3.0000e-005	2.9500e-003	1.0000e-005	2.9600e-003	7.8000e-004	1.0000e-005	8.0000e-004	0.0000	2.3143	2.3143	6.0000e-005	6.0000e-005	2.3350
Total	**1.0500e-003**	**3.7000e-003**	**0.0101**	**4.0000e-005**	**3.3700e-003**	**5.0000e-005**	**3.4200e-003**	**9.0000e-004**	**5.0000e-005**	**9.6000e-004**	**0.0000**	**3.4876**	**3.4876**	**7.0000e-005**	**2.3000e-004**	**3.5605**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Well Testing - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	3.5700e-003	1.2000e-003	1.0000e-005	5.1000e-004	5.0000e-005	5.6000e-004	1.5000e-004	5.0000e-005	1.9000e-004	0.0000	1.4097	1.4097	1.0000e-005	2.1000e-004	1.4724
Worker	7.2000e-004	5.6000e-004	7.0400e-003	2.0000e-005	2.2800e-003	1.0000e-005	2.2900e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.7875	1.7875	5.0000e-005	5.0000e-005	1.8036
Total	**8.5000e-004**	**4.1300e-003**	**8.2400e-003**	**3.0000e-005**	**2.7900e-003**	**6.0000e-005**	**2.8500e-003**	**7.5000e-004**	**6.0000e-005**	**8.0000e-004**	**0.0000**	**3.1972**	**3.1972**	**6.0000e-005**	**2.6000e-004**	**3.2760**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Well Testing - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	3.5700e-003	1.2000e-003	1.0000e-005	5.1000e-004	5.0000e-005	5.6000e-004	1.5000e-004	5.0000e-005	1.9000e-004	0.0000	1.4097	1.4097	1.0000e-005	2.1000e-004	1.4724
Worker	7.2000e-004	5.6000e-004	7.0400e-003	2.0000e-005	2.2800e-003	1.0000e-005	2.2900e-003	6.0000e-004	1.0000e-005	6.1000e-004	0.0000	1.7875	1.7875	5.0000e-005	5.0000e-005	1.8036
Total	**8.5000e-004**	**4.1300e-003**	**8.2400e-003**	**3.0000e-005**	**2.7900e-003**	**6.0000e-005**	**2.8500e-003**	**7.5000e-004**	**6.0000e-005**	**8.0000e-004**	**0.0000**	**3.1972**	**3.1972**	**6.0000e-005**	**2.6000e-004**	**3.2760**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Well Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0948	0.9796	0.5681	1.2600e-003		0.0426	0.0426		0.0394	0.0394	0.0000	109.3854	109.3854	0.0338	0.0000	110.2291
Total	**0.0948**	**0.9796**	**0.5681**	**1.2600e-003**		**0.0426**	**0.0426**		**0.0394**	**0.0394**	**0.0000**	**109.3854**	**109.3854**	**0.0338**	**0.0000**	**110.2291**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7000e-004	0.0132	4.4500e-003	5.0000e-005	1.8800e-003	1.8000e-004	2.0600e-003	5.4000e-004	1.7000e-004	7.2000e-004	0.0000	5.2098	5.2098	5.0000e-005	7.7000e-004	5.4415
Worker	2.6700e-003	2.0800e-003	0.0260	7.0000e-005	8.4100e-003	4.0000e-005	8.4500e-003	2.2300e-003	4.0000e-005	2.2700e-003	0.0000	6.6060	6.6060	1.8000e-004	1.8000e-004	6.6653
Total	**3.1400e-003**	**0.0153**	**0.0305**	**1.2000e-004**	**0.0103**	**2.2000e-004**	**0.0105**	**2.7700e-003**	**2.1000e-004**	**2.9900e-003**	**0.0000**	**11.8158**	**11.8158**	**2.3000e-004**	**9.5000e-004**	**12.1068**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Well Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0948	0.9796	0.5681	1.2600e-003		0.0426	0.0426		0.0394	0.0394	0.0000	109.3853	109.3853	0.0338	0.0000	110.2290
Total	**0.0948**	**0.9796**	**0.5681**	**1.2600e-003**		**0.0426**	**0.0426**		**0.0394**	**0.0394**	**0.0000**	**109.3853**	**109.3853**	**0.0338**	**0.0000**	**110.2290**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7000e-004	0.0132	4.4500e-003	5.0000e-005	1.8800e-003	1.8000e-004	2.0600e-003	5.4000e-004	1.7000e-004	7.2000e-004	0.0000	5.2098	5.2098	5.0000e-005	7.7000e-004	5.4415
Worker	2.6700e-003	2.0800e-003	0.0260	7.0000e-005	8.4100e-003	4.0000e-005	8.4500e-003	2.2300e-003	4.0000e-005	2.2700e-003	0.0000	6.6060	6.6060	1.8000e-004	1.8000e-004	6.6653
Total	**3.1400e-003**	**0.0153**	**0.0305**	**1.2000e-004**	**0.0103**	**2.2000e-004**	**0.0105**	**2.7700e-003**	**2.1000e-004**	**2.9900e-003**	**0.0000**	**11.8158**	**11.8158**	**2.3000e-004**	**9.5000e-004**	**12.1068**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Well Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1740	1.7677	1.1241	2.6100e-003		0.0737	0.0737		0.0682	0.0682	0.0000	226.5085	226.5085	0.0697	0.0000	228.2512
Total	**0.1740**	**1.7677**	**1.1241**	**2.6100e-003**		**0.0737**	**0.0737**		**0.0682**	**0.0682**	**0.0000**	**226.5085**	**226.5085**	**0.0697**	**0.0000**	**228.2512**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7000e-004	0.0211	8.4100e-003	1.1000e-004	3.8900e-003	1.8000e-004	4.0700e-003	1.1200e-003	1.7000e-004	1.2900e-003	0.0000	10.3642	10.3642	1.0000e-004	1.5300e-003	10.8235
Worker	5.1400e-003	3.8100e-003	0.0496	1.4000e-004	0.0174	8.0000e-005	0.0175	4.6200e-003	8.0000e-005	4.7000e-003	0.0000	13.2399	13.2399	3.3000e-004	3.5000e-004	13.3529
Total	**5.8100e-003**	**0.0249**	**0.0580**	**2.5000e-004**	**0.0213**	**2.6000e-004**	**0.0216**	**5.7400e-003**	**2.5000e-004**	**5.9900e-003**	**0.0000**	**23.6041**	**23.6041**	**4.3000e-004**	**1.8800e-003**	**24.1765**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Well Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1740	1.7677	1.1241	2.6100e-003		0.0737	0.0737		0.0682	0.0682	0.0000	226.5083	226.5083	0.0697	0.0000	228.2510
Total	**0.1740**	**1.7677**	**1.1241**	**2.6100e-003**		**0.0737**	**0.0737**		**0.0682**	**0.0682**	**0.0000**	**226.5083**	**226.5083**	**0.0697**	**0.0000**	**228.2510**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7000e-004	0.0211	8.4100e-003	1.1000e-004	3.8900e-003	1.8000e-004	4.0700e-003	1.1200e-003	1.7000e-004	1.2900e-003	0.0000	10.3642	10.3642	1.0000e-004	1.5300e-003	10.8235
Worker	5.1400e-003	3.8100e-003	0.0496	1.4000e-004	0.0174	8.0000e-005	0.0175	4.6200e-003	8.0000e-005	4.7000e-003	0.0000	13.2399	13.2399	3.3000e-004	3.5000e-004	13.3529
Total	**5.8100e-003**	**0.0249**	**0.0580**	**2.5000e-004**	**0.0213**	**2.6000e-004**	**0.0216**	**5.7400e-003**	**2.5000e-004**	**5.9900e-003**	**0.0000**	**23.6041**	**23.6041**	**4.3000e-004**	**1.8800e-003**	**24.1765**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.5500e-003	0.0153	0.0219	3.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	3.0040	3.0040	9.7000e-004	0.0000	3.0283
Paving	1.2800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.8300e-003**	**0.0153**	**0.0219**	**3.0000e-005**		**7.7000e-004**	**7.7000e-004**		**7.0000e-004**	**7.0000e-004**	**0.0000**	**3.0040**	**3.0040**	**9.7000e-004**	**0.0000**	**3.0283**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	2.1000e-004	8.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1010	0.1010	0.0000	1.0000e-005	0.1054
Worker	8.0000e-005	6.0000e-005	7.5000e-004	0.0000	2.6000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2006	0.2006	1.0000e-005	1.0000e-005	0.2023
Total	**9.0000e-005**	**2.7000e-004**	**8.3000e-004**	**0.0000**	**3.0000e-004**	**0.0000**	**3.1000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.3016**	**0.3016**	**1.0000e-005**	**2.0000e-005**	**0.3077**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.5500e-003	0.0153	0.0219	3.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	3.0040	3.0040	9.7000e-004	0.0000	3.0283
Paving	1.2800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.8300e-003**	**0.0153**	**0.0219**	**3.0000e-005**		**7.7000e-004**	**7.7000e-004**		**7.0000e-004**	**7.0000e-004**	**0.0000**	**3.0040**	**3.0040**	**9.7000e-004**	**0.0000**	**3.0283**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	2.1000e-004	8.0000e-005	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1010	0.1010	0.0000	1.0000e-005	0.1054
Worker	8.0000e-005	6.0000e-005	7.5000e-004	0.0000	2.6000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2006	0.2006	1.0000e-005	1.0000e-005	0.2023
Total	**9.0000e-005**	**2.7000e-004**	**8.3000e-004**	**0.0000**	**3.0000e-004**	**0.0000**	**3.1000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.3016**	**0.3016**	**1.0000e-005**	**2.0000e-005**	**0.3077**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0122					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7000e-004	5.2100e-003	7.2400e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	1.0213	1.0213	6.0000e-005	0.0000	1.0228
Total	**0.0130**	**5.2100e-003**	**7.2400e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**1.0213**	**1.0213**	**6.0000e-005**	**0.0000**	**1.0228**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.8000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1003	0.1003	0.0000	0.0000	0.1012
Total	**4.0000e-005**	**3.0000e-005**	**3.8000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1003**	**0.1003**	**0.0000**	**0.0000**	**0.1012**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0122					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7000e-004	5.2100e-003	7.2400e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	1.0213	1.0213	6.0000e-005	0.0000	1.0228
Total	**0.0130**	**5.2100e-003**	**7.2400e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.8000e-004**	**2.8000e-004**	**0.0000**	**1.0213**	**1.0213**	**6.0000e-005**	**0.0000**	**1.0228**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.8000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1003	0.1003	0.0000	0.0000	0.1012
Total	**4.0000e-005**	**3.0000e-005**	**3.8000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1003**	**0.1003**	**0.0000**	**0.0000**	**0.1012**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
User Defined Commercial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
User Defined Commercial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468
User Defined Commercial	0.534849	0.056022	0.172639	0.141007	0.026597	0.007310	0.011327	0.018693	0.000616	0.000315	0.024057	0.001100	0.005468

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.9300e-003	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1600e-003
Unmitigated	8.9300e-003	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1600e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.6500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1600e-003
Total	**8.9200e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0900e-003**	**1.0900e-003**	**0.0000**	**0.0000**	**1.1600e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.6500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0900e-003	1.0900e-003	0.0000	0.0000	1.1600e-003
Total	**8.9200e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0900e-003**	**1.0900e-003**	**0.0000**	**0.0000**	**1.1600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX C

Biological Resources Technical Report

Biological Resources Technical Report

Jurupa Community Services District Well Site 19 Project

City of Jurupa Valley, Riverside County, California

DRAFT REPORT



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March 2021

CADRE Environmental

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INTRODUCTION

The following biological resources technical report describes a detailed assessment of potential sensitive natural resources located within and/or immediately adjacent to the Jurupa Community Services District's (JCSD) Well Site 19 project site (Project Site). The report has been prepared to support compliance with the California Environmental Quality Act (CEQA) documentation. As discussed below, the assessment included a thorough literature review, site reconnaissance characterizing existing conditions (including floral, faunal and dominant vegetation communities), sensitive resources, and applicable standards and regulations to ensure impacts remain at a level below significance.

PROJECT LOCATION

The 1.00-acre Project Site (Assessor's Parcel Number (APNs) 156-332-021 and 156-310-063) is located within the northeastern region of the City of Jurupa Valley, Riverside County, California, as shown in Figure 1, *Regional Location Map*. Specifically, the Project Site extends south of east Philadelphia Street and includes an existing well site (Well Site 19, 11362 Philadelphia Street) as illustrated in Figure 2, *Project Site Vicinity Map*.

PROJECT DESCRIPTION

The proposed project entails the demolition of the existing JCSD well site 19 facility (APN156-332-021) and construction of a new well head site including electrical building, chemical building, discharge pipes and drop inlet within the adjacent property (APN 156-310-063).

WESTERN RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN

The Jurupa Community Services District is not a permittee to the western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and therefore not subject to MSHCP requirements or contribution to reserve assembly goals. Regardless, to ensure the project related impacts do not conflict with the provisions of the western Riverside County MSHCP per CEQA guidelines, an MSHCP consistency analysis was conducted and is presented in the following report in the section titled – Western Riverside County MSHCP Compliance Analysis.

The Project Site is located within the Western Riverside County MSHCP Jurupa Area Plan and is not located within or adjacent to a Criteria Cell, Cell Group or Special Linkage Area. The Project Site is located within the MSHCP designated survey area boundary for the burrowing owl (*Athene cunicularia*), California Species of Special Concern (SSC) and the following three (3) MSHCP narrow endemic plant species, as shown in Figure 3, *MSHCP Relationship Map*.

- San Diego ambrosia (*Ambrosia pumila*) [Federal Endangered (FE), California Rare Plant Ranking (CRPR) 1B.1];
- San Miguel savory (*Satureja chandleri*) [CRPR List 1B.2];
- Brand's phacelia (*Phacelia stellaris)* [CRPR 1B.1].



APNs 156-332-021 and 156-310-063

Figure 1 - Regional Location Map
Biological Resources Technical Report
Jurupa Community Services District's Well 19 Project

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N
not to scale



Figure 2 - Project Site Vicinity Map
Biological Resources Technical Report
Jurupa Community Services District's Well 19 Project

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N
1 inch = 50 ft.



Figure 3 - MSHCP Relationship Map
Biological Resources Technical Report
Jurupa Community Services District's Well 19 Project

CADRE Environmental

N

1 inch = 50 ft.

METHODOLOGY

The following section details the methods implemented prior to and during the reconnaissance survey conducted throughout the Project Site.

LITERATURE REVIEW

Existing biological resource conditions within and adjacent to the Project Site were initially investigated through review of pertinent scientific literature. Federal register listings, protocols, and species data provided by the United States Fish and Wildlife Service (USFWS) were also reviewed in conjunction with anticipated federally listed species potentially occurring within the region of the Project Site. The California Natural Diversity Database (CNDDB) (CDFW 2020a), a California Department of Fish and Wildlife (CDFW) Natural Heritage Division species account database, was also reviewed for all pertinent information regarding the locations of known occurrences of sensitive species in the vicinity of the property. In addition, numerous regional floral and faunal field guides were utilized in the identification of species and suitable habitats. Combined, the reviewed sources provided an excellent baseline from which to inventory the biological resources potentially occurring in the region. Other CDFW reports and publications consulted include the following:

- Special Animals (CDFW 2020b);
- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2020c);
- Endangered, Threatened, and Rare Plants of California (CDFW 2020d); and
- Special Vascular Plants and Bryophytes List (CDFW 2020e).

FIELD SURVEY

A reconnaissance survey of the Project Site was conducted by Ruben Ramirez of Cadre Environmental (USFWS Permit 780566-14, CDFW Permit 02243) on March 4th, 2021 in order to characterize and identify potential sensitive plant and wildlife habitats, and to establish the accuracy of the data identified in the literature search.

The Project Site was assessed from adjacent rights-of-way (ROW) and developed parking lots adjacent to the property. Specifically, the disturbed parcel APN 156-310-063 was not entered but rather surveyed from the boundaries.

Geologic and soil maps were examined to identify local soil types that may support sensitive taxa. Aerial photograph, topographic maps, vegetation and rare plant maps prepared for previous studies in the region were used to determine community types and other physical features that may support sensitive plants/wildlife, uncommon taxa, or rare communities that occur within or adjacent to the Project Site. Habitat assessments were conducted for, but not limited to, the following target species/groups.

- Sensitive plants.
- Delhi sands giant flower-loving fly (*Rhaphiomidas terminatus abdominalis*), FE.

- Coastal California gnatcatcher (*Polioptila californica californica*), Federally Threatened/SSC.
- Burrowing owl, SSC.
- San Bernardino kangaroo rat (*Dipodomys merriami parvus*), FE/SSC.

Vegetation Communities/Habitat Classification Mapping

Natural community names and hierarchical structure follows the "*Manual of California Vegetation*" (Sayer and Keeler-Wolf 2009) classification system, which has been refined and augmented where appropriate to better characterize the habitat types observed onsite.

Floristic Plant Inventory

A general plant survey was conducted throughout the Project Site to the extent possible during the reconnaissance in a collective effort to identify all species occurring onsite.

All plants observed during the survey efforts were either identified in the field or collected and later identified using taxonomic keys. Plant taxonomy follows Hickman (1993). Scientific nomenclature and common names used in this report generally follow Roberts et al. (2004) or Baldwin et al. (2012) for updated taxonomy. Scientific names are included only at the first mention of a species; thereafter, common names alone are used.

Wildlife Resources Inventory

All animals identified during the reconnaissance survey by sight, call, tracks, scat, or other characteristic sign were documented. In addition to species actually detected, expected use of the site by other wildlife was derived from the analysis of habitats on the site, combined with known habitat preferences of regionally occurring wildlife species.

Vertebrate taxonomy followed in this report is according to the Center for North American Herpetology (2021 for amphibians and reptiles), the American Ornithologists' Union (1988 and supplemental) for birds, and Baker et al. (2003) for mammals. Both common and scientific names are used during the first mention of a species; common names only are used in the remainder of the text.

Jurisdictional Resources Assessment

The Project Site was assessed for jurisdiction by the United States Army Corps of Engineers (USACE), CDFW, and Regional Water Quality Control Board (RWQCB). Non-wetland waters of the United States were assessed based on the limits of the Ordinary High-Water Mark (OHWM) as determined by erosion, the deposition of vegetation or debris, and changes in vegetation and soil characteristics. The assessment utilized the methodology for routine wetland determination according to the methods outlined in the USACE Wetland Delineation Manual (Environmental Laboratory 1987) and the Arid West Wetland Delineation Supplement and updated regulatory guidance letters (USACE 2008). Wetlands are identified by the presence of three

characteristics: hydrophytic vegetation, wetland hydrology, and hydric soils. If any of these criteria were met, one or more transects were run to determine the extent of the wetland. Specifically, the presence of wetland hydrology was evaluated throughout the Project Site by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil pits, where applicable. In addition, indicators of wetland or riverine hydrology were recorded, including water marks, drift lines, rack, debris, and sediment deposits, as warranted. Any indicators of hydric soils, such as redoximorphic features, buried organic matter, organic streaking, reduced soil conditions, gleyed or low-chroma soils, or sulfidic odor were also recorded.

EXISTING ENVIRONMENTAL SETTING

The following section presents the existing conditions of the Project Site assessment area. The Project Site is 1.00-acre including a 0.11-acre existing well site owned and operated by JCSD (APN 156-332-021) and adjacent disturbed property (APN 156-310-063) where a new well site is proposed. Dominant vegetation communities include developed and disturbed vegetation communities as described below and presented in Table 1, *Project Site Vegetation Community Acreages*. Several ornamental trees are also located immediately offsite along the border of the Project Site. Cadre Environmental conducted the vegetation mapping during the initial habitat assessment as shown in Figure 4, *Vegetation Communities Map*, and Figures 5 and 6, *Current Project Site Photographs*. Substrates onsite are characterized as Delhi fine sand (USDA 2021).

VEGETATION COMMUNITIES

Developed

Developed regions of the Project Site include the existing JCSD well 19 in the northwestern region and existing paved portions of existing developments located along the eastern boundary.

Disturbed

The majority of the Project Site is dominated by primarily ruderal vegetation and species common in disturbed habitats including slender pectocarya (*Pectocarya linearis*), common fiddleneck (*Amsinckia menziesii*), red stemmed filaree (*Erodium cicutarium*), black mustard (*Brassica nigra*), golden crownbeard *(Verbesina enceliodes*), London rocket (*Sisymbrium irio*), and common sow thistle (*Sonchus oleraceus*).

Table 1.
Project Site Vegetation Community Acreages

Vegetation Community	Acres
Developed	0.21
Disturbed	0.79
TOTAL	**1.00**

Source: Cadre Environmental 2021.



Figure 4 - Vegetation Communities Map
Biological Resources Technical Report
Jurupa Community Services District's Well 19 Project

CADRE Environmental

N
1 inch = 100 ft.



PHOTOGRAPH 1 - Southwest view of Project Site.



PHOTOGRAPH 2 - Southwest view of Project Site existing Well Site 19.

Refer to Figure 2 for Photographic Key Map

Figure 5 - Current Project Site Photographs

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Jurupa Community Services District's Well 19 Project

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PHOTOGRAPH 3 - Southeast view of Project Site.



PHOTOGRAPH 4 - Northeast view of Project Site.

Refer to Figure 2 for Photographic Key Map

Figure 6 - Current Project Site Photographs

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Jurupa Community Services District's Well 19 Project

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GENERAL PLANT & WILDIFE SPECIES

General plant species documented within the Project Site are presented in the previous section.

General wildlife species documented onsite include but are not limited to mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), European starling (*Sturnus vulgaris*), lesser goldfinch (*Spinus psaltria*), and house finch (*Haemorhous mexicanus*).

JURISDICTIONAL WETLAND RESOURCES

No wetlands or jurisdictional resources regulated by the USACE, CDFW, or RWQCB were documented within the Project Site.

Impacts to water quality would be less than significant during both construction and operation. The project contractor would implement standard BMPs during construction, incorporate landscape features and bio-swales that would provide pervious surface to capture on-site runoff.

SENSITIVE BIOLOGICAL RESOURCES AND POTENTIAL IMPACTS DISCUSSION

The following discussion describes the plant and wildlife species present, or potentially present within the property boundaries, that have been afforded special recognition by federal, state, or local resource conservation agencies and organizations, principally due to the species' declining or limited population sizes, usually resulting from habitat loss. Also discussed are habitats that are unique, of relatively limited distribution, or of particular value to wildlife. Protected sensitive species are classified by state and/or federal resource management agencies, or both, as threatened or endangered, under provisions of the state and federal endangered species act. Vulnerable or "at-risk" species that are proposed for listing as threatened or endangered (and thereby for protected status) are categorized administratively as "candidates" by the USFWS. CDFW uses various terminology and classifications to describe vulnerable species. There are additional sensitive species classifications applicable in California. These are described below.

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, or rare. The CDFW, USFWS, and special groups like the California Native Plant Society (CNPS) maintain watch lists of such resources. For the purpose of this assessment sources used to determine the sensitive status of biological resources are:

Plants: USFWS (2020), CNDDB (CDFW 2020a), CDFW (2020b), CNPS (2021), and Skinner and Pavlik (1994),

Wildlife: California Wildlife Habitat Relationships (2008), USFWS (2020), CNDDB (CDFW 2020a), and CDFW (2020b).

Habitats: CNDDB (CDFW 2020a).

FEDERAL PROTECTION AND CLASSIFICATIONS

The Federal Endangered Species Act of 1973 (FESA) defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range..." Threatened species are defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to "take" any listed species. "Take" is defined as follows in Section 3(18) of the FESA: "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification as forms of a "take." These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants. Recently, the USFWS instituted changes in the listing status of former candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing at this time) and C3 species (either extinct, no longer a valid taxon or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species are no longer maintained in list form by the USFWS, nor are they formally protected. However, some USFWS field offices have issued memoranda stating that former C2 species are henceforth to be considered Federal Species of Concern. This term is employed in this document but carries no official protections. All references to federally protected species in this report (whether listed, proposed for listing or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS.

For purposes of this assessment, the following acronyms are used for federal status species:

FE	Federal Endangered
FT	Federal Threatened
FPE	Federal Proposed Endangered
FPT	Federal Proposed Threatened
FC	Federal Candidate for Listing

The designation of critical habitat can also have a significant impact on the development of land designated as "*critical habitat*." The FESA prohibits federal agencies from taking any action that will "*adversely modify or destroy*" critical habitat (16 U.S.C. § 1536(a)(2)). This provision of the FESA applies to the issuance of permits by federal agencies. Before approving an action affecting critical habitat, the federal agency is required to consult with the USFWS who then issues a biological opinion evaluating

whether the action will "*adversely modify"* critical habitat. Thus, the designation of critical habitat effectively gives the USFWS extensive regulatory control over the development of land designated as critical habitat.

The Migratory Bird Treaty Act of 1918 (MBTA) makes it unlawful to "*take*" any migratory bird or part, nest, or egg of such bird listed in wildlife protection treaties between the United States and Great Britain, the Republic of Mexico, Japan, and the Union of Soviet States. For purposes of the MBTA, "*take*" is defined as to pursue, hunt, capture, kill, or possess or attempt to do the same.

The Bald Eagle and Golden Eagle Protection Act explicitly protects the bald eagle and golden eagle and imposes its own prohibition on any taking of these species. As defined in this act, take means to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, or molest or disturb. Current USFWS policy is not to refer the incidental take of bald eagles for prosecution under the Bald Eagle and Golden Eagle Protection Act (16 U.S.C. 668-668d).

STATE PROTECTION AND CLASSIFICATIONS

California's Endangered Species Act (CESA) defines an endangered species as "...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a threatened species as "...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species." Candidate species are defined as "...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike FESA, CESA does not include listing provisions for invertebrate species.

Article 3, Sections 2080 through 2085, of CESA addresses the taking of threatened or endangered species by stating "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided..." Under CESA, "take" is defined as "...hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Exceptions authorized by the state to allow "take" require "...permits or memorandums of understanding..." and can be authorized for "...endangered species, threatened species, or candidate species for scientific, educational, or management purposes." Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

Additionally, some sensitive mammals and birds are protected by the State as Fully Protected Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. SSC ("special" animals and plants) listings include special status species, including all state and federal protected and candidate taxa, Bureau of Land Management (BLM) and US Forest Service (USFS) sensitive species, species considered to be declining or rare by the CNPS or National Audubon Society, and a selection of species which are considered to be under population stress but are not formally proposed for listing. This list is primarily a working document for the CDFW's CNDDB project. Informally listed taxa are not protected per se, but warrant consideration in the preparation of biotic assessments. For some species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites.

For the purposes of this assessment, the following acronyms are used for State status species:

SE	State Endangered
ST	State Threatened
SCE	State Candidate Endangered
SCT	State Candidate Threatened
SFP	State Fully Protected
SP	State Protected
SR	State Rare
SSC	California Species of Special Concern
CWL	California Watch List

Nesting birds, including raptors, are protected under California Fish and Game Code Section 3503, which reads, "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." In addition, under California Fish and Game Code Section 3503.5, "it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto". Passerines and non-passerine land birds are further protected under California Fish and Game Code 3513. As such, CDFW typically recommends surveys for nesting birds that could potentially be directly (e.g., actual removal of trees/vegetation) or indirectly (e.g., noise disturbance) impacted by project-related activities. Disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by CDFW.

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in the State. This organization has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered vascular plant species of

California (Tibor 2001). The list serves as the candidate list for listing as threatened and endangered by CDFW. The CNPS has developed five categories of rarity (CRPR):

CRPR 1A	Presumed extinct in California.
CRPR 1B	Rare, threatened, or endangered in California and elsewhere.
CRPR 2A	Plants presumed extirpated in California but common elsewhere
CRPR 2B	Plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3	Plants about which we need more information – a review list.
CRPR 4	Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat.

As stated by the CNPS:

> "*Threat Rank is an extension added onto the California Rare Plant Rank and designates the level of endangerment by a 1 to 3 ranking with 1 being the most endangered and 3 being the least endangered. A Threat Rank is present for all California Rare Plant Rank 1B's, 2's, 4's, and the majority of California Rare Plant Rank 3's. California Rare Plant Rank 4 plants are seldom assigned a Threat Rank of 0.1, as they generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions exist to make the plant a species of concern and hence be assigned a California Rare Plant Rank. In addition, all California Rare Plant Rank 1A (presumed extinct in California), and some California Rare Plant Rank 3 (need more information) plants, which lack threat information, do not have a Threat Rank extension."* (CNPS 2021)

0.1	Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2	Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3	Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

LOCAL PROTECTION AND CLASSIFICATIONS

The City of Jurupa Valley's Municipal Code (Chapter 7.55 Street Trees) requires that the Public Works Director be responsible for the enforcement of the street tree planting and removal requirements. As stated by the City of Jurupa Valley:

> "*No person, firm, corporation, public district, public agency or political subdivision shall remove or severely trim any tree planted in the right-of-way of any city highway without first obtaining a permit from the Public*

Works Director to do so. Such permit shall be issued without fee, if the Public Works Director is satisfied that such removal or trimming is in the public interest or is necessary for the improvement of the right-of-way or the construction of improvements on adjacent land. He or she may impose such conditions as he or she deems reasonable or necessary, including requirements for the work to be done only by a qualified tree surgeon or tree trimmer actually engaged in that business, and for bond, insurance or other security to protect person and property from injury or damage. The provisions limiting trimming of trees shall not apply to any public utility maintaining overhead power of communication lines pursuant to franchise, where necessary to prevent interference of a tree with such installation. A permit for removal of a tree may be conditioned upon its relocation or replacement by one or more other trees of a kind or type to be specified in the permit." (City of Jurupa Valley, Section 13.10.050, Tree Removal)

No trees will be removed as a result of project implementation. No Impact.

SENSITIVE HABITATS

As stated by CDFW:

"*One purpose of the vegetation classification is to assist in determining the level of rarity and imperilment of vegetation types. Ranking of alliances according to their degree of imperilment (as measured by rarity, trends, and threats) follows NatureServe's Heritage Methodology, in which all alliances are listed with a G (global) and S (state) rank. For alliances with State ranks of S1-S3, all associations within them are also considered to be highly imperiled*". (CDFW 2017c)

No sensitive habitats were documented within the Project Site. No Impact. The proposed project will result in a total of 0.62 acre of impacts to developed and disturbed habitats as outlined in Table 2, *Project Site Vegetation Community Impacts*, and illustrated in Figure 7, *Vegetation Communities Impact Map*.

Table 2.
Project Site Vegetation Community Impacts

Vegetation Community	Total Acres	Impacts Acres
Developed	0.21	0.12
Disturbed	0.79	0.50
TOTAL	**1.00**	**0.62**

Source: Cadre Environmental 2021.

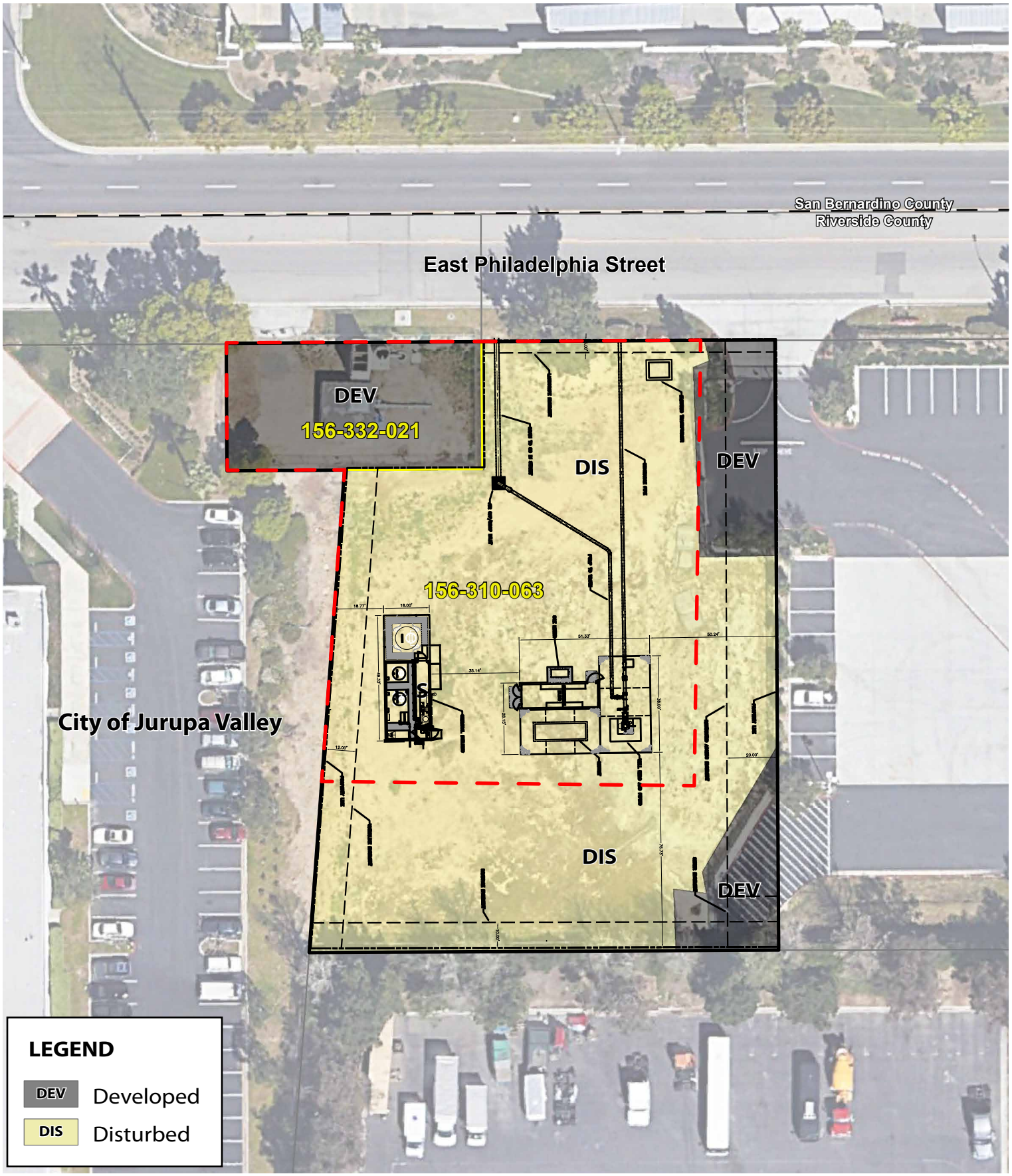


Figure 7 - Vegetation Communities Impact Map
Biological Resources Technical Report
Jurupa Community Services District's Well 19 Project

CADRE Environmental

N
1 inch = 50 ft.

SENSITIVE PLANTS

Based on the results of the initial habitat assessment, review of the western Riverside County MSHCP, and CNDDB, a total of ten (10) sensitive plant species have potential of occurring within the vicinity of the Project Site as presented in Table 3, *Sensitive Plant Species Assessment* (CNDDB 2020a, MSHCP 2004). No state or federally listed threatened, endangered, or MSHCP narrow endemic plants are expected to occur within or adjacent to the Project Site as listed in Table 3, *Sensitive Plant Species Assessment*. No Impact.

Table 3.
Sensitive Plant Species Assessment

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
PLANTS		
San Diego ambrosia (*Ambrosia pumila*) FE CRPR List 1B.1 MSHCP Narrow Endemic	San Diego ambrosia is known from Baja California, Mexico, and San Diego and Riverside counties in the United States. It blooms May to September. San Diego ambrosia occurs primarily on upper terraces of rivers and drainages as well as in open grasslands, openings in coastal sage scrub, and occasionally in areas adjacent to vernal pools.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Plummer's mariposa-lily (*Calochortus plummerae*) CRPR 4.2	Perennial bulbiferous herb which generally blooms from May to June within chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and grassland habitats with granite and rocky substrates. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Parry's spineflower (*Chorizanthe parryi var. parryi*) CRPR 1B.1	Annual herb, generally blooms from April to June within chaparral, cismontane woodland, coastal scrub, grassland habitats with sandy, rocky openings. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Slender-horned spineflower (*Dodecahema leptoceras*) CRPR 1B.1 FE/SE	Annual herb which generally blooms from April to June within chaparral, cismontane woodland and coastal scrub (alluvial fan) with sandy substrates. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Mesa horkelia (*Horkelia cuneata ssp. puberula*) CRPR 1B.1	Perennial herb which generally blooms from February to September within chaparral (maritime), cismontane woodland and coastal scrub with sandy or gravelly substrates. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Parish's desert-thorn (*Lycium parishii*) CRPR 2B.3	Perennial herb which generally blooms from March to April in coastal scrub and Sonoran Desert scrub habitats. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Pringle's monardella (*Monardella pringlei*) CRPR 1A	Annual herb which generally blooms from May to June in coastal scrub dominated sandy substrates. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Brand's phacelia (*Phacelia stellaris*) CRPR List 1B.1 MSHCP Narrow Endemic	Brand's phacelia is an annual herb. It blooms March to June. This species occurs in coastal sage scrub and dune habitats.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
San Miquel savory (*Satureja chandleri*) CRPR List 1B.2 MSHCP Narrow Endemic	San Miquel savory is a perennial shrub that blooms from March to July. This species occurs in rocky habitats within chaparral, coastal scrub, riparian woodland, and grassland habitats.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Chaparral ragwort (*Senecio aphanactis*) CRPR 2B.2	Annual herb which generally blooms from January to May within chaparral, cismontane woodland and coastal scrub habitats. (CNPS 2021)	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.

California Native Plant Society (CNPS): California Rare Plant Rank (CRPR)
CRPR 1A – plants presumed extinct in California
CRPR 1B – plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 2A – plants presumed extirpated in California but common elsewhere
CRPR 2B – plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3 – plants about which we need more information, a review list
CRPR 4 – plants of limited distribution, a watch list
.1 – Seriously endangered in California
.2 – Fairly endangered in California
.3 – Not very endangered in California

Federal (USFWS) Protection and Classification
FE – Federally Endangered
FT – Federally Threatened
FC – Federal Candidate for Listing

Species Name (*Scientific Name*) Status	Habitat Description	Comments
State (CDFW) Protection and Classification SE – State Endangered ST – State Threatened		

SENSITIVE WILDLIFE

Based on the results of the initial habitat assessment, review of the western Riverside County MSHCP and CNDDB, a total of nineteen (19) sensitive wildlife species have the potential of occurring within the region of the Project Site as presented in Table 4, *Sensitive Wildlife Species Assessment* (CNDDB 2020a, MSHCP 2004). No state or federally listed threatened, endangered, or MSHCP target species were observed or are expected to occur onsite.

Table 4.
Sensitive Wildlife Species Assessment

Species Name (*Scientific Name*) Status	Habitat Description	Comments
INVERTEBRATES		
Delhi sands giant flower-loving fly (*Rhaphiomidas terminatus abdominalis*) FE	Restricted to Delhi sand formations in Riverside and San Bernardino Counties.	The entire Project Site is mapped as Delhi fine sand soils and is located in the USFWS Ontario Recovery Unit. There is a total of four (4) records of this species occurring within one (1) mile of the Project Site. However, the 0.79-acre of disturbed habitat is heavily compacted, surrounded by industrial development and does not represent suitable habitat for the species.
REPTILES		
Orange-throated whiptail (*Aspidoscelis hyperythra*) WL	The orange-throated whiptail occurs in Riversidean sage scrub and chaparral where loose soils and occasional rocky areas are found.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Coast horned lizard (*Phrynosoma blainvillii*) SSC	The horned lizard occurs primarily in scrub, chaparral, and grassland habitats.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
BIRDS		
Bell's sage sparrow (*Artemisiospiza belli belli*) CWL	This species is typically found in chaparral on alluvial fans and foothills.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Cooper's hawk (*Accipiter cooperii*) SSC	Cooper's hawk is most commonly found within or adjacent to riparian/oak forest and woodland habitats. This uncommon resident of California increases in numbers during winter migration.	Cooper's hawks occasionally nest in large pines and Eucalyptus trees. No nests were documented onsite and the majority of ornamental trees are small in stature and not expected to be utilized for nesting.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CWL	Southern California rufous-crowned sparrow is a non-migratory bird species that primarily occurs within sage scrub and grassland habitats and to a lesser extent chaparral sub-association. This species generally breeds on the ground within grassland and scrub communities in the western and central regions of California.	Not expected to occur onsite based on disturbed conditions, lack of native habitat or undisturbed soils.
Golden eagle (*Aquila chrysaetos*) CWL, SFP	Within southern California, the species prefers grasslands, brushlands (coastal sage scrub and chaparral), deserts, oak savannas, open coniferous forests, and montane valleys.	Not expected to occur onsite based on a lack of suitable habitat.
Burrowing owl (*Athene cunicularia)* SSC	The burrowing owl uses predominantly open land, including grassland, agriculture (e.g., dry-land farming and grazing areas), playa, and sparse coastal sage scrub and desert scrub habitats. Some breeding burrowing owls are year-round residents and additional individuals from the north may winter throughout the region.	Not expected to occur onsite. No suitable burrows documented within the Project Site.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Northern Harrier (*Circus cyaneus*) SSC	The northern harrier frequents open wetlands, wet/lightly grazed pastures, fields, dry uplands/prairies, mesic grasslands, drained marshlands, croplands, meadows, grasslands, open rangelands, fresh and saltwater emergent wetlands.	Not observed or expected to occur onsite based on a lack of suitable habitat.
Least Bell's vireo *(Vireo bellii pusillus)* FE, SE	Least Bell's vireo resides in riparian habitats with a well-defined understory including southern willow scrub, mule fat, and riparian forest/woodland habitats.	Not expected to occur onsite based on a lack of riparian within or adjacent to the Project Site.
Southwestern willow flycatcher *(Empidonax traillii extimus)* FE, SE	The southwestern willow flycatcher is narrowly distributed. Although the preferred habitat, riparian woodland and select other forests, is well distributed within all, few current locations for the willow flycatcher have been documented.	Not expected to occur onsite based on a lack of riparian within or adjacent to the Project Site.
Loggerhead shrike (*Lanius ludovicianus*) SSC	This species of shrike hunts in open or grassy areas and nests in large chaparral shrubs such as ceanothus and lemonade berry.	Not expected to occur onsite based on a lack of suitable habitat
Coastal California gnatcatcher (*Polioptila californica californica*) FT/SSC	The coastal California gnatcatcher is a non-migratory bird species that primarily occurs within sage scrub habitats in coastal southern California dominated by California sagebrush.	Not expected to occur onsite based on a lack of suitable habitat

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
MAMMALS		
Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) SSC	The northwestern San Diego pocket mouse occurs in coastal sage, upland sage scrubs, and alluvial fan sage scrub, sage scrub/grassland ecotones, chaparral, and desert scrubs at all elevations up to 6,000 feet.	Not expected to occur onsite based on a lack of suitable habitat
San Bernardino kangaroo rat (*Dipodomys merriami parvus*) FE/SSC	Prefers alluvial scrub, coastal sage scrub habitats with sandy and gravelly substrates.	Not expected to occur onsite based on a lack of alluvial fan or adjacent terrace habitats.
Western mastiff bat (*Eumops perotis californicus*) SSC	Roosts in rocky areas and forages in grassland, shrublands, and woodlands.	Not expected to occur onsite based on a lack of suitable habitat.
Western yellow bat (*Lasiurus xanthinus*) SSC	Roosts in the skirts of palm trees and forages in adjacent habitats.	Not expected to occur onsite based on a lack of suitable foraging habitat within the vicinity of the Project Site.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC	The San Diego black-tailed jackrabbit in open habitats, primarily including grasslands, sage scrub, alluvial fan sage scrub, and Great Basin sage scrub.	Not expected to occur onsite based on a lack of suitable foraging habitat within the vicinity of the Project Site.
Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) SSC	Low elevation grassland alluvial sage scrub and coastal sage scrub habitats.	Not expected to occur onsite based on a lack of suitable foraging habitat within the vicinity of the Project Site.
Federal (USFWS) Protection and Classification FE – Federally Endangered FT – Federally Threatened FC – Federal Candidate for Listing **State (CDFW) Protection and Classification** SE – State Endangered SPE – State Proposed Endangered ST – State Threatened SSC – State Species of Special Concern CWL – California Watch List SPF – State Fully Protected		

The Project Site is not located within a designated USFWS critical habitat boundary.

The Project Site possesses adjacent trees and shrubs expected to potentially provide nesting habitat for migratory birds protected under the CDFG Code Section 3503. Measures for potential direct/indirect impacts to nesting bird species will require compliance with the CDFG Code. Construction outside the nesting season (between September 1st and February 15th) does not require pre-removal nesting bird surveys. If construction is proposed between February 16th and August 31st, a qualified biologist must conduct a nesting bird survey(s) no more than three (3) days prior to initiation of grading to document the presence or absence of nesting birds within or directly adjacent (100 feet) to the Project Site. Loss of an active nest would be considered a potentially significant impact. Impacts to potential nesting bird species would be reduced to less than significant with the implementation of Standard Compliance Measure (**CM-BIO1**).

JURISDICTIONAL WETLAND RESOURCES

No wetlands or jurisdictional resources regulated by the USACE, CDFW, or RWQCB were documented within the Project Site.

Impacts to water quality would be less than significant during both construction and operation. The project contractor would implement standard BMPs during construction, incorporate landscape features and bio-swales that would provide pervious surface to capture on-site runoff.

WESTERN RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN COMPLIANCE ANALYSIS

Although the Jurupa Community Services District is not a permittee to the western Riverside County MSHCP, the following section summarizes the Project Site's relationship to MSHCP criteria areas and MSHCP compliance guidelines.

CRITERIA AREAS

The Project Site is located within the Western Riverside County MSHCP Jurupa Area Plan and is not located within or adjacent to a Criteria Cell, Cell Group, or Special Linkage Area.

CRITERIA AREA SPECIES SURVEY AREA

The Project Site is not within the Criteria Area Sensitive Plant Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2021).

The project is consistent with MSHCP Section 6.3.2.

NARROW ENDEMIC PLANT SPECIES SURVEY AREA

The Project Site occurs within a predetermined Survey Area for three (3) MSHCP narrow endemic plant species including San Diego ambrosia, Brand's phacelia, and San Miguel savory, as shown in Figure 3, *MSHCP Relationship Map*. (RCA GIS Data

Downloads 2021). No suitable habitat for MSHCP narrow endemic plants was documented within the Project Site.

The project is consistent with MSHCP Section 6.3.2.

AMPHIBIAN SPECIES SURVEY AREA

The Project Site is not within the Amphibian Species Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2021).

The project is consistent with MSHCP Section 6.3.2.

MAMMAL SPECIES SURVEY AREA

The Project Site is not within the Mammal Species Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2021).

The project is consistent with MSHCP Section 6.3.2.

BURROWING OWL SURVEY AREA

The Project Site occurs completely within a predetermined Survey Area for the burrowing owl as shown in Figure 3, *MSHCP Relationship Map*. No suitable burrowing owl burrows potentially utilized for refugia and/or nesting were documented within or adjacent to the Project Site.

Implementation of the CDFG Code nesting bird survey will meet the 30-day burrowing owl preconstruction survey requirement as presented in the following section – Standard Compliance Measure.

The project is consistent with MSHCP Section 6.3.2.

MSHCP RIPARIAN/RIVERINE AREAS AND VERNAL POOLS

No riparian, riverine or vernal pool resources were documented within or adjacent to the Project Site. No MSHCP Section 6.1.2 resources will be directly or indirectly impacted.

The project is consistent with MSHCP Section 6.1.2.

URBAN/WILDLANDS INTERFACE

The MSHCP Urban/Wildlands Interface guidelines presented in Section 6.1.4 are intended to address indirect effects associated with locating commercial, mixed uses and residential developments in proximity to a MSHCP Conservation Area. The Project Site is not located adjacent to an existing or proposed MSHCP Conservation Area.

The project is consistent with MSHCP Section 6.1.4.

FUELS MANAGEMENT

The fuels management guidelines presented in Section 6.4 of the MSHCP are intended to address brush management activities around new development within or adjacent to MSHCP Conservation Areas. The Project Site is not located adjacent to an existing or proposed MSHCP Conservation Area.

The project is consistent with MSHCP Section 6.4.

Initiation and approval of the proposed project would not conflict with any MSHCP conservation goals or requirements. The project as proposed based on implementation of an CDFG nesting bird survey as described below is compliant with the western Riverside County MSHCP.

STANDARD COMPLIANCE MEASURE

The following standard compliance measure (Regulatory Requirement CDFG Code) outlined below will ensure any potential impacts related to nesting birds including burrowing owl are less than significant.

CM-BIO1 Regulatory Requirement CDFG Code

Regulatory requirement for potential direct/indirect impacts to nesting common and sensitive bird and raptor species will require compliance with the CDFG Code Section 3503. Construction outside the nesting season (between September 1st and January 31st) do not require pre-removal nesting bird surveys. Construction outside the nesting season (between September 1st and February 15th) does not require pre-removal nesting bird surveys. If construction is proposed between February 16th and August 31st, a qualified biologist must conduct a nesting bird survey(s) no more than three (3) days prior to initiation of grading to document the presence or absence of nesting birds within or directly adjacent (100 feet) to the Project Site.

The preconstruction survey(s) will focus on identifying any bird nests that may be directly or indirectly affected by construction activities. If active nests are documented, species-specific measures shall be prepared by a qualified biologist and implemented to prevent abandonment of the active nest.

At a minimum, grading in the vicinity of a nest shall be postponed until the young birds have fledged. A minimum exclusion buffer of 100 feet shall be maintained during construction, depending on the species and location. The perimeter of the nest setback zone shall be fenced or adequately demarcated with stakes and flagging at 20-foot intervals, and construction personnel and activities restricted from the area.

The survey(s) will focus on identifying any raptors and/or bird nests that are directly or indirectly affected by construction activities. If active nests are documented, species-specific measures will be prepared by a qualified biologist and implemented to prevent abandonment of the active nest. At a minimum, grading in the vicinity of a nest will be postponed until the young birds have fledged. The perimeter of the nest setback zone

will be fenced or adequately demarcated with stakes and flagging at 20-foot intervals, and construction personnel and activities restricted from the area. A survey report by a qualified biologist verifying that no active nests are present, or that the young have fledged, will be submitted to the Jurupa Community Services District for review and approval prior to initiation of grading in the nest-setback zone.

The qualified biologist will serve as a construction monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests occur. A final monitoring report of the findings, prepared by a qualified biologist, will be submitted to the Jurupa Community Services District documenting compliance with the CDFG Code. Any nest permanently vacated for the season would not warrant protection pursuant to the CDFG Code.

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Certification "*I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge".*

Author:_____Date: March 11th, 2021

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APPENDIX D

Cultural Resource Investigation

PALEOWEST

CULTURAL RESOURCE INVESTIGATION FOR THE JURUPA COMMUNITY SERVICE DISTRICT'S WELL 30 PROJECT, CITY OF JURUPA VALLEY, RIVERSIDE COUNTY, CALIFORNIA

DRAFT REPORT

Roberta Thomas and Garret Root

9/9/2021



CULTURAL RESOURCE INVESTIGATION FOR THE JURUPA COMMUNITY SERVICE DISTRICT'S WELL 30 PROJECT, CITY OF JURUPA VALLEY, RIVERSIDE COUNTY, CALIFORNIA

Prepared by:
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Prepared for:
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Technical Report No. 21-492

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September 9, 2021

Keywords: CEQA; Riverside County; Jurupa Valley; Mira Loma Quartermasters Depot (MLQD); historic water infrastructure; Well 19; 1.1 acres

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MANAGEMENT SUMMARY

The Jurupa Community Services District is proposing the removal of an existing well (Well 19) and site acquisition and construction of a new well (Well 30) (Project) in the city of Jurupa Valley, Riverside County, California. PaleoWest, LLC (PaleoWest) was contracted by Albert A. Webb Associates to conduct a Phase I cultural resource assessment of the Project area in compliance with the California Environmental Quality Act (CEQA).

This report summarizes the methods and results of the cultural resource investigation of the Project area. This investigation included background research, communication with the Native American Heritage Commission (NAHC) and interested Native American tribal groups, and an intensive pedestrian (Phase I) survey of the Project area. The purpose of the investigation was to determine the potential for the Project to impact historical resources under CEQA.

A series of cultural resource records searches and literature reviews were conducted of the California Historical Resource Information System at the South Central Coastal Information Center and the Eastern Information Center. These records searches indicate that no fewer than 22 previous studies have been conducted within one-mile and one-half-mile, respectively, of the Project area (Project study area). In addition, two cultural resources, historic period archaeological sites, have been recorded within the Project study area. No prehistoric archaeological resources or historic period built-environment resources have been identified within the Project study area and no cultural resources were identified within the Project area.

As part of the cultural resource assessment of the Project area, PaleoWest also requested a search of the Sacred Lands File (SLF) from the NAHC. Results of the SLF search indicate that there are no known Native American cultural resources within the immediate Project area. The NAHC suggested contacting 13 individuals representing 10 Native American tribal groups to find out if they have additional information about the Project area. The 10 recommended tribal groups were contacted. To date, eight responses have been received.

PaleoWest conducted a site visit of the proposed Project area on June 18, 2021. No prehistoric or historic period archaeological resources were identified as a result of the site visit. One historic period built-environment resource, Well 19, was documented within the Project area. An evaluation for historical significance indicates that structure is not eligible for the California Register of Historical Resources (CRHR) under any criteria. Therefore, Well 19 is not considered historical resources for the purposes of CEQA and no further cultural resource management is recommended for this resource. Additionally, an assessment of the archaeological sensitivity of the Project area indicates that the likelihood of encountering intact, subsurface archaeological deposits is considered low and, as such, no further cultural resource management is recommended for the Project area.

In the event that potentially significant cultural resources are encountered during construction activities associated with the Project, a qualified archaeologist shall be obtained to assess the significance of the find in accordance with the criteria set forth in the CRHR. In addition, Health and Safety Code 7050.5, CEQA 15064.5(e), and Public Resources Code 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

1.0 INTRODUCTION

The Jurupa Community Services District (JCSD) is proposing the removal of an existing well (Well 19) and site acquisition and construction of a new well (Well 30) (Project) in the city of Jurupa Valley, Riverside County, California. PaleoWest, LLC (PaleoWest) was contracted by Albert A. Webb Associates to conduct a Phase I cultural resource assessment of the Project area in compliance with the California Environmental Quality Act (CEQA). JCSD is the Lead Agency for the purposes of CEQA.

1.1 PROJECT LOCATION AND DESCRIPTION

Existing Well 19, which is owned by JCSD, is situated within an approximately 0.11-acre fenced parcel (Assessor's Parcel Number [APN] 156-332-021) at 11362 E. Philadelphia Street in the northwestern extent of the city of Jurupa Valley. The proposed Well 30 site is an approximately 0.9-acre vacant parcel (APN 156-310-063), which is located immediately south and east of the Well 19 site. The Project area includes both parcels, which total approximately 1.1 acres. The Project area is located east of Interstate-15 (I-15) and north of State Route 60 (Figure 1-1). The Project area is situated within Section 5, Township 2 South, Range 6 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Guasti, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangle (Figure 1-2). The elevation of the Project area is approximately 838 feet above mean sea level (amsl).

The proposed Project consists of the decommissioning and demolition of the JCSD's existing Well 19 and site acquisition, drilling, construction, and operation of a new groundwater well (Well 30) (District Project No. C195054). Well 30 will be approximately 20 inches in diameter and drilled to a depth of approximately 400 feet below ground surface. The well will be equipped with a 400 to 600 horsepower electric motor. The well head and approximately 200 linear feet of above ground piping (including valves) will be constructed on top of a concrete pad. Site improvements also include an approximately 465 square foot (SF) electrical building to house the electronics to operate the well; Supervisory Control and Data Acquisition antenna, standby backup diesel generators installed on a concrete pad in a waterproof enclosure; a Southern California Edison meter and transformer, both installed on concrete pads; an approximately 890 SF chemical building, driveway access to the site from E. Philadelphia Street, and pipelines from the well head to JCSD's existing water pipeline and existing storm drain facilities in E. Philadelphia Street. Additionally, the Project will include on-site drainage facilities to convey site runoff into the existing storm drain system.

The chemical storage building will store salt in a brine tank. The chemical storage building will also include an on-site chlorine generator, which will use the salt to produce sodium hypochlorite, also known as chlorine. Once produced the chlorine will be introduced into the pumped groundwater prior to the water entering JCSD's potable water system.

For security purposes, the Well 30 site will be enclosed with either a chain link fence or a solid wall. Access to the site will be via a locked gate from E. Philadelphia Street.



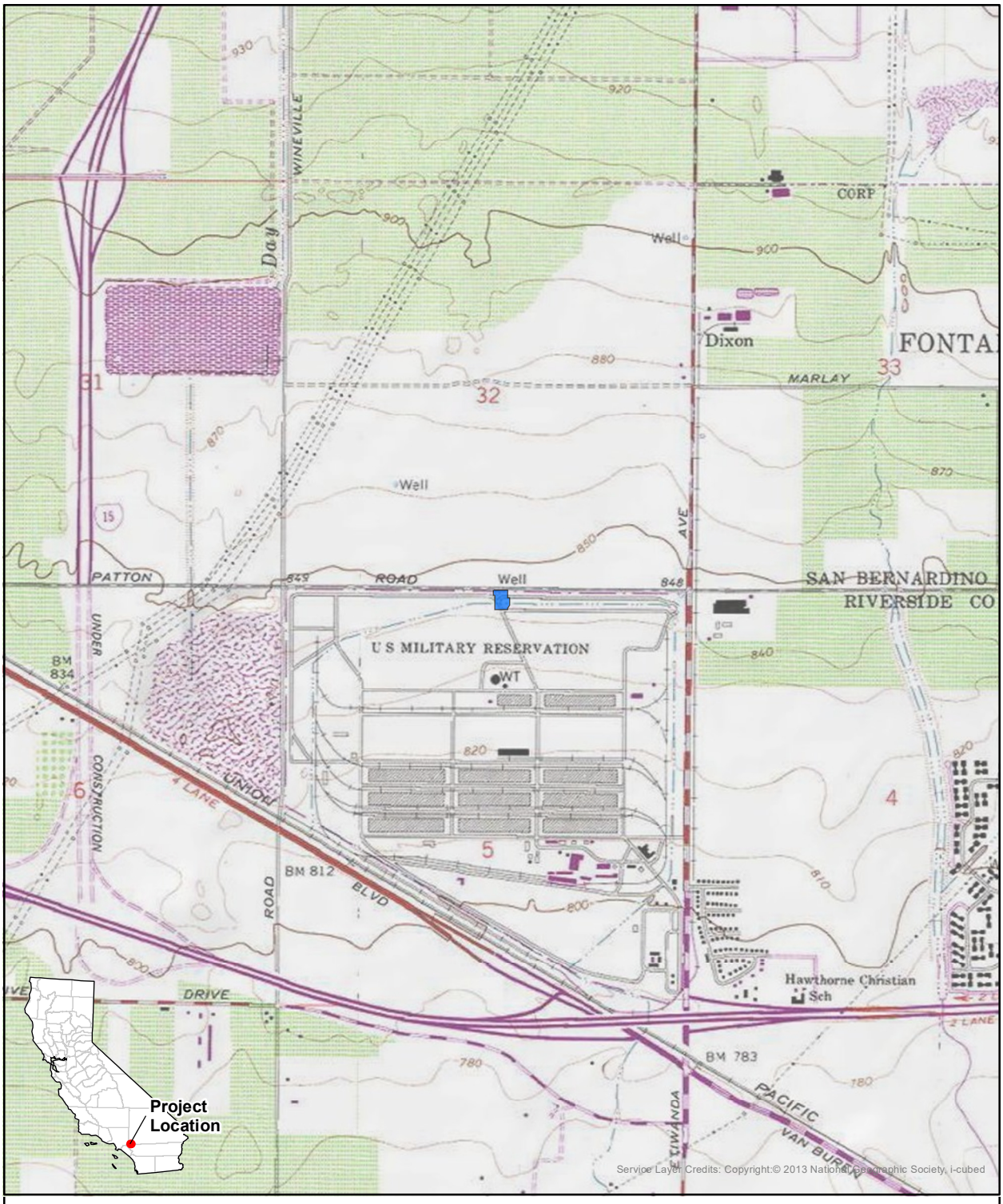
PALEO WEST

0 feet 232,000

0 meters 55,000

1:3,000,000

Figure 1-1
Project Vicinity
USGS 7.5' Quadrangle:
Guasti, Ca (1982)
T2S R6W, Sec 5
UTM Zone 11, NAD 83



PALEO WEST

0 feet 2,000

0 meters 500

1:24,000

Figure 1-2
Project Location
USGS 7.5' Quadrangle:
Guasti, Ca (1982)
T2S R6W, Sec 5
UTM Zone 11, NAD 83

Project Area

1.2 REPORT ORGANIZATION

This report documents the results of a cultural resource investigation conducted for the proposed Project. Chapter 1 has introduced the Project location and description and defined the Project area. Chapter 2 states the regulatory context that should be considered for the Project. Chapter 3 synthesizes the natural and cultural setting of the Project area and surrounding region. The results of the cultural resource literature and records searches conducted at the South Central Coastal Information Center (SCCIC) and the Eastern Information Center (EIC) and the Sacred Lands File (SLF) search, and a summary of the Native American communications is presented in Chapter 4. The field methods employed during this investigation and findings are outlined in Chapter 5 with management recommendation provided in Chapter 6. This is followed by bibliographic references and appendices.

2.0 REGULATORY CONTEXT

2.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The proposed Project is subject to compliance with CEQA, as amended. Compliance with CEQA statutes and guidelines requires both public and private projects with financing or approval from a public agency to assess the project's impact on cultural resources (Public Resources Code Section 21082, 21083.2 and 21084 and California Code of Regulations 10564.5). The first step in the process is to identify cultural resources that may be impacted by the project and then determine whether the resources are "historically significant" resources.

CEQA defines historically significant resources as "resources listed or eligible for listing in the California Register of Historical Resources (CRHR)" (Public Resources Code Section 5024.1). A cultural resource may be considered historically significant if the resource is 45 years old or older and possesses integrity of location, design, setting, materials, workmanship, feeling, and association.[1] In addition, it must meet any of the following criteria for listing on the CRHR:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history (Public Resources Code Section 5024.1).

Cultural resources are buildings, sites, humanly modified landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance. A resource can also be determined historically significant under CEQA by virtue of being included in a local register of historical resources regardless of CRHR eligibility (see Title 14 CCR §15064.5(a)(2)). CEQA states that if a project will have a significant impact on important cultural resources, deemed "historically significant," then project alternatives and mitigation measures must be considered. Additionally, the OHP may choose to comment on the CEQA compliance process for specific local government projects in an informal capacity but does not seek to review all projects that may affect historically significant cultural resources under CEQA provisions.

2.2 CALIFORNIA ASSEMBLY BILL 52

Signed into law in September 2014, California Assembly Bill 52 (AB 52) created a new class of resources – tribal cultural resources (TCRs) – for consideration under CEQA. TCRs may include sites, features, places, cultural landscapes, sacred places, or objects with cultural value to a California Native American tribe that are listed or determined to be eligible for listing in the

[1] The Office of Historic Preservation (OHP) guidelines recognize a 45-year-old criteria threshold for documenting and evaluating cultural resources (OHP 1995:2). This guideline assumes a 5-year lag between resource identification and the date that planning decisions are made. The age threshold is an operational guideline and not specific to CEQA statutory or regulatory codes.

CRHR, included in a local register of historical resources, or a resource determined by the lead CEQA agency, in its discretion and supported by substantial evidence, to be significant and eligible for listing on the CRHR. AB 52 requires that the lead CEQA agency consult with California Native American tribes that have requested consultation for projects that may affect tribal cultural resources. The lead CEQA agency shall begin consultation with participating Native American tribes prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report. Under AB 52, a project that has potential to cause a substantial adverse change to a tribal cultural resource constitutes a significant effect on the environment unless mitigation reduces such effects to a less than significant level.

3.0 SETTING

This section of the report summarizes information regarding the physical and cultural setting of the Project area, including the prehistoric, ethnographic, and historic contexts of the general area. Several factors, including topography, available water sources, and biological resources, affect the nature and distribution of prehistoric, ethnographic, and historic-period human activities in an area. This background provides a context for understanding the nature of the cultural resources that may be identified within the region.

3.1 ENVIRONMENTAL SETTING

The Project area is situated south of the San Gabriel Mountains, which are part of the Transverse Ranges that separate the Los Angeles Basin and the Mojave Desert, in the eastern portion of the Pomona Valley. The Pomona Valley is bordered to the west by the San Gabriel Valley, to the north by the San Gabriel Mountains, to the east by the San Bernardino Valley, and to the south by the Santa Ana River. The alluvial valley was formed by the Santa Ana River and its tributaries. The Santa Ana River originates on the northern and eastern slopes of Mount San Gorgonio and is the largest hydrological feature near the Project area, approximately eight miles away. The San Antonio Creek bisects the western portion of Pomona Valley and runs along the Los Angeles County and San Bernardino County border. Other notable tributaries emerging from the southern slopes of the San Gabriel Mountains include Lytle Creek, Cajon Wash, Deer Canyon Wash, Cucamonga Creek, and Etiwanda Creek.

As the climate of the region is largely determined by topographic features, climate, in turn, largely dictates the character of the biotic environment exploited by native populations. The climate of the Project area is characterized as Mediterranean, with hot, dry summers and cool, moist winters. It has a semi-arid precipitation regime; significant changes in temperature and moisture occur based on elevation and exposure, particularly in the nearby mountains.

Prior to historical development of the Project vicinity, vegetation in the area included representative species of the valley grassland plant community. Indigenous species present may have included rye grass (*Leymus condensatus*), blue grass (*Poa secunda*), bent grass (*Agrostis* spp.), needlegrass (*Stipa* spp.), three-awn (*Aristida divaricata*), and members of the sunflower family (*Asteraceae*). Additionally, restricted riparian communities also occurred near springs and along watercourses. Various floral species were available from early spring until winter, and the leaves, stems, seeds, fruits, roots, and tubers from many of these plant species formed an important subsistence base for the Native American inhabitants of the region (Bean and Saubel 1972; Hyde and Elliot 1994).

3.2 PREHISTORIC SETTING

Prehistoric occupation of the inland valleys of Southern California can be divided into seven cultural periods: Paleoindian (circa [ca.] 12,000–9,500 years before present [B.P.]); Early Archaic (ca. 9,500–7,000 B.P.); Middle Archaic (ca. 7,000–4,000 B.P.); Late Archaic (ca. 4,000–1,500 B.P.); Saratoga Springs (ca. 1,500–750 B.P.); Late Prehistoric (ca. 750–410 B.P.); and Protohistoric (ca. 410–180 B.P.), which ended in the ethnographic period. These periods are structured based on the archaeological research conducted at Diamond Valley Lake as part of

the Eastside Reservoir Project, located approximately 36 miles southeast of the Project area (Goldberg et al. 2001; McDougall et al. 2003). Prior to the work conducted for the Eastside Reservoir Project, no comprehensive context had been developed specifically for the interior valley and mountain localities of Southern California that distinguished the region from the nearby desert and coastal regions. Due to the nature and temporal association of the archaeological resources identified within a one-mile radius of the Project area, the prehistoric cultural setting discussed below begins at the Protohistoric period. The following has been adapted from Horne and McDougall (2003).

3.2.1 Late Prehistoric Period (ca. 750–410 B.P.)

The Medieval Warm extended into the Late Prehistoric Period, ending about 575 B.P. A period of lower temperatures and increased precipitation, known as the Little Ice Age, resulted in increased resource productivity in the inland region. Population increased in the region of the Project study area during this wet interval. In the ESRP area, several small, but apparently semisedentary occupations, date to this time period. Cottonwood Triangular points began to appear in inland assemblages at this time, and Obsidian Butte obsidian became much more common (Goldberg et al., 2001).

By about 500 B.P., strong ethnic patterns developed among native populations in Southern California. This may reflect accelerated cultural change brought about by increased efficiency in cultural adaptation and diffusion of technology from the central coastal region of California and the southern Great Basin (Douglas 1981).

Also during this period, Lake Cahuilla began to recede (Waters 1983) and the large Patayan populations occupying its shores began moving westward into areas such as Anza Borrego, Coyote Canyon, the Upper Coachella Valley, the Little San Bernardino Mountains, and the San Jacinto Plain (Wilke 1976). The final desiccation of Lake Cahuilla, which had occurred by approximately 400 B.P. (A.D. 1640), resulted in a population shift away from the lakebed into the Peninsular Ranges to the west, and the Colorado River regions to the east.

3.2.2 Protohistoric Period (ca. 410–180 B.P.)

The improved, dynamic conditions of the Little Ice Age continued throughout the Protohistoric period. Utilization of the bow and arrow promoted an increase in hunting efficiency while a renewed abundance of mortars and pestles indicates extensive exploitation of various hard nuts and berries. As a result of the increased resource utilization of the area, sedentism intensified with small, fully sedentary villages forming during the Protohistoric period. This is evidenced by sites containing deeper middens suggesting more permanent habitation. These would have been the villages, or rancherias, noted by the early nonnative explorers (True 1966, 1970).

The cultural assemblage associated with the Protohistoric period included the introduction of locally manufactured ceramic vessels and ceramic smoking pipes, an abundance of imported Obsidian Butte obsidian, Cottonwood Triangular points, and Desert Side-notched points as well as the addition of European trade goods, such as glass trade beads, late in the period (Meighan 1954).

3.3 ETHNOHISTORIC SETTING

Archival research and published reports suggest the Project area is situated where three traditional use territories of Native American groups meet. The traditional use territories of the Serrano, Cahuilla, and Gabrielino come together just southwest of the present-day city of San Bernardino which is very near the Project area. These cultural groups all spoke languages belonging to the Takic branch of the Shoshonean family, a part of the larger Uto-Aztecan language stock (Bean 1978:576; Geiger and Meighan 1976:19). In the following section, a brief synopsis of Serrano, Cahuilla, and Gabrielino ethnography is presented. This information has been summarized from Bean and Vane (2001) and McCawley (1996).

The Cahuilla and Serrano belonged to nonpolitical, nonterritorial patrimoieties that governed marriage patterns as well as patrilineal clans and lineages. Each clan, "political-ritual-corporate units" composed of 3 to 10 lineages, owned a large territory in which each lineage owned a village site with specific resource areas. Clan lineages cooperated in defense, in large communal subsistence activities, and in performing rituals. Clans were apt to own land in the valley, foothill, and mountain areas, providing them with the resources of many different ecological niches. Unlike their Cahuilla and Serrano neighbors, the Gabrielino had a hierarchically ordered social class that included groupings of elite, middle class, and commoners. Class membership played a major role in determining individual lifestyles, as it depended upon both ancestry and wealth (Bean and Smith 1978:543).

In prehistoric times Cahuilla, Gabrielino, and Serrano shelters are believed to have been dome shaped; after contact they tended to be rectangular in shape. Cahuilla and Serrano shelters were often made of brush, palm fronds, or arrowweed while the Gabrielino utilized reed. Most of the Serrano and Cahuilla domestic activities were performed outside the shelters within the shade of large, expansive *ramadas*; windbreaks, made of vertical poles covered with rush mats, provided open-air food preparation and cooking areas at Gabrielino settlements.

The Cahuilla, Gabrielino, and Serrano were, for the most part, hunting, collecting, harvesting, and protoagricultural peoples. As in most of California, acorns were a major staple, but the roots, leaves, seeds, and fruit of many other plants also were used. Fish, birds, insects, and large and small mammals were also available.

To gather and prepare these food resources, the Cahuilla, Gabrielino, and Serrano had an extensive inventory of equipment including bows and arrows, traps, nets, disguises, blinds, spears, hooks and lines, poles for shaking down pine nuts and acorns, cactus pickers, seed beaters, digging sticks and weights, and pry bars. In addition, the Cahuilla also had an extensive inventory of food processing equipment including hammers and anvils, mortars and pestles, manos and metates, winnowing shells and baskets, strainers, leaching baskets and bowls, knives (made of stone, bone, wood, and carrizo cane), bone saws, and drying racks made of wooden poles to dry fish.

Mountain tops, unusual rock formations, springs, and streams are held sacred to the Cahuilla, Gabrielino, and Serrano, as are rock art sites and burial and cremation sites. In addition, various birds are revered as sacred beings of great power and sometimes were killed ritually and mourned in mortuary ceremonies similar to those for important individuals. As such, bird cremation sites are sacred.

3.4 HISTORICAL SETTING

3.4.1 Riverside County

The Project area is within the city of Jurupa Valley which is located immediately west of Riverside, California. The earliest recorded historic period use of the lands within the general vicinity of the Project area began in the 1770s, following establishment of the Mission San Gabriel, approximately 35 miles west of the Project area. In the decades following mission secularization, initiated in 1834 by the Mexican government, land grants were established in the vicinity of the Project area – including the Rancho Jurupa that included the Project area as well as downtown Riverside. The land was granted to Juan Bandini by Governor Juan B. Alvarado in 1838 (Hoffman 1862).

With the signing of the Treaty of Guadalupe Hidalgo in 1848, which ended the Mexican-American War, California entered into the American Period and, in 1850, became a recognized state in the United States. The completion of the Central Pacific Railroad's transcontinental railroad in 1869 opened California to agricultural settlement and brought the previous era of large-scale ranching to a close. The arrival of the Southern Pacific Railroad (which grew out of the Central Pacific Railroad and was built eastward from Los Angeles through Colton in 1875, reaching Yum a in 1877) resulted in an initial influx of new settlers into what is now western Riverside County.

In the latter decades of the nineteenth century, land companies sought to purchase large areas of the Rancho Jurupa in order to develop it into parcels for deciduous fruit and citrus farms. Settlers came to the area, but no towns were founded in the 1800s (Lech 2004:198). Riverside was founded as a town in San Bernardino County in the 1870s and was incorporated in 1883 (Nixon and Beedle 2005). It was located on the south bank of the Santa Ana River, its source of water. Advertised as a "Colony for California," the area was settled as an agricultural area by immigrants coming to the state to partake of the wonders listed in promotional literature (Nixon and Beedle 2005). Riverside became a center of the citrus industry, famous for its Washington navel orange. Competition with the neighboring city of San Bernardino resulted in the formation of the County of Riverside in 1893, with Riverside as the seat of the newly established county.

In addition to citrus, this area of Riverside County was also home to thousands of acres of vineyards. The land was owned and cultivated by Charles Stern and Sons, one of two major wine producers of the region and the era. In the 1880s, Charles and his three sons established a winery on the outskirts of Los Angeles, but soon realized as the city grew, his land, used for grape production dwindled. He and his sons formed the Riverside Vineyard Company and purchased 3,000 acres along the San Bernardino County line (part of Mira Loma), renaming the area, Wineville. In 1900, the company sank its first well, one of many and began construction of a 20-mile-long irrigation system to water the vineyards (Peninou 1965: 55-58). As part of their growing holdings and irrigation system, the company sank Well D-936a (JCSD Well 19) in 1917. It was representative of their growing holding and increasing need for water and irrigation systems (California Department of Public Works 1917).

Urbanization began in the early twentieth century, and the Project area is now part of the suburban expansion of the city of Riverside and western Riverside County. The city of Jurupa Valley was incorporated in 2011 (City of Jurupa Valley 2021). The city now includes the communities of Jurupa Hills, Mira Loma, Glen Avon, Pedley, Indian Hills, Belltown, Sunnyslope,

Crestmore Heights, and Rubidoux. It is 44-square miles and borders San Bernardino County to the north, Riverside to the south and east, Eastvale and San Bernardino County to the west (City of Jurupa Valley 2021).

3.4.2 Mira Loma Quartermasters Depot

Established in 1942, the Mira Loma Quartermasters Depot (MLQD) served as a military storage facility that processed and shipped quartermaster, engineers, medical and signal corps supplies throughout the Pacific theater. The MLQD consolidated operations shared with another, smaller facility located in San Bernardino County (*The Sun San Bernardino Daily* 1942). Located 10 miles north of the city of Riverside, the new MLQD facility consisted of 531 acres between Philadelphia Street on the north, Etiwanda Avenue on the east, Mission Boulevard on the south, and Wineville Road on the west. It centered around a series of large warehouses with administration, training, solider and officer housing, and a hospital. Most of the buildings and structures served common support roles, they included wastewater treatment facility, oil pump house, repair and paint shops, sheds, and oil and water storage structures. The U.S. Army retained ownership of the facility through World War II after which the surplus property was transferred to the United States Air Force (USAF) in 1955. The MLQD was redesignated the Mira Loma Air Force Station (AFS) and continued to function as a storage facility until 1963, at which time it was began to be used for the decommissioning and deconstruction of the non-nuclear components of the Titan I intercontinental ballistic missile. In 1964, the USAF disposed of over 350 acres of land associated with Mira Loma AFS, selling the facilities to the commercial developer Space Center Mira Loma, Inc. The company retained ownership for 20 years before selling half of the property to the County of Riverside Asset Leasing Corporation in 1984 (California Military Museum 2016; NETROnline 1948, 1966, 1994).

4.0 CULTURAL RESOURCES INVENTORY

A series of literature reviews and records searches were conducted at the SCCIC, housed at California State University, Fullerton, and the EIC, housed at the University of California, Riverside. These records searches were conducted on April 30, 2021 and May 17, 2021, respectively. The inventory effort included the Project area and a one-mile radius around the Project area for the SCCIC and a one-half-mile buffer for the EIC, collectively termed the Project study area. The Project area is located in Riverside County; however, the records search buffer extends into San Bernardino County and, as such, both the EIC and SCCIC were consulted. The objective of this data review was to identify prehistoric or historical cultural resources that have been previously recorded within the study area during prior cultural resource investigations.

4.1 PREVIOUS CULTURAL RESOURCES INVESTIGATIONS

The records search results indicate that no fewer than 22 previous investigations have been conducted and documented within the Project study area since 1976 (Table 4-1). None of these studies appear to include any portion of the Project area.

Table 4-1. Previous Cultural Studies within the Project Study Area

Report No.	Date	Author(s)	Title
SB-04143	2002	Dahdul, Miriam and Josh Smallwood	Identification & Evaluation of Historical Properties: Wineville Recycled Water Pipeline Project, City of Ontario, San Bernardino County, California
SB-04159	2001	Duke, Curt	Cultural Resource Assessment: Cingular Wireless Facility No. Sb137-01, San Bernardino County, California
SB-04164	2001	Budinger, Fred E.	Verizon Site F045 Etiwanda
SB-04265	2002	Strickland, Jan	D131.2-Etiwanda/Jurupa
SB-04577	2004	Aislin-Kay, Marnie and Christeen Taniguchi	Records Search and Site Visit Results for Cingular Telecommunications Facility Candidate SC-196-02 (Dart Distribution Specialist), 5681 E. Philadelphia Street, Ontario, San Bernardino County, California
SB-05420	2006	Tang, Bai "Tom", Laurie Taylor, and Daniel Ballester	Identification and Evaluation of Historic Properties: Revised Wineville Recycled Water Pipeline in the Cities of Ontario and Fontana, San Bernardino County, California
SB-05973	2008	Encarnacion, Deirdre, Harry M. Quinn, Daniel Ballester, and Laura H. Shaker	Identification and Evaluation of Historic Properties: Fontana-3 Pipeline Laterals Recycled Water Pipeline Project, City of Fontana, San Bernardino County, California
SB-07123	2010	Panich, Lee and John Holson	Supplemental Archaeological Survey Report, 66kV Transmission Lines Access Roads, Tehachapi Renewable Transmission Project Segments & and 8, Los Angeles and San Bernardino Counties, California
SB-08257	2016	Tang, Bai	Due Diligence Historical/Archaeological Resources Study Inland Empire Utilities Agency Recharge Basin Maintenance Plan Chino Basin Area, San Bernardino and Riverside Counties, California CRM TECH Contract No. 2989

Table 4-1. Previous Cultural Studies within the Project Study Area

Report No.	Date	Author(s)	Title
SB-08269	2017	Bryne, Stephen, Gary Jones, and Gabrielle Duff	Archaeological Survey Report Interstate 15 (1-15) Corridor Project
RI-00283	1977	David M. Van Horn	Ultrasystems Project # 4333: Archaeological Report
RI-03122	1990	Drover, Christopher E.	An Archaeological Assessment of Parcel Map 26365, Mira Loma, California
RI-04134	1998	Mason, Roger, Philppe Lapin, and Brant A. Brechbiel	Cultural Resources Records Search and Survey Report for a Pacific Bell Mobile Services Telecommunications Facility: Cm 159-11 Near Mira Loma, Riverside County, California
RI-04595	2002	Demcak, Carol R.	Phase I Archaeological Assessment of a One-Acre Parcel in Mira Loma Area of Riverside County, California
RI-04618	2002	Drover, Christopher E.	An Archaeological Impact Assessment of Mira Loma Commerce Center Parcels, Mira Loma, Riverside County, California
RI-07545	2008	Tang, Bai "Tom" and Michael Hogan	Phase I Archaeological Assessment: Assessor's Parcel Nos. 156-140-042, -043, and -044, Near the Community of Mira Loma, Riverside County, California
RI-09119	2013	Jeanette A. McKenna	Archaeological/Paleontological Monitoring Program, Swift Transportation, Jurupa Valley, Riverside County, California
RI-09341	2015	Jeanette McKenna	A Phase I Cultural Resources Investigation of the Property at 6240 E. Mission Blvd., Jurupa Valley, Riverside County, California
RI-09564	2015	Johni Etheridge and MacKensie Cornelius	Archaeological Survey Report, Iberia/Ensite #23081 (279228), EBI Project No. 6115000017
RI-10294	2017	Sarah A. Williams and Carrie D. Wills	Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLCCSL02190 (11060 Mission Boulevard, Mira Loma, Riverside County, California, CASPR No. 3551A06RCA
RI-10362	2016	Curt Duke, Matthew Stever, and Benjamin Scherzer	Cultural and Paleontological Resources Assessment Space Center Mira Loma Jurupa Valley, Riverside County, California
RI-10571	2018	Sarah A. Williams and Carrie D. Wills	Cultural Resource Records Search and Site Visit Results for AT&T Mobility, LLC Candidate CLU4471, 3125 Progress Circle, Mira Loma, Riverside County, California (EBI Project Number 6118008686)

4.2 CULTURAL RESOURCES REPORTED WITHIN ONE MILE OF THE PROJECT AREA

The records search results indicated that two cultural resources have been previously documented within the Project study area. These resources are both historic period archaeological sites that include the remains of a World War II military facility and the remains

of an old vineyard. Neither of these resources are located in the Project area. These resources are listed in Table 4-2.

Table 4-2. Previously Recorded Cultural Resources within the Project Study Area

Primary No.	Age	Type	Description
P-33-016818	Historic	Site	Remains of a WWII-era military complex
P-33-023961	Historic	Site	Remnants of an old vineyard; Swift Transportation (Old Vineyard)

4.3 ADDITIONAL SOURCES

Additional sources consulted during the cultural resource literature and data review include the National Register of Historic Places, the Office of Historic Preservation Archaeological Determinations of Eligibility, the Office of Historic Preservation Built Environment Resources Directory (BERD), historic newspapers, military histories, and regional viticulture monographs. Results of the archival review indicate there are no listed cultural resources recorded within the Project study area.

Historical maps consulted include Cucamonga, CA (1903), Guasti and vicinity (1941) and Ontario, CA (1954) 15-minute, and Guasti, CA (1953 and 1966) 7.5-minute USGS quadrangles. Historical aerials from NETROnline dated 1938, 1948, 1959, 1966, 1967, 1994, 2002, and 2005 were also reviewed. The 1948 aerial image and 1966 Guasti quad both depict a well on the property on the northern border of a MLQD. The well lies south of Patton Road (now E. Philadelphia Street) and north of a road associated with the military installation. At this time, a water treatment facility consisted of a large concrete tank and associated water tower lies approximately 0.2 mile to the south. Aside from the well and water treatment facilities, the Project area and surrounding area appears to remain undeveloped until the mid-1990s, when the water tanks south of the Project area are demolished and several buildings are constructed on adjacent properties.

4.4 NATIVE AMERICAN COORDINATION

PaleoWest contacted the Native American Heritage Commission (NAHC) on March 18, 2021 for a review of the SLF. The objective of the SLF search was to determine if the NAHC had any knowledge of Native American cultural resources (e.g., traditional use or gathering area, place of religious or sacred activity, etc.) within the immediate vicinity of the Project area. The NAHC responded on April 1, 2021, stating that the SLF was completed with negative results; however, the NAHC requested that 13 individuals representing 10 Native American tribal groups be contacted to elicit information regarding cultural resource issues related to the proposed Project (Appendix A). PaleoWest sent outreach letters to the 10 recommended tribal groups on June 25, 2021. These letters were followed up by phone calls on August 10, 2021.

To date eight responses have been received. The Quechan Historic Preservation Department sent an email indicating the Tribe does not wish to comment on the Project and stated they defer to more local tribes. Ms. Jamie Nord, Cultural Resource Technician for the San Manuel Band of Mission Indians (SMBMI), stated that the Project area is not located within the Serrano ancestral territory. As such, the Tribe will not be requesting to receive consulting party status with the lead agency and do not wish to participate in scoping, development, or review of

documents for the Project. Ms. Lacy Padilla, Archaeologist for the Agua Caliente Band of Cahuilla Indians, sent an email stating that the Project area is not within the Tribe's Traditional Use Area and therefore, they do not have any information to provide and defer to other tribes in the area. Mr. Robert Dorame, Chairperson for the Gabrielino Tongva Indians of California Tribal Council, indicated that in the event any prehistoric resources are identified, the Tongva Indians of California Tribal Council would like to be notified. Additionally, if human remains are identified, regardless of the NAHC-assigned Most Likely Descendent, the Tongva Indians of California Tribal Council request to be notified. Mr. Anthony Morales, Chairperson for the Gabrieleno/Tongva San Gabriel Band of Mission Indians, stated that he would have concerns with the Project if ground-disturbing activities would be taking place in previously undisturbed soils. Mr. Joseph Ontiveros, Soboba Band of Luiseño Indians, stated that existing village sites with placenames are located adjacent to the Project and in the surrounding area. He further stated that information regarding tribal and historic resources will be disclosed to the lead agency. Mr. Andrew Salas, Chairperson for the Gabrieleno Band of Mission Indians - Kizh Nation, requested to be sent the outreach letter again for review. The outreach letter was resent on August 10, 2021; no additional response has been received to date. Lastly, a representative of the Santa Rosa Band of Cahuilla Indians stated that the Tribe does not have any comments on the Project.

5.0 FIELD INVESTIGATION

5.1 FIELD METHODS

A site visit of the Project area was conducted by PaleoWest Archaeologist Gena Granger on June 18, 2021. The purpose of the site visit was to observe and note the condition of the Project area including the extent of the hardscape, the overall degree of ground disturbance, and the character and nature of the Project area.

During the field survey, the exteriors of the structure(s) within the Project area were photographed and recorded. Any building or structure located on the property that was determined to have been built prior to 1975 or to be potentially eligible for the CRHR was formally evaluated on DPR 523 series forms. DPR forms of recorded resources are included in Appendix B.

5.2 FIELD RESULTS

The existing well on the property is contained within a small, fenced portion of the Project area (APN 156-332-021). The entirety of the area within the fence was inspected and photographed (Figure 5-1). Most of the fenced area that contains the well facility sits on a concrete slab. The adjacent parcel, APN 156-310-063, was not accessible during the site visit. As such, the surveyor inspected this portion of the Project area from public right-of-way areas, including adjacent parking lots and the public sidewalk (Figure 5-2). This portion of the Project area is currently vacant and covered with vegetation debris. The area appears to be compacted; however, a slight linear earthen berm is visible running north/south from the existing well along the west side of the vacant parcel. Additionally, modern trash and construction debris were noted within the vacant parcel.

No historical or prehistoric archaeological resources were observed during the site visit. However, the extant well feature (Well 19) was documented and evaluated as it was constructed prior to 1976 (Figure 5-3).

5.2.1 Well 19

Well 19 consists of a well structure, standpipe, pump building, and associated infrastructure on a poured concrete slab. The property includes a single-story building that has a rectangular plan with board formed concrete walls. The building is topped by a concrete flat roof with wide eave overhangs supported by metal pipes. Fenestration consists of a six-lite, fixed metal frame window with a solid metal door which opens to the south. An equipment storage hatch is located on the roof and can be removed via a crane. Pipes extend through the base of the building and descend below grade. The building houses electrical equipment and the pumps. Adjacent to the building is a plastic tank with associated piping. North of the building is a rectangular, tall, board formed concrete structure which functions as a standpipe and provides direct access to the well. It is vented from the roof, a second smaller, concrete standpipe is located to the west. Pipes deposit water into the standpipe from above with a secondary pipe passing through the base and emptying into another open concrete pipe. The entire facility is enclosed by a chain link fence (See Figures 5-1 and 5-2).



Figure 5-1. Fenced area containing Well Site No. 19, view to the southwest.



Figure 5-2. Vacant, inaccessible portion of the Project area, view to the north.



PALEO WEST

0 feet 80

0 meters 20

1:1,000

Figure 5-3
Resource Location
USGS 7.5' Quadrangle:
Guasti, Ca (1982)
T2S R6W, Sec 5
UTM Zone 11, NAD 83

Project Area
Survey Area
Resource

Archival research indicates the well was originally built in 1917 by Charles Stern and Sons as part of the development of irrigation facilities to supply water for the Riverside Vineyard Company (California Department of Public Works 1917). Following acquisition of the property by the U.S. Army in 1942, the standpipe and associated pump building were constructed in support of the MLQD. The well and pumping infrastructure were part of a larger water system used by the U.S. Army and later the USAF. Specifically, water extracted from the well was pumped approximately 0.2 miles south to a water treatment facility consisting of a water tank and tower. The water treatment facility appears to have been demolished in mid-1990s. Archival research indicates that there have been numerous upgrades and changes since construction including the addition of chlorination facilities, new pumps, and electrical equipment (California Military Museum 2016; NETROnline 1948, 1966, 1994). The well, building and associated infrastructure were acquired in 1998 by JCSD with the well serving the customers in the surrounding region (JCSD 2021).

The United States military constructed infrastructural systems, including Well 19 and the associated water treatment facility, on many of their installations. These infrastructural systems served as a support role to the installation's primary missions. Many buildings and structures in the former quartermaster depot would have fallen within this "Utilities / Infrastructure" property type. These properties were not directly related to any of the primary missions of the base during World War II (1941-1945) and Cold War periods (1946-1991) but were constructed as necessary elements of a functioning army and later air force facility. This water pump and well evaluated under this property type was not used for storage or Titan I disposal missions. Typical buildings and structures within this general supporting storage category range from tanks (water and fuel), pipelines, pump houses, electrical substations, and waste treatment facilities. Although broadly related to the support and operations context of the installation, this property type does not individually, nor as a resource type group, have a direct or important association with a historically significant event or theme within that context (JRP 2000).

California Register of Historical Resources Evaluation

The following presents an assessment of the historical significance of Well 19 by applying the significance criteria for the CRHR. The purpose of this assessment is to evaluate the eligibility of the resource for listing on the CRHR pursuant to California Public Resources Code 5024 and 5024.5 as a potential historical resource for the purposes of the CEQA.

CRHR Criterion 1: Well 19 does not meet CRHR Criterion 1 for association with events that have made a significant contribution to the broad pattern of history. The property was originally constructed in 1917 to support a large network of irrigation facilities for vineyard operations. While Charles Stern and Sons and their Riverside Vineyard Company (Charles Stern and Sons) were important to the development of wine in the region, this facility was constructed 17 years following the establishment of the company. By the time this well was constructed, the family and the company were already well established, with this facility not representative of the company's early success. Additionally, the current buildings and structures that are present at Well 19 were constructed following acquisition of the property by the U.S. Army and were part of the broader support functions of the base during that time and during the Cold War period. In this context, MLQD's core missions were storage of U.S. Army and USAF property and this facility did not play a significant role in these themes. As part of the water supply for MLQD, the facility served a necessary function but did not support any important operations on the base. In the larger context of army and air force base operations in California and nationwide

during this period, the utility / infrastructure function of this facility did not play a direct or important role in significant historic events or trends. Therefore, Well 19 is not eligible for the CRHR under Criterion 1.

CRHR Criterion 2: Well 19 does not meet CRHR Criterion 2 for any direct associations with the productive lives of persons important in local, state, or national history. While the well was originally constructed by the company, Charles Stern and Sons, it does not have any direct association to the individuals or their achievements. Further, research has yielded no information to indicate that any persons of historical significance are specifically associated with this facility during its use by the army, air force, or subsequent owners. Therefore, Well 19 is not eligible for the CRHR under Criterion 2.

CRHR Criterion 3: Well 19 does not meet CRHR Criterion 3 for embodying the distinctive characteristics of a type, period, and method of construction, or as the work of a master, or as having high artistic value. When originally constructed, it was one of several wells that made up an irrigation system. It was representative of improvements to an established system of wells, irrigation lines and laterals which irrigated 3,000 acres. Additionally, when the U.S. Army took ownership of the property, they constructed the current buildings and structures. This facility is utilitarian in design, materials, and construction technology and is a relatively common property type on military facilities. Therefore, Well 19 is not eligible for the CRHR under Criterion 3.

CRHR Criterion 4: Well 19 does not meet CRHR Criterion 4 because it is unlikely to yield information important in prehistory or history. The design and construction of this type of facility are unlikely to yield significant historical information. Therefore, Well 19 is not eligible for the CRHR under Criterion 4.

6.0 MANAGEMENT RECOMMENDATIONS

As a result of the cultural resource records searches and site visit, one historic period built-environment resource was documented within the Project area. The resource consists of a well, standpipe, and associated pumphouse dating to the early part of the twentieth century. A significance evaluation conducted by PaleoWest indicates that the property does not meet the criteria for listing on the CRHR. As such, it is not considered a historical resource for the purposes of CEQA and no further cultural resource management is recommended for this resource.

An assessment of archaeological sensitivity indicates that the Project area contains a relatively low potential to encounter intact, subsurface archaeological deposits. The lack of reported prehistoric archaeological remains with the Project study area suggests that the property is not highly sensitive for prehistoric archaeological resources. In addition, a review of historical topographic maps and aerial photographs found that aside from the well facility, the Project area is largely undeveloped prior to the 1990s. As such, it is unlikely that historic period archaeological remains dating to the early twentieth century would be encountered within the Project area. Based on this finding, no further cultural resource management is recommended for the Project area.

In the event that potentially significant cultural materials are encountered during Project-related ground-disturbing activities, all work should be halted in the vicinity of the discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource. In addition, Health and Safety Code 7050.5, CEQA 15064.5(e), and Public Resources Code 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of any human remains in a location other than a dedicated cemetery. Finally, should additional actions be proposed outside the currently defined Project area that have the potential for additional subsurface disturbance, further cultural resource management may be required.

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Appendix A.
Native American Coordination

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[**Vacant**]

COMMISSIONER
[**Vacant**]

COMMISSIONER
[**Vacant**]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

April 1, 2021

Roberta Thomas
PaleoWest Archaeology

Via Email to: rthomas@paleowest.com

Re: 21-0157 JCSD Well Site 19 Project, Riverside County

Dear Ms. Thomas:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Riverside County
4/1/2021

Agua Caliente Band of Cahuilla Indians
Jeff Grubbe, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919

Agua Caliente Band of Cahuilla Indians
Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 — Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street — Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com

San Manuel Band of Mission Indians
Jessica Mauck, Director of Cultural Resources
26569 Community Center Drive — Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
jmauck@sanmanuel-nsn.gov

Santa Rosa Band of Cahuilla Indians
Lovina Redner, Tribal Chair
P.O. Box 391820 — Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosa-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 21-0157 JCSD Well Site 19 Project, Riverside County.

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 Cahuilla
San Jacinto, CA, 92581 Luiseno
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Soboba Band of Luiseno Indians
Isaiah Vivanco, Chairperson
P. O. Box 487 Cahuilla
San Jacinto, CA, 92581 Luiseno
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 21-0157 JCSD Well Site 19 Project, Riverside County.

PALEOWEST

T: 626.408.8006
info@paleowest.com

LOS ANGELES COUNTY
517 S. Ivy Avenue
Monrovia, CA 91016

June 16, 2021

Charles Alvarez
Gabrielino-Tongva Tribe
23454 Vanowen Street
West Hills, CA, 91307
Transmitted via email to roadkingcharles@aol.com

RE: Cultural Resource Investigation for the JCSD Well Site No. 19 Project in Jurupa Valley, Riverside County, California

Dear Mr. Alvarez,

On behalf of Albert A. Webb Associates, PaleoWest, LLC (PaleoWest) is conducting a cultural resource investigation in compliance with the California Environmental Quality Act for the Jurupa Community Service District's (JCSD) Well Site No. 19 Project (Project) in Jurupa Valley, Riverside County, California. The proposed Project consists of the removal and replacement of an existing well (Well Site No. 19) on an approximately 1-acre property located at 11362 E Philadelphia Street. The Project area is located on the Guasti, Calif. 7.5' USGS quadrangle map, within Section 5 in T2S/R6W (see attached map).

A cultural resource literature review and records search conducted at the appropriate Information Centers indicates that two historic period archaeological sites have been identified within one mile of the Project area. No prehistoric archaeological resources have been identified within a one mile of the Project area. PaleoWest conducted a reconnaissance survey of the Project area and documented one historic period built environment resource, Well Site No. 19, as a result of the survey.

As part of the cultural resource investigation of the Project area, PaleoWest requested a search of the Native American Heritage Commission's (NAHC's) *Sacred Lands File* on March 18, 2021. The NAHC responded on April 1, 2021 indicating that that no Native American cultural resources were identified within the Project area. However, should your records show that cultural properties exist within or near the Project area (see enclosed map), please contact me at (918) 232-4312 or rthomas@paleowest.com. I will follow-up with a phone call or email if I do not hear from you.

Your comments are very important to us, and to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

Sincerely,

Roberta Thomas, M.A., RPA
Senior Archaeologist
PaleoWest

SAMPLE



PALEO WEST

0 feet 2,000

0 meters 500

1:24,000

USGS 7.5' Quadrangle:
Guasti, CA (1982)
T2S R6W, Sec 5 UTM
Zone 11, NAD 83 SBBM

Project Area

County Boundary

Native American Contact/Response Matrix			
Recommended Contacts (Name and Tribal Affiliation)	Initial Contact	Follow up Attempts	Comments/Notes
Charles Alvarez, Gabrielino-Tongva Tribe	Letter/email dated June 16, 2021	Called August 10, 2021	Called and was sent to voicemail. Mailbox is full and unable to leave a message.
Robert Dorame, Chairperson, Gabrielino Tongva Indians of California Tribal Council	Letter/email dated June 16, 2021	Called August 10, 2021	Spoke with Mr. Dorame and he commented that in the event any prehistoric resources are identified the Tongva Indians of California Tribal Council would like to be notified. If human remains area identified, regardless of the NAHC-assigned MLD, Tongva Indians of California Tribal Council requests to be notified.
Patricia Garcia-Plotkin, THPO Director, Agua Caliente Band of Cahuilla Indians	Letter/email dated June 16, 2021		Email response from Lucy Padilla (Archaeologist, Agua Caliente Band of Cahuilla Indians) on June 29, 2021 stated thata records check of the Tribal Historic preservation Office's cultural registry revealed that this project is not located with the Tribe's Traditional Use Area. Therefore, the Tribe defers to the other tribes in the area.
Sandonne Goad, Chairperson, Gabrielino/Tongva Nation	Letter/email dated June 16, 2021	Called August 10, 2021	Called and left voicemail.
Jessica Mauck, Director of Cultural Resources, San Manual Band of Mission Indians	Letter/email dated June 16, 2021		Email response from Jamie Nord (Cultural Resources Technician for San Manuel Band of Mission Indians) on June 29, 2021 stated that the project is located outside of Serrano ancestral territory and, as such, SMBMI will not be requesting to receive consulting party status with the lead agency or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates.

Native American Contact/Response Matrix			
Recommended Contacts (Name and Tribal Affiliation)	Initial Contact	Follow up Attempts	Comments/Notes
Jill McCormick, Historic Preservation Officer, Quechan Tribe of the Fort Yuma Reservation	Letter/email dated June 16, 2021		Email response form Quechan Historic Preservation Officer on June 28, 2021 state the the Tribe have no comments on the project and that they defer to the more local Tribes and support their decisions on the project.
Anthony Morales, Chairperson, Gabrieleno/Tongva San Gabriel Band of Mission Indians	Letter/email dated June 16, 2021	Called August 10, 2021	Called and spoke with Mr. Morales. He stated that he would have concerns with the project if ground disturbing activities would be taking place in previously undisturbed soils.
Joseph Ontiveros, Cultural Resources Department, Soboba Band of Luiseño Indians	Letter/email dated June 16, 2021	Called August 10, 2021	Called and spoke with Mr. Ontiveros. He stated that existing village sites with placenames are located adjacent to the project and in the surrounding area. He further stated that information regarding tribal and historic resources will be disclosed to the lead agency.
Lovina Redner, Tribal Chair, Santa Rosa Band of Cahuilla Indians	Letter/email dated June 16, 2021	Called August 10, 2021	Spoke with Tribal Office and the Tribe does not have any comments on the project.
Andrew Salas, Chairperson, Gabrieleno Band of Mission Indians - Kizh Nation	Letter/email dated June 16, 2021	Called August 10, 2021	Spoke with Mr. Salas and he requested the project notification letter be emailed again to the same email address for his review. The email was re-sent on August 10, 2021.

Roberta Thomas

From: Quechan Historic Preservation Officer <historicpreservation@quechantribe.com>
Sent: Monday, June 28, 2021 7:13 AM
To: Roberta Thomas
Subject: RE: JCSD Well 19 Project (21-0157)

This email is to inform you that we have no comments on this project. We defer to the more local Tribes and support their decisions on the projects.

From: Roberta Thomas [mailto:rthomas@paleowest.com]
Sent: Friday, June 25, 2021 4:02 PM
To: historicpreservation@quechantribe.com
Subject: JCSD Well 19 Project (21-0157)

Please find the attached letter and accompanying map for the JCSD Well 19 Project in Jurupa Valley, Riverside County, California.

Best,
Robbie

Roberta Thomas | Senior Archaeologist
PaleoWest
rthomas@paleowest.com
918.232.4312
www.paleowest.com

Los Angeles County Office
517 S. Ivy Avenue
Monrovia, CA, 91016

Virus-free. www.avast.com

Roberta Thomas

From: Padilla, Lacy (TRBL) <lpadilla@aguacaliente.net>
Sent: Tuesday, June 29, 2021 4:15 PM
To: Roberta Thomas
Subject: RE: JCSD Well 19 Project (21-0157)

Greetings,

A records check of the Tribal Historic preservation office's cultural registry revealed that this project is not located within the Tribe's Traditional Use Area. Therefore, we defer to the other tribes in the area. This letter shall conclude our consultation efforts.

Thank you,

Lacy Padilla
Archaeologist
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive Palm Springs, CA 92264
D: 760-699-6956 I C: 760-333-5222

From: Roberta Thomas <rthomas@paleowest.com>
Sent: Friday, June 25, 2021 4:00 PM
To: THPO Consulting <ACBCI-THPO@aguacaliente.net>
Subject: JCSD Well 19 Project (21-0157)

Please find the attached letter and accompanying map for the JCSD Well 19 Project in Jurupa Valley, Riverside County, California.

Best,
Robbie

Roberta Thomas | Senior Archaeologist
PaleoWest
rthomas@paleowest.com
918.232.4312
www.paleowest.com

Los Angeles County Office
517 S. Ivy Avenue
Monrovia, CA, 91016

From: Jamie Nord
To: Roberta Thomas
Cc: Ryan Nordness
Subject: RE: JCSD Well Site # 19, Jurupa Valley, Riverside County, California
Date: Tuesday, June 29, 2021 9:04:38 AM

IRONSCALES couldn't recognize this email as this is the first time you received an email from this sender Jamie.Nord@sanmanuel-nsn.gov

Dear Roberta Thomas,

Thank you for contacting the San Manuel Band of Mission Indians (SMBMI) regarding the above-referenced project. SMBMI appreciates the opportunity to review the project documentation, which was received by the Cultural Resources Management Department on June 25th, 2021. The proposed project is located outside of Serrano ancestral territory and, as such, SMBMI will not be requesting to receive consulting party status with the lead agency or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates.

Kind regards,

Jamie Nord
CULTURAL RESOURCES TECHNICIAN
Email: Jamie.Nord@SanManuel-NSN.Gov
O: (909) 864-8933 ext. 3421
M: (909) 649-1186

Internal ext.: 50-3421
26569 Community Center Dr Highland California 92346

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Appendix B.
DPR Forms

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____
Other Listings _____
Review Code _____ Reviewer _____ Date _____

***Resource Name or #:** (Assigned by recorder) JCSD Well 19

P1. Other Identifier: _____

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** San Bernardino

***b. USGS 7.5' Quad** Guasti **T** 2S; **R** 6W; NE ¼ **of** __¼ **of Sec** 5; S.B. **B.M.**

c. Address 11362 E. Philadelphia Street **City** Mira Loma **Zip** 91752

d. UTM: (Give more than one for large and/or linear resources) Zone 11S ; 450840.84 mE / 3765970.83 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)
Assessor's Parcel Numbers (APNs): 156-332-021

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Jurupa Community Services District's (JCSD) Well 19 consists of a well structure, standpipe, pump building, and associated infrastructure on a poured concrete slab. The property includes a single-story building that has a rectangular plan with board formed concrete walls. The building is topped by a concrete flat roof with wide eave overhangs supported by metal pipes. Fenestration consists of a six-lite, fixed metal frame window with a solid metal door which opens to the south. An equipment storage hatch is located on the roof and can be removed via a crane. Pipes extend through the base of the building and descend below grade. The building houses electrical equipment and the pumps. Adjacent to the building is a plastic tank with associated piping. North of the building is a rectangular, tall, board formed concrete structure which functions as a standpipe and provides direct access to the well. It is vented from the roof, a second smaller, concrete standpipe is located to the west. Pipes deposit water into the standpipe from above with a secondary pipe passing through the base and emptying into another open concrete pipe. The entire facility is enclosed by a chain link fence.

***P3b. Resource Attributes:** (List attributes and codes) HP 9-Public Utility Building

***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing



P5b. Description of Photo: (view, date, accession #) Photograph 1. Overview of Well Site No. 19, view facing southwest, June 18, 2021.

***P6. Date Constructed/Age and Source:**
☒Historic ☐Prehistoric ☐Both
Ca. 1942 (California Military Museum 2016)

***P7. Owner and Address:**
Jurupa Community Services Dist.
11201 Harrel Street
Jurupa Valley, CA 91752

***P8. Recorded by:** (Name, affiliation, address)
G. Granger, PaleoWest
517 S. Ivy Avenue
Monrovia, CA 91016

***P9. Date Recorded:** June 18, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: PaleoWest, LLC, "Cultural Resource Investigation in Support of the Jurupa Service District's Well 30 Project, City of Jurupa Valley, Riverside County, California," 2021.

***Attachments:** ☐NONE ☒Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☒Other (List): Sketch Map

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary #_____
HRI #_____

BUILDING, STRUCTURE, AND OBJECT RECORD

NRHP Status Code 6Z

 ***Resource Name or #** (Assigned by recorder) JCSD Well 19

B1. Historic Name: _____
B2. Common Name: JCSD Well 19
B3. Original Use: Well
B4. Present Use: Well
***B5. Architectural Style:** utilitarian
***B6. Construction History:** (Construction date, alterations, and date of alterations) Constructed ca. 1942

***B7. Moved?** X **No** ____**Yes** _____**Unknown Date:** _____
Original Location: _____

***B8. Related Features:** none

B9a. Architect: unknown b. Builder: unknown

***B10. Significance: Theme** _____ **Area** _____
Period of Significance _____ **Property Type** _____ **Applicable Criteria** _____
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

JCSD Well 19, located at 11362 E. Philadelphia Avenue, is not eligible for listing in the California Register of Historical Resources (CRHR). The property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code.

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:** SEE CONTINUATION SHEET

B13. Remarks:

***B14. Evaluator:** Garret Root, M.A., PaleoWest

***Date of Evaluation:** July 2021

(Sketch Map with north arrow required.)

See page 7

(This space reserved for official comments.)

***B10. Significance (continued):**

HISTORIC CONTEXT

Riverside County and Jurupa Valley

Riverside was founded as a town in San Bernardino County in the 1870s and was incorporated in 1883 (Nixon and Beedle 2005). It was located on the south bank of the Santa Ana River, its source of water. Advertised as a "Colony for California," the area was settled as an agricultural area by immigrants coming to the state to partake of the wonders listed in promotional literature (Nixon and Beedle 2005). Riverside became a center of the citrus industry, famous for its Washington navel orange. Competition with the neighboring city of San Bernardino resulted in the formation of the County of Riverside in 1893, with Riverside as the seat of the newly established county.

In addition to citrus, the region and the study property location was also home to thousands of acres of vineyards. The land was owned and cultivated by Charles Stern and Sons, one of two major wine producers of the region and the era. In the 1880s, Charles and his three sons established a winery on the outskirts of Los Angeles, but soon realized as the city grew, his land, used for grape production dwindled. He and his sons formed the Riverside Vineyard Company and purchased 3,000 acres along the San Bernardino County line (part of Mira Loma), renaming the area, Wineville. In 1900, the company sank its first well, one of many and began construction of a 20-mile irrigation system to water the vineyards (Peninou 1965: 55-58). As part of their growing holdings and irrigation system, the company sank Well D-936a in 1917 (study property). It was representative of their growing holding and increasing need for water and irrigation systems (California Department of Public Works 1917).

Mira Loma Quartermasters Depot

Established in 1942, the Mira Loma Quartermasters Depot (MLQD) served as a military storage facility that processed and shipped quartermaster, engineers, medical and signal corps supplies throughout the Pacific theater. The MLQD consolidated operations shared with another, smaller facility located in San Bernardino County (*The Sun San Bernardino Daily* 1942). Located 10 miles north of the city of Riverside, the new MLQD facility consisted of 531 acres between Philadelphia Street on the north, Etiwanda Avenue on the east, Mission Boulevard on the south, and Wineville Road on the west. It centered around a series of large warehouses with administration, training, solider and officer housing, and a hospital. Most of the buildings and structures served common support roles, they included wastewater treatment facility, oil pump house, repair and paint shops, sheds, and oil and water storage structures. The U.S. Army retained ownership of the facility through World War II after which the surplus property was transferred to the United States Air Force (USAF) in 1955. The MLQD was redesignated the Mira Loma Air Force Station (AFS) and continued to function as a storage facility until 1963, at which time it was began to be used for the decommissioning and deconstruction of the non-nuclear components of the Titan I intercontinental ballistic missile. In 1964, the USAF disposed of over 350 acres of land associated with Mira Loma AFS, selling the facilities to the commercial developer Space Center Mira Loma, Inc. The company retained ownership for 20 years before selling half of the property to the County of Riverside Asset Leasing Corporation in 1984 (California Military Museum 2016; NETROnline 1948, 1966, 1994).

The land surrounding the MLQD had been utilized as vineyards and later peach and apricot orchards. The study property had been owned by Charles Stern and Sons with the extant well serving as part of the Riverside Vineyard Company irrigation system. However, none of the infrastructure or buildings appear to date from that time. The current facility, comprising of a pump building, well structure, and standpipe were constructed in 1942 in support of MLQD. The well and pumping infrastructure were part of a larger water system used by the Army and later the Air Force. Located south of the current pump was a large concrete water tank built in about the same time frame. This well and pump equipment would have been used to fill the water tanks which supported depot operations. The tank remained until the mid-1990s when it was razed. It appears there have been numerous upgrades and changes since construction including the addition of chlorination facilities, new pumps, and electrical equipment (California Military Museum 2016; NETROnline 1948, 1966, 1994). The well, building and associated infrastructure were acquired in 1998 by Jurupa Community Services District with the well serving the customers in the surrounding region (JCSD 2021).

Well 19

Well 19 consists of two structures, one building, and associated infrastructure on a poured concrete slab. Archival research indicates the well was originally built in 1917 by Charles Stern and Sons as part of the development of irrigation facilities to supply water for the Riverside Vineyard Company (California Department of Public Works 1917). Following acquisition of the property by the U.S. Army in 1942, the standpipe and associated pump building were constructed in support of the MLQD. The well and pumping infrastructure were part of a larger water system used by the U.S. Army and later the USAF. Specifically, water extracted from the well was pumped approximately 0.2 miles south to a water treatment facility consisting of a water tank and tower. The water treatment facility appears to have been demolished in mid-1990s. Archival research indicates that there have been numerous upgrades and changes since construction including the addition of chlorination facilities, new pumps, and electrical equipment (California Military Museum 2016; NETROnline 1948, 1966, 1994). The well, building and associated infrastructure were acquired in 1998 by JCSD with the well serving the customers in the surrounding region (JCSD 2021).

The United States military constructed infrastructural systems, including Well 19 and the associated water treatment facility, on many of their installations. These infrastructural systems served as a support role to the installation's primary missions. Many buildings and structures in the former quartermaster depot would have fallen within this "Utilities / Infrastructure" property type. These properties were not directly related to any of the primary missions of the base during World War II (1941-1945) and Cold War periods (1946-1991) but were constructed as necessary elements of a functioning army and later air force facility. This water pump and well evaluated under this property type was not used for storage or Titan I disposal missions. Typical buildings and structures within this general supporting storage category range from tanks (water and fuel), pipelines, pump houses, electrical substations, and waste treatment facilities. Although broadly related to the support and operations context of the installation, this property type does not individually, nor as a resource type group, have a direct or important association with a historically significant event or theme within that context (JRP 2000).

CALIFORNIA REGISTER OF HISTORICAL RESOURCES EVALUATION

The following presents an assessment of the historical significance of Well 19 by applying the significance criteria for the CRHR. The purpose of this assessment is to evaluate the eligibility of the resource for listing on the CRHR pursuant to California Public Resources Code 5024 and 5024.5 as a potential historical resource for the purposes of the CEQA.

CRHR Criterion 1: Well 19 does not meet CRHR Criterion 1 for association with events that have made a significant contribution to the broad pattern of history. The property was originally constructed in 1917 to support a large network of irrigation facilities for vineyard operations. While Charles Stern and Sons and their Riverside Vineyard Company (Charles Stern and Sons) were important to the development of wine in the region, this facility was constructed 17 years following the establishment of the company. By the time this well was constructed, the family and the company were already well established, with this facility not representative of the company's early success. Additionally, the current buildings and structures that are present at Well 19 were constructed following acquisition of the property by the U.S. Army and were part of the broader support functions of the base during that time and during the Cold War period. In this context, MLQD's core missions were storage of U.S. Army and USAF property and this facility did not play a significant role in these themes. As part of the water supply for MLQD, the facility served a necessary function but did not support any important operations on the base. In the larger context of army and air force base operations in California and nationwide during this period, the utility / infrastructure function of this facility did not play a direct or important role in significant historic events or trends. Therefore, Well 19 is not eligible for the CRHR under Criterion 1.

CRHR Criterion 2: Well 19 does not meet CRHR Criterion 2 for any direct associations with the productive lives of persons important in local, state, or national history. While the well was originally constructed by the company, Charles Stern and Sons, it does not have any direct association to the individuals or their achievements. Further, research has yielded no information to indicate that any persons of historical significance are specifically associated

with this facility during its use by the army, air force, or subsequent owners. Therefore, Well 19 is not eligible for the CRHR under Criterion 2.

CRHR Criterion 3: Well 19 does not meet CRHR Criterion 3 for embodying the distinctive characteristics of a type, period, and method of construction, or as the work of a master, or as having high artistic value. When originally constructed, it was one of several wells that made up an irrigation system. It was representative of improvements to an established system of wells, irrigation lines and laterals which irrigated 3,000 acres. Additionally, when the U.S. Army took ownership of the property, they constructed the current buildings and structures. This facility is utilitarian in design, materials, and construction technology and is a relatively common property type on military facilities. Therefore, Well 19 is not eligible for the CRHR under Criterion 3.

CRHR Criterion 4: Well 19 does not meet CRHR Criterion 4 because it is unlikely to yield information important in prehistory or history. The design and construction of this type of facility are unlikely to yield significant historical information. Therefore, Well 19 is not eligible for the CRHR under Criterion 4.

***B12. References (continued):**

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1917 Division of Water Resources. Well Log. D-936a. State of California.

California Governor's Office of Planning and Research
2015 *CEQA: California Environmental Quality Act, Statutes and Guidelines*. State of California, Sacramento, California.

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1942 *The San Bernardino Daily Sun*. "Stafford Transferred to Big Depot at Mira Loma."

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1965 *A History of the Los Angeles Viticulture District*. Nomis Press for the Wine Librarians Association, Los Angeles.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

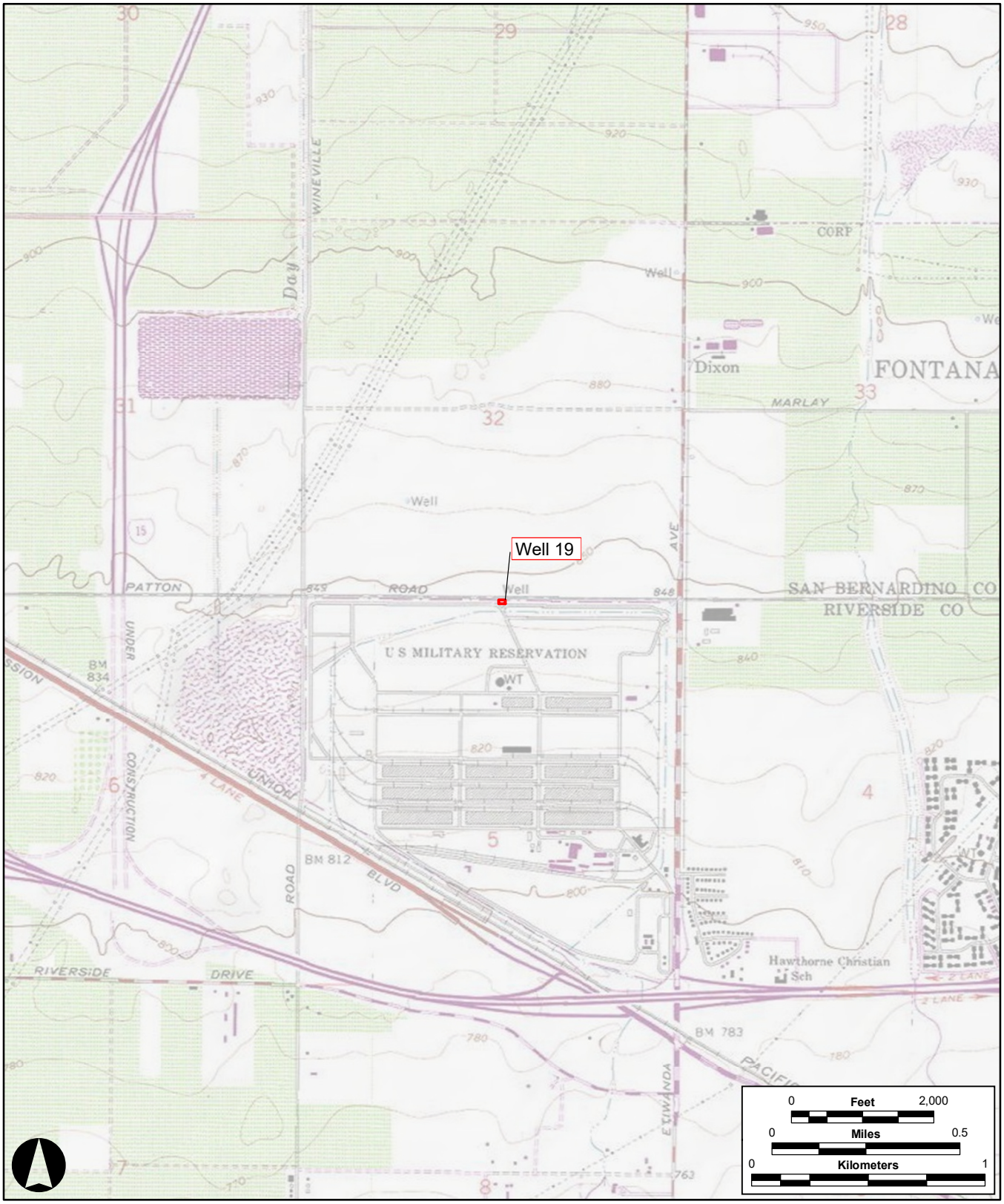
LOCATION MAP

Primary
HRI

Trinomial

Page 6 **of** 7 **Resource Name or #:** JCSD Well 19 **Scale:** 1:24,000

Map Name: Guasti, CA 7.5' USGS Quad. **Date:** 2021



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary #
HRI#
Trinomial

***Resource Name or #:** JCSD Well 19

***Drawn by:** B. Spelts

***Scale:** 1:1,000

***Date of map:** July 2021



*Required information

APPENDIX E

Energy Tables

Table 1 – Total Construction-Related Fuel Consumption

Well 30 Project

Fuel	Consumption	
Diesel		
On-Road Construction Trips[1]	1,832	Gallons
Off-Road Construction Equipment[2]	43,208	Gallons
Diesel Total	**45,040**	**Gallons**
Gasoline		
On-Road Construction Trips[1]	3,130	Gallons
Off-Road Construction Equipment[3]	-	Gallons
Gasoline Total	**3,130**	**Gallons**

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod for construction in 2022 and fleet-average fuel consumption in gallons per mile from EMFAC2017 web based data for South Coast Air Basin. See Table 2 for calculation details.
2. Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (HP)-hour, based on SCAQMD CEQA Air Quality Handbook, Table A9-3E.
3. All emissions from off-road construction equipment were assumed to be diesel.

Table 2 – On-Road Construction Trip Estimates

Well 30 Project

Trip Type	Trips	Trip length	Vehicle Miles Traveled (VMT)	Fuel Efficiency	Annual Fuel Usage[1]	
	(trips)	(miles)	(miles)	(mpg)	(Fuel)	(gallon)
Worker[2,3]	5,950	14.7	87,465	27.3	Gasoline	3,130
Vendor[4]	2,180	6.9	15,042	8.7	Diesel	1,826
Hauling[5]	2	20	40	6.7	Diesel	6

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod output for construction and fleet-average fuel consumption in gallons per mile from EMFAC2017 web based data for 2022 in South Coast Air Basin.
2. Worker trips were assumed to be 100% gasoline powered vehicles.
3. Per CalEEMod, worker Trips were assumed to be 50% LDA, 25% LDT1, and 25% LDT2.
4. Vendor trips were assumed to be 50% MHDT and 50% HHDT, split evenly between the MHDT and HHDT construction categories.
5. Per CalEEMod, hauling trips were assumed to be 100% HHDT.

Table 3 – Annual Energy Consumption from Operation

Well 30 Project

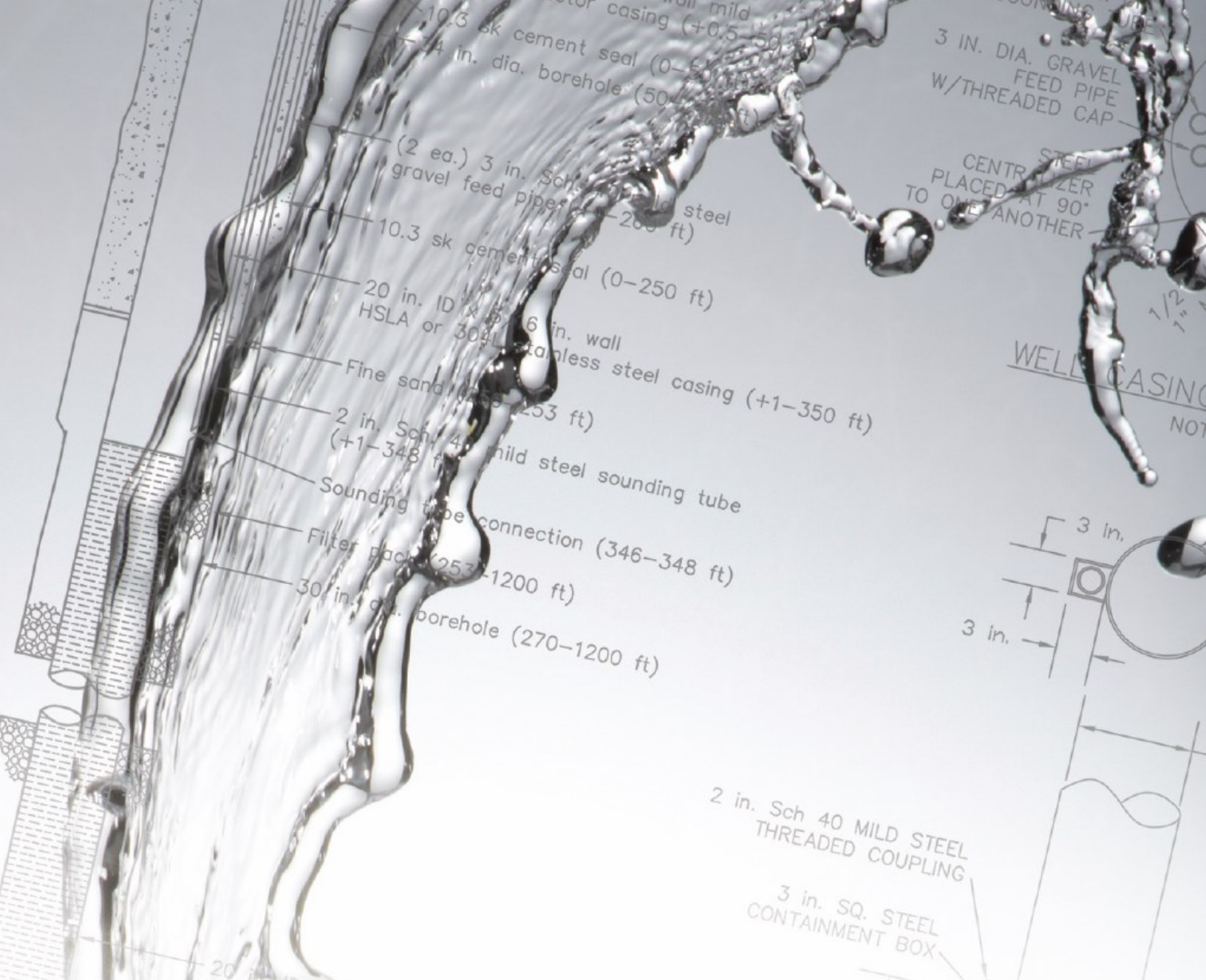
Fuel Type	Energy Consumption	Units
Electricity		
Well[1]	675	MWh/year
Total Electricity	**675**	MWh/year

Notes:

1. Represents estimated increase in electricity use from new well.

APPENDIX F

Geohydrologic Analysis of Future Groundwater Production



DRAFT

UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION IN JCSD

PREPARED FOR:

Jurupa Community Services District

April 21, 2020

PREPARED BY:

GEOSCIENCE Support Services, Inc., **Ground Water Resources Development**

P.O. Box 220, Claremont, CA 91711 | P: 909.451.6650 | F: 909.451.6638 | www.gssiwater.com

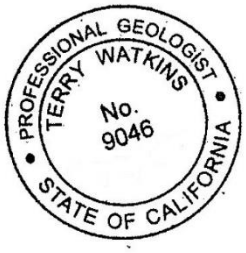
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THIS DOCUMENT HAS BEEN CHECKED FOR COMPLETENESS, ACCURACY, AND CONSISTENCY BY THE FOLLOWING PROFESSIONALS:



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JURUPA COMMUNITY SERVICES DISTRICT
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION IN JCSD

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JURUPA COMMUNITY SERVICES DISTRICT
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION IN JCSD

1.0 INTRODUCTION

1.1 Purpose and Scope

Geoscience Support Services, Inc. (Geoscience) has been tasked by Jurupa Community Service District (JCSD) with performing an updated geohydrologic analysis of future groundwater production from JCSD wells. Figure 1 shows the locations of JCSD wells and other surface features within the study area. JCSD would like to assess a proposed seasonal groundwater production of 14,000 acre-feet per year from its wells, as well as assess projected water qualities, total dissolved solids (TDS) and nitrate as nitrogen (nitrate), over the course of future operations. Geoscience previously prepared a geohydrologic analysis of future groundwater production in 2007 entitled Geohydrologic Analysis of Potential Future Groundwater Production in the Jurupa Community Services District (Geoscience, 2007), which was supplemented with an update, Supplemental Analysis of Future Groundwater Production in the Jurupa Community Services District in 2010 (Geoscience, 2010). The geohydrologic analysis here-in includes creating a new model using the latest available data on historical production and water quality, as well as incorporating enhancements from the latest Integrated Santa Ana River (SAR) Model.

This updated geohydrologic analysis includes the considerations of several important developments occurred after the 2010 assessment. The proposed pumping schedule will produce approximately 14,000 acre-feet during the summer months (i.e., April to September), and JCSD plans to rely on water from the Chino Desalter Authority during the winter months (October to March), which should reduce the deep drawdown conditions predicted in the previous study. Also, water quality has continued to change, and levels of TDS and nitrate in JCSD production wells have risen in the last 9 years. An updated model is needed to capture these changes. In addition, the Storage Framework Investigation Final Report (WEI, 2019) was not incorporated in previous Geoscience studies. These factors motivate the development of this updated assessment of projected groundwater pumping in the JCSD.

1.2 Integrated SAR Model

Since previous studies in 2007 and 2010, Geoscience has developed the Integrated SAR Model for a group of stakeholders in the basin, including San Bernardino Valley Municipal Water District, Western Municipal Water District, Inland Empire Utilities Agency, Orange County Water District, Riverside Public Utilities, U.S. Geological Survey (USGS), U.S. Fish and Wildlife Service, and California Department of Fish and Wildlife Improvements. The Integrated SAR Model include the development of unified model layers based on regional lithologic modeling, the addition of streamflow and evapotranspiration simulation capability, and the ability to directly simulate underflow between adjacent groundwater basins. It is a five-layer groundwater model with a model cell size of 102.5 ft by 102.5 ft and was calibrated for the period from 1966 to 2016 with a monthly stress period.

2.0 LOCAL CHINO BASIN GROUNDWATER MODEL

2.1 Summary

A Local Chino Basin Groundwater Flow Model was cut and developed from the Integrated SAR Model described in Section 1.2. In additional, a solute transport model was added to the flow model to estimate the future TDS and nitrate concentrations. Both the flow and solute transport models were described in detail below.

2.2 Description of Model Codes

2.2.1 MODFLOW

MODFLOW is a block-centered, finite difference groundwater flow model published by the USGS (McDonald and Harbaugh, 1988). MODFLOW is modular in that all modules interface using a standard format, and new physical processes can and have been added as modules or "packages" to the flow model. MODFLOW is widely used, versatile, industry standard software. MODFLOW-NWT, the Newton formulation of MODFLOW-2005, was used for the Integrated SAR Model. The Newton-Raphson solver is well suited for solving problems involving drying and rewetting nonlinearities of the unconfined groundwater flow equation (Niswonger et al., 2011). The modules or packages used include Basic (BAS), Evapotranspiration (EVT), Streamflow Routing (SFR), Upstream Weighting (UPW), Recharge (RCH), Newton Solver (NWT), Horizontal Flow Barrier (HFB), Multi-Node Well 2 (MNW2), Well (WEL), Drain (DRN) and Time-Varying Constant-Head Boundary (CHD). The input data for the MODFLOW-NWT modules is based on a monthly basis (i.e., monthly stress periods) for 25 years. The monthly stress periods allow the model to capture the seasonal aspects of the proposed pumping schedule, as well as seasonally variable fluxes including mountain front runoff, areal recharge, evapotranspiration and streambed percolation.

2.2.2 MT3DMS and MT3D-USGS Solute Transport Model

MT3D-USGS is a USGS updated version of the MT3DMS, and it includes new solute transport modeling capabilities to accommodate flow terms calculated by MODFLOW packages that were previously unsupported by MT3DMS and to provide greater flexibility in the simulation of solute transport and reactive solute transport (Bedekar, V., and Morway, E.D, 2016). For the purpose of this study, since MT3D-USGS was used to simulate the TDS and nitrate concentrations. The flow in and out of each model cell calculated by the flow model is read by MT3D-USGS and used to track concentrations of TDS and nitrate.

2.2.3 Model Pre- and Post- Processors

A variety of approaches are used to assemble, process and prepare model input, as well as process output from the MODFLOW and MT3D flow and transport models. Model input pre-processing is generally conducted using the following tools:

- GWVistas

- Geographic Information Systems (GIS) software
- Petrel® lithologic modeling software
- Proprietary software developed by Geoscience

The Integrated SAR model was used as a basis to develop and populate a local model of the Chino Basin, including the JCSD wellfields and area of interest for this project. Additionally, groundwater pumping data and water quality data in JCSD wells received in a variety of formats, including pdf and Excel formats, were processed to develop the input for the MODFLOW flow model and MT3D solute transport model.

2.3 Model Size and Grid Geometry

Figure 2 shows the boundaries for both the Integrated SAR Model and the local Chino Basin Model. The local model domain encompasses a total area of 342,957 acres. The total active model area in this domain is 154,980 acres. The model grid is made up of cells with length and width of 102.5 ft x 102.5 ft. The model grid is rotated 27.05 degrees clockwise to minimize the number of inactive cells and maximize efficiency. The aquifer is subdivided into five model layers. The finite-difference grid consists of 1,292 rows in the northeast to southwest direction and 1,100 columns in the northwest to southeast direction for a total of 1,421,220 cells per layer, or 4,263,600 cells total.

2.4 Boundary Conditions

The results from the Scenario 2a Baseline model run from the Integrated SAR were used to establish time-varying constant head boundaries at the interface with the Riverside and Temescal groundwater basins that are consistent with the head solution from the larger Integrated SAR model. Boundary conditions for the flow model are shown in Figure 3.

2.5 Aquifer Characteristics

2.5.1 Layer Elevations

The conceptual model layers are mapped in the table below. Previous models in this area have been conceptualized into two or three model layers. The Integrated SAR Model is made up of five model layers with a unified conceptual model for model layers developed with input from the Technical Advisory Committee including the USGS. In Chino Basin, previous model layers 1 and 3 were subdivided into Layers 1 and 2 and Layers 4 and 5 respectively in the Chino Basin model. Layer 1 was subdivided with the intention of capturing additional vertical resolution near the Santa Ana River. Model layer decision making was informed with the use of a Petrel ® lithologic model of the Upper Santa Ana groundwater basin. Model layer cross-sections and lithologic model are presented in additional detail in the Integrated SAR Model documents (Geoscience, 2020).

Table 2-1. Hydrogeologic Units and Assigned Model Layers

Chino/Temescal Basin		
Geologic Unit	**Hydrogeologic Unit**	**Model Layer**
Very Young and Young Axial-Channel and Wash Deposits[1] (Holocene)	Shallow Aquifer	1
Very Young and Young Alluvial Deposits[2] (Holocene)		
Old and Very Old Alluvial Deposits[3] (Pleistocene)		2
	Upper Deep Aquifer	3
	Lower Deep Aquifer	4
Fernando Group (Pleistocene)		5
Puente Formation (Miocene) ?	Consolidated	6
Granitic Rock	Basement	7
Source: WEI, 2015		

[1] Including alluvial-valley deposits.

[2] Including colluvium, eolian deposits, talus, and landslide deposits.

[3] Including colluvium, eolian deposits, talus, landslide deposits, and regolith.

2.5.2 Hydraulic Conductivity

Hydraulic conductivity was parameterized using the lithologic model developed for the Integrated SAR model and pumping test and specific capacity data from wells in the Chino Basin. Initial horizontal hydraulic conductivity distribution was computed using a thickness-weighted average of hydraulic conductivities of each of fifteen lithologic types, using the following equation:

$$F1\ K1 + F2\ K2 + \ldots\ldots + FnKn$$

Where:

F = the fraction of each model cell of a given lithologic type,
K = the average estimated hydraulic conductivity for that lithologic type.

The hydraulic conductivity of each lithologic type was estimated based on literature ranges (Halford and Kuniansky, 2002) and adjusted using a best-fit approach to match pumping test data from the Chino Basin. Once the initial parameter distribution was computed, zonal calibration to water levels and streamflow was conducted and history matching was used to prepare the calibrated hydraulic conductivity distribution. Calibrated values of horizontal and vertical hydraulic conductivities are shown in Figure 4 and Figure 5, respectively.

2.5.3 Effective Porosity and Storativity

Specific yield and storativity values were assigned to the model grid based on layer type (unconfined versus confined) and understanding of the regional aquifer system. Values were subsequently adjusted based on a zonal calibration to match water levels using the process of history matching. Calibrated valued of specific yield and storativity are shown in Figures 6 and 7, respectively.

2.5.4 Conductance of Horizontal Flow Barriers

The Central Avenue Fault, Riley Barrier, and the west branch of the Rialto-Colton Fault were modeled with the Horizontal Flow Barrier (HFB) package. Low values of hydraulic conductivity were assigned along these faults.

2.6 Recharge and Discharge

2.6.1 General

Recharge and discharge components in the Chino Basin Model area include the following fluxes:

- Recharge:
  - Deep Percolation of Precipitation and Applied Water
  - Artificial Recharge
  - Mountain Front Runoff from Chino Hills, Jurupa Mountains, Pedley Hills, La Sierra Hills and Santa Ana Mountains
  - Underflow Inflow from Six Basins, Cucamonga Basin, Rialto-Colton Basin, North Riverside Basin, Arlington Narrows, and Riverside Narrows
  - Streambed Percolation

- Discharge:
  - Groundwater Pumping (Pool 1: Agricultural)
  - Groundwater Pumping (Pool 2 & 3: Non-Agricultural and Appropriator)
  - Groundwater Pumping (Chino Basin Desalter Authority; CDA)
  - Evapotranspiration
  - Rising Water Discharge to Streamflow

The modules or packages used to simulate various groundwater recharge and discharge components include Evapotranspiration (EVT), Streamflow Routing (SFR), Recharge (RCH), Multi-Node Well 2 (MNW2), Well (WEL), Drain (DRN) and Time-Varying Constant-Head Boundary (CHD). A table showing how each of these MODFLOW packages were used to simulate each of the flux terms in the flow model is shown in Table 2-1.

Table 2-2. Recharge and Discharge Terms for the Local Chino Basin Model

Term		Model Package
Recharge	Recharge from Mountain Front Runoff	Well Package
	Areal Recharge from Precipitation	Recharge Package
	Streambed Percolation	Streamflow Routing Package
	Artificial Recharge	Well Package
	Anthropogenic Return Flow	Well Package and Recharge Package
	Underflow Inflow	Well Package
Discharge	Evapotranspiration	Evapotranspiration Package
	Groundwater Pumping	Well Package, MNW2 Package
	Rising Water Discharge to Streamflow	Streamflow Routing Package and Drain

2.6.2 Streamflow Routing Package

The Streamflow Routing (SFR) package was used to simulate streamflow and streambed percolation along the Santa Ana River. The Upper Santa Ana River Model was developed for SAWPA for the Waste Load Allocation Model update. The watershed model is described in the Integrated SAR Model TM1: Model Integration (Geoscience, 2018). The watershed model was developed using HSPF and used to simulate runoff along the Upper Santa Ana River. The watershed model was used to parameterize inflow to the SFR package for MODFLOW, including tributary inflow and runoff. The SFR package is made up of 1563 segments that follow the Santa Ana River and tributaries in Chino Basin, downstream from MWD Crossing to Prado Dam. For the baseline scenario here, updated land use and wastewater discharge assumptions were used to develop streamflow.

2.6.3 Recharge Package

The Recharge (RCH) package includes deep percolation from precipitation and anthropogenic return flow, which depends on estimated future water use. Areal recharge from precipitation was estimated using the output from the HSPF watershed model. The HSPF model was run with the most recent land-use information for the Chino Basin using precipitation from the base period hydrology from 1966-1990, which closely matches the long-term average precipitation and includes wet and dry hydrologic cycles. Anthropogenic return flow was updated using projected groundwater pumping information in each sub-watershed in the Chino Basin.

2.6.4 Well Package

The Well (WEL) package is used to simulate groundwater pumping from non-JCSD wells, which were simulated using the MNW2 package. The WEL package was also used to simulate mountain front runoff and underflow into the Chino Basin area along the model boundaries from Chino Hills, Six Basins, Cucamonga Basin, Rialto-Colton Basin, Jurupa Mountains, Pedley Hills, La Sierra Hills and the Santa Ana Mountains.

2.6.5 Drain Package

The Drain (DRN) package is used to simulate groundwater discharge to Prado Basin near Prado Dam. Drain elevations were set using land surface elevations. Shallow groundwater discharges out of the groundwater system and becomes surface water discharge at Prado Dam.

2.6.6 Evapotranspiration Package

The evapotranspiration (EVT) boundary condition was established based on vegetation mapping and a riparian vegetation study conducted during the development of the Integrated SAR Model. The EVT package simulates groundwater ET based on simulated groundwater elevation. ET rate varies between zero ET at and below the ET extinction depth up to a maximum ET rate at land surface. Recent vegetation mapping was used to estimate the vegetation types for the baseline condition scenario used here. Parameters including extinction depth and evapotranspiration rate were established based upon a literature review of riparian species mapped. A table of extinction depths is located below in Table 2-3. Extinction depths were selected based on literature guidance for riparian vegetation types (Maddock et al., 2012). Figure 8 shows the location of model cells, where ET was simulated. For more information on the development of the ET package, the reader is referred to documentation on the development of the Integrated SAR Model, including TM1: Model Integration (Geoscience, 2018).

Table 2-3. Evapotranspiration Extinction Depths

Vegetation Type/Classification		Extinction Depth [ft]
Aspen Classification	Deep-rooted riparian	16.40
	Shallow-rooted riparian	4.92
	Transitional riparian	20.00
	Obligate wetland	3.28
	Open water	3.28
	Unvegetated sandy wash	3.28
	Giant Reed	3.28
	Managed Wetland	3.28
Additional Riparian Zones	Chino Riparian (WEI mapping)	16.40
	Riparian (BGW Shallow Groundwater Area)	16.40
	SBBA Riparian (Matti and Carson)	16.40
	Yucaipa Riparian (Geoscience)	16.40
	No ET	3.28

2.6.7 Time-Varying Constant Head Package

The time-varying constant head boundaries (CHD) were generated using the head results (.hds file) from the Scenario 2A Baseline run of Integrated SAR model along the boundaries of the Chino Basin with the Riverside and Temescal Basins. The CHD package simulates the underflow that was simulated explicitly in the Integrated SAR model and forms the link between the Integrated SAR model simulation and the local Chino Basin model used here-in.

3.0 PREDICTIVE BASELINE SCENARIO ASSUMPTION

3.1 Description of Baseline Scenario

One predictive Baseline Scenario were developed in the context of anticipated future changes in groundwater pumping from JCSD wells, and artificial recharge within the Chino Basin. The purpose of this Baseline Scenario model run is (1) to evaluate the future groundwater production using an updated projected production of 14,000 acre-ft/year and (2) to address a steady increase in TDS and Nitrate levels of groundwater in recent years. Detailed assumptions for this Baseline Scenario are discussed below.

3.2 Major Model Assumptions from the Integrated SAR Model

Since the local Chino Basin Model was exported from the Integrated SAR Model, most of the major assumptions are similar to the ones used in the Integrated SAR Model predictive runs including:

- Transient calibrated model-calculated groundwater elevations for Layer 1 through Layer 5 at the end of December 2016 were used as initial heads.
- The recorded hydrology (i.e. precipitation, streamflow, etc.) for the period from 1966 through 1990 was selected as the hydrologic base period and was repeated for the predictive period from 2020 through 2044.
- Future artificial recharge, wastewater discharges to the Santa Ana River, and water levels for the time-varying constant head boundary of the local Chino Basin Model were developed from the Integrated SAR Model Scenario 2a Baseline Run.

Figure 1 depicts the locations for artificial recharge and wastewater discharge within the study area. Tables 1 through 2 list the assumed artificial recharge and wastewater discharge, respectively.

3.3 Groundwater Pumping Assumptions for JCSD Wells

The Chino Basin Watermaster and their consultant, Wildermuth Environmental, Inc. published the Storage Framework Investigation Final Report in 2019. Projected annual production from 2020 to 2045 for each producer including JCSD are included (WEI, 2019). Based on the annual project production, GEOSCIENCE worked closely with JCSD to develop a realistic monthly pumping assumption for each JCSD well to be used in the Baseline Scenario model run. In general, the production was proportionally assigned to each well based on the average production over the last three years (i.e., 2017 through 2019) with some minor adjustment approved by JCSD. In addition, based on discussions with JCSD staff, all production from JCSD wells is assumed to occur between April and September of each year. The annual pumping is assumed to be 10,524 acre-ft/year for 2020, 12,310 acre-ft/year for 2025, and 14,310 acre-ft/year for 2030 and after. Detailed pumping assumptions were included in Table 3.

3.4 Initial Concentrations for TDS and Nitrate

The initial concentrations (i.e., assumed concentrations at the beginning of the modeling period) for TDS and Nitrate were developed based on ambient water quality contours from the "Re-computation of Ambient Water Quality in the Santa Ana River Watershed for the Period 1996 to 2015," published by Santa Ana Watershed Project Authority (SAWPA) and their consultant, Daniel B. Stephens & Associates, Inc. (DBS&A, 2017). The initial concentration contours were further adjusted by looking at recent water quality sampling data at JCSD wells provided by SAWPA and JCSD. Particularly, vertical variation of TDS and Nitrate concentrations in the specific aquifers was also evaluated using available data to assign representative TDS and Nitrate concentrations for aquifers or model layers. TDS and nitrate concentration values were interpolated using GIS from the adjusted concentration contours and values were assigned to each of the model cells. Figures 9 and 10 illustrate the initial concentrations for TDS and nitrate, respectively.

3.5 TDS and Nitrate Mass Loading

In order to characterize the temporal and spatial variation of TDS and Nitrate concentrations at JCSD wells, test model runs were conducted to identify the average TDS and nitrate mass loading in the JCSD area. By applying the identified average TDS and nitrate mass loadings, the Baseline Scenario model run was able to match the historical increasing trend of the concentrations observed in JCSD wells.

4.0 PREDICTIVE BASELINE SCENARIO RESULTS

4.1 Groundwater Elevations

Model-predicted groundwater level contours in 2044 are provided on Figure 11. Groundwater elevations within the JCSD service area range from approximately 720 feet, above mean sea level (ft amsl) to 500 ft amsl in 2044. The groundwater flow direction in this area is generally northeast to southwest.

Hydrographs for selected JCSD wells are included on Figures 12 and 13. As shown, model-predicted change in groundwater levels between 2020 and 2044 under Baseline Scenario is not significant at the existing JCSD wells. Groundwater levels within the JCSD's Service Area are predicted to decline by approximately 5 to 10 feet as shown on Figure 14. Appendix A includes detailed hydrographs for all the JCSD wells.

4.2 JCSD Production

Results of model-calculated groundwater pumping in JCSD wells between 2020 and 2044 under Baseline Scenario are presented in Appendix A, and are summarized in Table 4. Total annual pumping from the 22 existing JCSD wells ranges from approximately 10,520 to 14,307 acre-ft/year with an average of 13,453 acre-ft/year over the 25-Year predictive period. This is very similar to the pumping assumption as the model input. The MNW2 package restricts groundwater production in wells if drawdown falls below the extraction limits of existing well infrastructure. The flow model results indicate that JCSD will be able to extract the desired water volumes from the wellfield.

4.3 TDS and Nitrate-N Concentrations in JCSD Wells

Model-simulated TDS and nitrate concentrations in 2044 are plotted as contours in Figures 15 and 16, respectively. As shown, concentrations within JCSD Service Area range from 300 mg/L to 1,200 mg/L for TDS, and 5 mg/L to 35 mg/L for nitrate in 2044. The average TDS concentration at JCSD wells is approximately 760 mg/L in 2044, with the maximum concentrations of 1,300 mg/L at Well 23. The flow weighted average TDS concentrations for the total JCSD production is 695 mg/L in 2044. The average nitrate concentration at JCSD wells is 14 mg/L in 2044, with the maximum concentrations of 21 mg/L at Well 23. The flow weighted average nitrate concentrations for the total JCSD production is 11 mg/L in 2044.

Chemographs for JCSD wells are included in Appendix B for TDS and Appendix C for Nitrate. The average increases in TDS and nitrate concentrations at JCSD wells are approximately 170 mg/L and 2 mg/L,

respectively, over the 25-year model simulation period. For TDS concentrations, the maximum increase is approximately 360 mg/L found at Well 27, following by the increase of 260 mg/L found at Well 25. Minimal level of increase for TDS concentrations were found at Wells 8 and 28. For Nitrate concentrations, the maximum increase is approximately 6 mg/L found at Well 16, following by the increase of 5 mg/L found at Wells 15 and 27. Minimal level of increase for nitrate concentrations were found at Wells 6, 8, 14 and 28.

5.0 FINDINGS AND RECOMMENDATIONS

The following provides a summary of our findings based on the results from Baseline Scenario model run.

- Model-predicted change in groundwater levels between 2020 and 2044 under Baseline Scenario is not significant within the JCSD Service Area. A local drawdown of 5 to 10 feet is anticipated over the 25-year simulation period, which result in groundwater elevations ranging from approximately 720 ft amsl to 500 ft amsl in 2044.

- Model-calculated pumping at all the JCSD wells were consistent with the Baseline Scenario pumping assumption and the model input over the 25-year simulation period. The calculated total annual pumping from the existing 22 JCSD wells ranges from 10,520 to 14,307 acre-ft/year with an average of 13,453 acre-ft/year.

- Results from solute transport model run indicate that concentrations within JCSD Service Area range from 300 mg/L to 1,200 mg/L for TDS, and 5 mg/L to 35 mg/L for nitrate in 2044. The flow weighted average concentrations for the total JCSD production is 695 mg/L for TDS, and 11 mg/L for nitrate in 2044. Maximum concentrations for both TDS and nitrate appear at Well 23.

- Over the 25-year model simulation period, the average increase in TDS concentration is approximately 170 mg/L, with maximum increase found at Well 27, and minimal increase observed at Wells 8 and 28.

- Over the 25-year model simulation period, the average increase in nitrate concentration is approximately 2 mg/L, with maximum increase found at Well 16, and none or minimal level of increase observed at Wells 6, 8, 14 and 28.

- By implementing the operation strategy under Baseline Scenario conditions, JCSD will be able to produce the same amount of groundwater as current planning without causing significant local decrease in groundwater elevations. However, the TDS and nitrate concentrations at most of JCSD existing wells will increase throughout the period.

Based on the findings mentioned above, the following action items were recommended:

- High concentrations were observed at Wells 6, 22 and 23 for TDS (over 1,000 mg/L), and at Well 23 for nitrate (over 20 mg/L) in the past two years (2018 to 2019). By considering the worst-case scenario, GEOSCIENCE conservatively estimates the future TDS and nitrate concentrations at these wells to be within the same high-level range. This causes increases in concentrations at nearby JCSD wells in the future. However, the observed high concentrations at Wells 6, 22 and 23 could be a one-time high loading event, and the concentrations may drop to the average historical level after the event. GEOSCIENCE recommends frequent sampling and monitoring at these wells to further evaluate the concentration changing pattern at these wells.

- The developed local groundwater model is an excellent tool for helping JCSD evaluate future operational strategies and site new wells. After JCSD collecting more water quality data as recommended above, GEOSCIENCE suggests another two or three scenario runs to find out the optimal operational strategy for existing JCSD wells.

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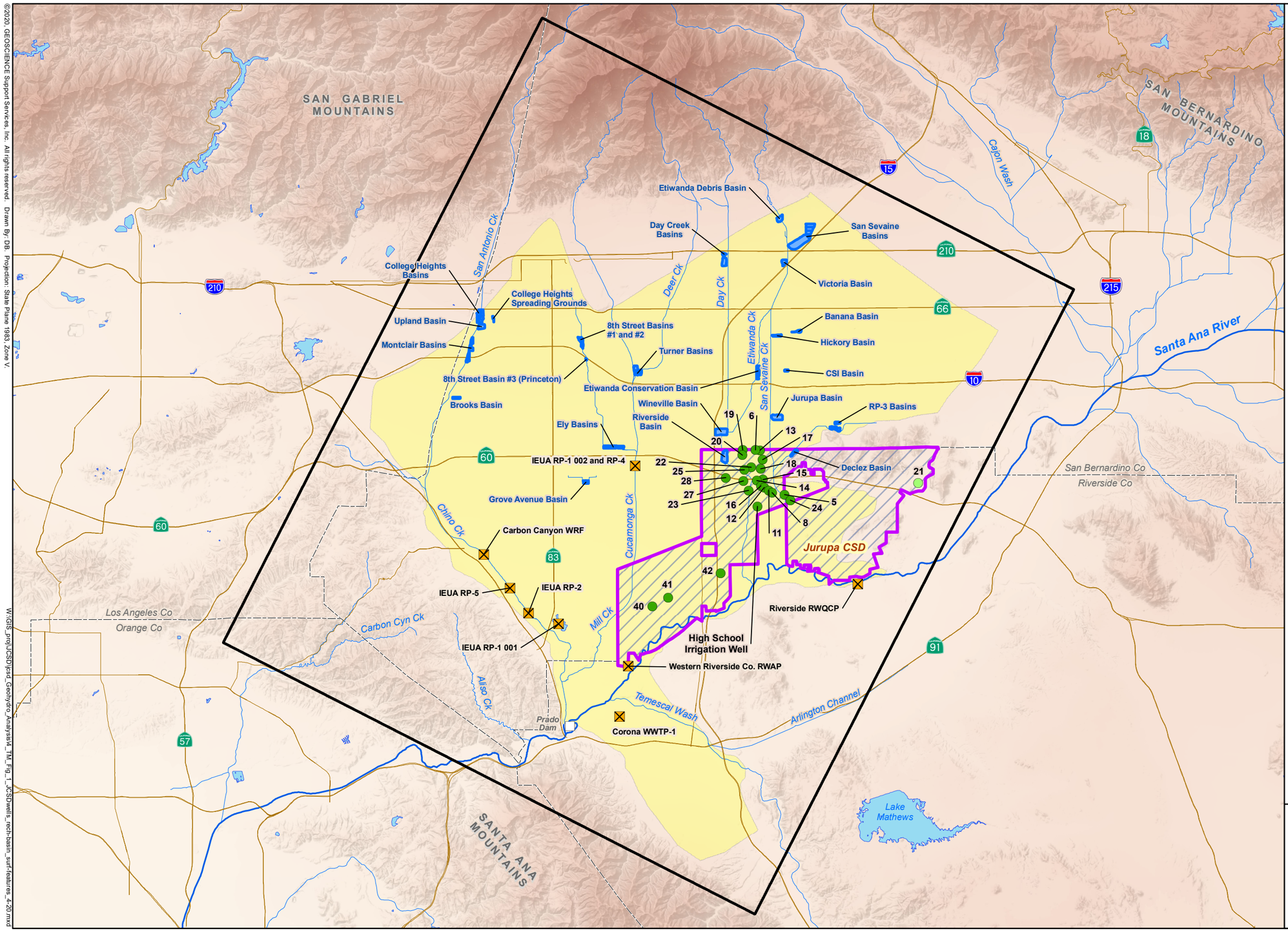
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FIGURES

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JCSD WELL LOCATIONS, SURFACE FEATURES AND ARTIFICIAL RECHARGE FACILITIES

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FIGURE 1

JURUPA COMMUNITY SERVICES DISTRICT

UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

GEOSCIENCE

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SAN GABRIEL MOUNTAINS

SAN BERNARDINO MOUNTAINS

SANTA ANA MOUNTAINS

1

1

j-direction --->

<---i-direction

1100

1292

San Antonio Ck

Deer Ck

Day Ck

Etiwanda Ck

San Sevaine Ck

Cucamonga Ck

Chino Ck

Mill Ck

Aliso Ck

Prado Dam

Temescal Wash

Arlington Channel

Santa Ana River

Lake Mathews

San Bernardino Co

Riverside Co

Los Angeles Co

Orange Co

210

66

83

15

10

215

18

60

91

102.5 ft

102.5 ft

102.5 ft x 102.5 ft cell size

EXPLANATION

Local Chino Basin Groundwater Model Boundary

Integrated Santa Ana River Model Boundary

Jurupa Community Services District Boundary

Dam Location

N

0 3 6

Miles

INTEGRATED SANTA ANA RIVER MODEL BOUNDARY

Jurupa CSD

LOCAL CHINO BASIN GROUNDWATER MODEL BOUNDARY

Location within Integrated SAR Model Area

GROUNDWATER MODEL BOUNDARY AND MODEL GRID LAYOUT

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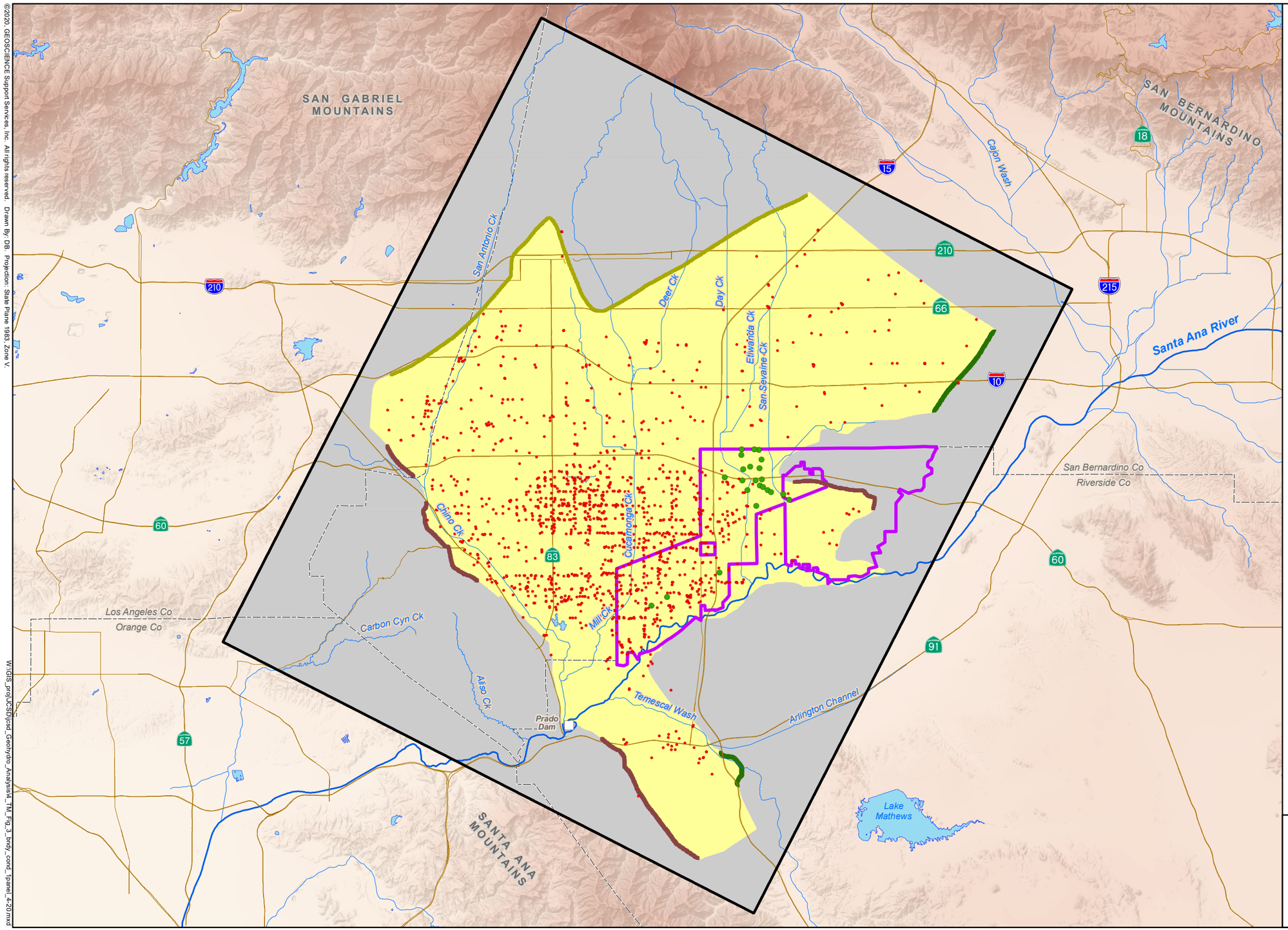
JURUPA COMMUNITY SERVICES DISTRICT

UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

FIGURE 2

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EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Active Model Area
- General-Head Boundary
- Inactive Model Area

Well (Specified Flux)

- Well Simulating Mountain Front Recharge
- Pumping Well
- Well Simulating Underflow Inflow
- JCSD Pumping Well
- Dam Location

N

0 3 6

Miles

MODEL BOUNDARY CONDITIONS

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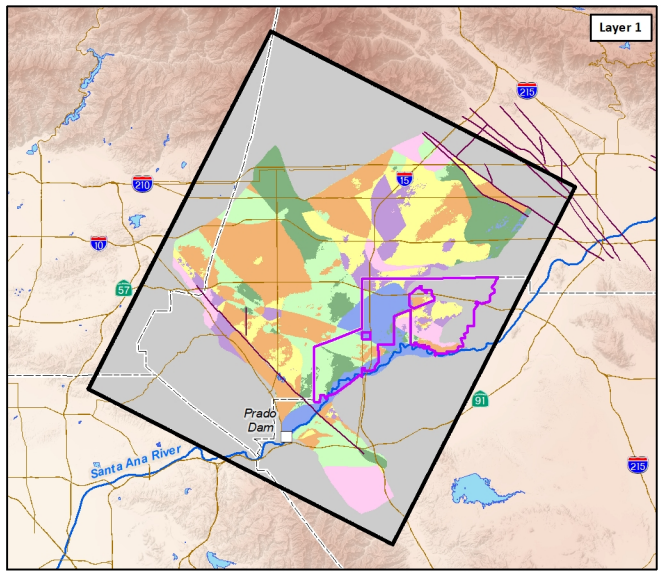
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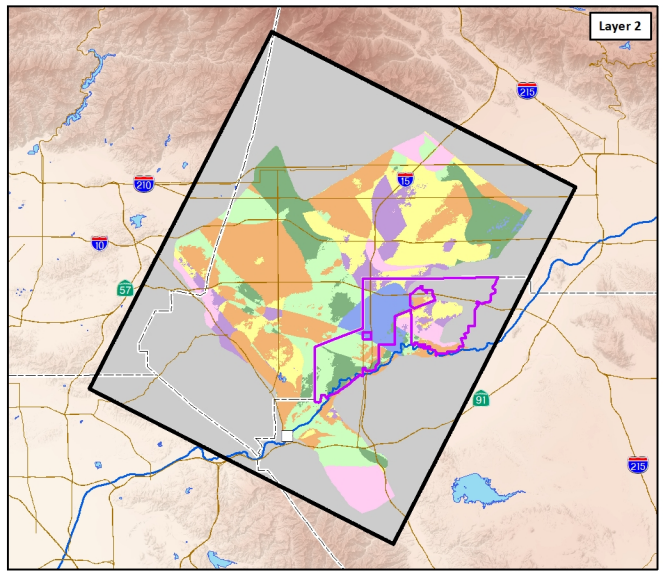
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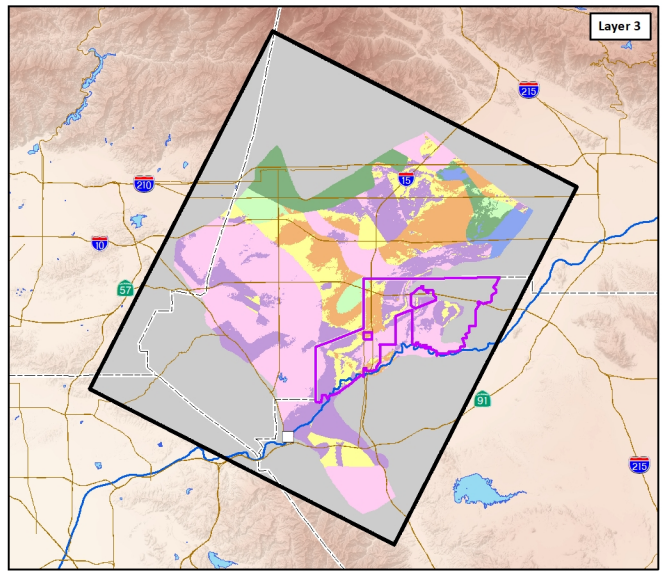
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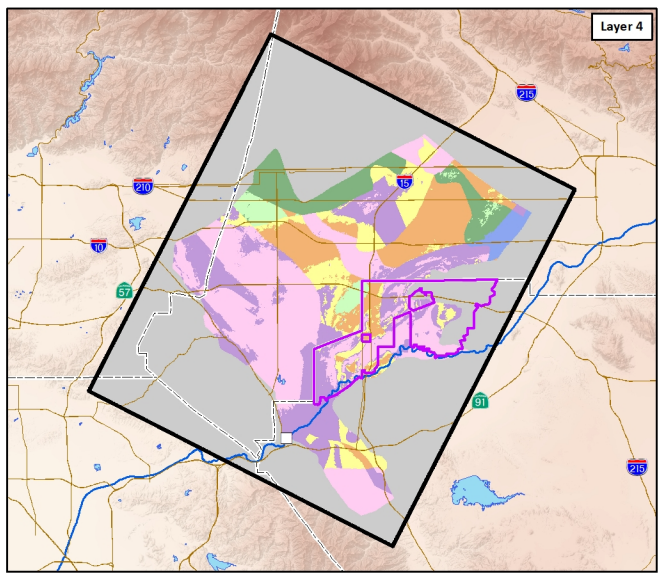
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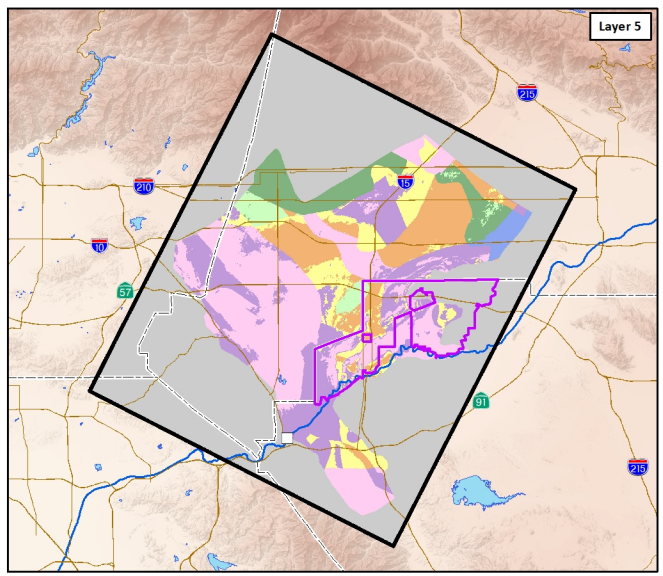
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EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Inactive Model Area
- Jurupa Community Services District Boundary
- Groundwater Flow Barrier
- Dam Location

Horizontal Hydraulic Conductivity (ft/day)

- < 10
- 10 - 25
- 25 - 50
- 50 - 100
- 100 - 200
- 200 - 300
- 300 - 450

N

0 8 16

Miles

HORIZONTAL HYDRAULIC CONDUCTIVITY

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21-Apr-20

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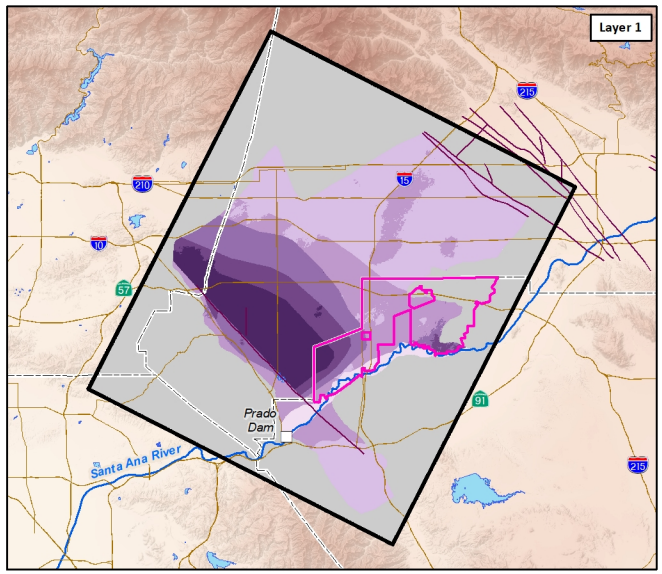
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

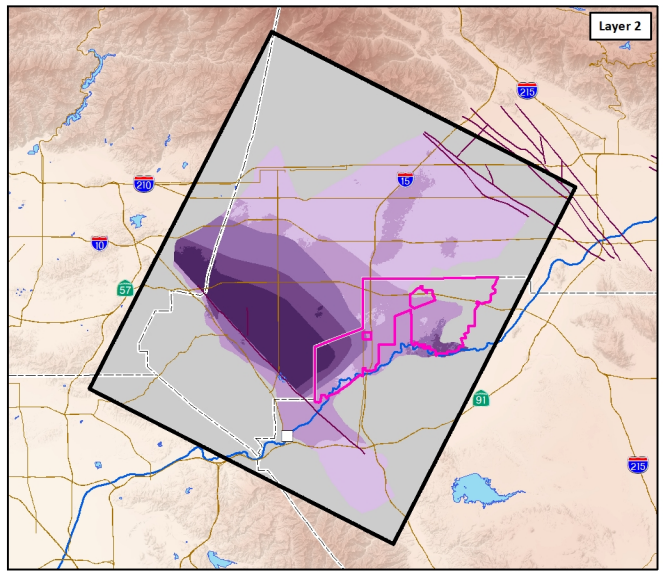
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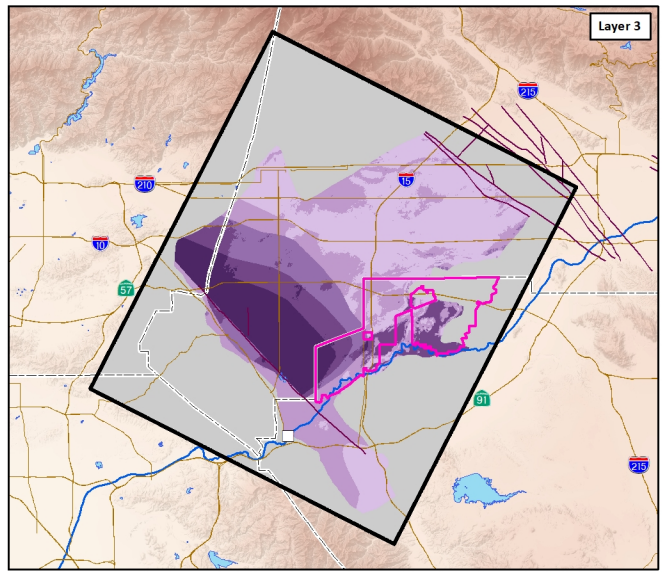
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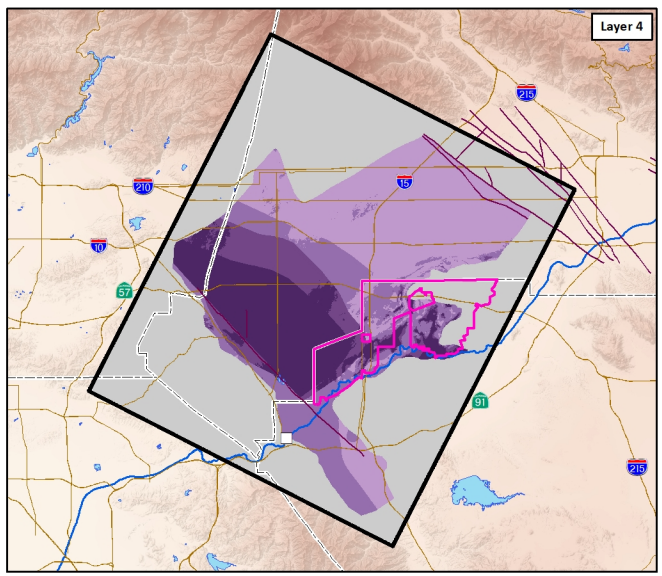
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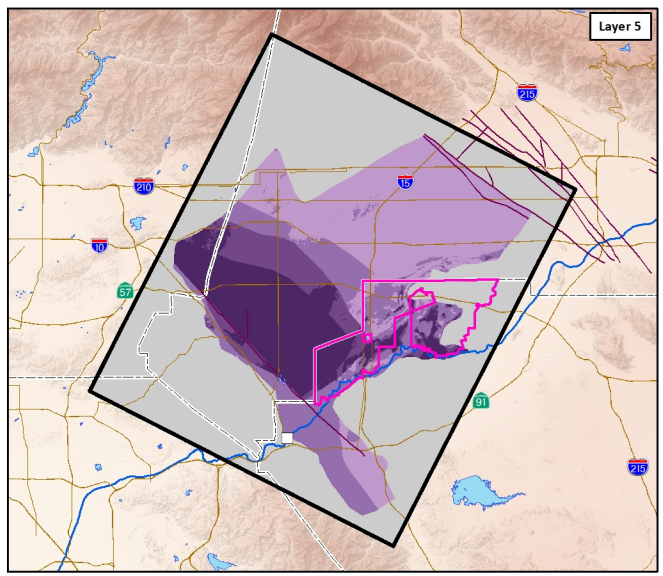
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EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Inactive Model Area
- Jurupa Community Services District Boundary
- Groundwater Flow Barrier
- Dam Location

Vertical Hydraulic Conductivity (ft/day)

- < 0.001
- 0.001 - 0.01
- 0.01 - 0.1
- 0.1 - 1.0
- 1.0 - 5.0
- > 5.0

N

0 8 16

Miles

VERTICAL HYDRAULIC CONDUCTIVITY

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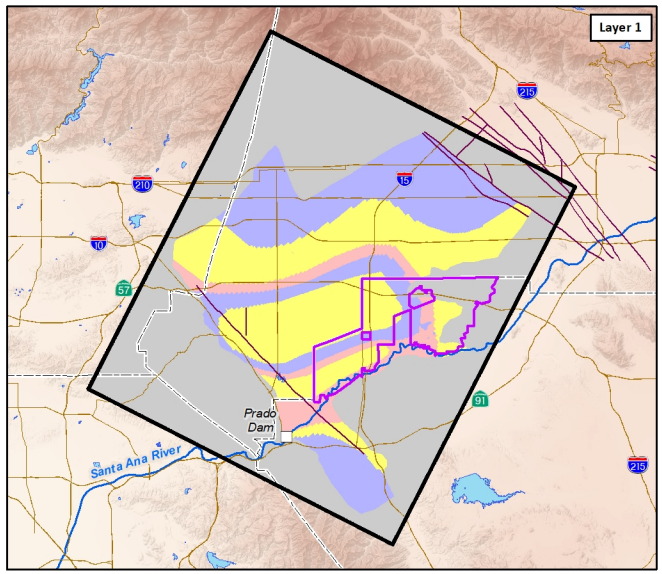
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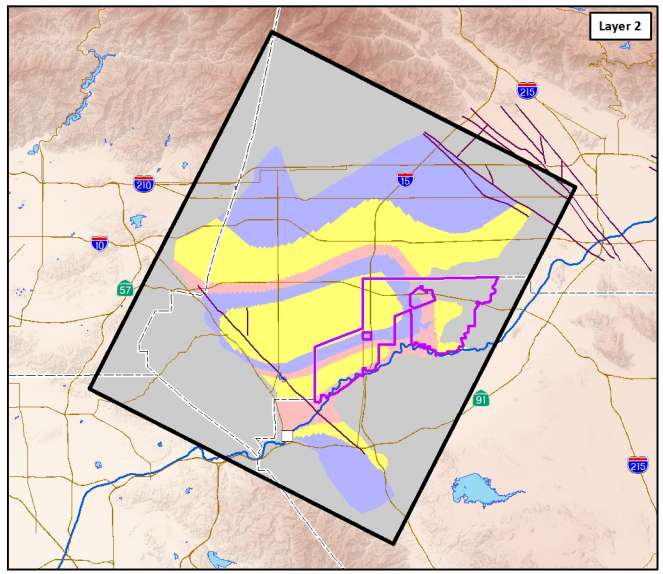
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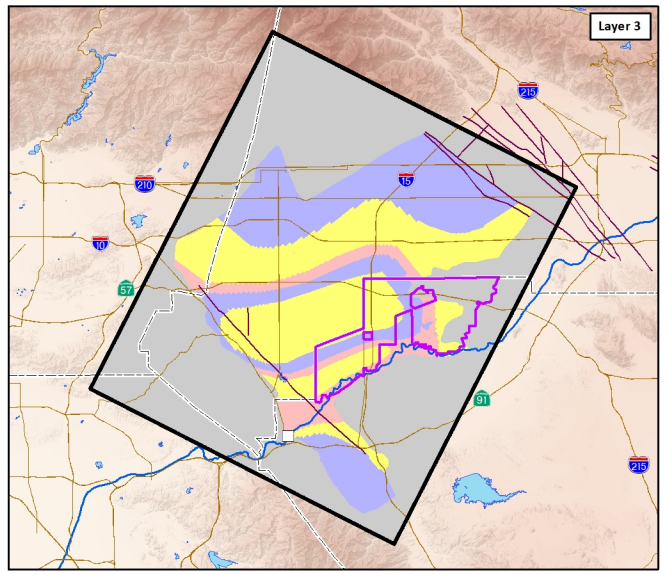
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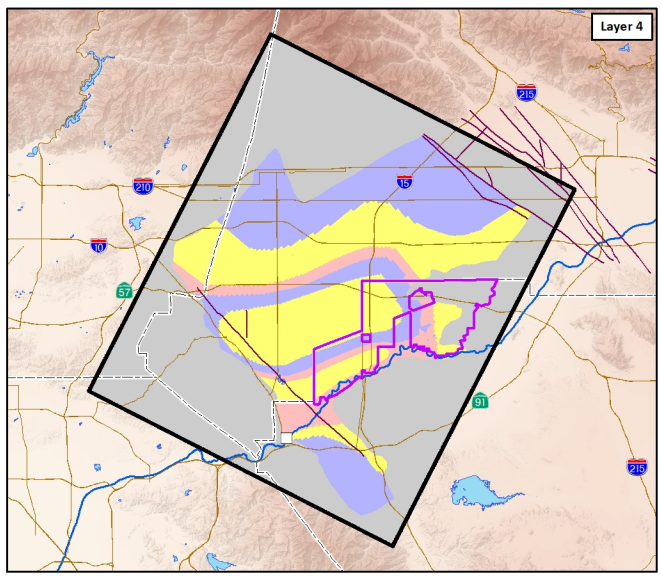
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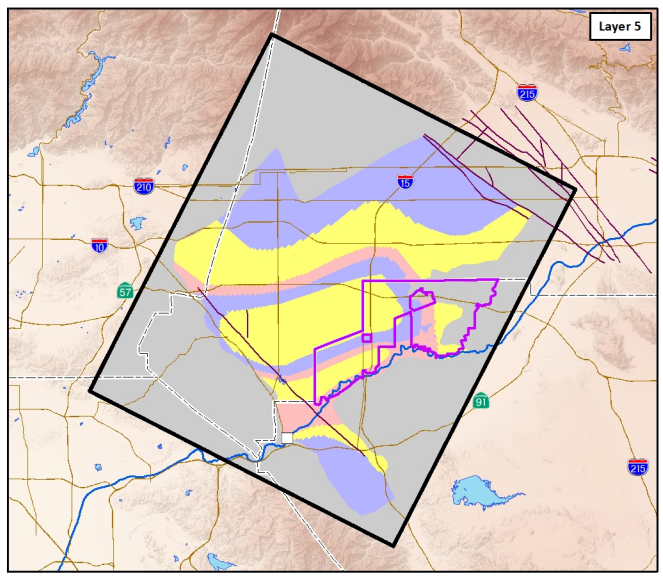
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EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Inactive Model Area
- Jurupa Community Services District Boundary
- Groundwater Flow Barrier
- Dam Location

Secondary Storage Coefficient (Specific Yield, unitless)

- < 0.05
- 0.05 - 0.10
- 0.10 - 0.15
- 0.15 - 0.20
- 0.20 - 0.25
- 0.25 - 0.30
- 0.30 - 0.35

N

0 8 16

Miles

SECONDARY STORAGE COEFFICIENT (SPECIFIC YIELD)

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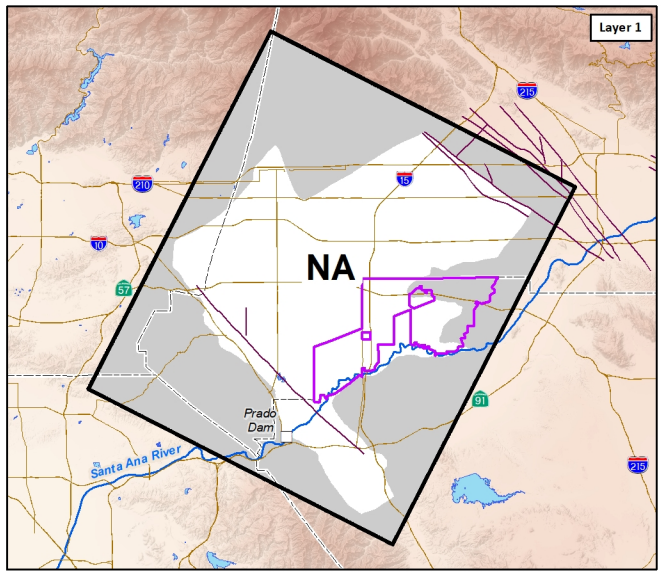
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

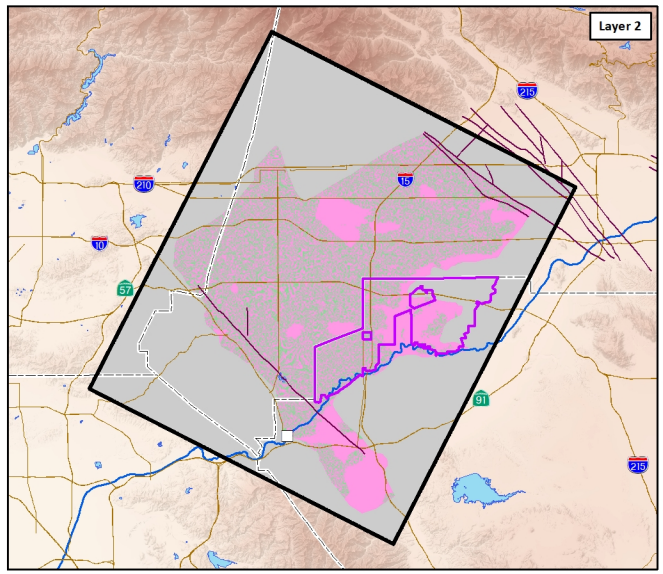
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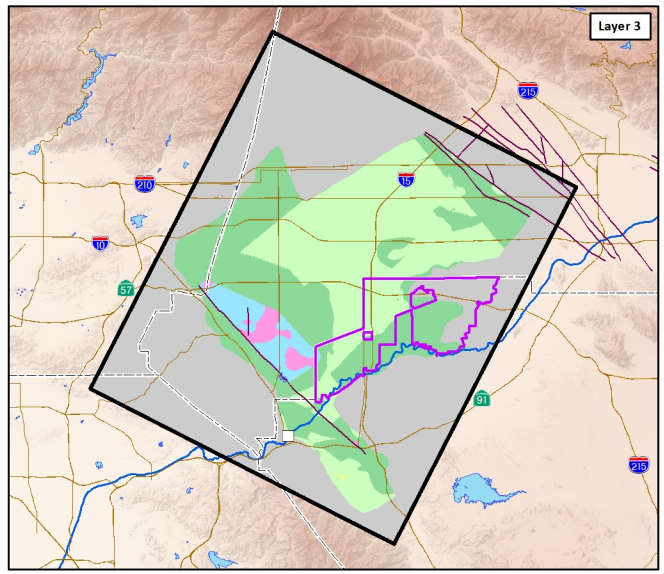
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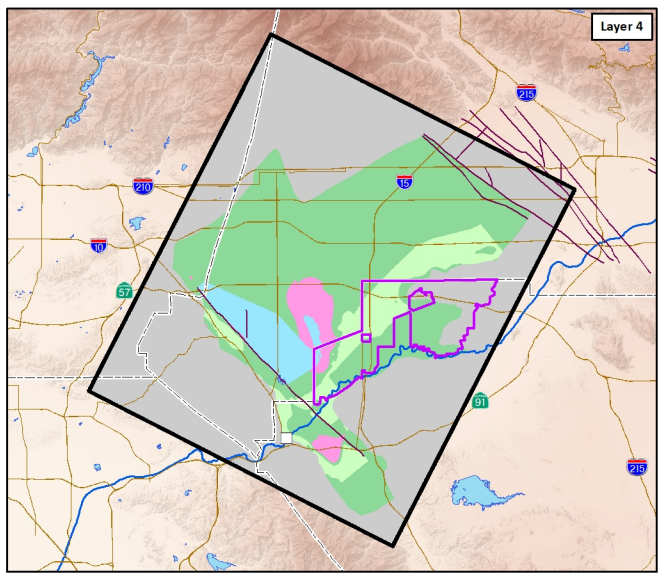
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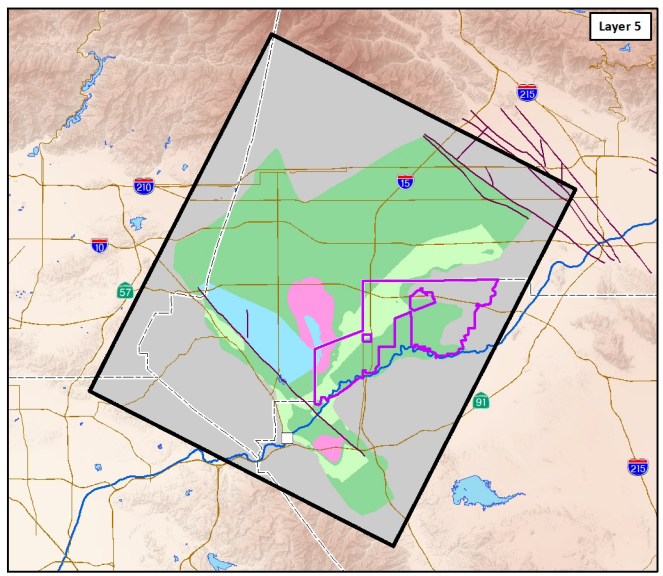
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EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Inactive Model Area
- Jurupa Community Services District Boundary
- Groundwater Flow Barrier
- Dam Location

Primary Storage Coefficient (Storativity), unitless

- < 0.000001
- 0.000001 - 0.00001
- 0.00001 - 0.0001
- 0.0001 - 0.005
- > 0.005

N

0 8 16

Miles

PRIMARY STORAGE COEFFICIENT (STORATIVITY)

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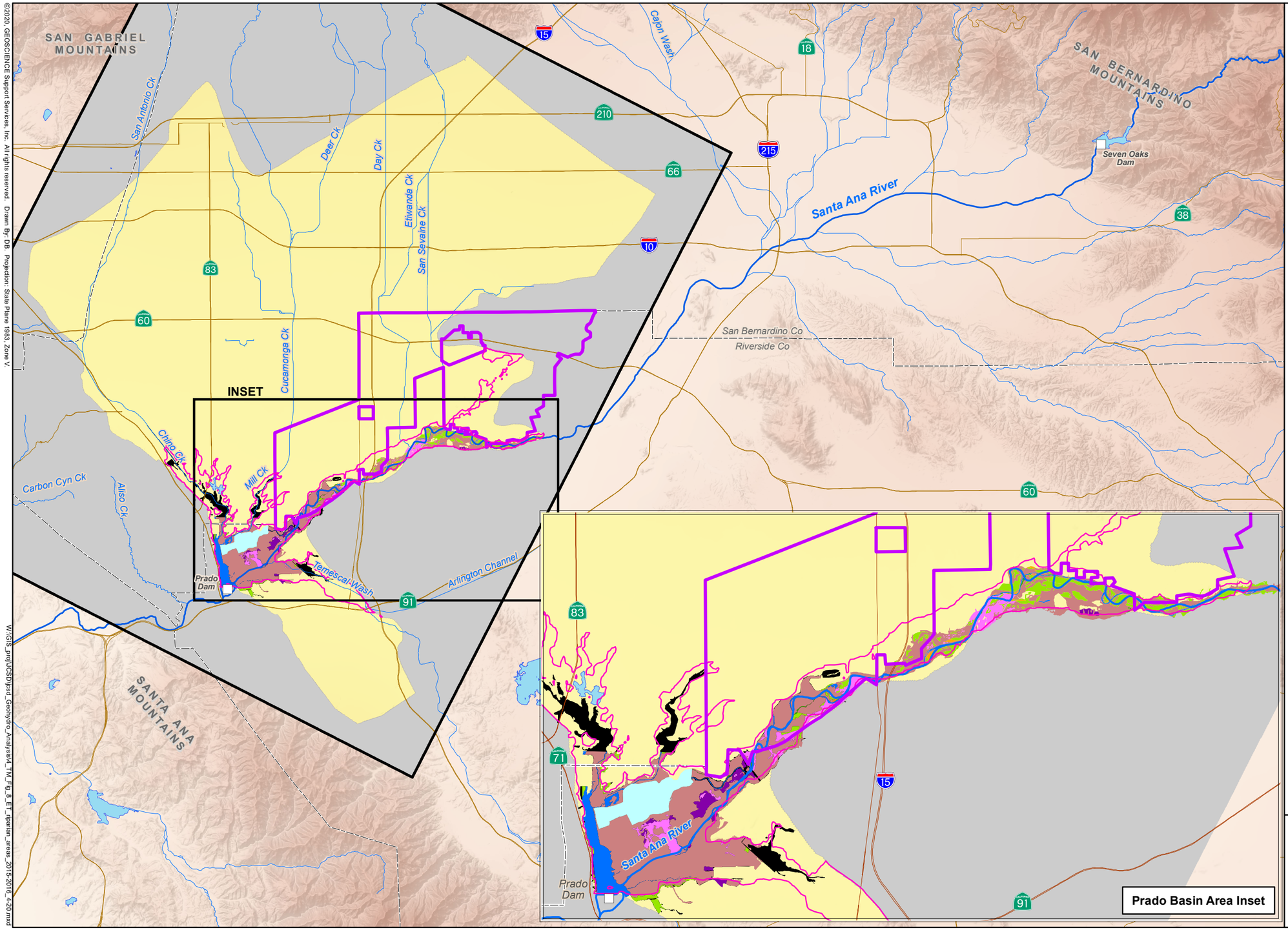
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

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FIGURE 7

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21-Apr-20

EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Active Model Area
- Inactive Model Area
- Jurupa Community Services District Boundary

2015 Riparian Vegetation (Aspen)

- Deep-Rooted Riparian
- Giant Reed
- Managed Wetland
- Obligate Wetland
- Open Water
- Shallow-Rooted Riparian
- Transitional Riparian
- Unvegetated Sandy Wash

- 2016 Total Riparian Extent (WEI,2017)
- Area of Shallow Groundwater (<20 ft) (Sources:
  1. Chino Basin and Riverside-Arlington Area (BGW, 2018 - Based on post-1999 water level data from NWIS, CA DWR, and perennial streams from the NHD).
  2. SBBA Area - Matti and Carson, 1991 - Based on highest water level from 1973-1983.
  3. Yucaipa Model Area - GEOSCIENCE, 2017 - Based on high water levels and extent of riparian vegetation)
- Dam Location

N

0 3 6

Miles

LOCATION OF EVAPOTRANSPIRATION (2015-2016)

JURUPA COMMUNITY SERVICES DISTRICT

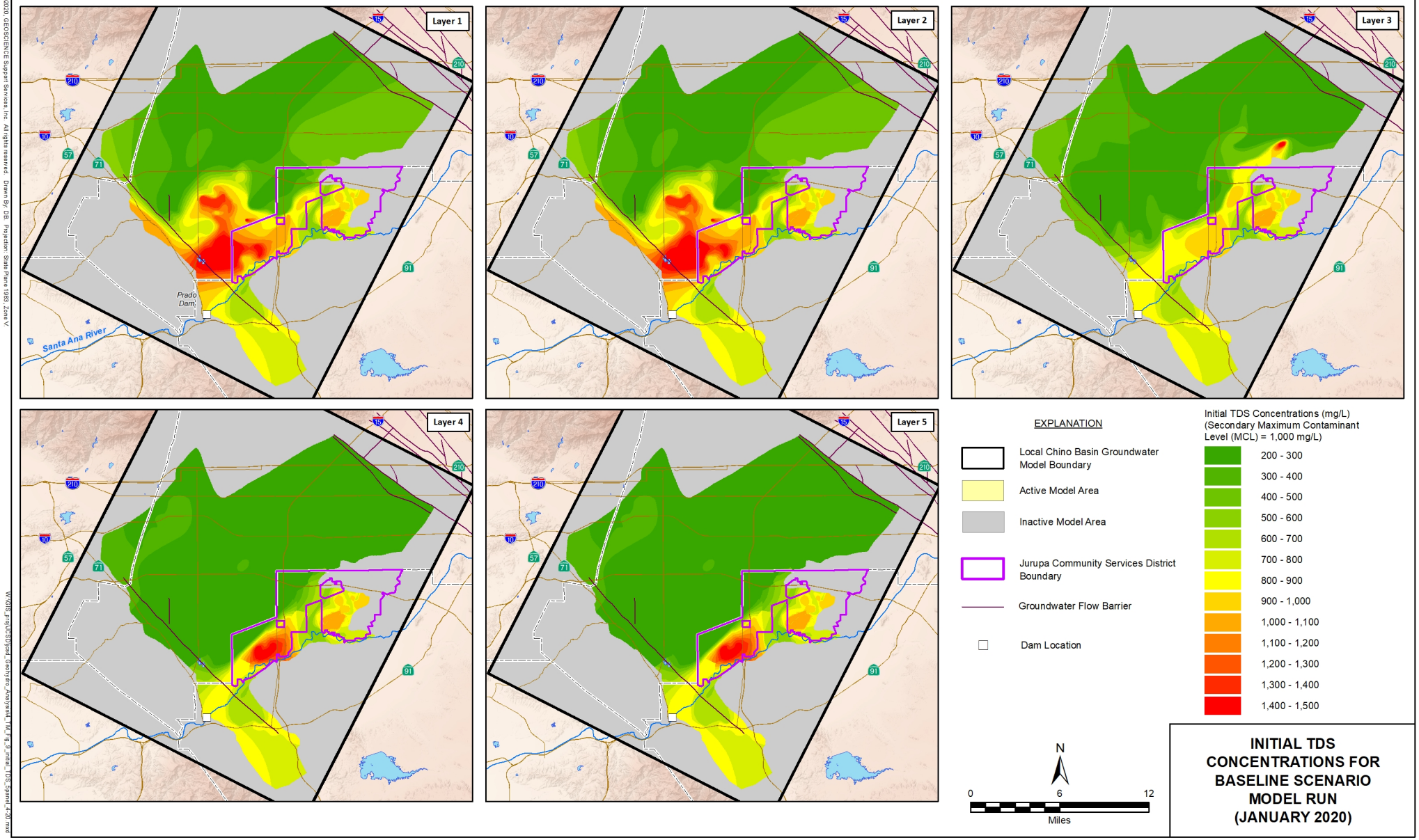
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

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FIGURE 8

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INITIAL TDS CONCENTRATIONS FOR BASELINE SCENARIO MODEL RUN (JANUARY 2020)

W:\GIS_proj\JCSD\mxd_Geohydro_Analysis\4_TM_Fig_8_initial_TDS_Spanel_4-20.mxd

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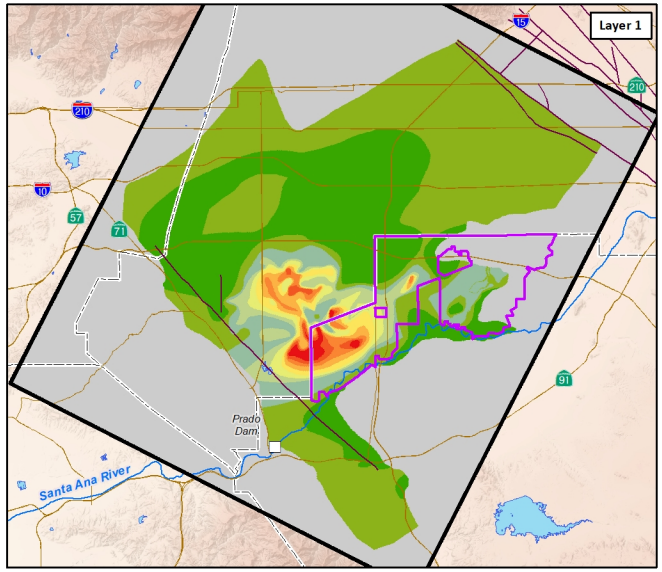
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

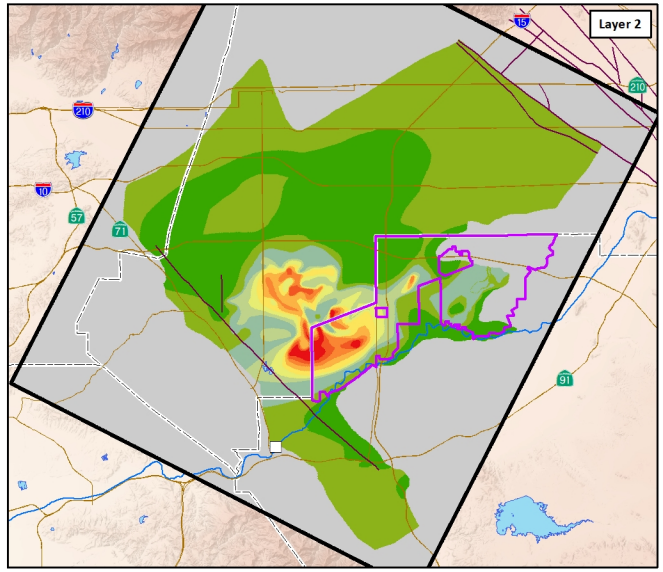
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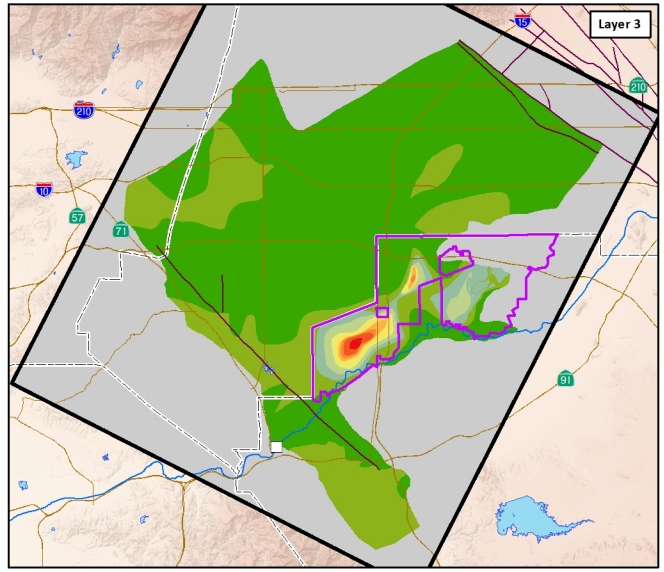
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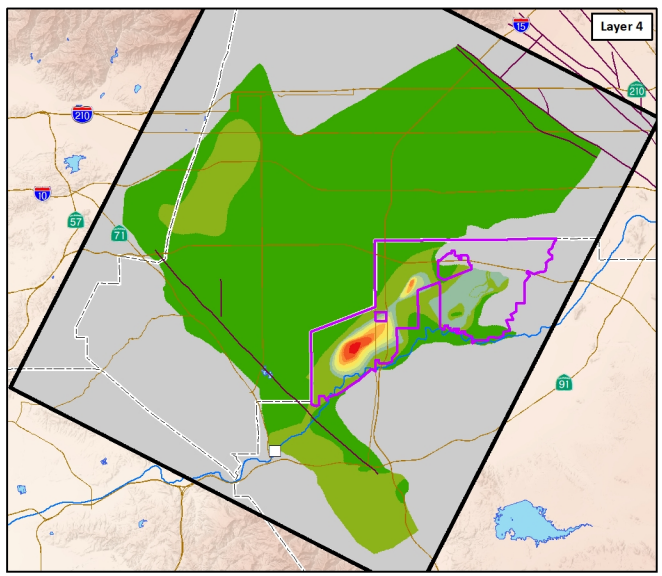
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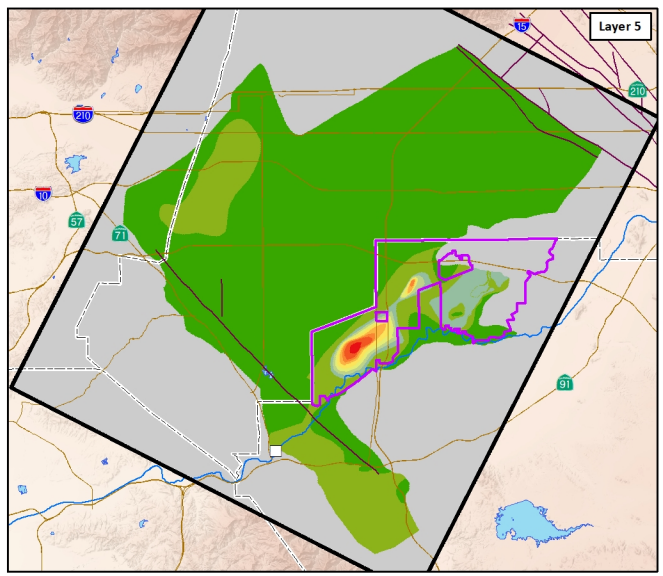
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EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Inactive Model Area
- Jurupa Community Services District Boundary
- Groundwater Flow Barrier
- Dam Location

Initial Nitrate Concentrations (mg/L)
(Nitrate Primary Maximum Contaminant Level (MCL) = 10 mg/L)

- 0 - 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 60
- 60 - 70
- 70 - 80
- 80 - 90
- 90 - 100

N

0 6 12
Miles

INITIAL NITRATE AS N CONCENTRATIONS FOR BASELINE SCENARIO MODEL RUN (JANUARY 2020)

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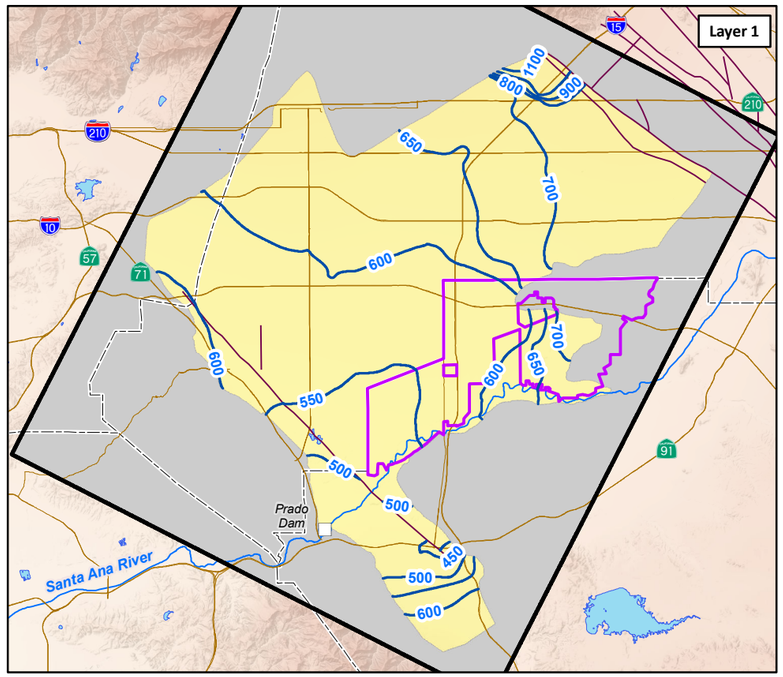
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

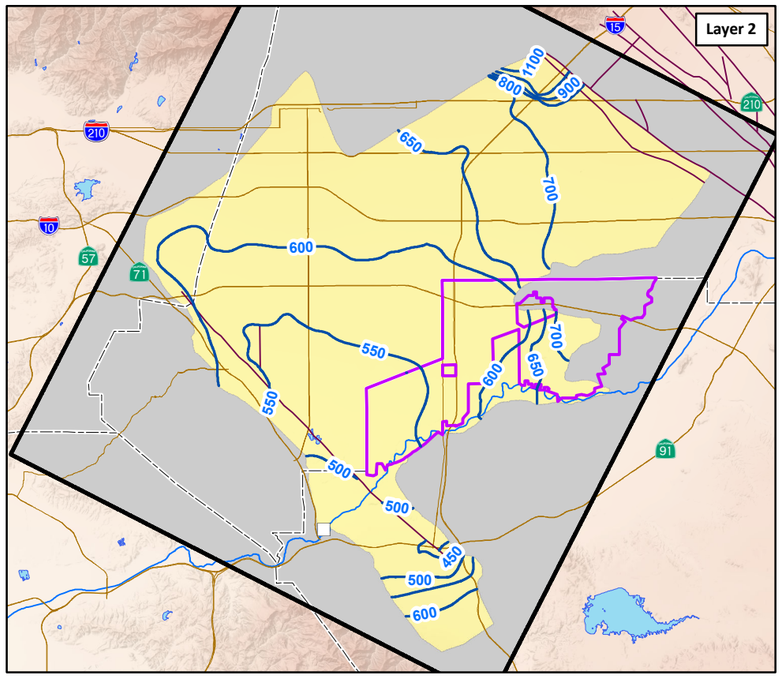
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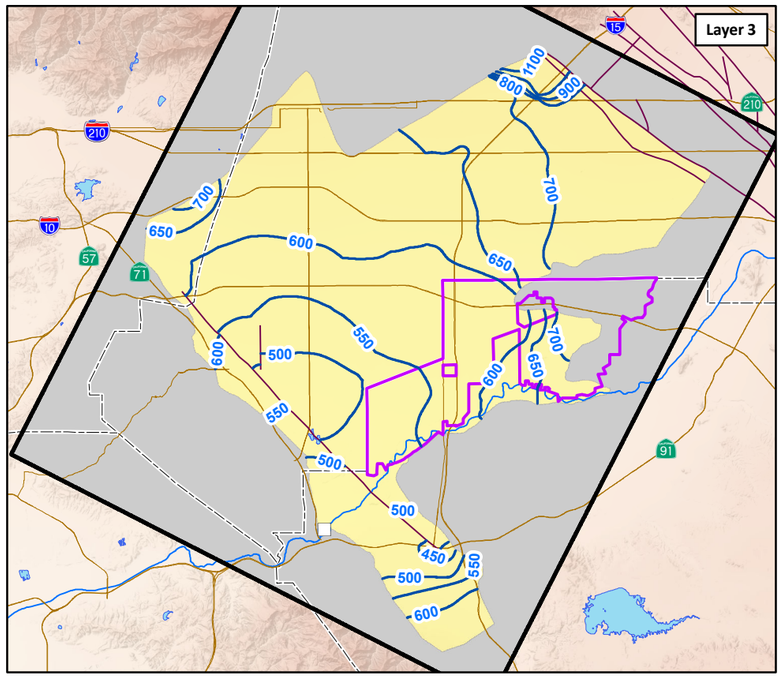
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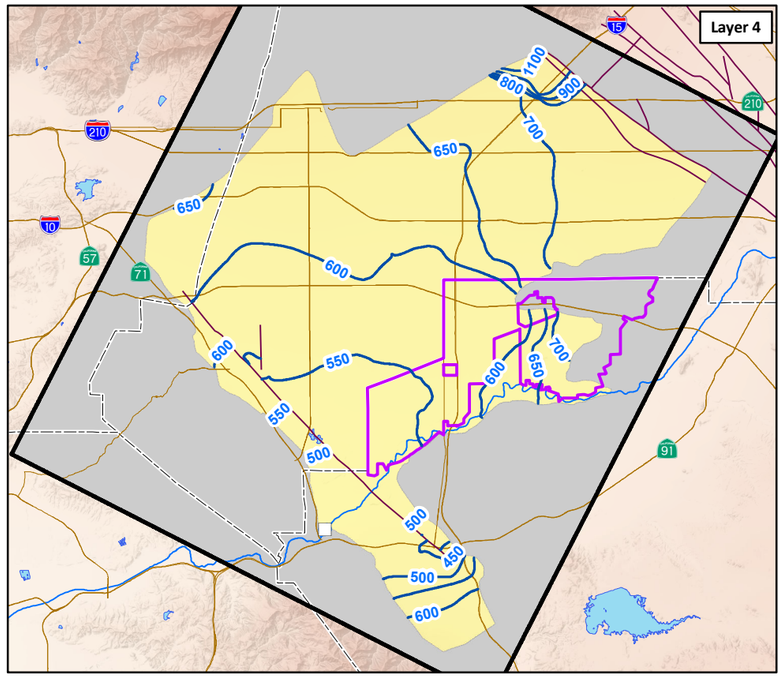
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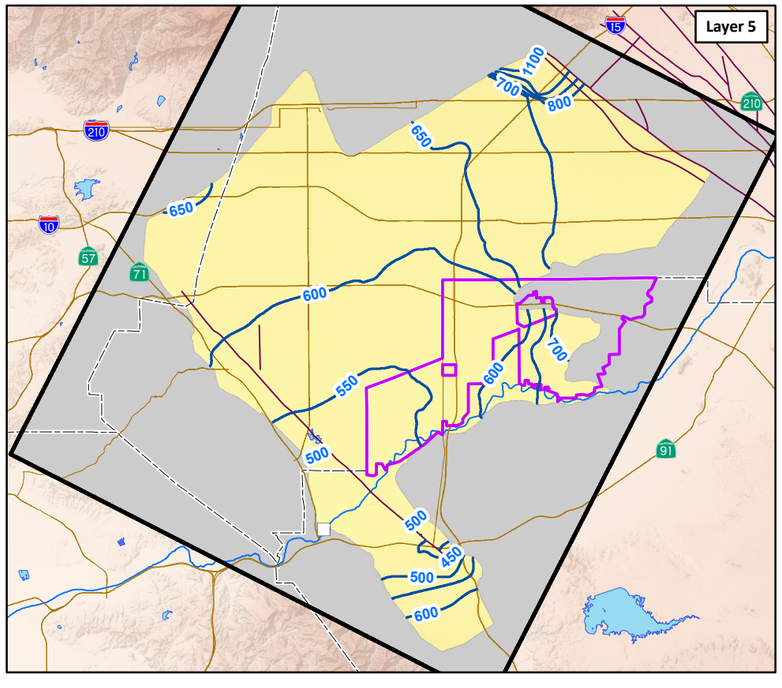
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EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Active Model Area
- Inactive Model Area
- Jurupa Community Services District Boundary
- 600 — Modeled-Simulated 2044 Groundwater Elevations (ft amsl)
- Groundwater Flow Barrier
- Dam Location

N

0 6 12

Miles

MODEL-SIMULATED GROUNDWATER ELEVATION CONTOURS IN 2044

W:\GIS_proj\JCSD\jcsd_Geohydro_Analysis\4_TM_Fig_11_2044_gw_elev_5panel_4-20.mxd

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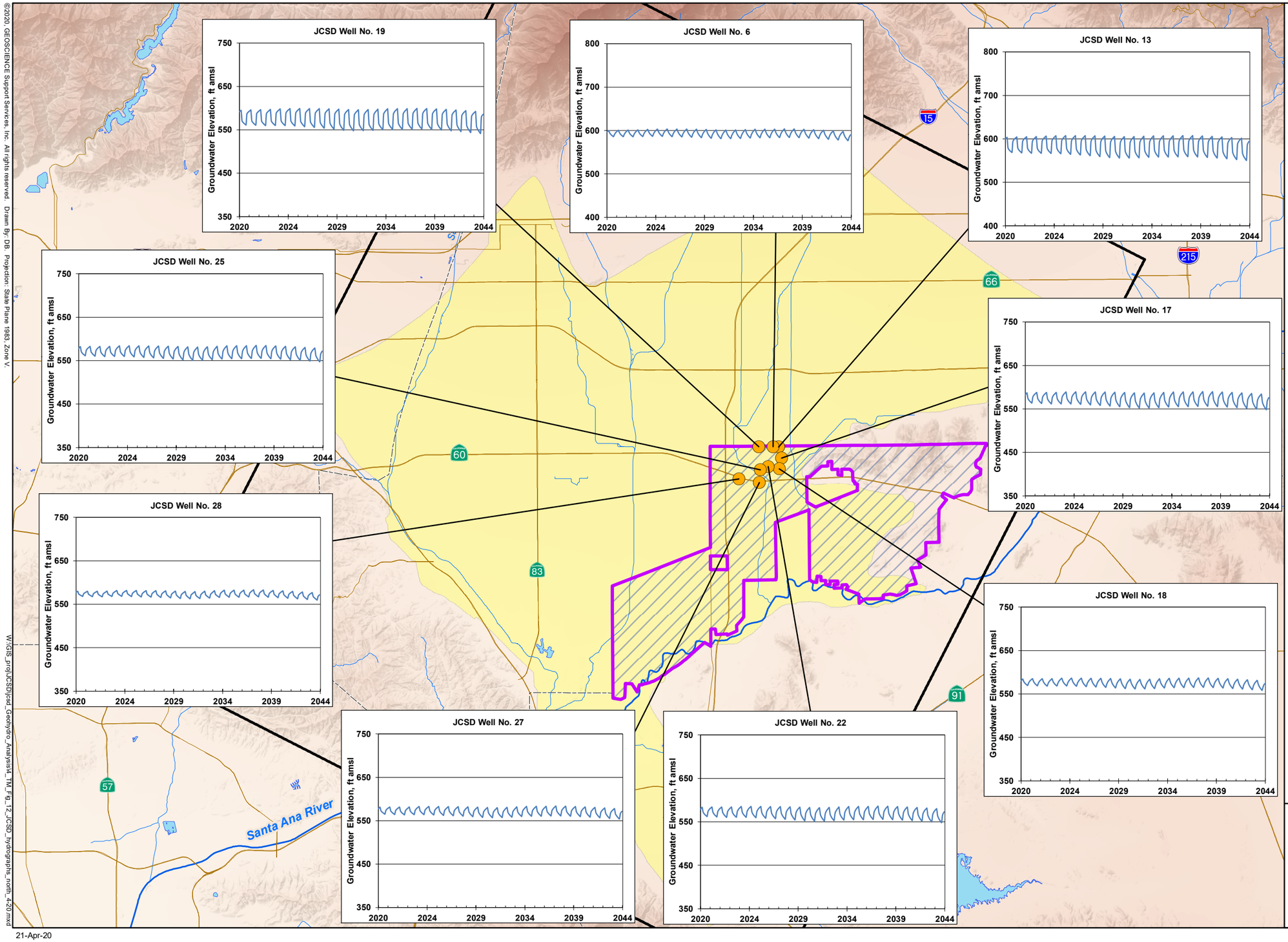
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

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FIGURE 11

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EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Active Model Area
- Jurupa Community Services District Boundary
- Selected JCSD Well With Hydrograph

N

0 3 6

Miles

GROUNDWATER ELEVATION HYDROGRAPHS FOR SELECTED JCSD WELLS NORTHERN GROUP

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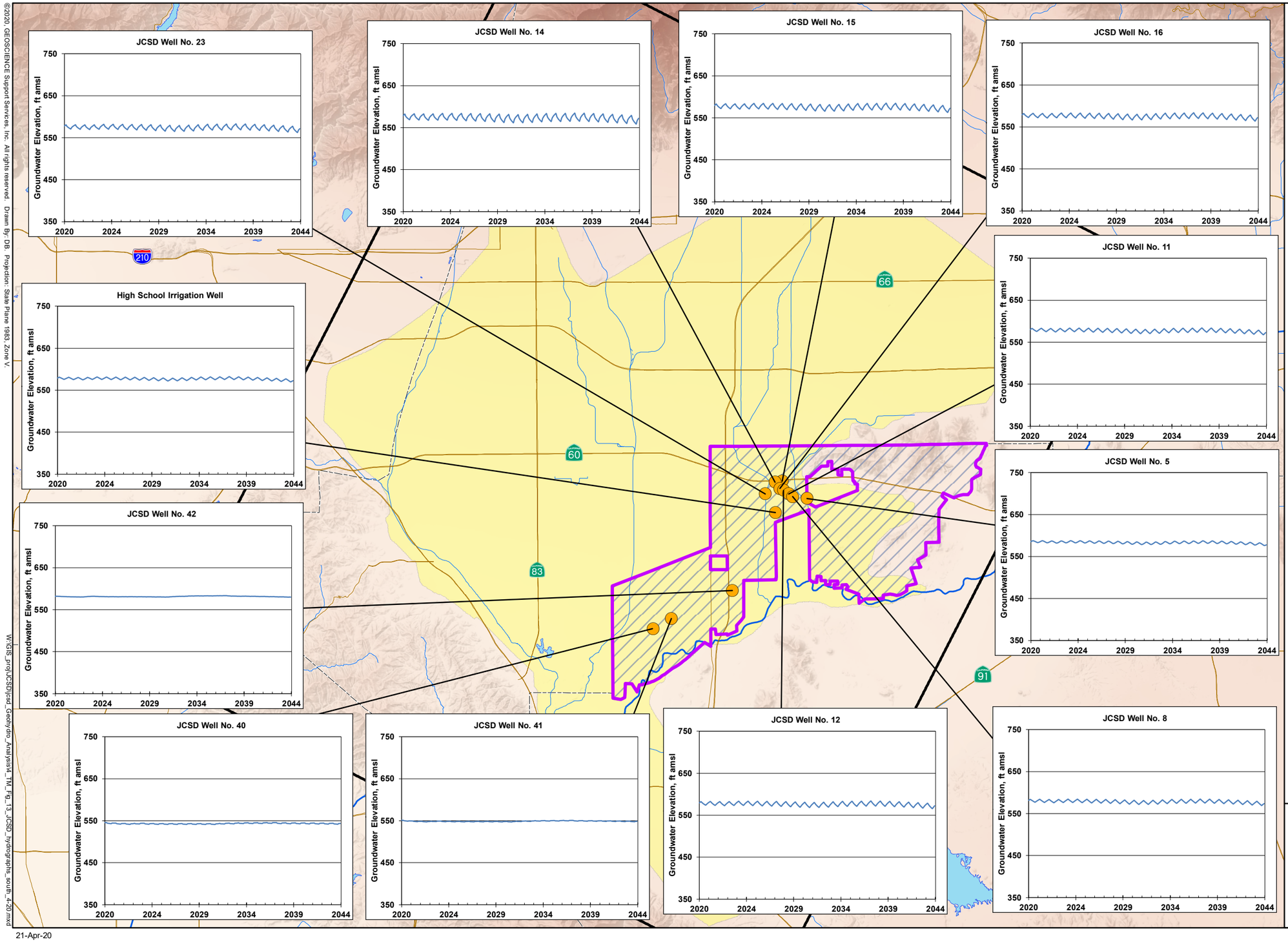
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

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FIGURE 12

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EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Active Model Area
- Jurupa Community Services District Boundary
- Selected JCSD Well With Hydrograph

N

0 3 6

Miles

GROUNDWATER ELEVATION HYDROGRAPHS FOR SELECTED JCSD WELLS SOUTHERN GROUP

W:\GIS_proj\JCSD\jcsd_Geohydro_Analysis4_TM_Fig_13_JCSD_hydrographs_south_4-20.mxd

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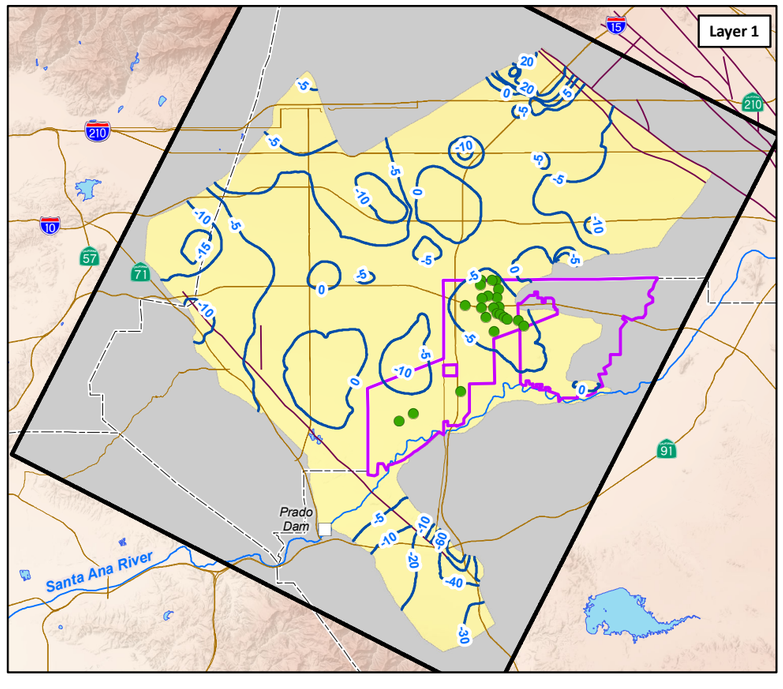
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

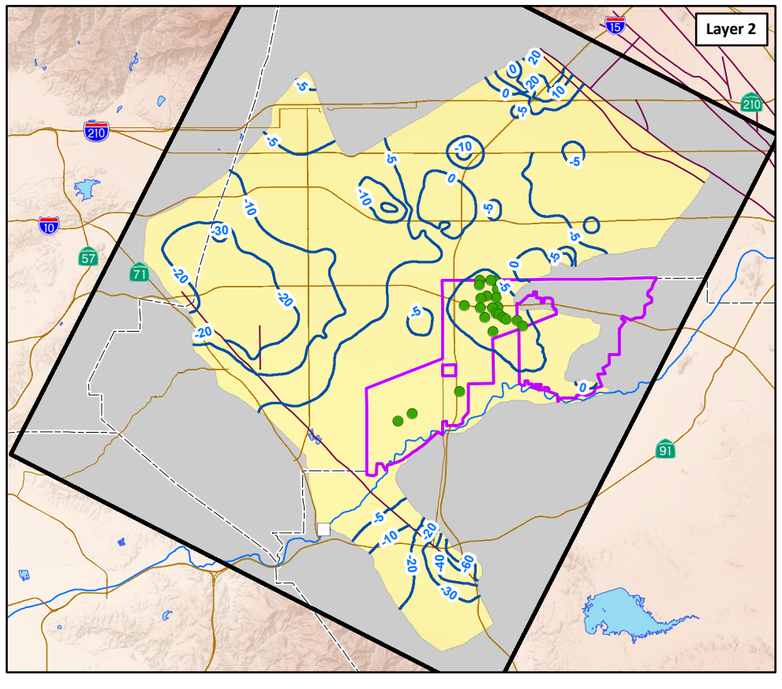
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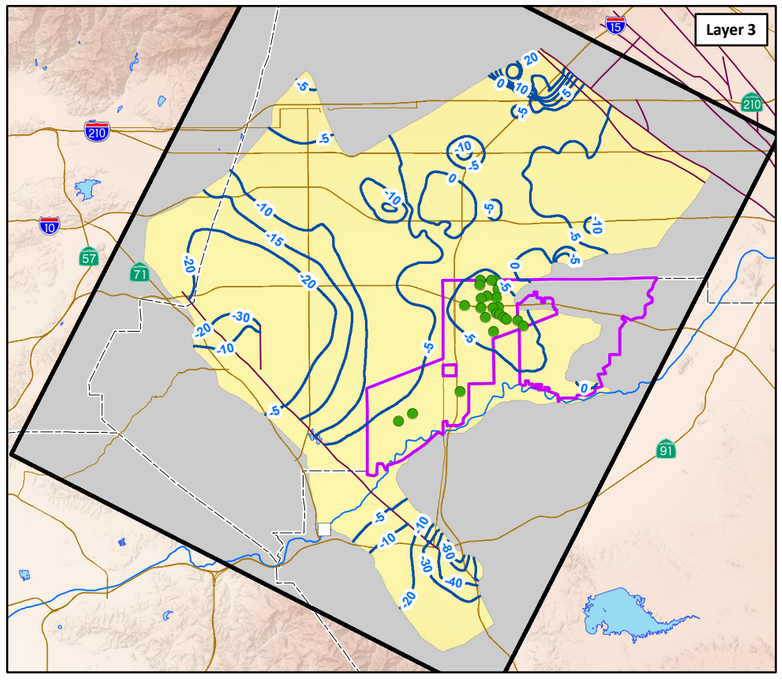
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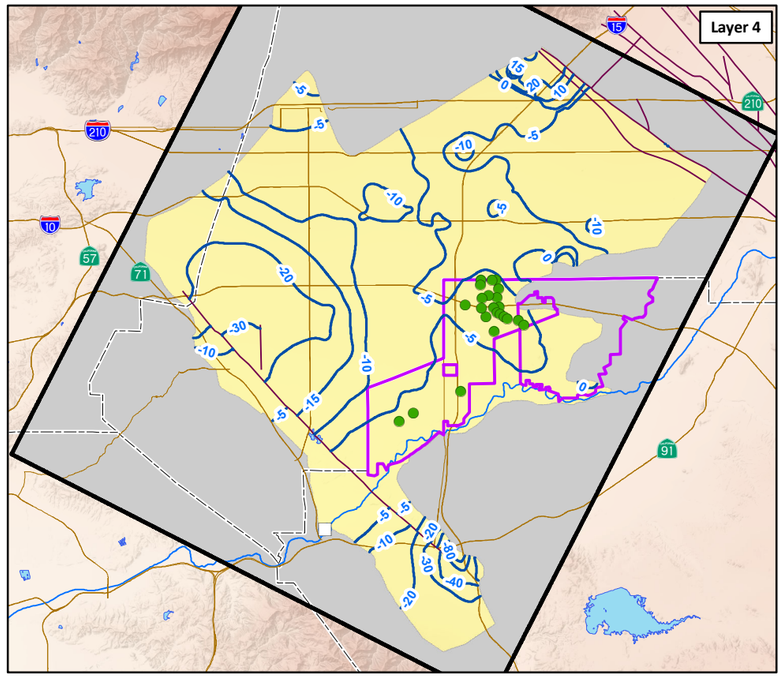
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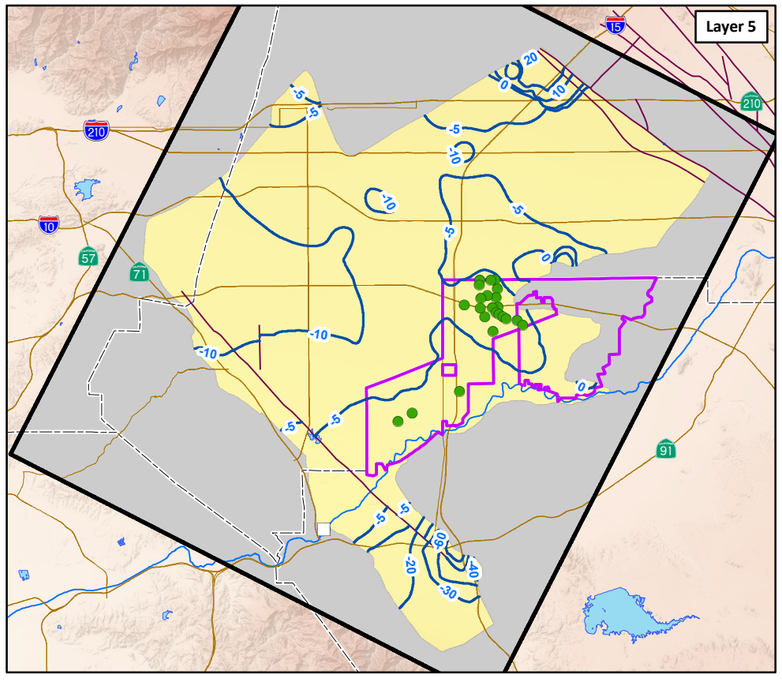
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EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Active Model Area
- Inactive Model Area
- Jurupa Community Services District Boundary
- 10 — Modeled-Simulated Change In Groundwater Elevation Contours From 2020 to 2044 (ft)
- Groundwater Flow Barrier
- JCSD Pumping Well
- Dam Location

N

0 6 12

Miles

MODEL-SIMULATED CHANGE IN GROUNDWATER ELEVATION CONTOURS FROM 2020 TO 2044

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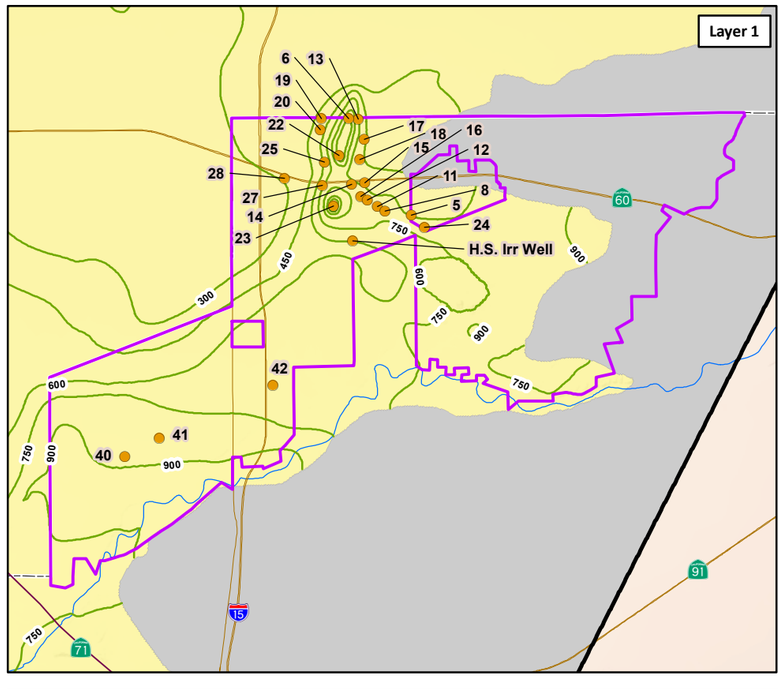
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

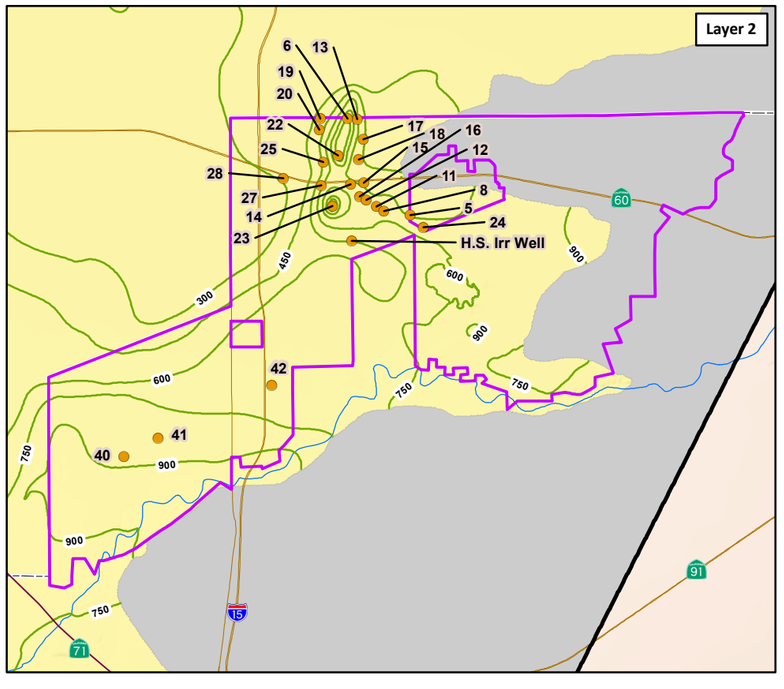
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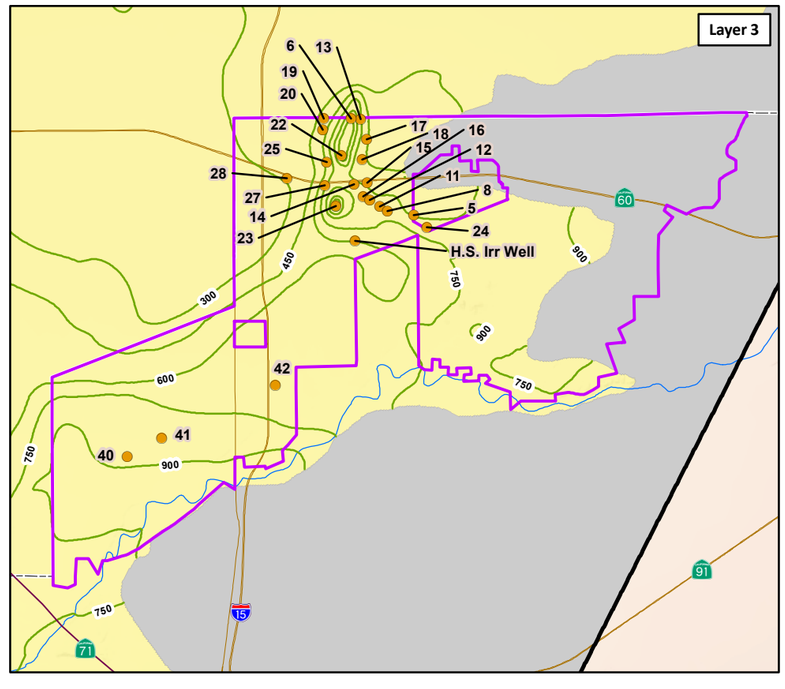
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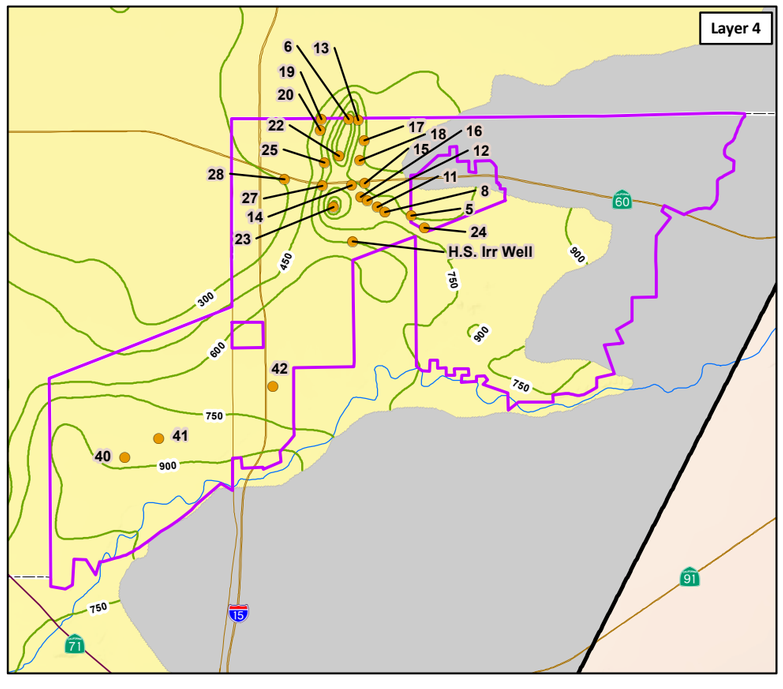
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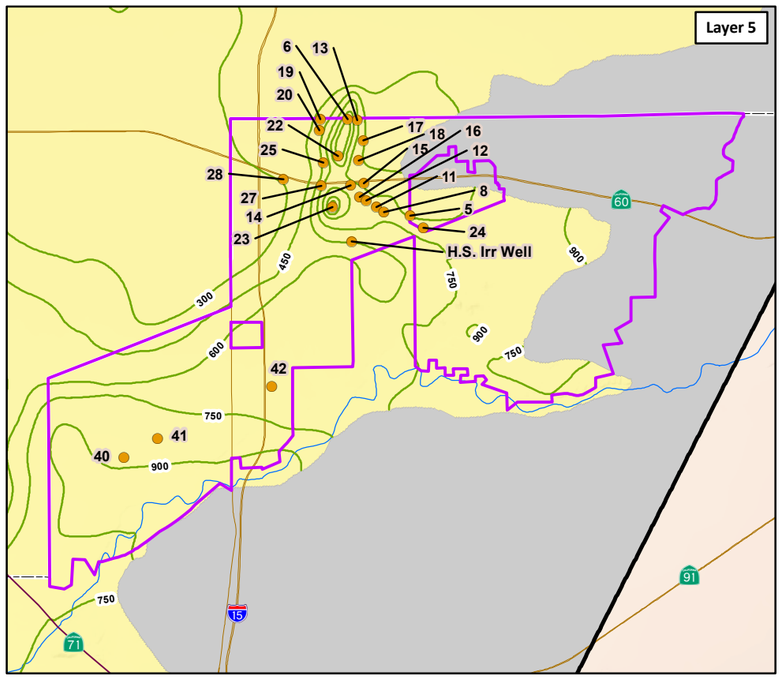
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EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Active Model Area
- Inactive Model Area
- Jurupa Community Services District Boundary
- 700 — TDS Concentrations (mg/L) (Secondary Maximum Contaminant Level (MCL) = 1,000 mg/L)
- Groundwater Flow Barrier
- JCSD Pumping Well

N

0 2.5 5

Miles

MODEL-SIMULATED TDS CONCENTRATIONS 2044

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21-Apr-20

JURUPA COMMUNITY SERVICES DISTRICT

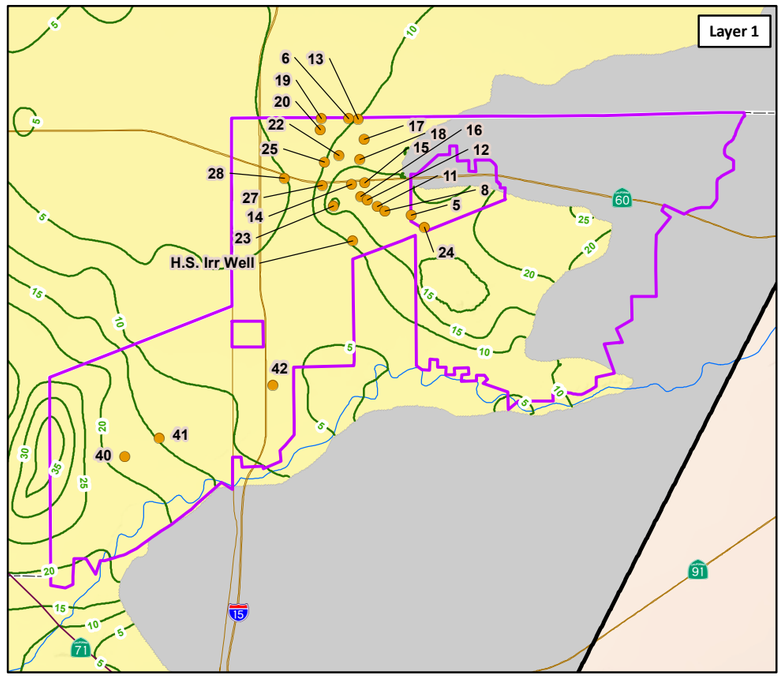
UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

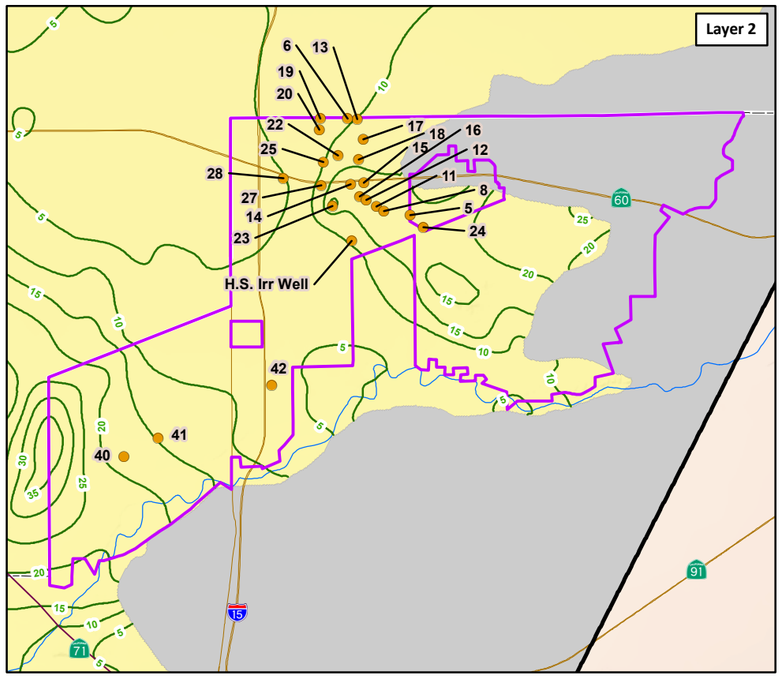
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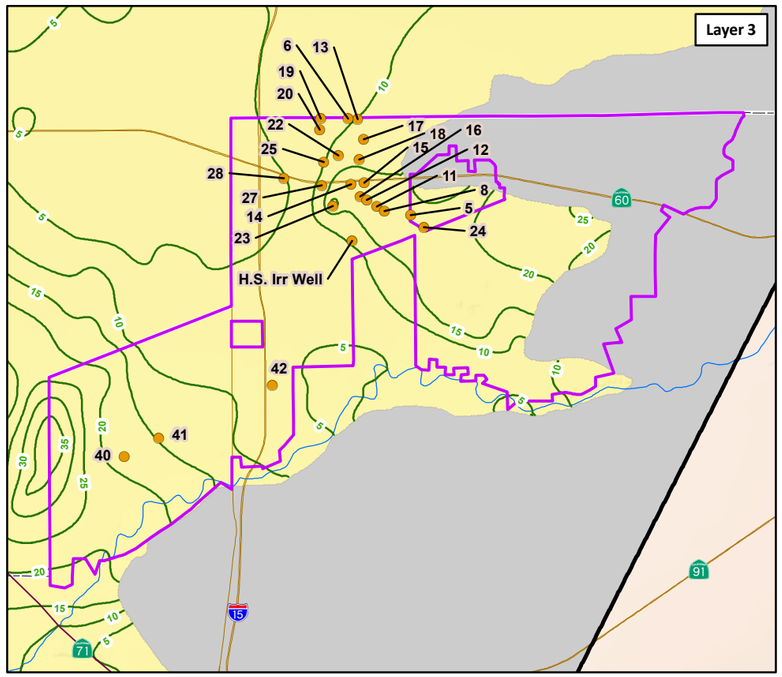
FIGURE 15

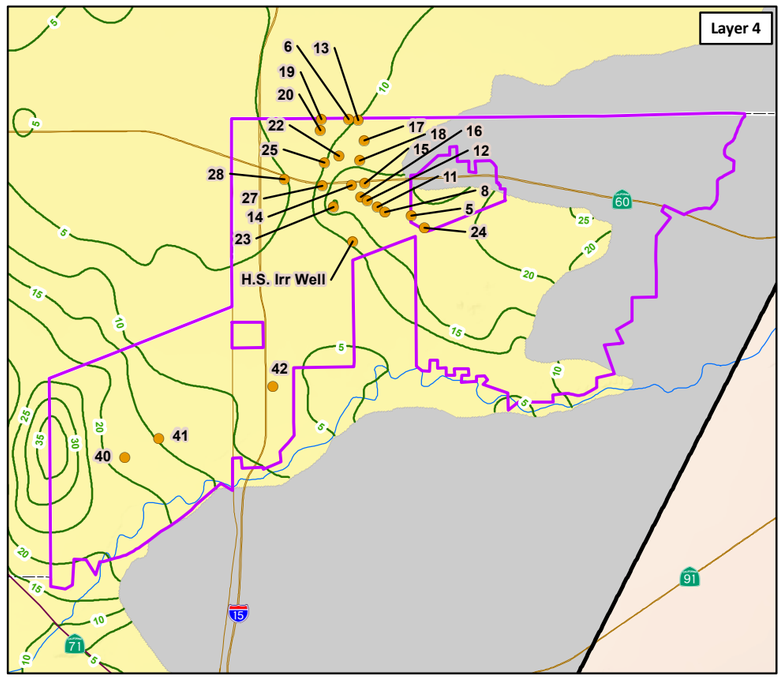
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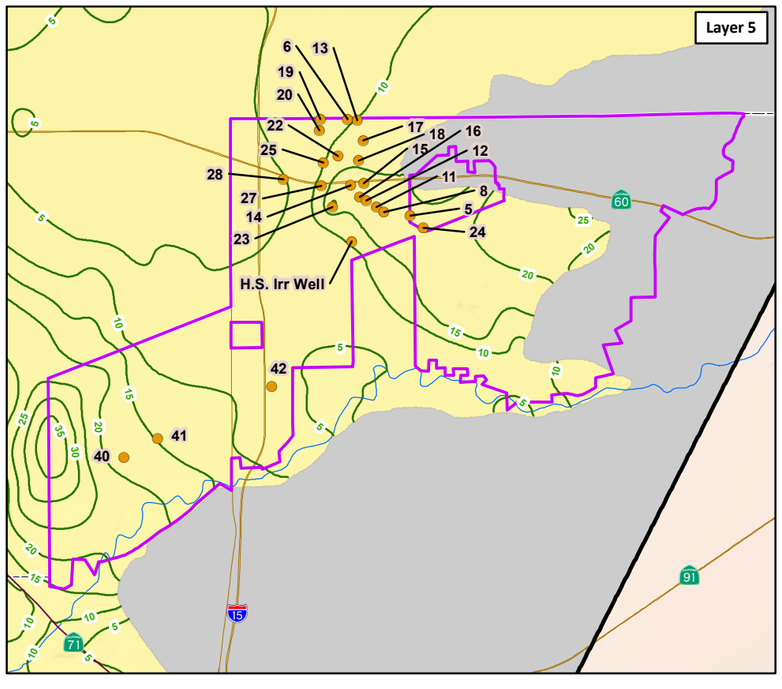
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EXPLANATION

- Local Chino Basin Groundwater Model Boundary
- Active Model Area
- Inactive Model Area
- Jurupa Community Services District Boundary
- 10 — Nitrate Concentrations (mg/L) (Nitrate Primary Maximum Contaminant Level (MCL) = 10 mg/L)
- Groundwater Flow Barrier
- JCSD Pumping Well

N

0 2.5 5

Miles

MODEL-SIMULATED NITRATE CONCENTRATIONS 2044

W:\GIS_proj\JCSD\jcsd_Geohydro_Analysis\4_TM_Fig_16_nitrate_contours_2044_5panel_4-20.mxd

21-Apr-20

JURUPA COMMUNITY SERVICES DISTRICT

UPDATED GEOHYDROLOGIC ANALYSIS OF FUTURE GROUNDWATER PRODUCTION WITHIN JCSD

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FIGURE 16

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TABLES

GEOSCIENCE

Jurupa Community Services District Model Run
Baseline Scenario Pumping Assumption (2020 - 2044)

Well Name	Capacity[1] [gpm]	Average Pumping 2015-2019 [acre-ft/year]	Average Pumping 2017-2019 [acre-ft/year]	2017 - 2019 Pumping Distribution	2020[2] Oct. - Mar.[3] [acre-ft/month]	2020[2] Apr. - Sep.[3] [acre-ft/month]	2025[2] Oct. - Mar.[3] [acre-ft/month]	2025[2] Apr. - Sep.[3] [acre-ft/month]	2030 to 2044[2] Oct. - Mar.[3] [acre-ft/month]	2030 to 2044[2] Apr. - Sep.[3] [acre-ft/month]	*Required Capacity Check* *[gpm]*	*Assumed 2020-2044 Pumping Distribution*
6	1,800	22	37	0.18%	0	3	0	4	0	4	33	0.18%
8	850	152	253	1.24%	0	22	0	25	0	30	223	1.24%
11	1,100	5	9	0.04%	0	1	0	1	0	1	8	0.04%
12	1,100	13	22	0.11%	0	2	0	2	0	3	20	0.11%
13	2,800	847	1,411	6.93%	0	121	0	142	0	165	1,246	6.93%
14	2,000	564	940	4.61%	0	81	0	95	0	110	830	4.61%
15	550	69	116	0.57%	0	10	0	12	0	14	102	0.57%
16	1,875	102	169	0.83%	0	15	0	17	0	20	149	0.83%
17	3,700	1,752	2,920	14.33%	0	251	0	294	0	342	2,577	14.33%
18	1,045	37	62	0.30%	0	5	0	6	0	7	55	0.30%
19	1,050	621	1,034	5.08%	0	89	0	104	0	121	913	5.08%
20	845	0	0	0.00%	0	0	0	0	0	0	0	0.00%
22[4]	3,500	1,464	2,440	11.97%	0	244	0	286	0	332	2,507	13.94%
23	3,500	428	713	3.50%	0	61	0	72	0	83	630	3.50%
24	400	0	0	0.00%	0	0	0	0	0	0	0	0.00%
25[4]	3,450	2,658	4,429	21.73%	0	278	0	325	0	378	2,850	15.84%
27[4]	3,500	1,274	2,124	10.42%	0	217	0	254	0	295	2,228	12.39%
28[4]	3,800	1,555	2,591	12.72%	0	257	0	301	0	350	2,641	14.68%
High School	700	98	164	0.80%	0	14	0	17	0	19	145	0.80%
40	600	54	89	0.44%	0	8	0	9	0	10	79	0.44%
41	600	40	67	0.33%	0	6	0	7	0	8	59	0.33%
42	400	19	32	0.16%	0	3	0	3	0	4	29	0.16%
5	500	16	27	0.13%	0	2	0	3	0	3	24	0.13%
21	1,100	437	728	3.57%	0	63	0	73	0	85	643	3.57%
Annual Total		**12,227**	**20,379**	**100%**	**10,524**		**12,310**		**14,310**		**17,988**	**100%**

Notes:

1. Capacity was unknown for non-potable irrigation Wells 5, 21, 40, 41, 42 and High School.
2. Projected annual extraction amount for 2020, 2025, 2030 and after were based on the Storage Frame Investigation Report published by WEI on January 2019. The data for 2020 was modified based on the latest data provided by WEI.
3. Projected extractions were assumed only to be happened from April to September each year. Monthly pumping amounts between April and September were calculated based on the historical pumping distribution from 2017 to 2019 with the exception for Well 22, 25, 27 and 28. See Notes 4 and 5 below.
4. Based on historical pumping amounts from 2017 to 2019, Well 25 contributes approximately 22% of the total pumping amount. If the this 22% was used for future pumping assumption, the required pumping capacity will be 3,900 gpm, which is greater than the actual Well 25 capacity of 3,250 gpm. Hence, the future pumping at Well 25 was adjusted to have a maximum pumping capacity of 2,850 gpm, leaving 400 gpm buffering room from the actual capacity, and the additional required capacity was evenly distributed to Wells 22, 27 and 28 due to these wells' past three-year utilizations and additional pumping capacities.
5. Capacity information for non-potable irrigation wells are not available.

Artificial Recharge Assumptions (2020-2044)

Year	8th Street Basin	Banana Basin	Brooks Basin	College Heights Basin	Declez Basin	Ely Basin	Etiwanda Debris Basin	Grove Avenue	Hickory Basin	Jurupa Basin	Day Creek Basin	Montclair Basin	RP-3 Basin	San Sevaine Basin	Turner Basin 1&2	Turner Basin 3&4	Upland Basin	Victoria Basin	Wineville Basin	Riverside Basin	CSI Basin	East Declez Basin	Total
	acre-ft/yr																						
2020	2,754	1,333	2,792	1,079	1,253	2,154	1,311	467	2,255	0	415	2,600	5,235	1,965	937	1,328	1,062	1,980	167	0	49	0	**31,138**
2021	3,165	1,431	2,758	1,132	1,250	2,555	1,710	612	2,287	0	664	2,451	5,201	2,449	1,227	1,617	1,168	2,250	217	0	61	0	**34,203**
2022	2,782	1,325	2,440	986	1,250	2,161	463	418	1,803	0	269	1,703	4,623	1,440	813	1,203	768	1,889	83	0	47	0	**26,465**
2023	3,236	1,546	3,599	1,733	1,250	2,407	2,137	530	2,657	0	1,030	4,357	5,997	3,214	1,585	1,975	1,679	2,050	390	0	86	0	**41,458**
2024	2,990	1,376	2,725	1,160	1,253	2,094	1,160	433	2,214	0	442	2,333	5,128	1,932	964	1,355	839	1,957	183	0	60	0	**30,598**
2025	2,775	1,299	2,477	1,024	1,250	1,865	404	284	1,865	0	265	1,738	4,774	1,514	895	1,285	721	1,829	116	0	52	0	**26,431**
2026	2,557	1,239	2,549	948	1,250	1,993	578	376	2,009	0	277	1,822	4,727	1,325	823	1,213	668	1,830	73	0	35	0	**26,290**
2027	3,079	1,446	2,831	1,168	1,250	2,341	1,680	551	2,422	0	624	2,436	5,295	2,145	1,211	1,601	1,123	2,054	228	0	74	0	**33,560**
2028	2,995	1,356	2,780	1,122	1,253	2,469	986	501	2,273	0	425	2,487	5,186	1,923	976	1,367	931	1,991	187	0	53	0	**31,264**
2029	2,878	1,370	2,509	992	1,250	2,178	621	415	2,004	0	432	1,922	4,713	1,620	1,031	1,421	761	1,886	107	0	53	0	**28,162**
2030	2,507	1,320	2,541	1,127	1,250	2,175	760	387	1,986	0	332	2,091	4,590	1,704	902	1,292	434	1,881	104	0	18	0	**27,401**
2031	2,739	1,371	2,664	335	1,250	2,638	571	554	2,184	0	446	1,685	4,997	1,735	937	1,327	583	1,910	194	0	57	0	**28,177**
2032	3,483	1,674	3,547	816	1,253	2,811	2,816	674	2,757	0	1,004	3,382	5,915	3,320	1,618	2,009	1,776	2,243	412	0	98	0	**41,609**
2033	2,983	1,443	2,758	687	1,250	2,502	1,634	585	2,453	0	622	1,883	5,351	2,377	1,240	1,630	866	2,126	202	0	64	0	**32,652**
2034	2,909	1,442	3,307	1,203	1,250	2,107	2,224	486	2,546	0	769	2,845	5,847	3,122	1,379	1,769	1,724	2,028	404	0	67	0	**37,428**
2035	2,875	1,438	2,454	798	1,250	2,178	438	411	2,251	0	388	1,859	4,979	1,558	866	1,256	532	1,856	152	0	63	0	**27,601**
2036	3,419	1,641	2,849	1,151	1,253	2,584	2,477	645	2,818	0	849	2,719	6,002	2,965	1,301	1,693	927	2,356	310	0	85	0	**38,046**
2037	3,925	1,761	3,550	1,487	1,250	3,183	4,222	897	3,240	0	1,309	3,954	6,411	4,440	1,942	2,332	1,688	2,600	460	0	128	0	**48,777**
2038	2,552	1,265	2,446	1,176	1,250	1,754	777	274	1,914	0	210	1,918	4,823	1,638	739	1,129	687	1,837	87	0	47	0	**26,524**
2039	2,925	1,419	2,542	1,268	1,250	2,186	832	408	2,053	0	319	2,173	4,770	1,776	863	1,253	756	1,945	98	0	51	0	**28,888**
2040	3,318	1,448	2,603	1,387	1,253	2,348	1,523	388	2,292	0	464	2,575	5,135	2,462	1,037	1,428	889	2,035	162	0	63	0	**32,810**
2041	2,933	1,509	2,611	1,342	1,250	2,120	781	308	2,105	0	324	2,664	4,772	1,983	872	1,262	735	1,915	113	0	70	0	**29,671**
2042	3,019	1,361	2,654	1,352	1,250	2,285	750	316	2,138	0	311	2,753	4,975	1,950	840	1,230	843	1,835	134	0	51	0	**30,050**
2043	2,626	1,250	2,492	1,275	1,250	1,892	434	323	1,803	0	205	2,065	4,530	1,394	777	1,167	751	1,751	46	0	35	0	**26,067**
2044	2,799	1,223	2,466	1,302	1,250	1,956	571	248	1,896	0	220	2,145	4,676	1,464	759	1,149	692	1,802	79	0	30	0	**26,728**
Average 2020-2044	**2,969**	**1,411**	**2,758**	**1,122**	**1,251**	**2,277**	**1,274**	**460**	**2,249**	**0**	**505**	**2,422**	**5,146**	**2,137**	**1,061**	**1,452**	**944**	**1,993**	**188**	**0**	**60**	**0**	31,680

Wastewater Discharge Assumptions (2020-2044)

Agency	Facility / Discharge Point	Wastewater Discharge
		MGD
City of Riverside	Riverside Regional Water Quality Control Plant (RWQCP)	25
Inland Empire Utilities Agency	Regional Plant (RP) 1 - DP 001	1.4
	RP 1 - DP 002 and RP 4	8.1
	RP-5	2.5
	Carbon Canyon Water Recycling Facility	3.2
Western Municipal Water District	Western Riverside County Regional Wastewater Authority Plant	9
City of Corona	Corona WWTP-1	4.6

Model-Simulated JCSD Production (2020 - 2044)

Year	JCSD Well No. 6	JCSD Well No. 8	JCSD Well No. 11	JCSD Well No. 12	JCSD Well No. 13	JCSD Well No. 14	JCSD Well No. 15	JCSD Well No. 16	JCSD Well No. 17	JCSD Well No. 18	JCSD Well No. 19	JCSD Well No. 22	JCSD Well No. 23	JCSD Well No. 25	JCSD Well No. 27	JCSD Well No. 28	High School Well	JCSD Well No. 40	JCSD Well No. 41	JCSD Well No. 42	JCSD Well No. 5	JCSD Well No. 21*	Total
	acre-ft/yr																						
2020	19	131	5	12	729	485	60	87	1,508	32	534	1,467	368	1,667	1,304	1,545	85	44	33	17	14	376	**10,520**
2021	20	135	5	12	754	502	62	90	1,559	33	552	1,516	381	1,724	1,348	1,597	88	46	34	17	14	389	**10,878**
2022	21	139	5	12	778	518	64	93	1,610	34	570	1,566	393	1,781	1,392	1,650	90	48	36	18	15	402	**11,236**
2023	21	144	5	13	803	535	66	96	1,661	35	589	1,616	406	1,837	1,436	1,702	93	51	38	18	15	414	**11,595**
2024	22	148	5	13	828	551	68	99	1,712	36	607	1,666	418	1,894	1,480	1,755	96	51	38	19	16	427	**11,951**
2025	23	153	6	14	853	568	70	102	1,764	38	625	1,716	431	1,950	1,525	1,807	99	53	39	20	16	440	**12,308**
2026	23	158	6	14	880	586	72	106	1,821	39	645	1,771	445	2,014	1,574	1,866	102	54	41	20	17	454	**12,708**
2027	24	163	6	14	908	605	74	109	1,878	40	665	1,827	459	2,077	1,624	1,925	105	56	42	21	17	468	**13,108**
2028	25	168	6	15	936	623	77	112	1,935	41	686	1,883	473	2,140	1,673	1,983	109	58	43	21	18	483	**13,508**
2029	25	173	6	15	963	641	79	116	1,993	42	706	1,938	487	2,204	1,723	2,042	112	60	45	22	18	497	**13,909**
2030	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	62	46	23	19	511	**14,308**
2031	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	61	46	23	19	511	**14,308**
2032	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	62	46	23	19	511	**14,309**
2033	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	61	46	23	19	511	**14,307**
2034	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	62	46	23	19	511	**14,309**
2035	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	61	46	23	19	511	**14,308**
2036	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	61	46	23	19	511	**14,307**
2037	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	61	46	23	19	511	**14,307**
2038	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	61	46	23	19	511	**14,307**
2039	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	61	46	23	19	511	**14,307**
2040	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	61	46	23	19	511	**14,307**
2041	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	61	46	23	19	511	**14,307**
2042	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	61	46	23	19	511	**14,307**
2043	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	61	46	23	19	511	**14,307**
2044	26	178	6	16	991	660	81	119	2,050	44	726	1,994	501	2,267	1,772	2,101	115	61	46	23	19	511	**14,307**
Average 2020-2044	**25**	**167**	**6**	**15**	**932**	**621**	**76**	**112**	**1,928**	**41**	**683**	**1,875**	**471**	**2,132**	**1,667**	**1,975**	**108**	**58**	**43**	**21**	**18**	**481**	**13,453**

* JCSD Well 21 is located outside of active model area, and the future production from this well is assumed to the same as model input.

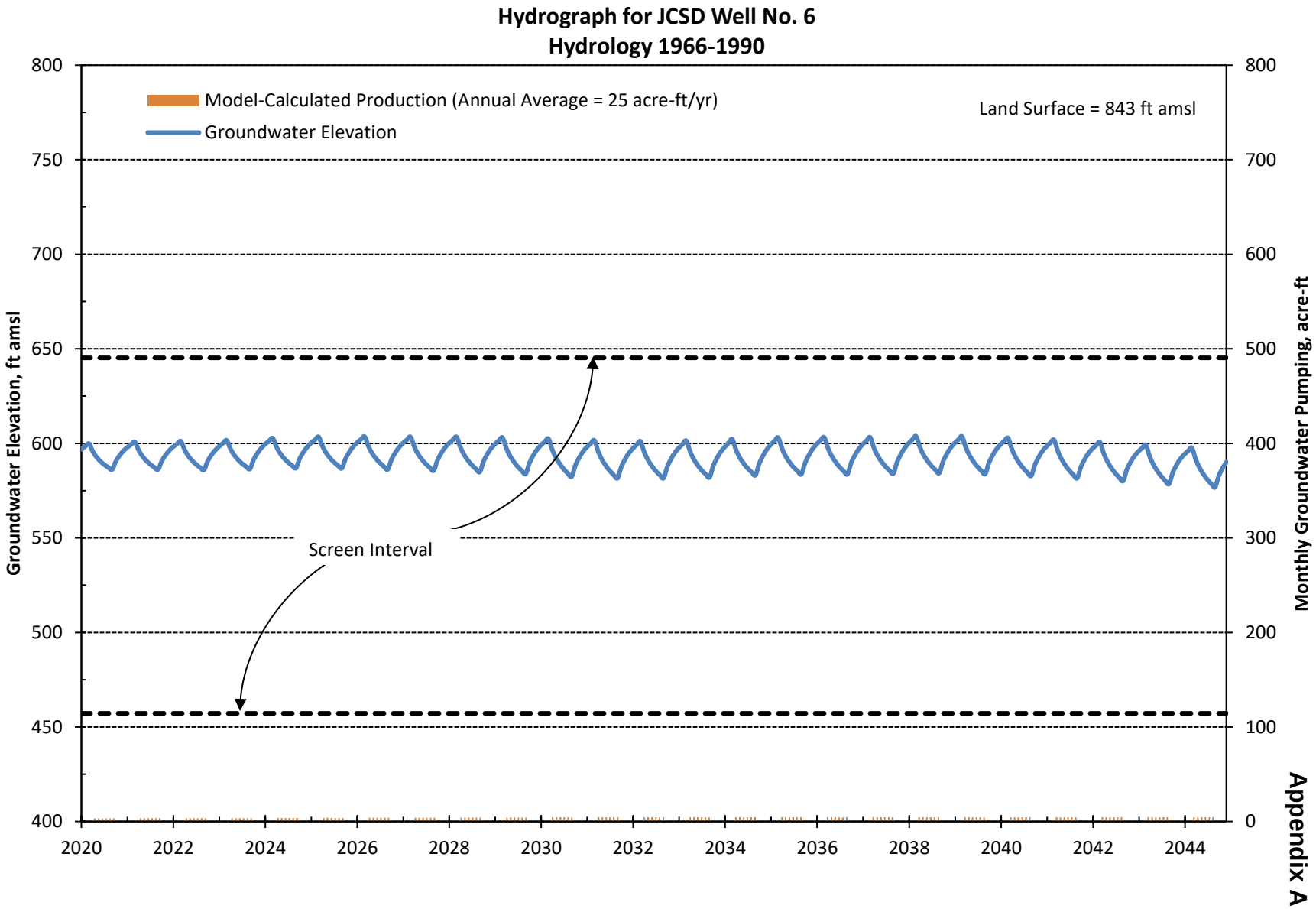
APPENDICES

GEOSCIENCE

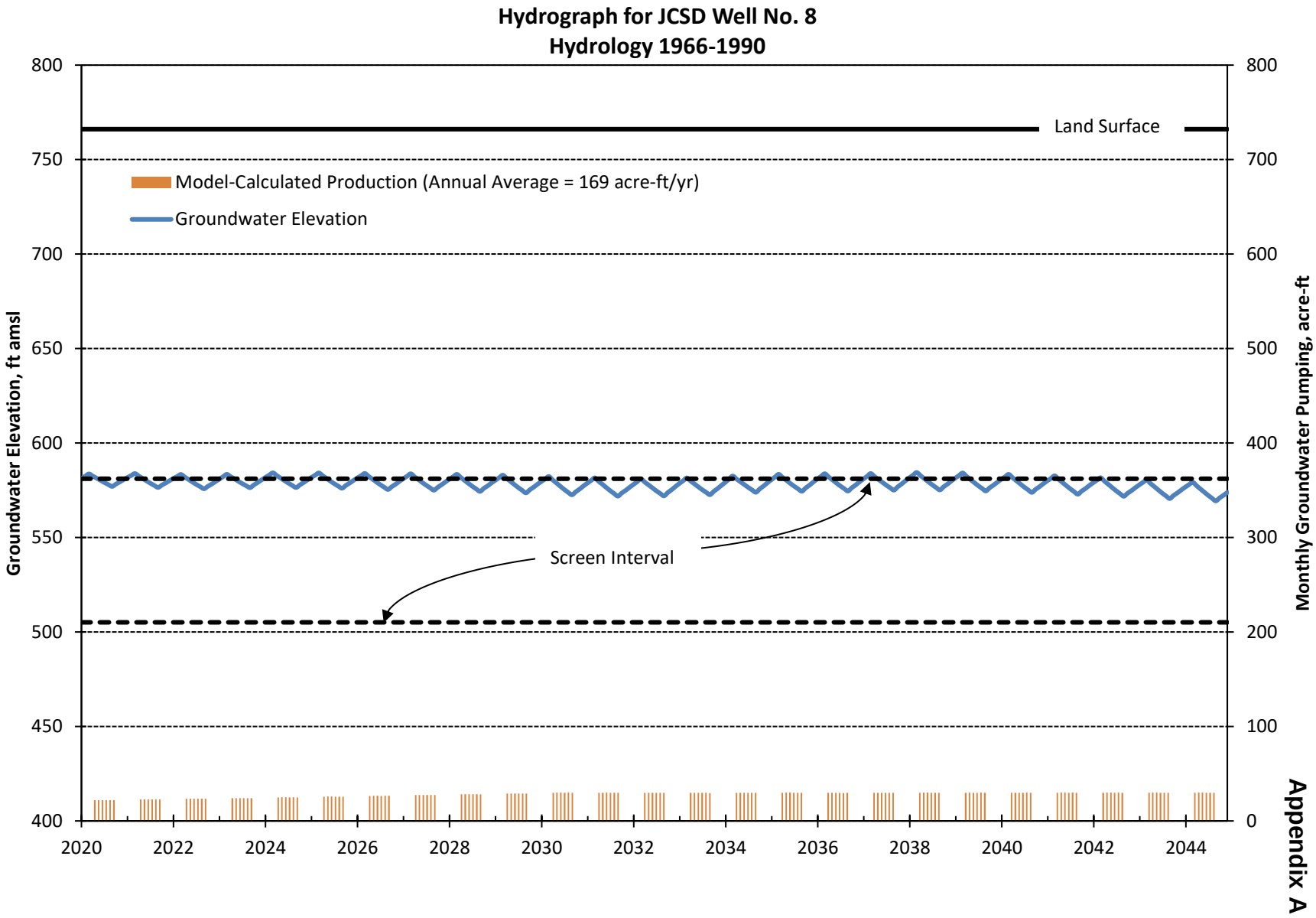
APPENDIX A

Model-Simulated Groundwater Elevations at JCSD Wells (Hydrographs)

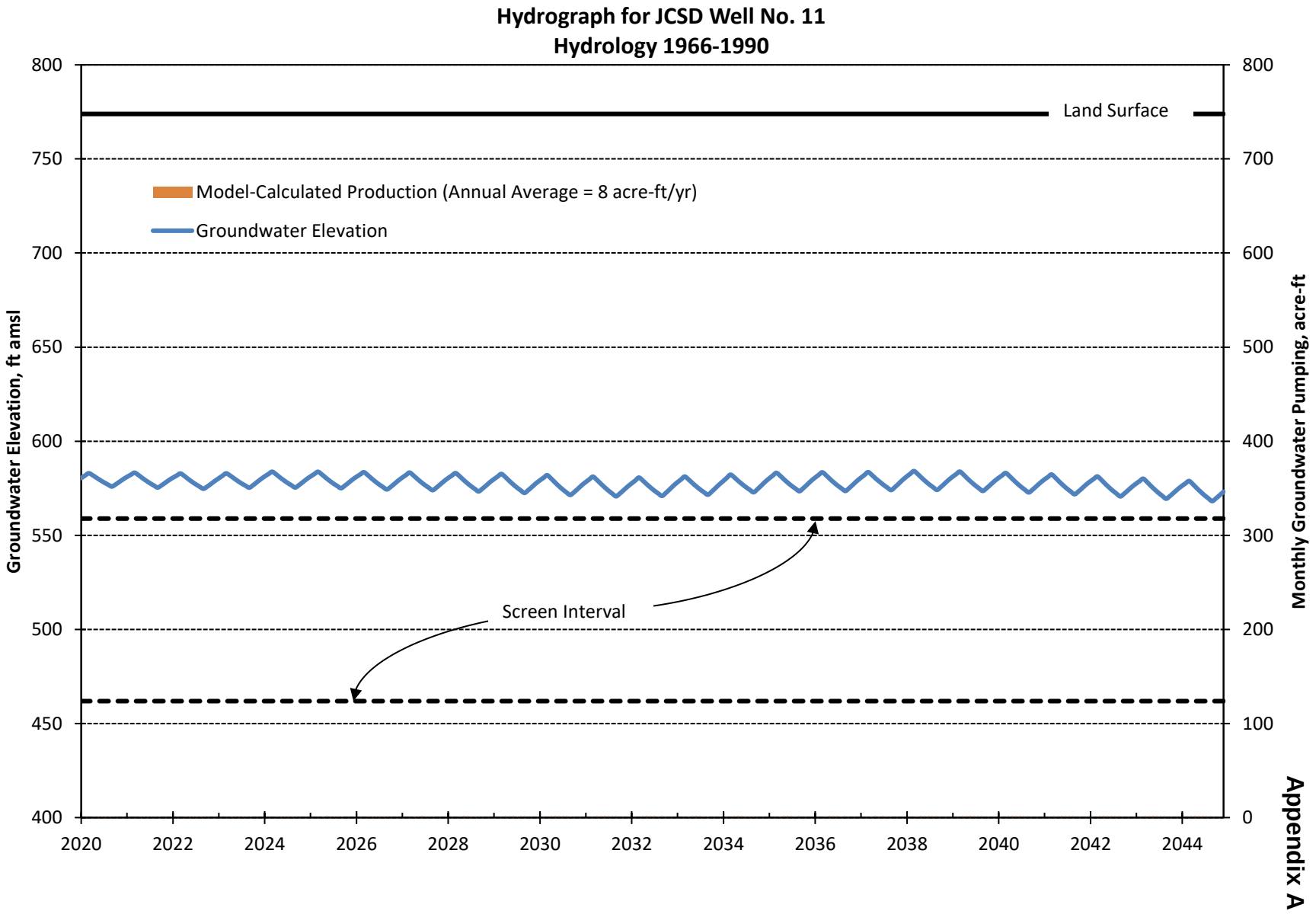
GEOSCIENCE


Hydrograph for JCSD Well No. 6
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 25 acre-ft/yr)
Groundwater Elevation
Land Surface = 843 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
800
750
700
650
600
550
500
450
400
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

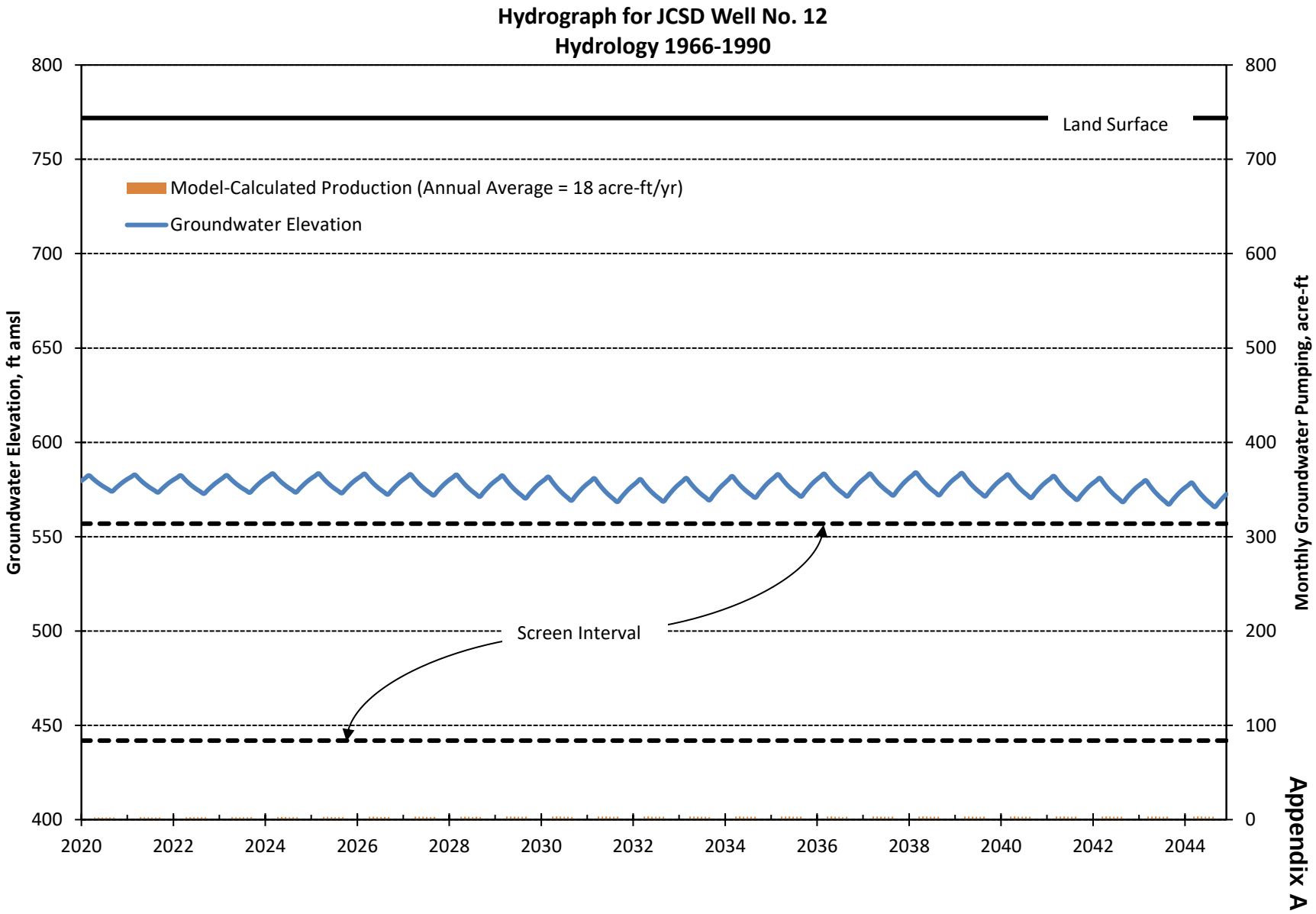
Appendix A


Hydrograph for JCSD Well No. 8
Hydrology 1966-1990
Land Surface
Model-Calculated Production (Annual Average = 169 acre-ft/yr)
Groundwater Elevation
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
800
750
700
650
600
550
500
450
400
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

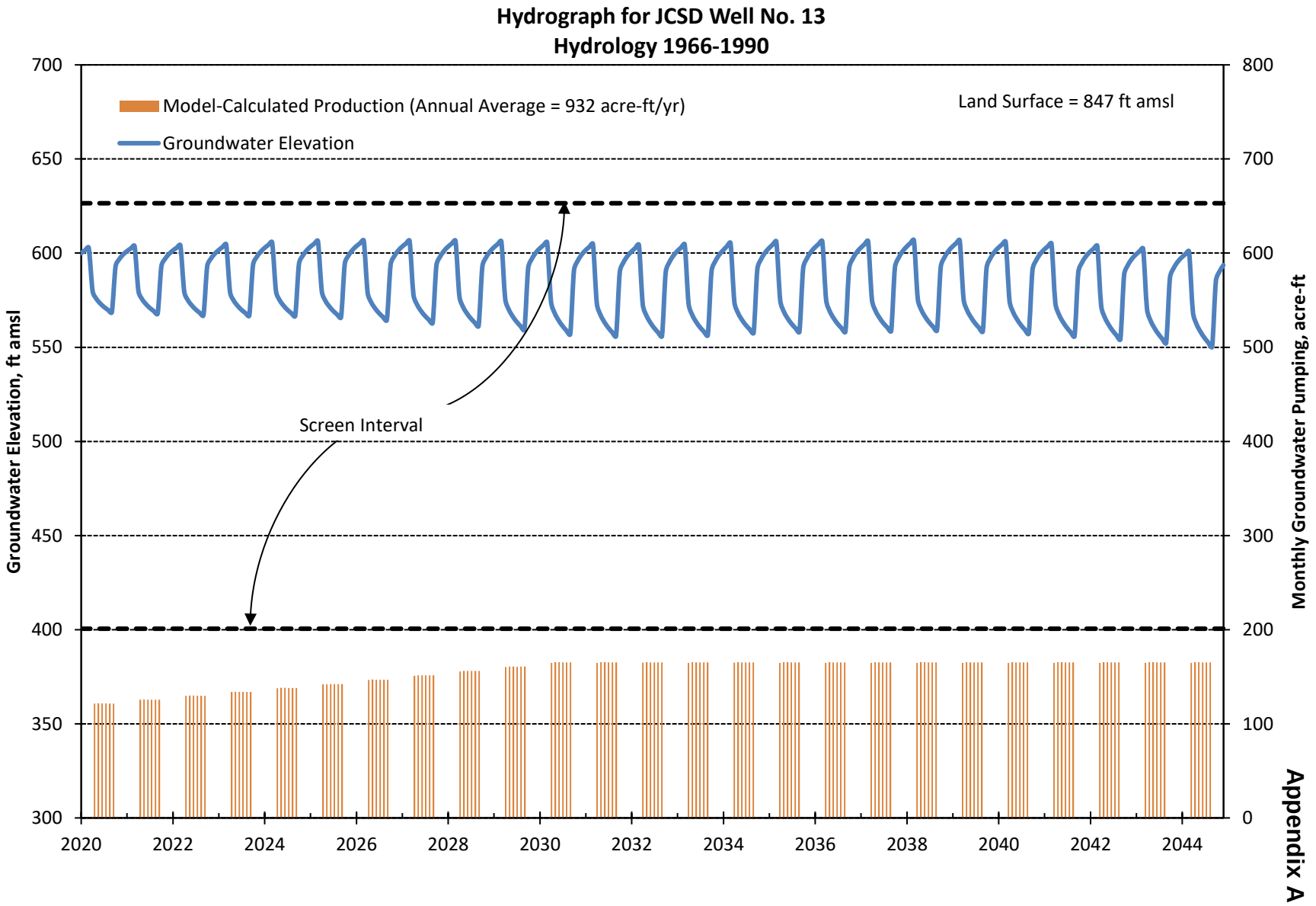
Appendix A


Hydrograph for JCSD Well No. 11
Hydrology 1966-1990
Land Surface
Model-Calculated Production (Annual Average = 8 acre-ft/yr)
Groundwater Elevation
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
800
750
700
650
600
550
500
450
400
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

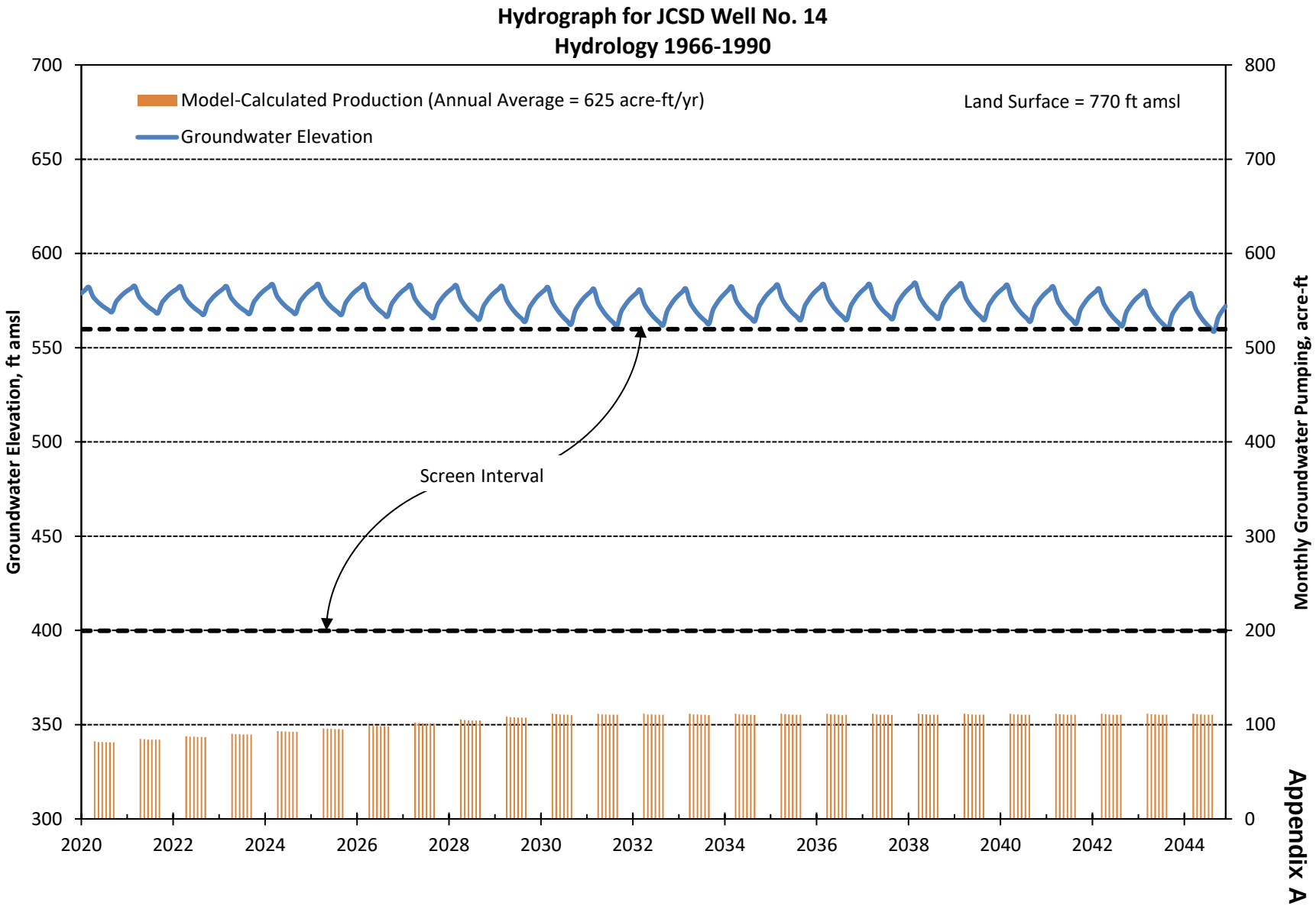
Appendix A


Hydrograph for JCSD Well No. 12
Hydrology 1966-1990
Land Surface
Model-Calculated Production (Annual Average = 18 acre-ft/yr)
Groundwater Elevation
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
800
750
700
650
600
550
500
450
400
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

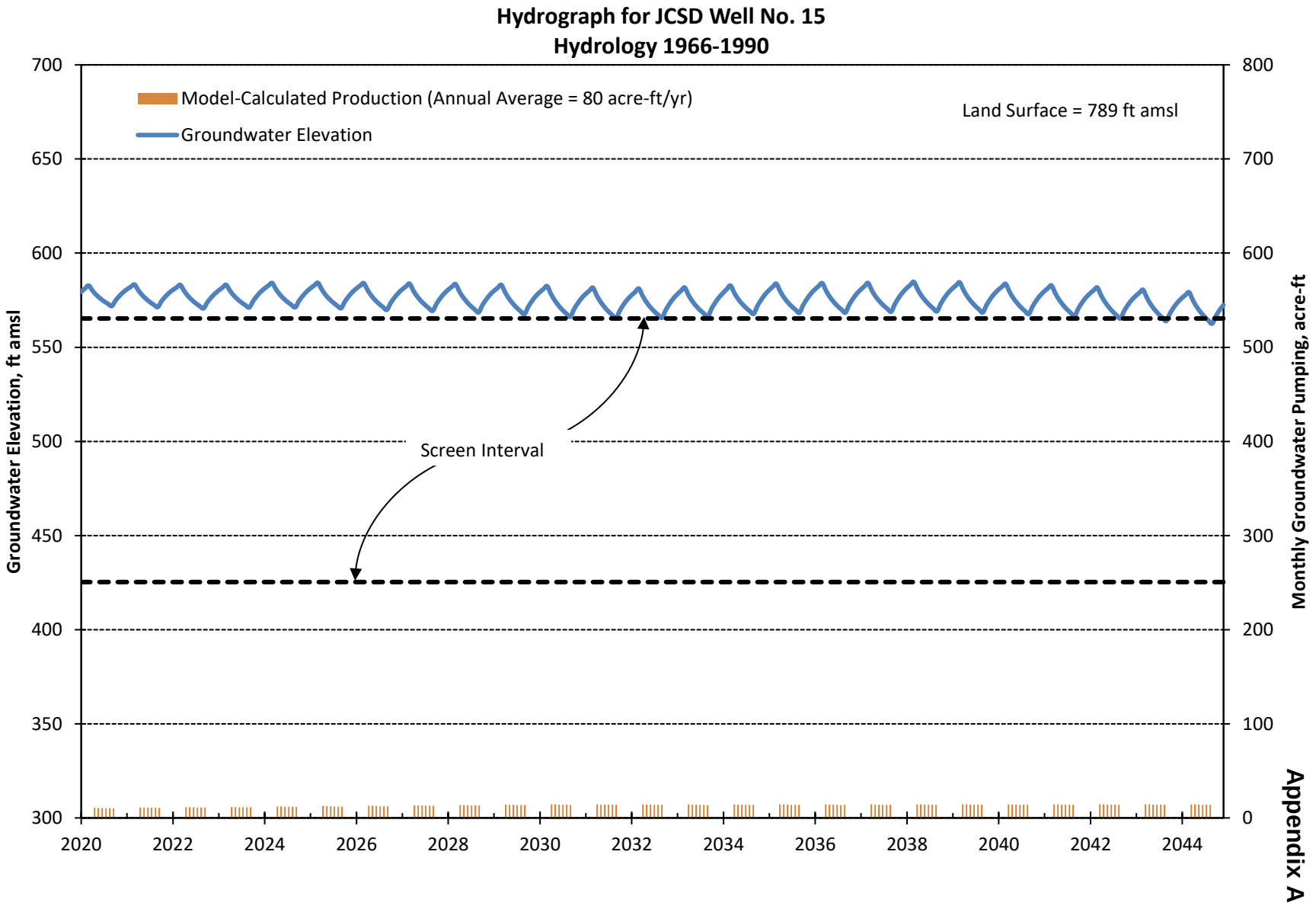
Appendix A


Hydrograph for JCSD Well No. 13
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 932 acre-ft/yr)
Groundwater Elevation
Land Surface = 847 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

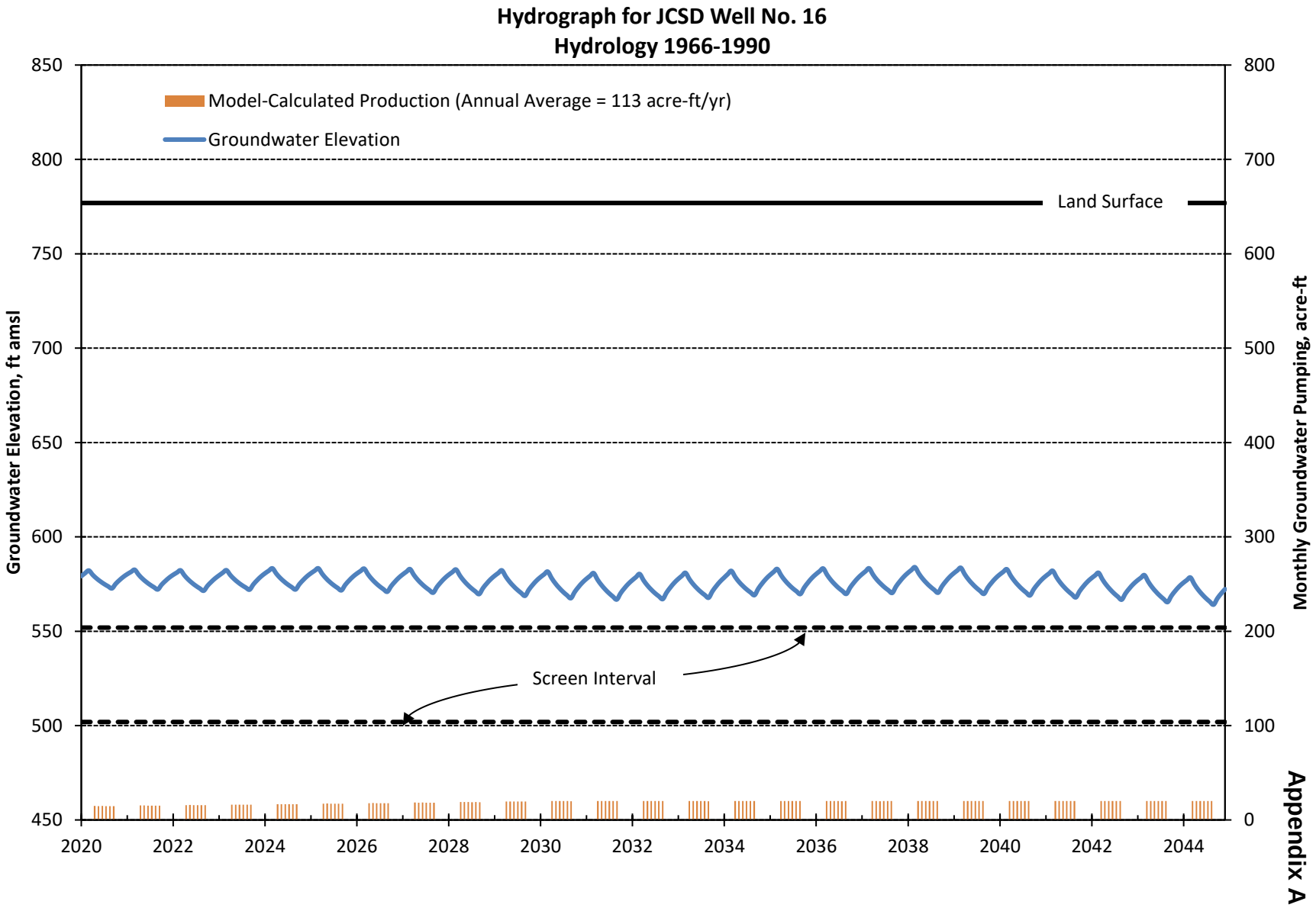
Appendix A


Hydrograph for JCSD Well No. 14
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 625 acre-ft/yr)
Groundwater Elevation
Land Surface = 770 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

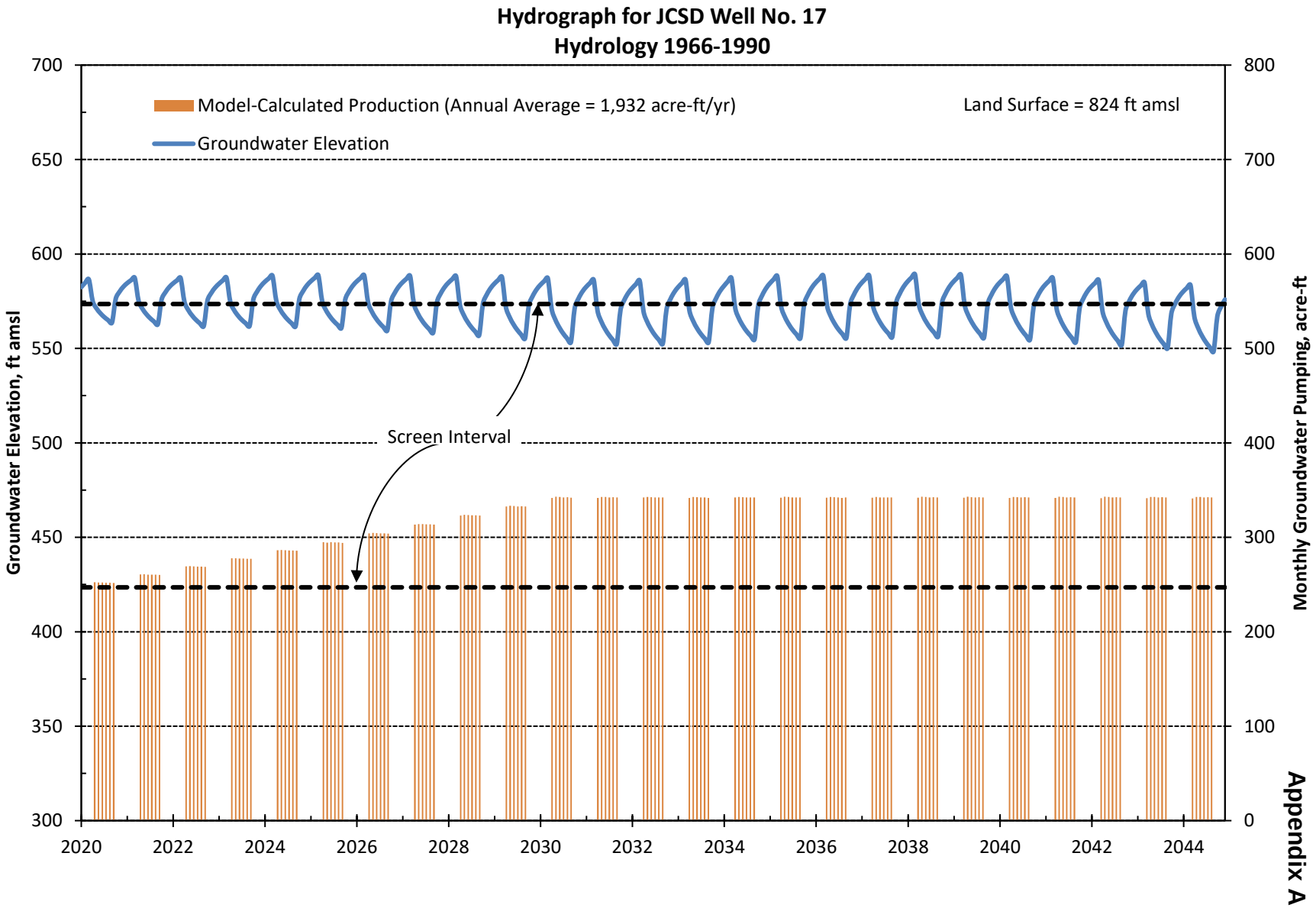
Appendix A


Hydrograph for JCSD Well No. 15
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 80 acre-ft/yr)
Groundwater Elevation
Land Surface = 789 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

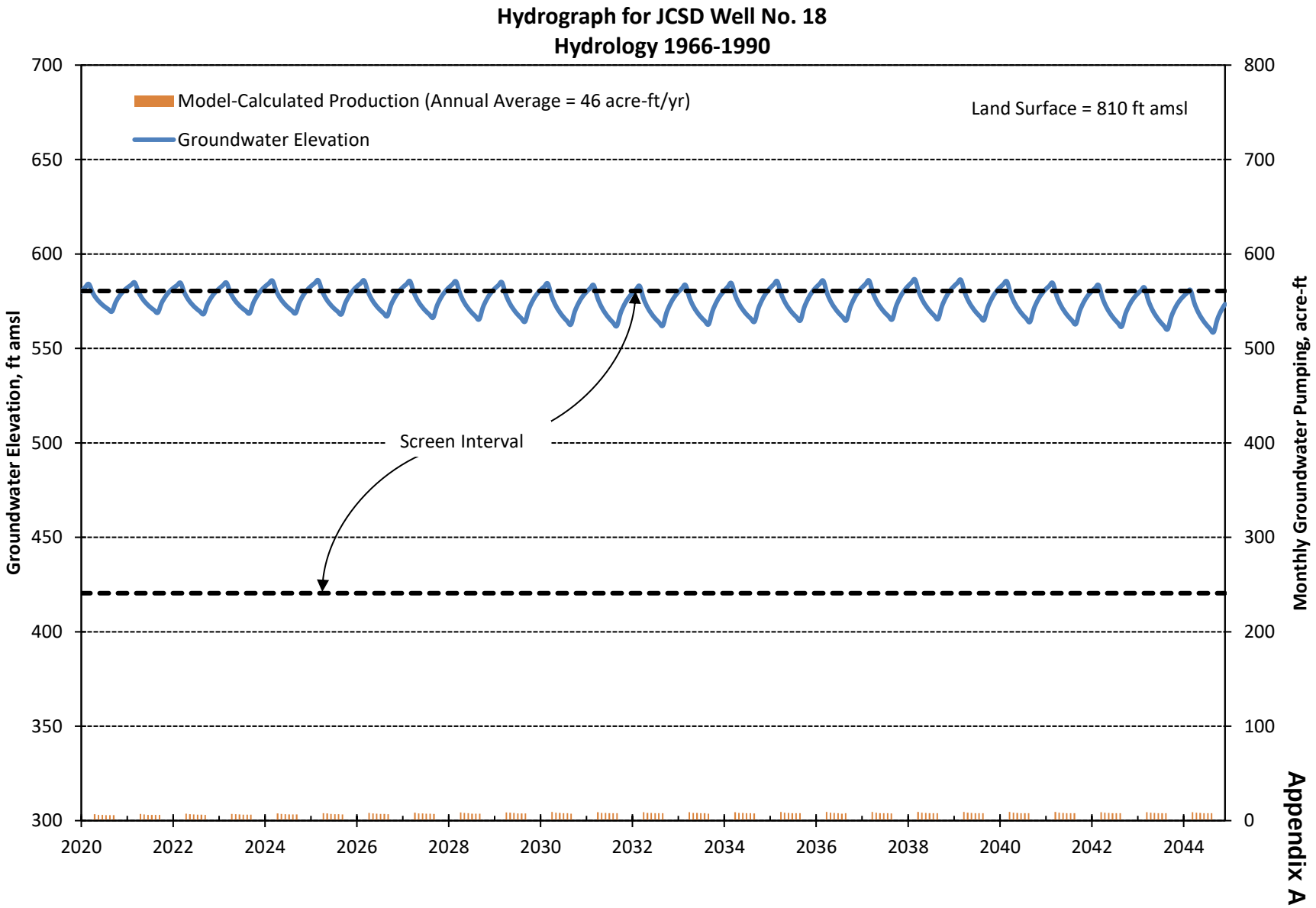
Appendix A


Hydrograph for JCSD Well No. 16
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 113 acre-ft/yr)
Groundwater Elevation
Land Surface
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
850
800
750
700
650
600
550
500
450
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

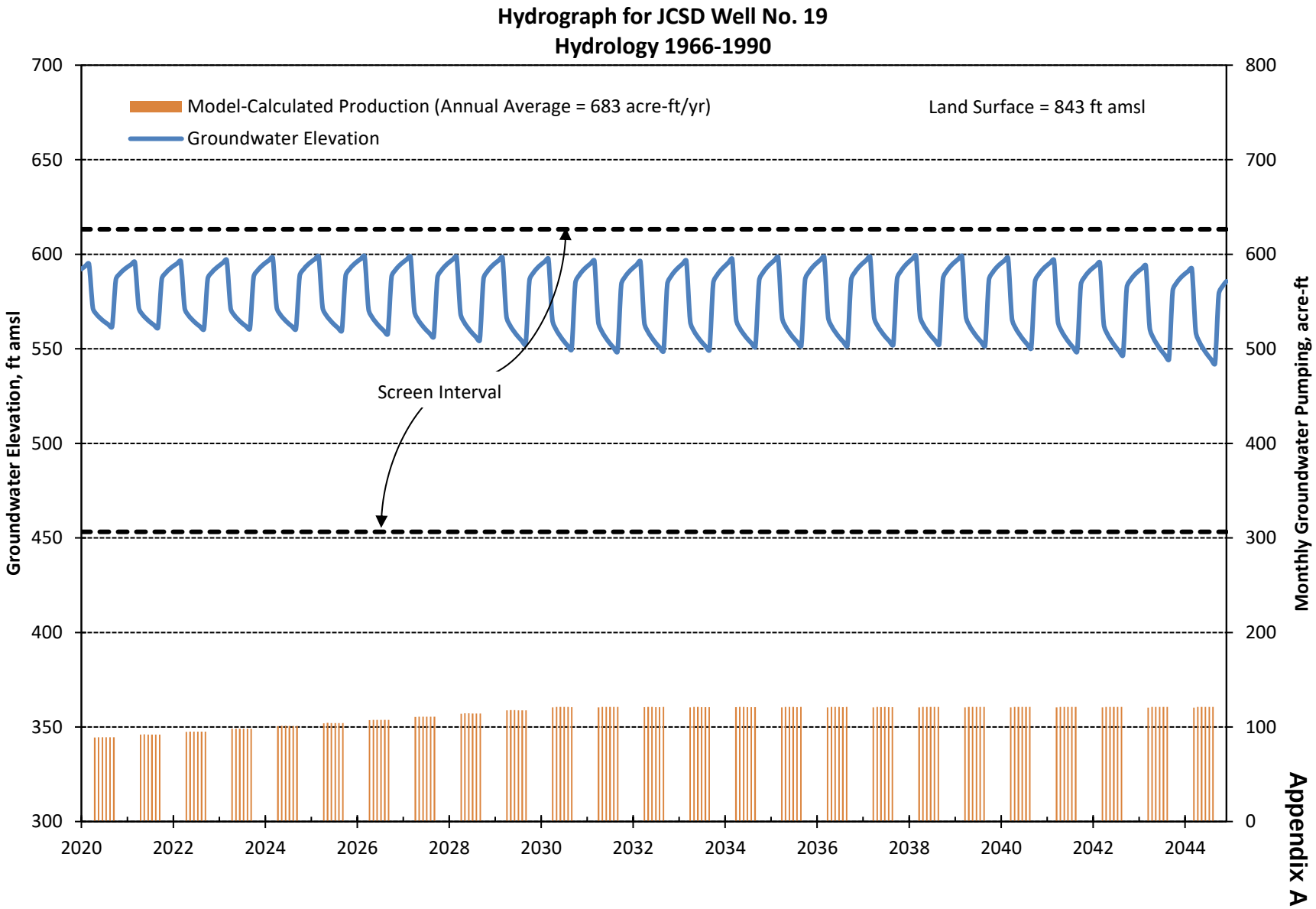
Appendix A


Hydrograph for JCSD Well No. 17
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 1,932 acre-ft/yr)
Groundwater Elevation
Land Surface = 824 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

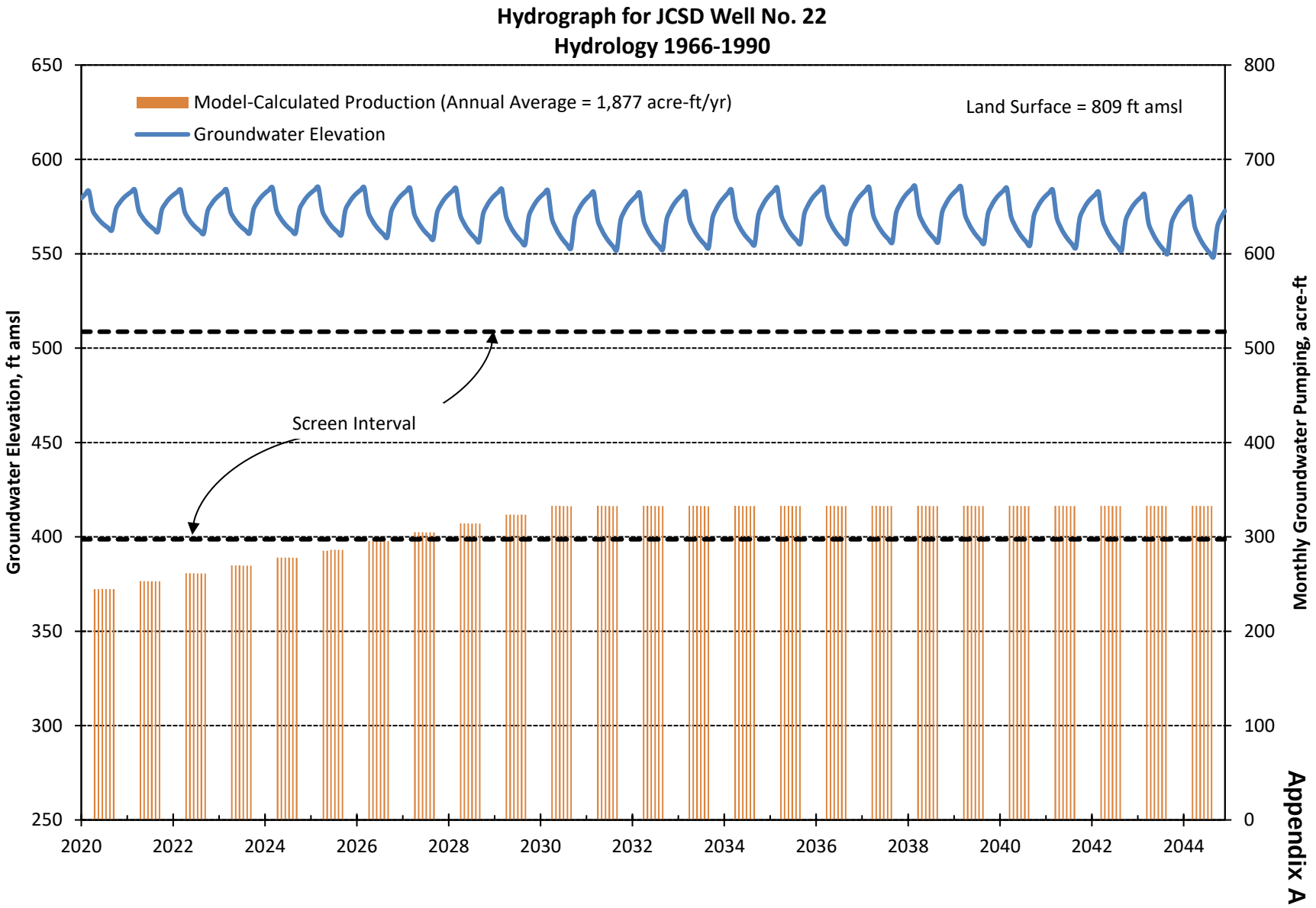
Appendix A


Hydrograph for JCSD Well No. 18
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 46 acre-ft/yr)
Groundwater Elevation
Land Surface = 810 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

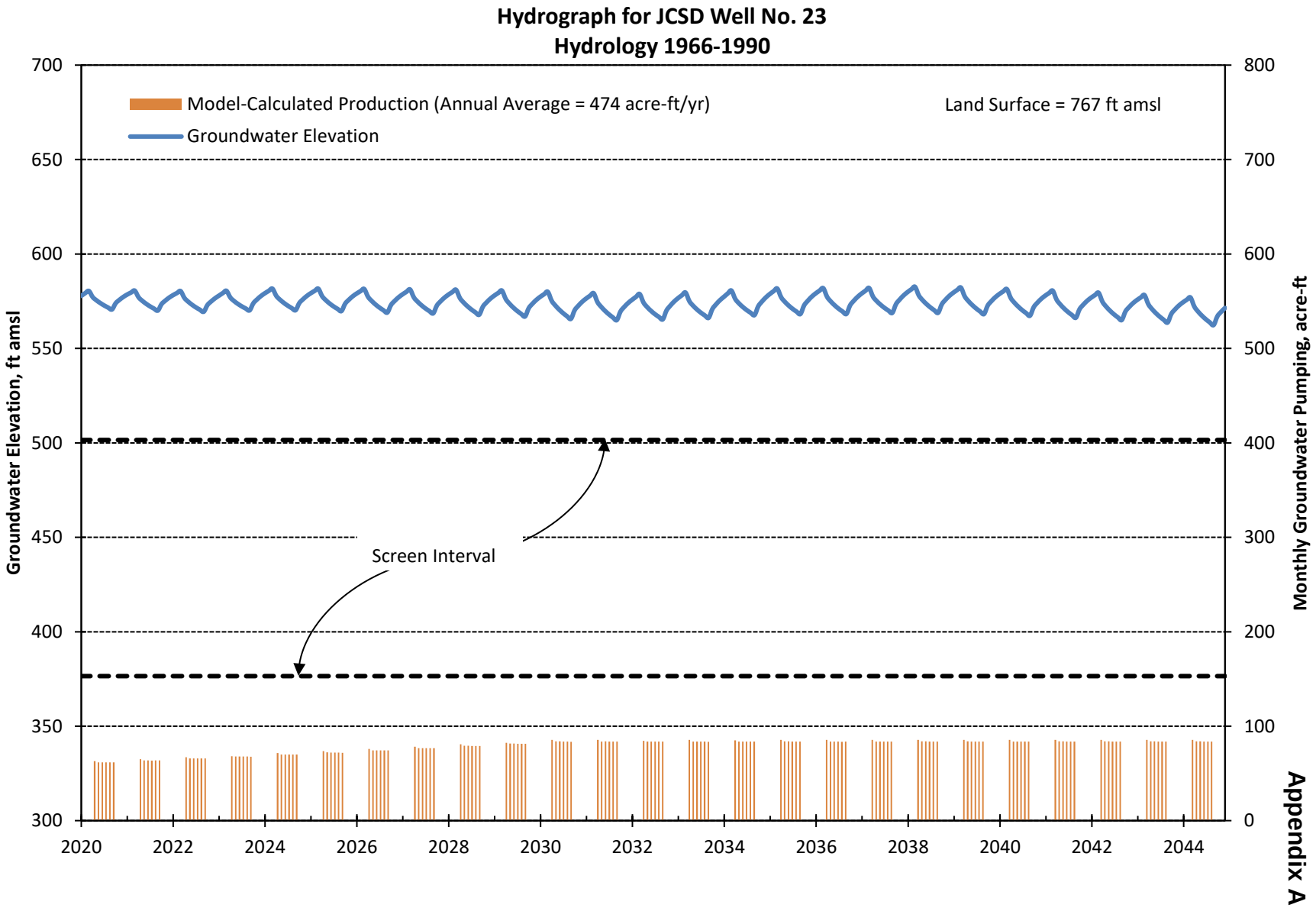
Appendix A


Hydrograph for JCSD Well No. 19
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 683 acre-ft/yr)
Groundwater Elevation
Land Surface = 843 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

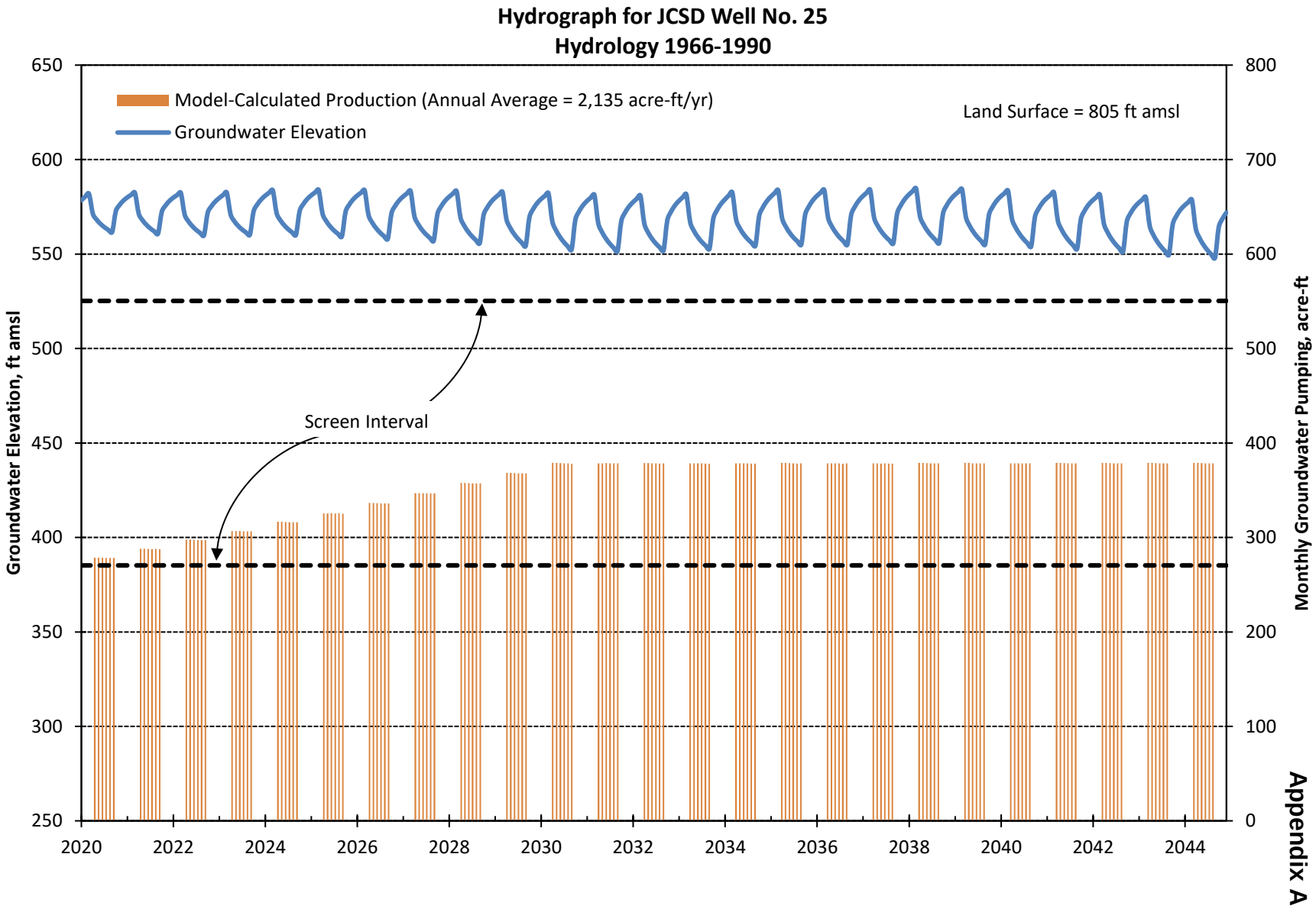
Appendix A


Hydrograph for JCSD Well No. 22
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 1,877 acre-ft/yr)
Groundwater Elevation
Land Surface = 809 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
650
600
550
500
450
400
350
300
250
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

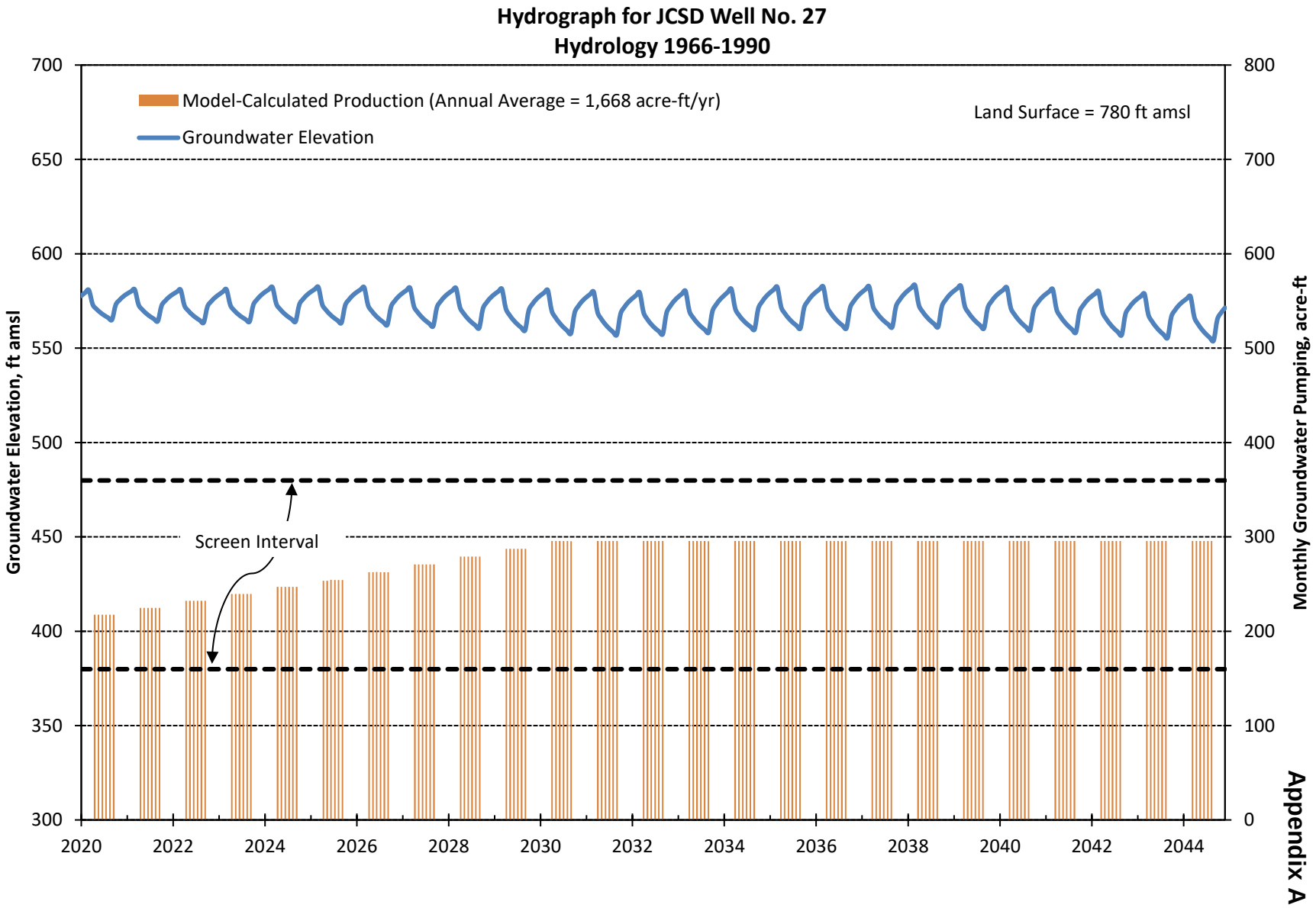
Appendix A


Hydrograph for JCSD Well No. 23
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 474 acre-ft/yr)
Groundwater Elevation
Land Surface = 767 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

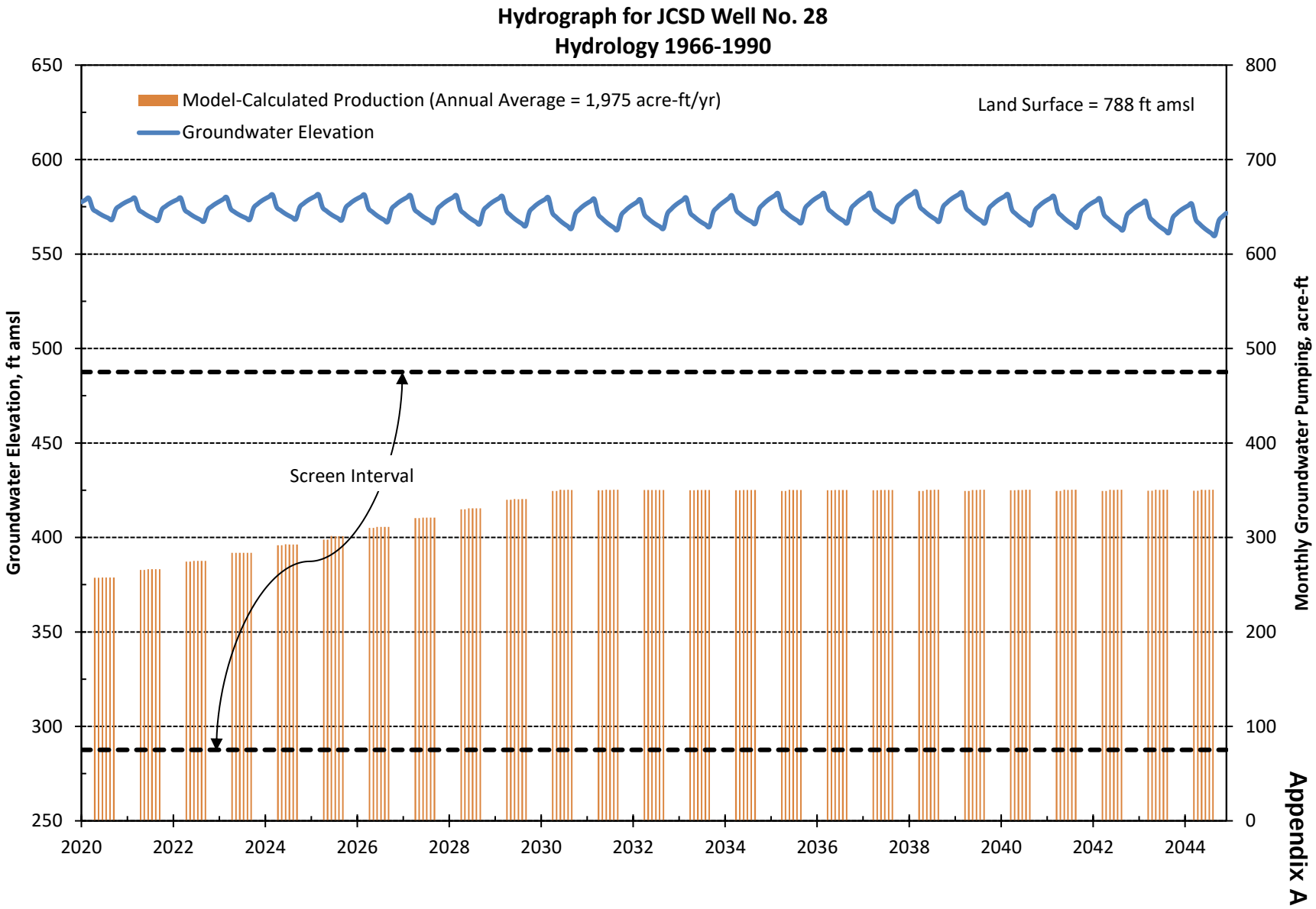
Appendix A


Hydrograph for JCSD Well No. 25
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 2,135 acre-ft/yr)
Groundwater Elevation
Land Surface = 805 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
650
600
550
500
450
400
350
300
250
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

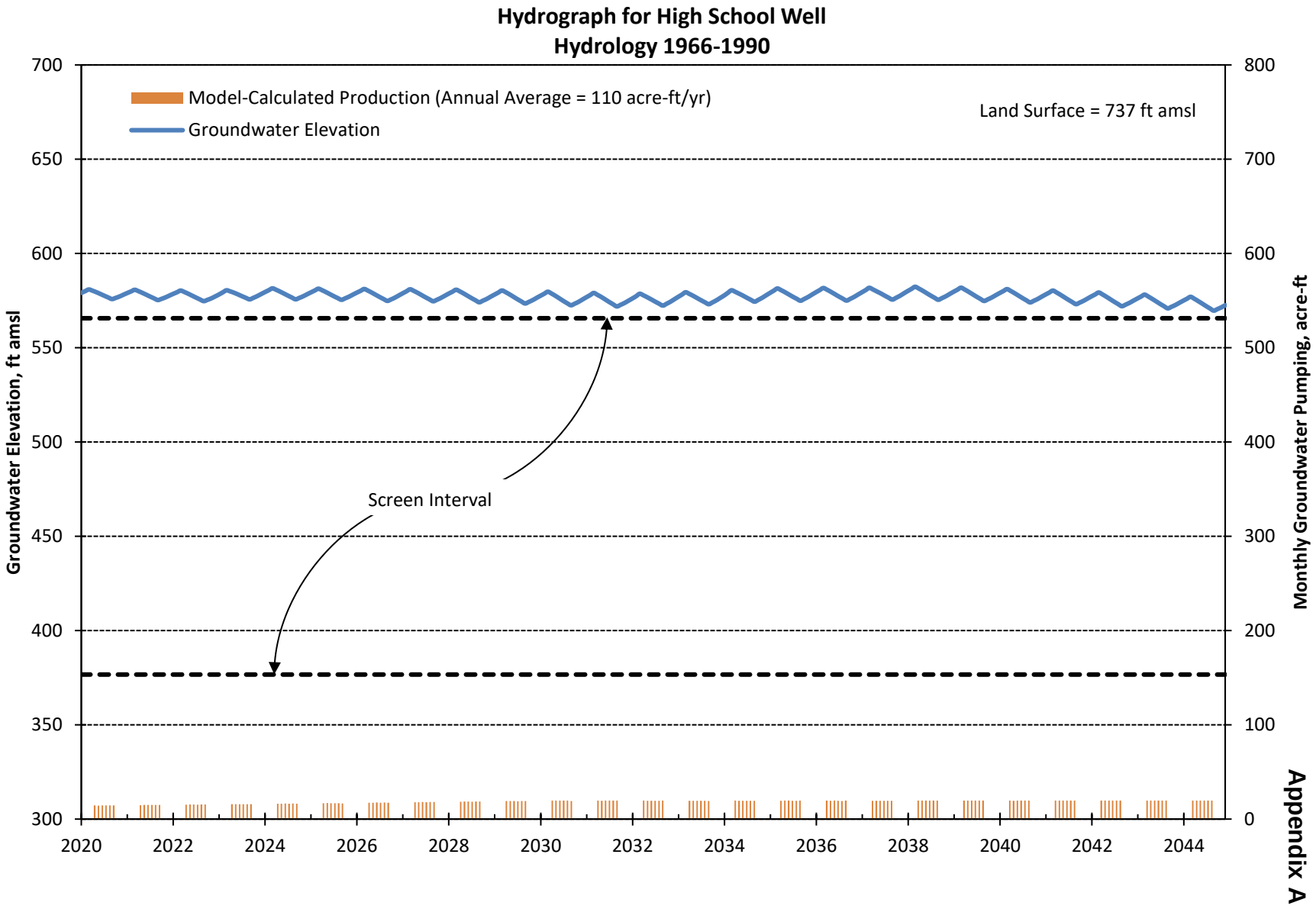
Appendix A


Hydrograph for JCSD Well No. 27
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 1,668 acre-ft/yr)
Groundwater Elevation
Land Surface = 780 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

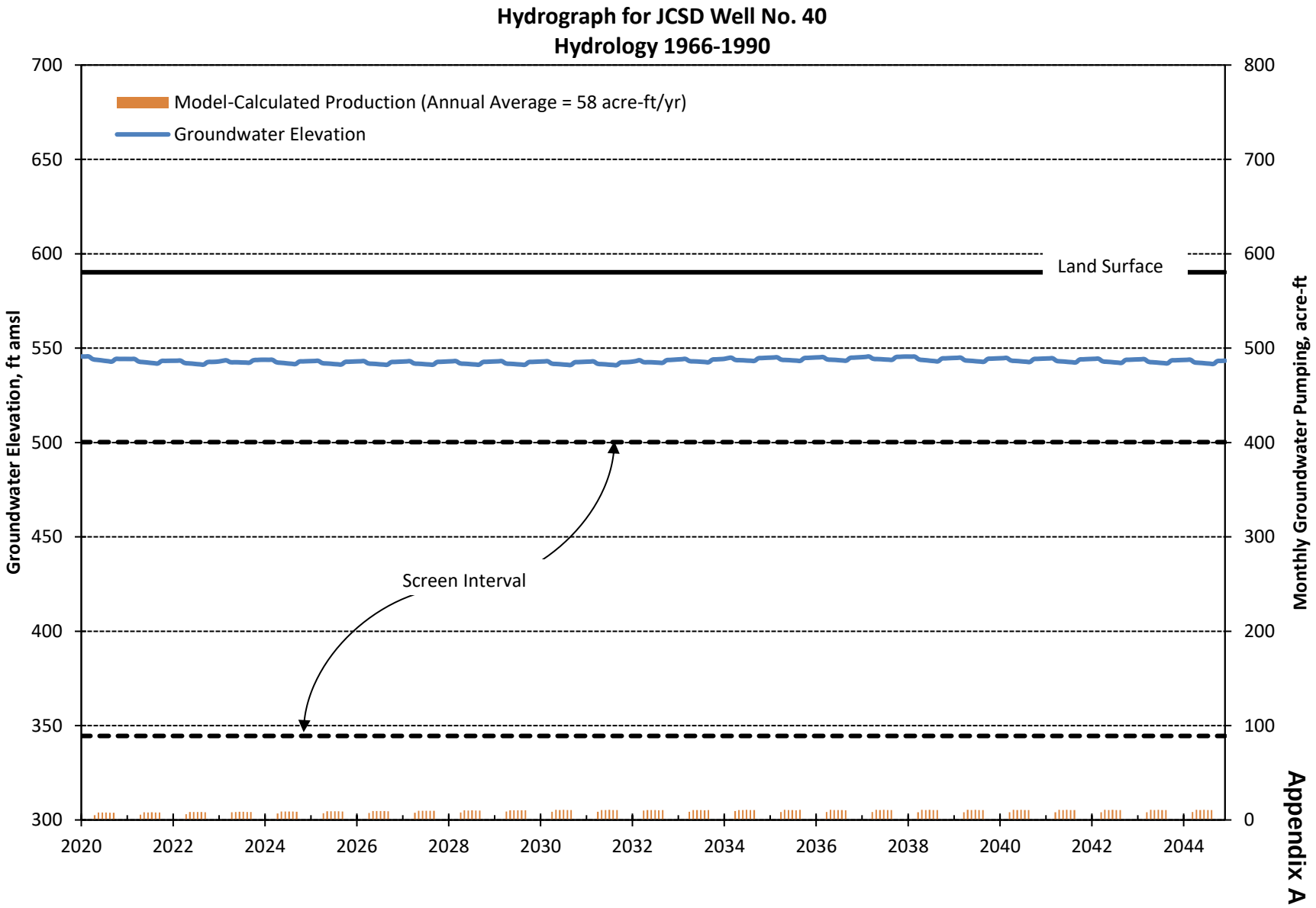
Appendix A


Hydrograph for JCSD Well No. 28
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 1,975 acre-ft/yr)
Groundwater Elevation
Land Surface = 788 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
650
600
550
500
450
400
350
300
250
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

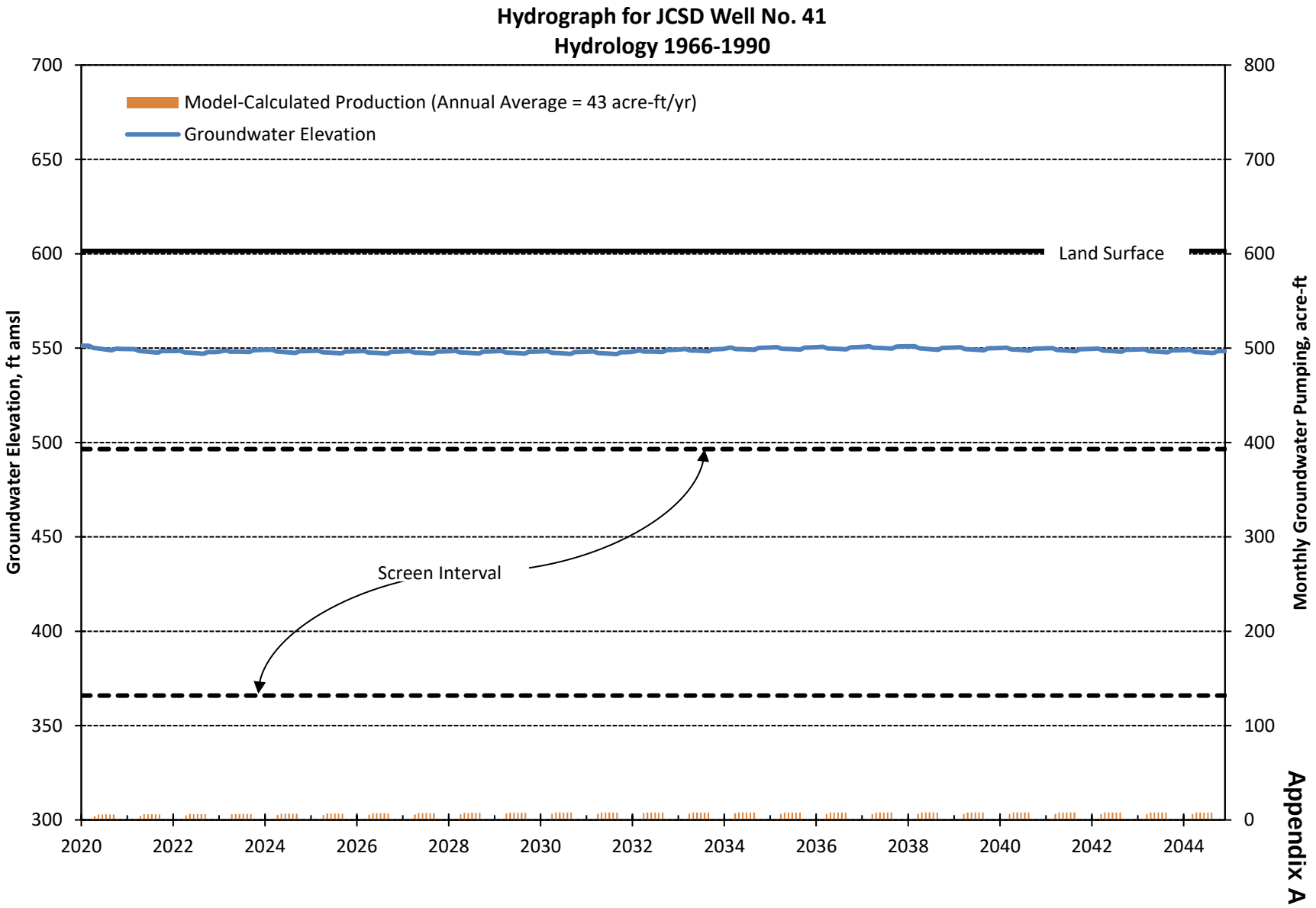
Appendix A


Hydrograph for High School Well
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 110 acre-ft/yr)
Groundwater Elevation
Land Surface = 737 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

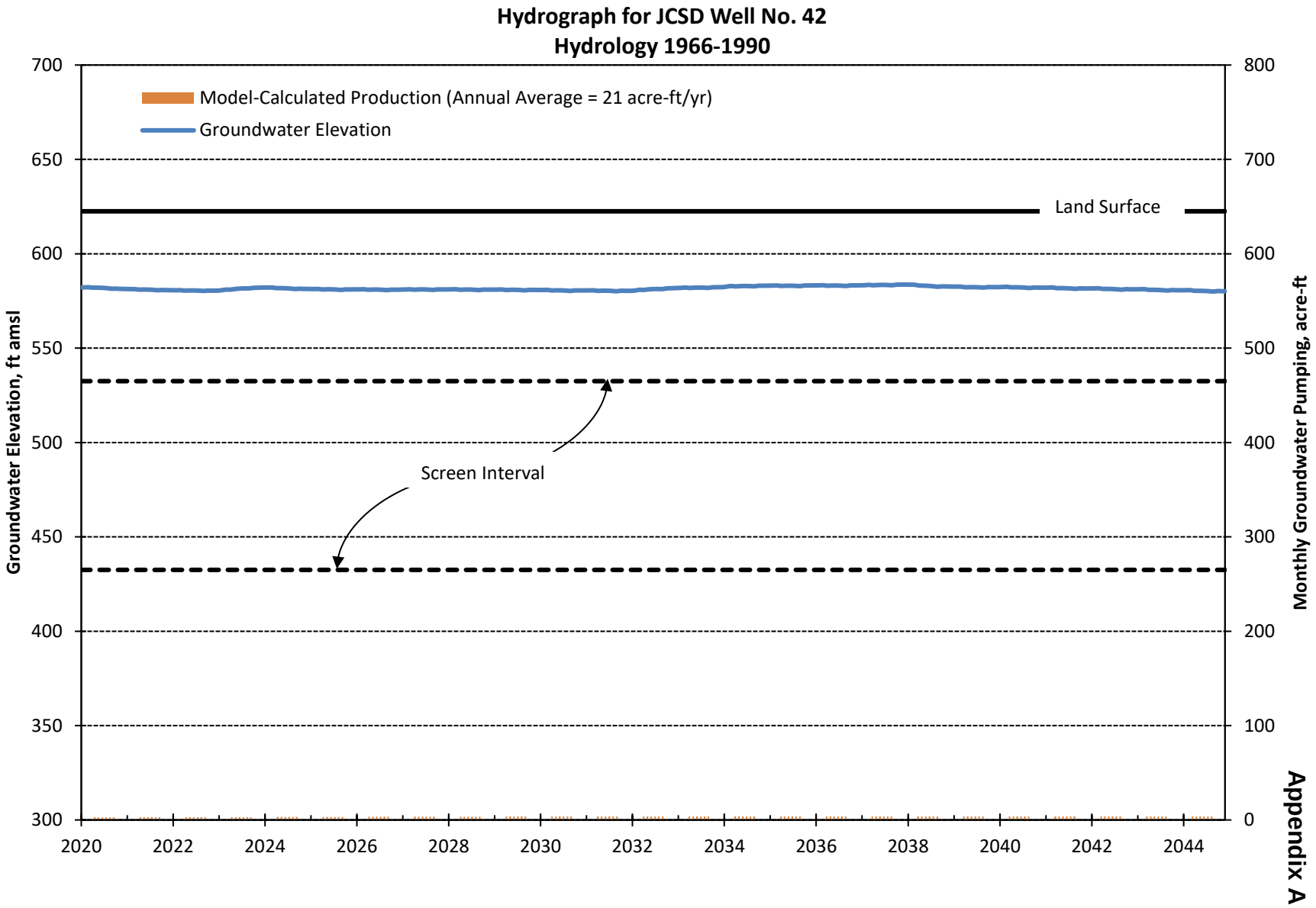
Appendix A


Hydrograph for JCSD Well No. 40
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 58 acre-ft/yr)
Groundwater Elevation
Land Surface
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

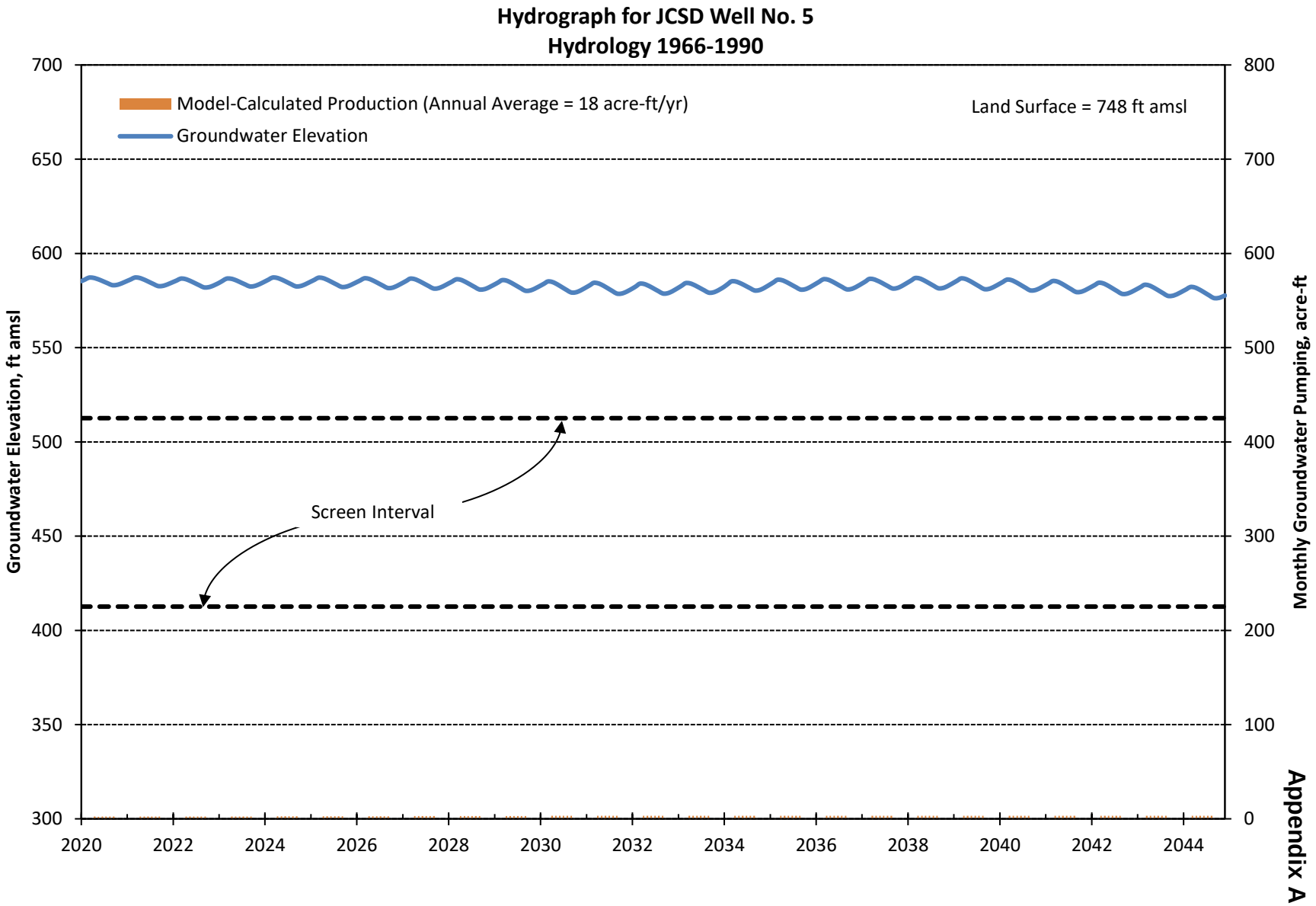
Appendix A


Hydrograph for JCSD Well No. 41
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 43 acre-ft/yr)
Groundwater Elevation
Land Surface
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

Appendix A


Hydrograph for JCSD Well No. 42
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 21 acre-ft/yr)
Groundwater Elevation
Land Surface
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

Appendix A


Hydrograph for JCSD Well No. 5
Hydrology 1966-1990
Model-Calculated Production (Annual Average = 18 acre-ft/yr)
Groundwater Elevation
Land Surface = 748 ft amsl
Screen Interval
Groundwater Elevation, ft amsl
Monthly Groundwater Pumping, acre-ft
700
650
600
550
500
450
400
350
300
800
700
600
500
400
300
200
100
0
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
2040
2042
2044

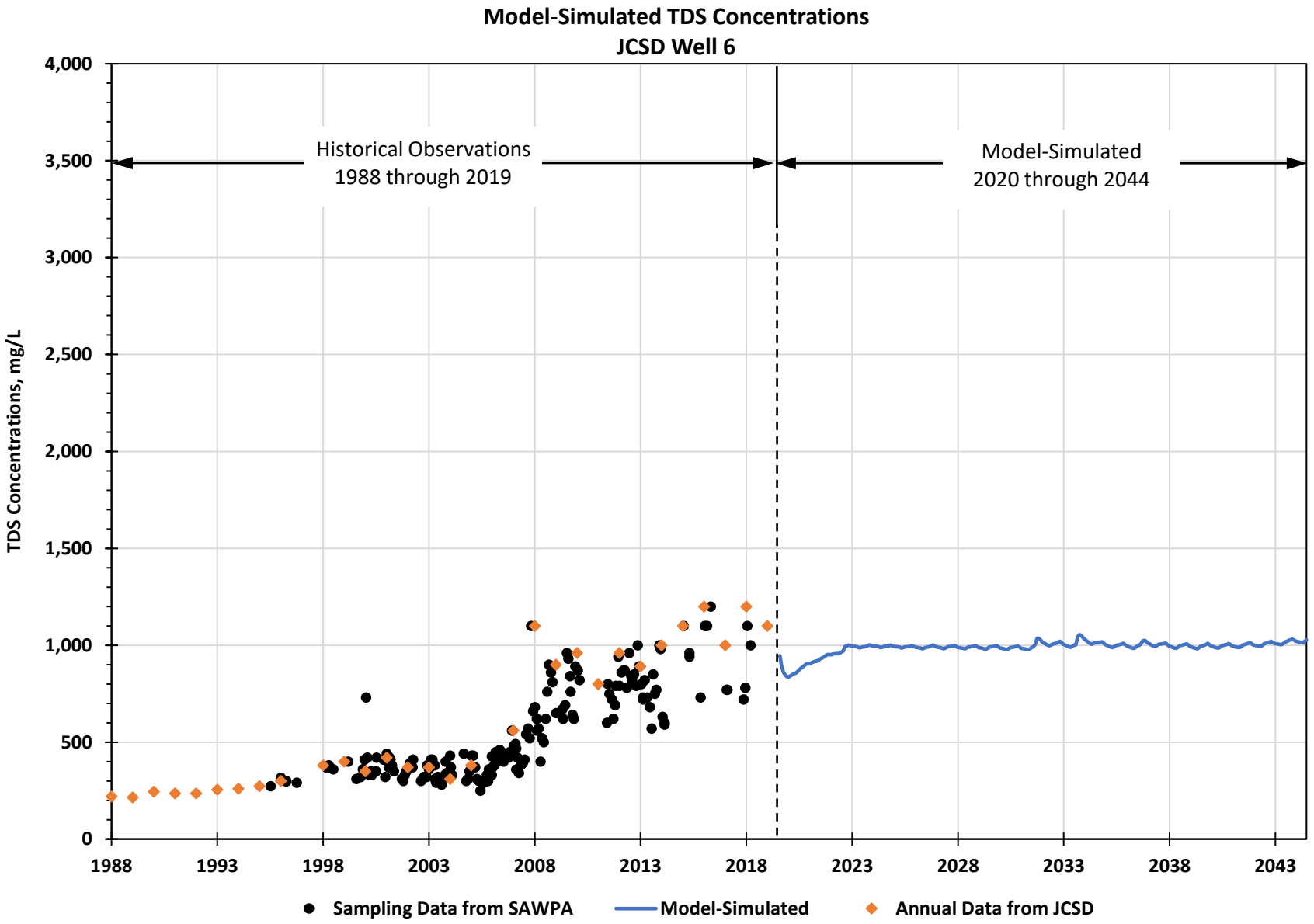
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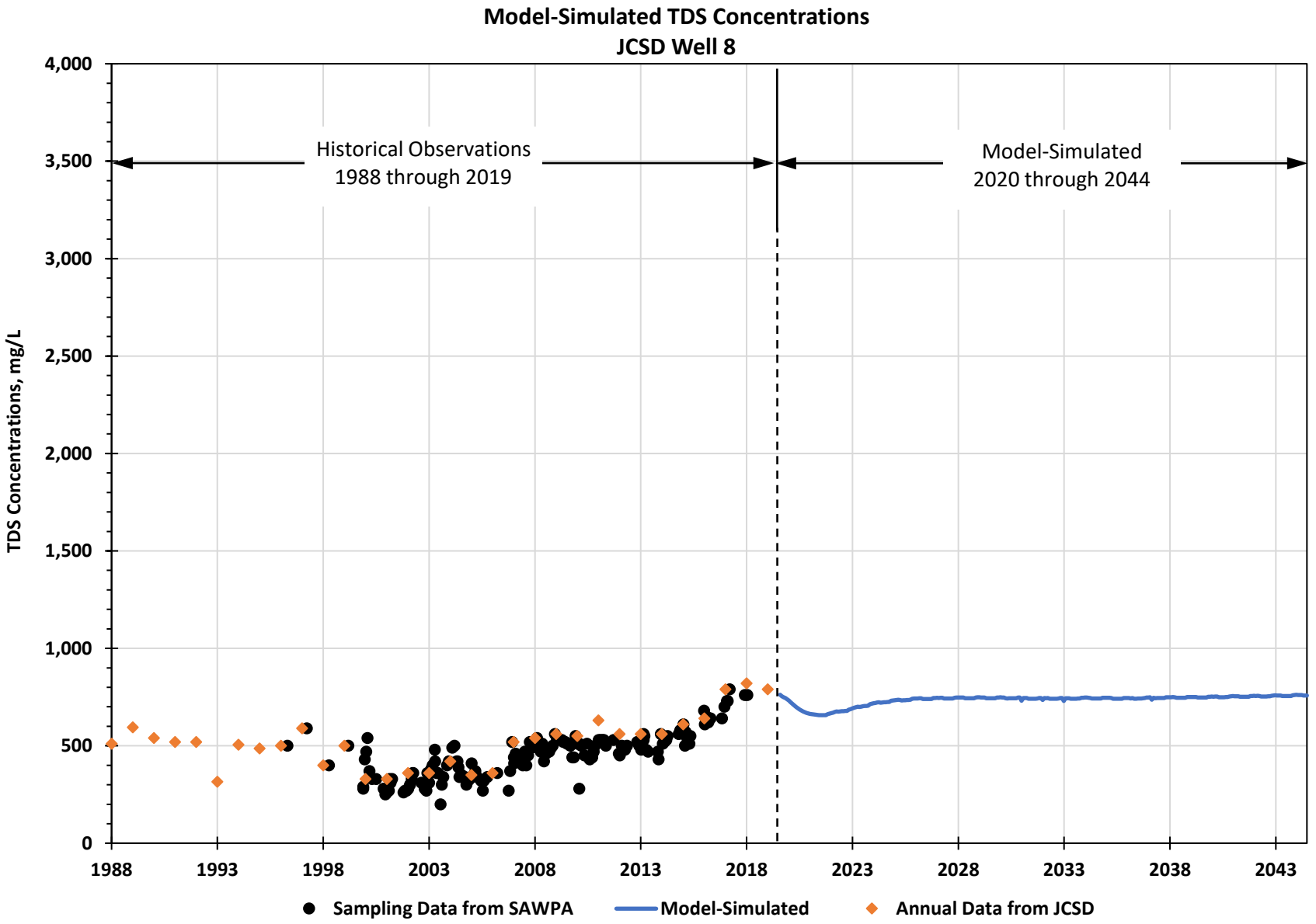
APPENDIX B

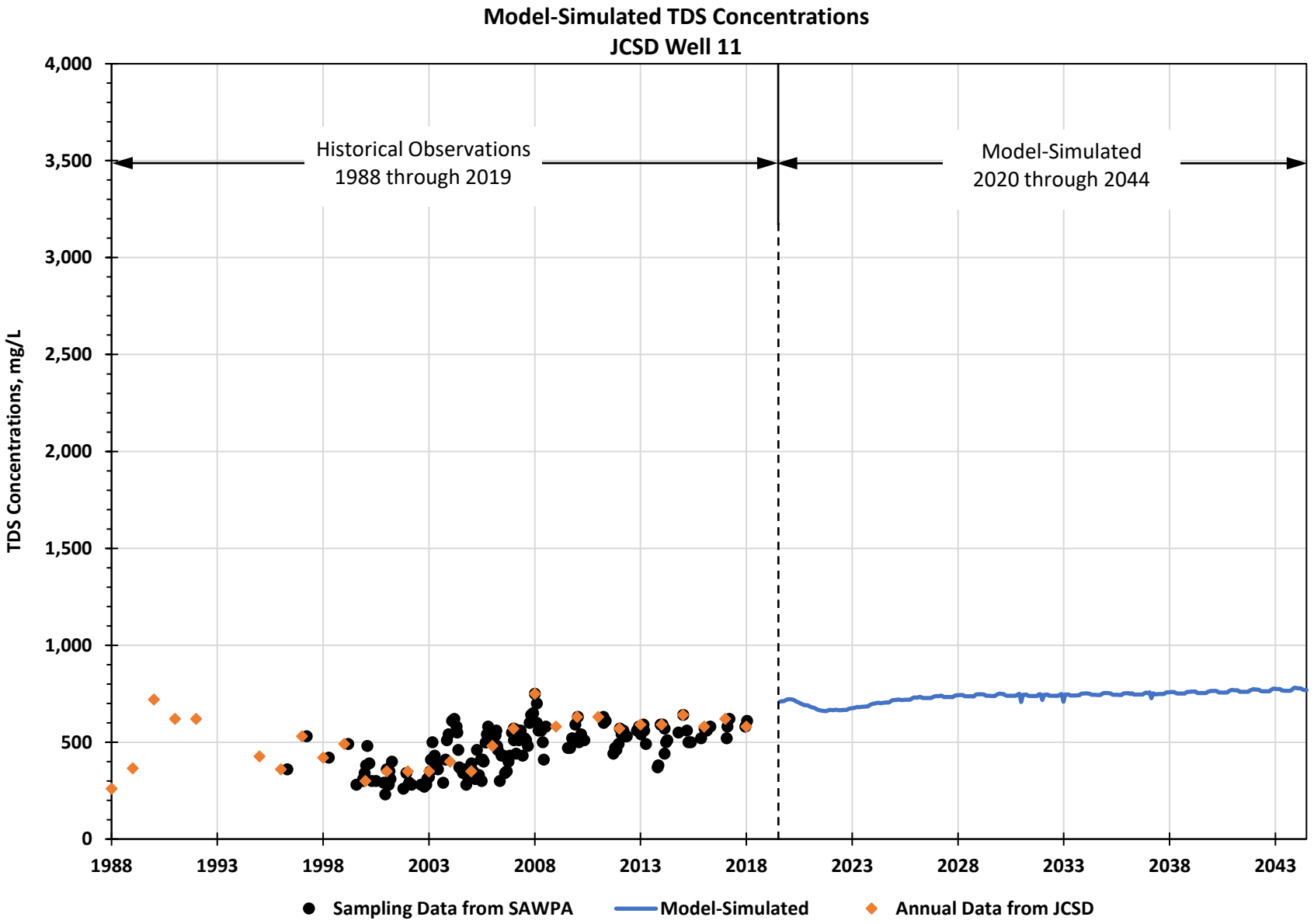
Historical and Model-Simulated TDS Concentrations

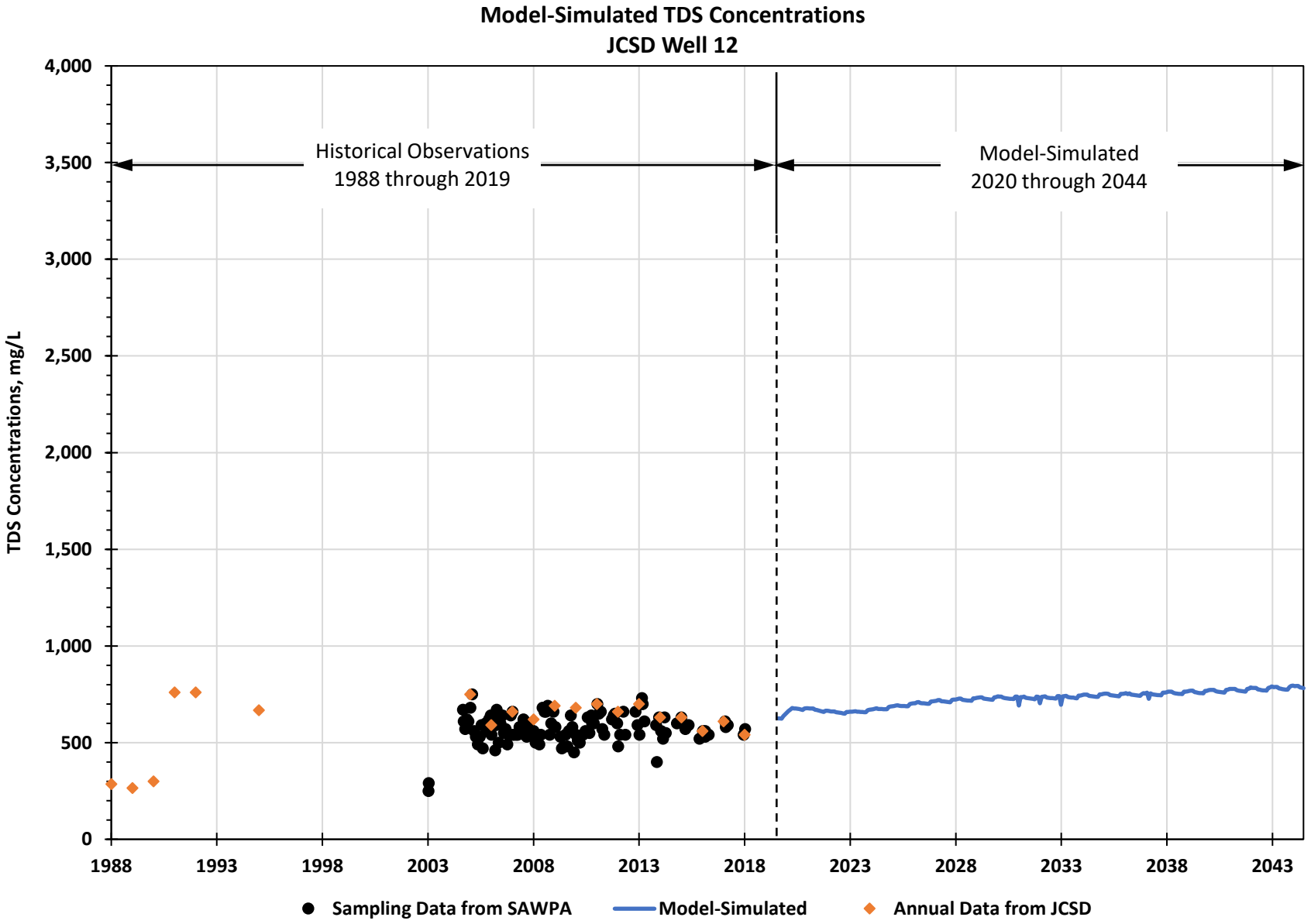
at JCSD Wells (Chemographs)

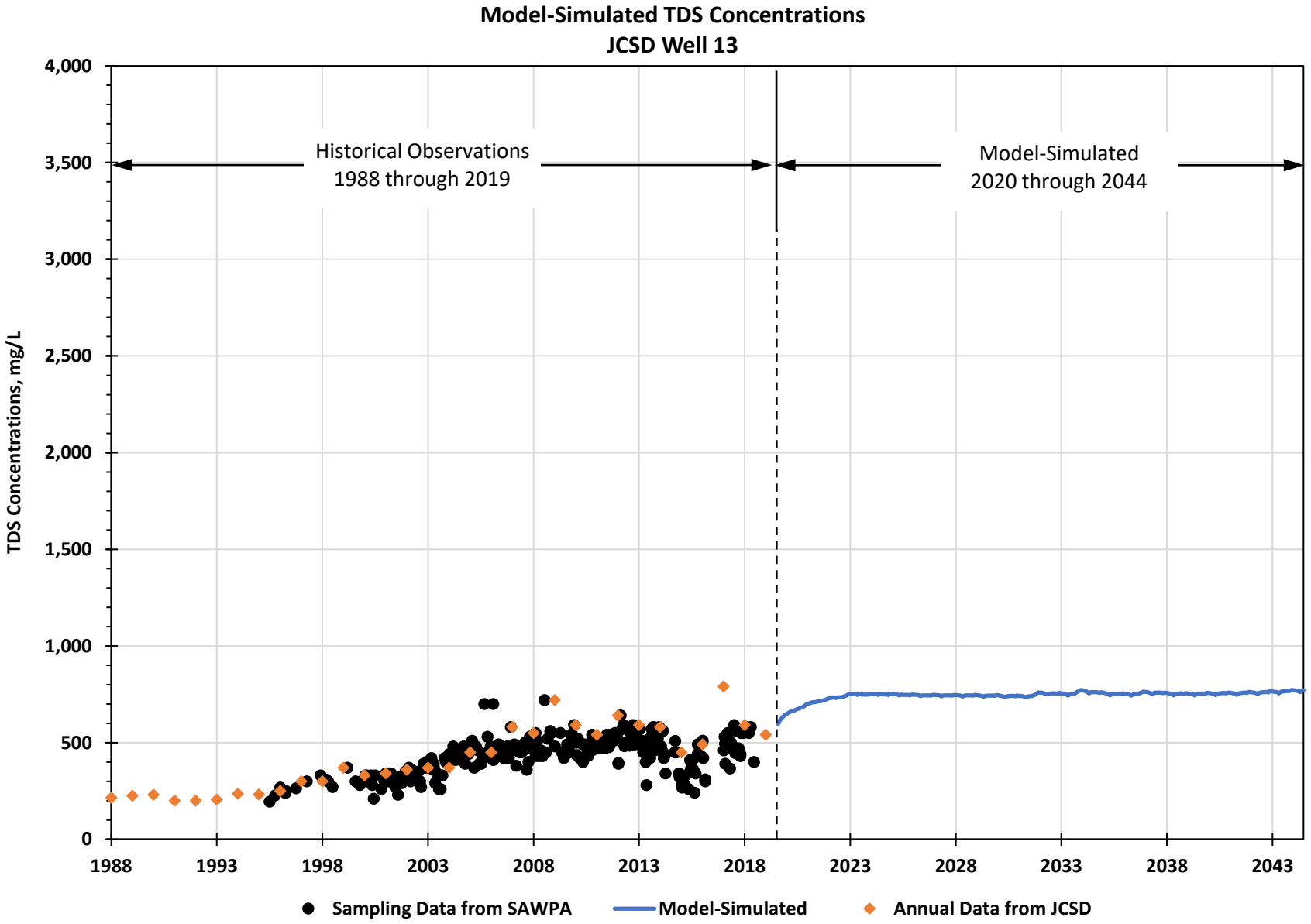
GEOSCIENCE

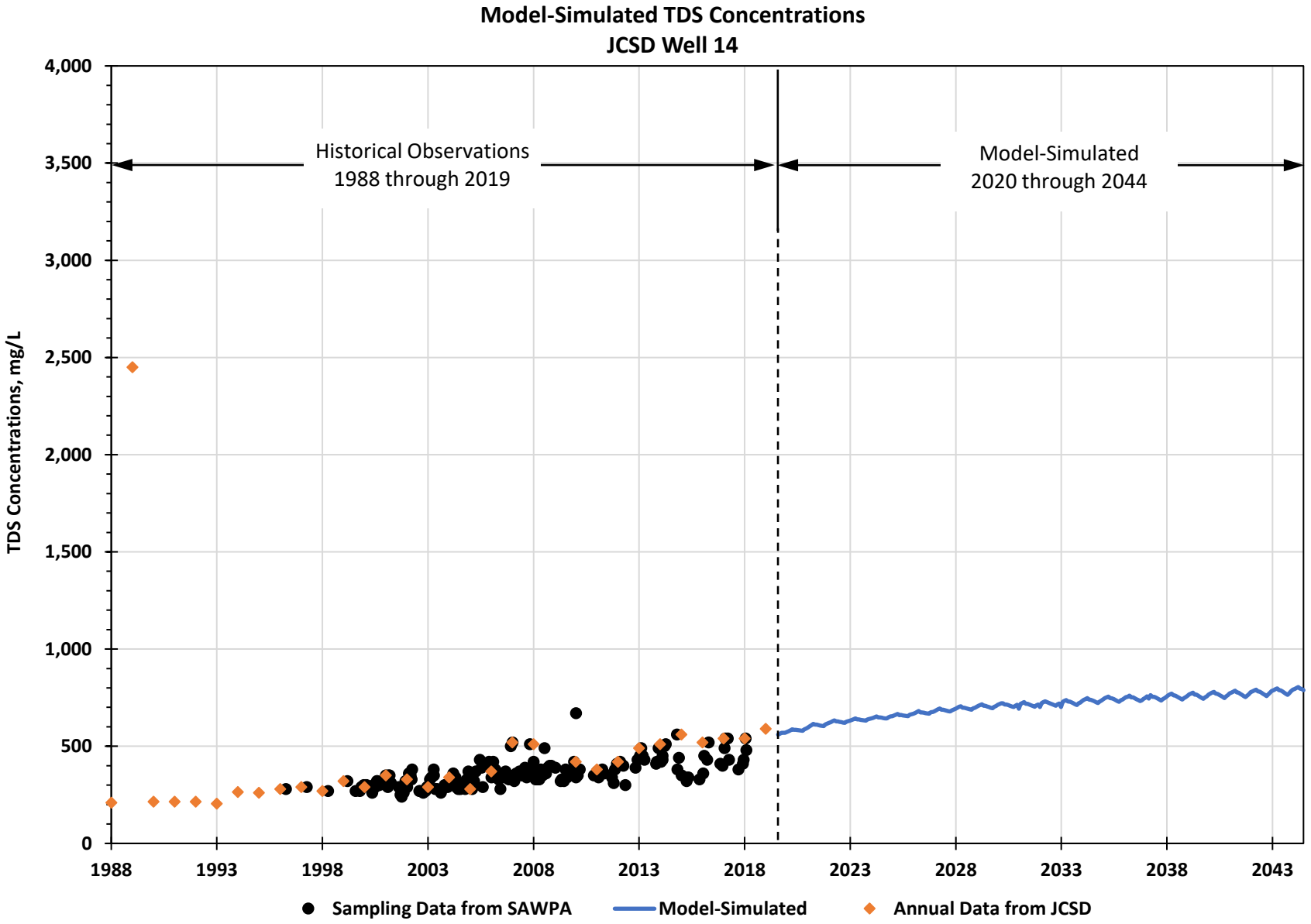

Model-Simulated TDS Concentrations
JCSD Well 6
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD

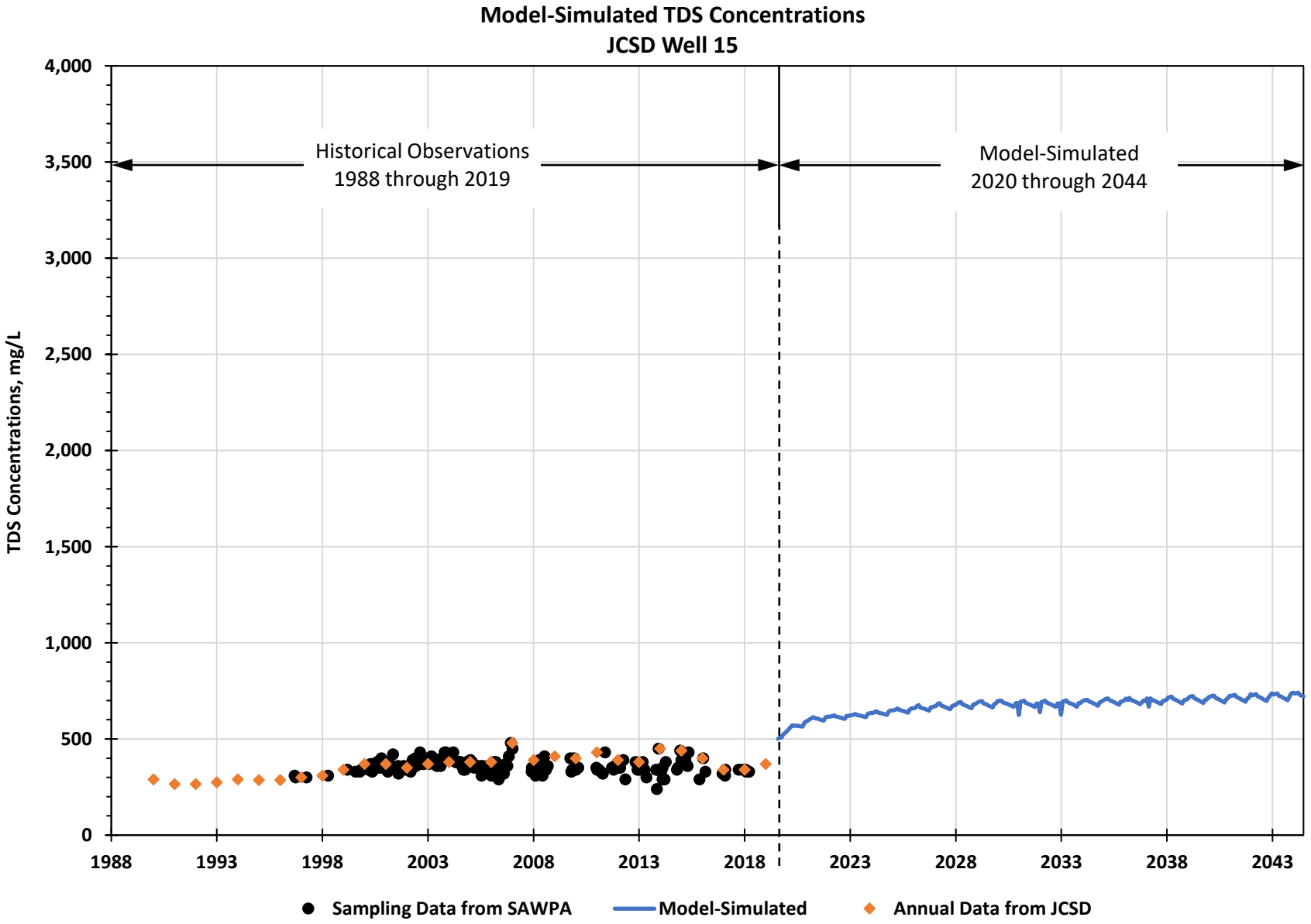

Model-Simulated TDS Concentrations
JCSD Well 8
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD

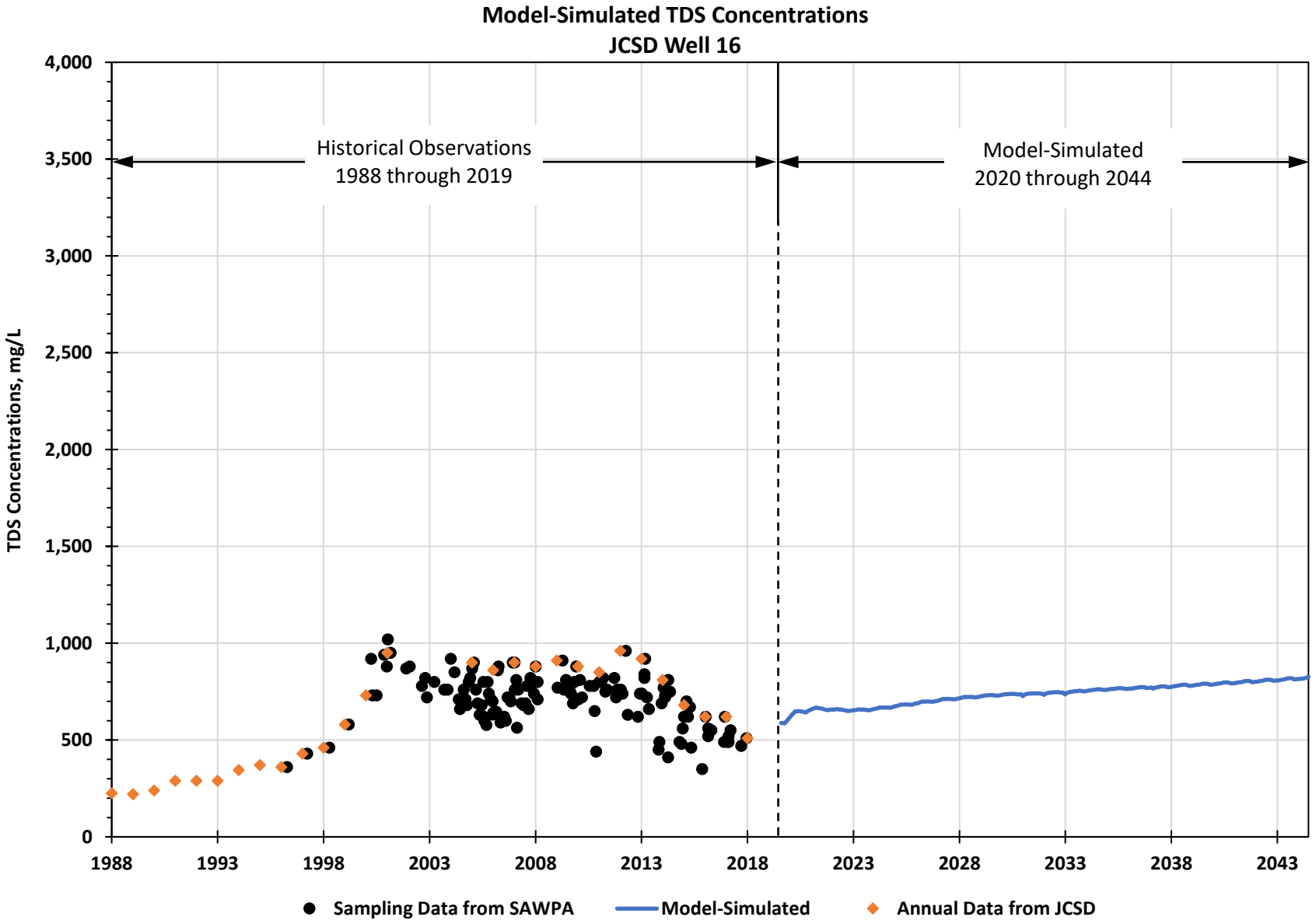

Model-Simulated TDS Concentrations
JCSD Well 11
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD

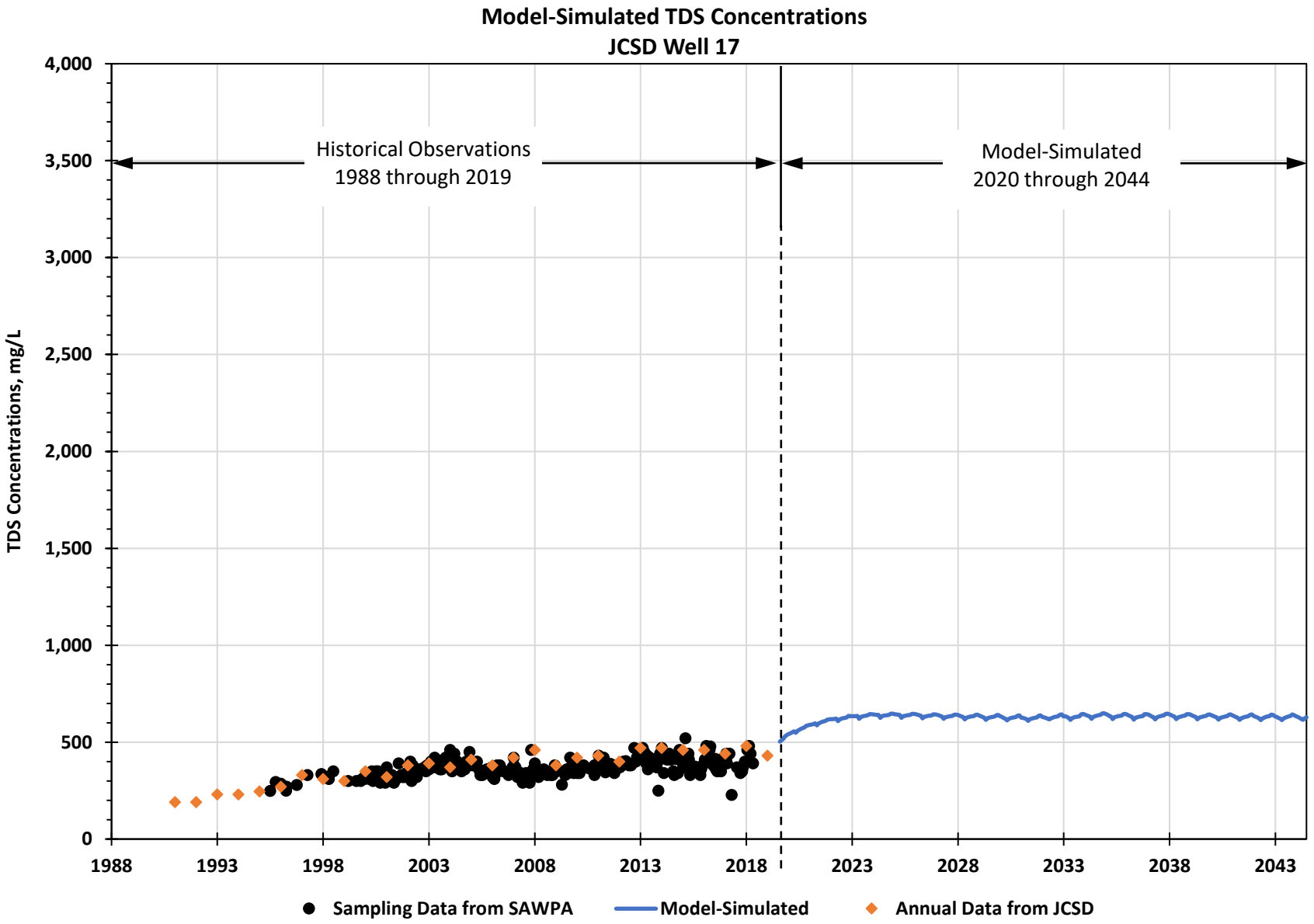

Model-Simulated TDS Concentrations
JCSD Well 12
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD

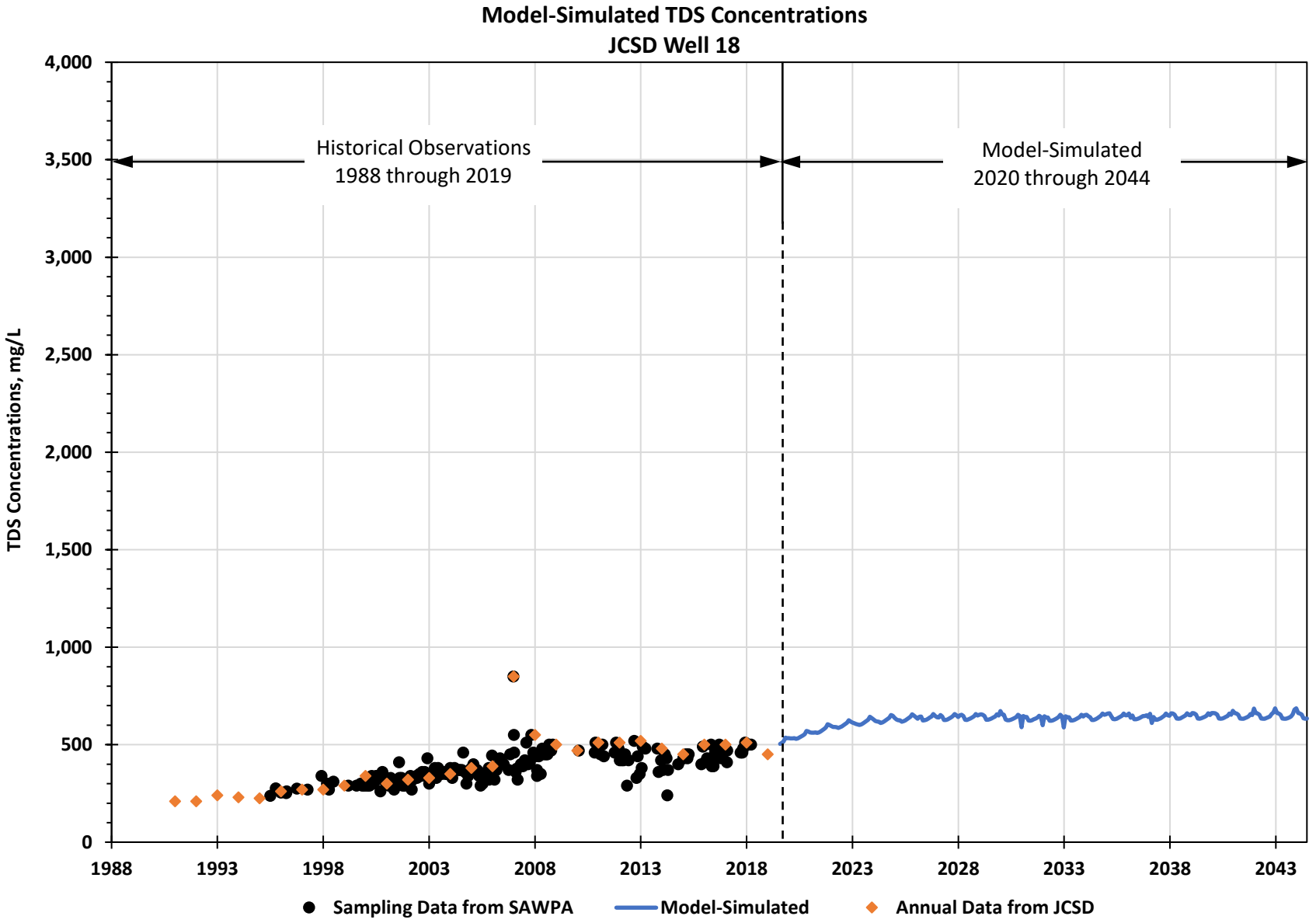

Model-Simulated TDS Concentrations
JCSD Well 13
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD

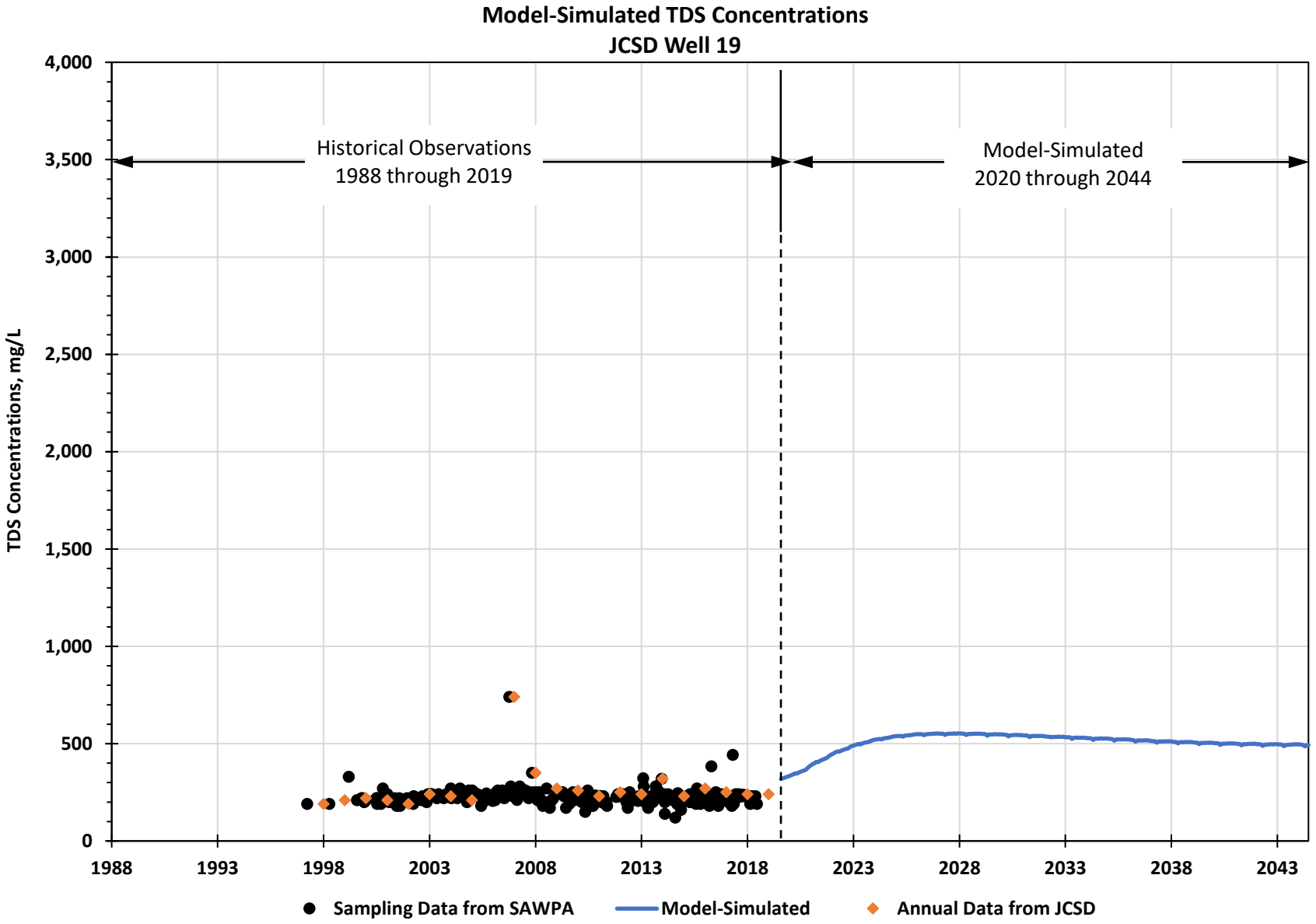

Model-Simulated TDS Concentrations
JCSD Well 14
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD

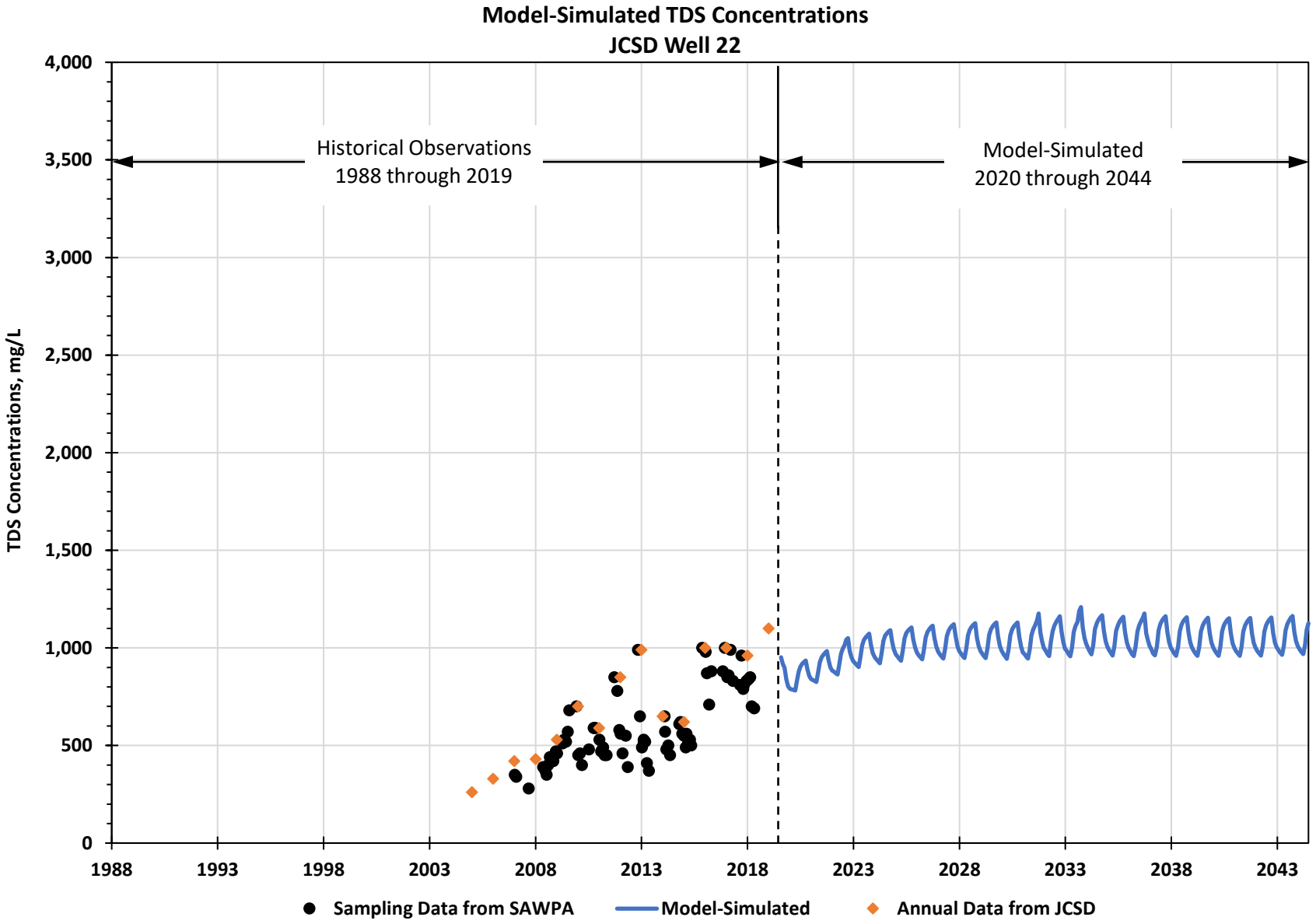

Model-Simulated TDS Concentrations
JCSD Well 15
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD

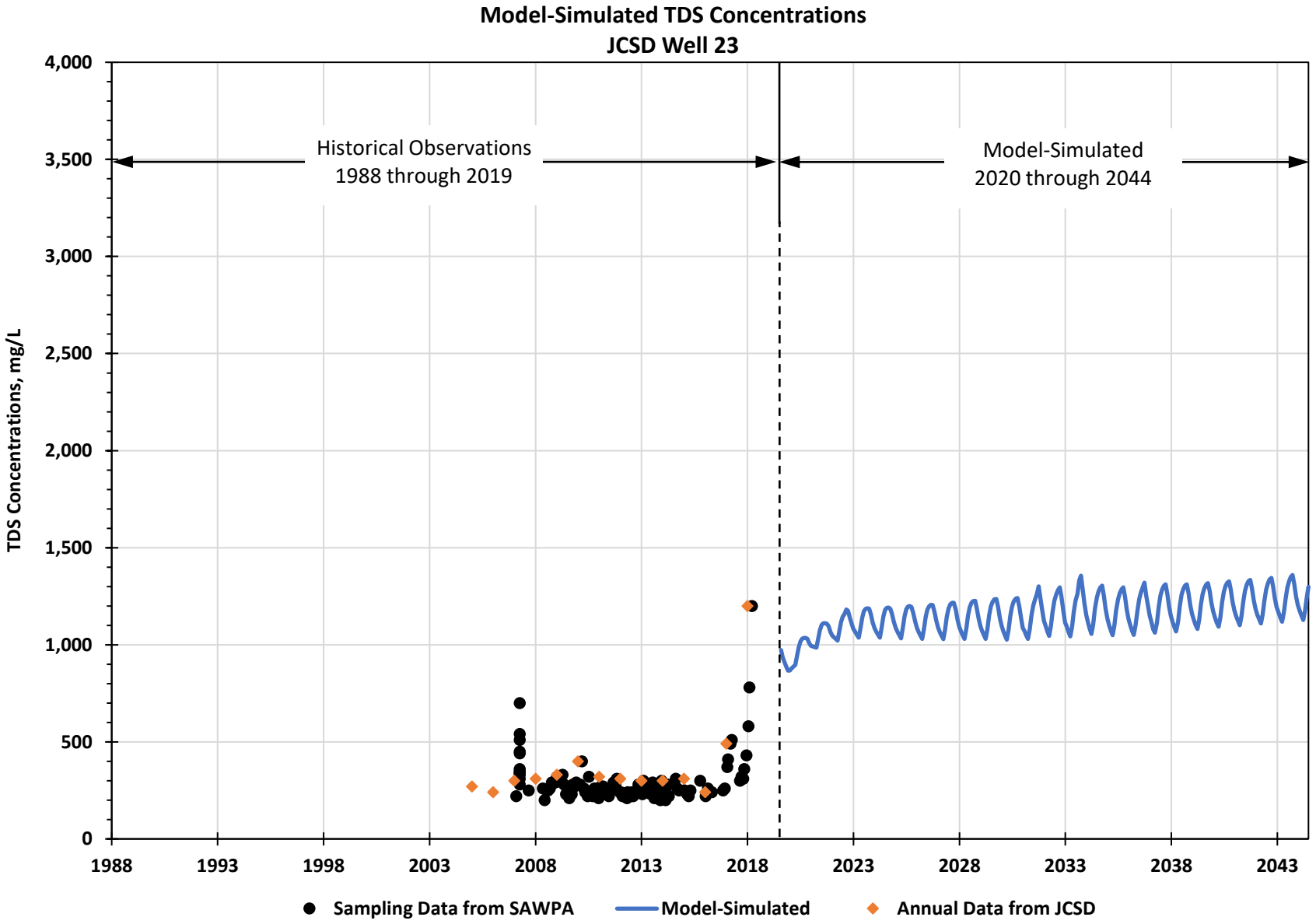

Model-Simulated TDS Concentrations
JCSD Well 16
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD

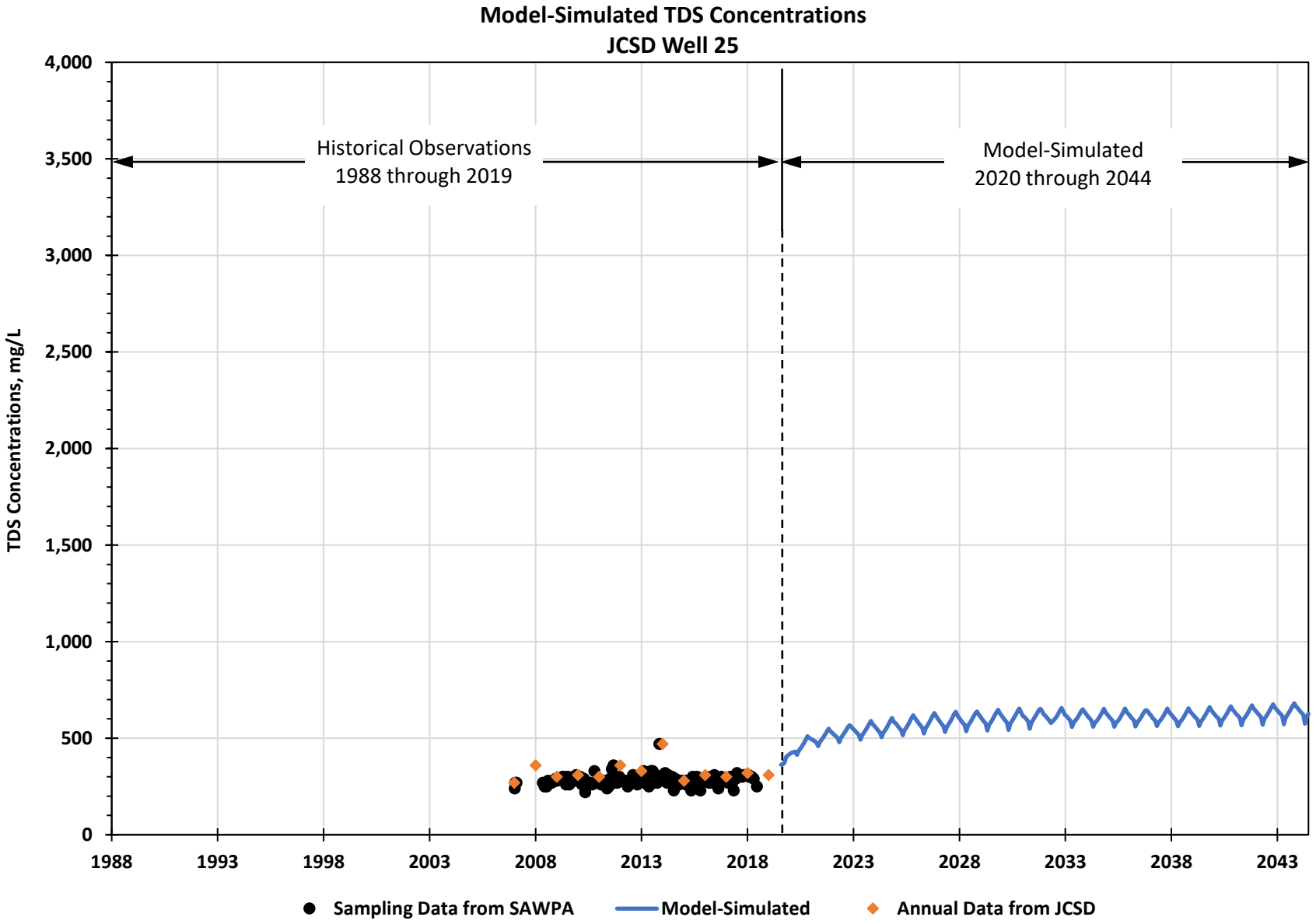

Model-Simulated TDS Concentrations
JCSD Well 17
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD

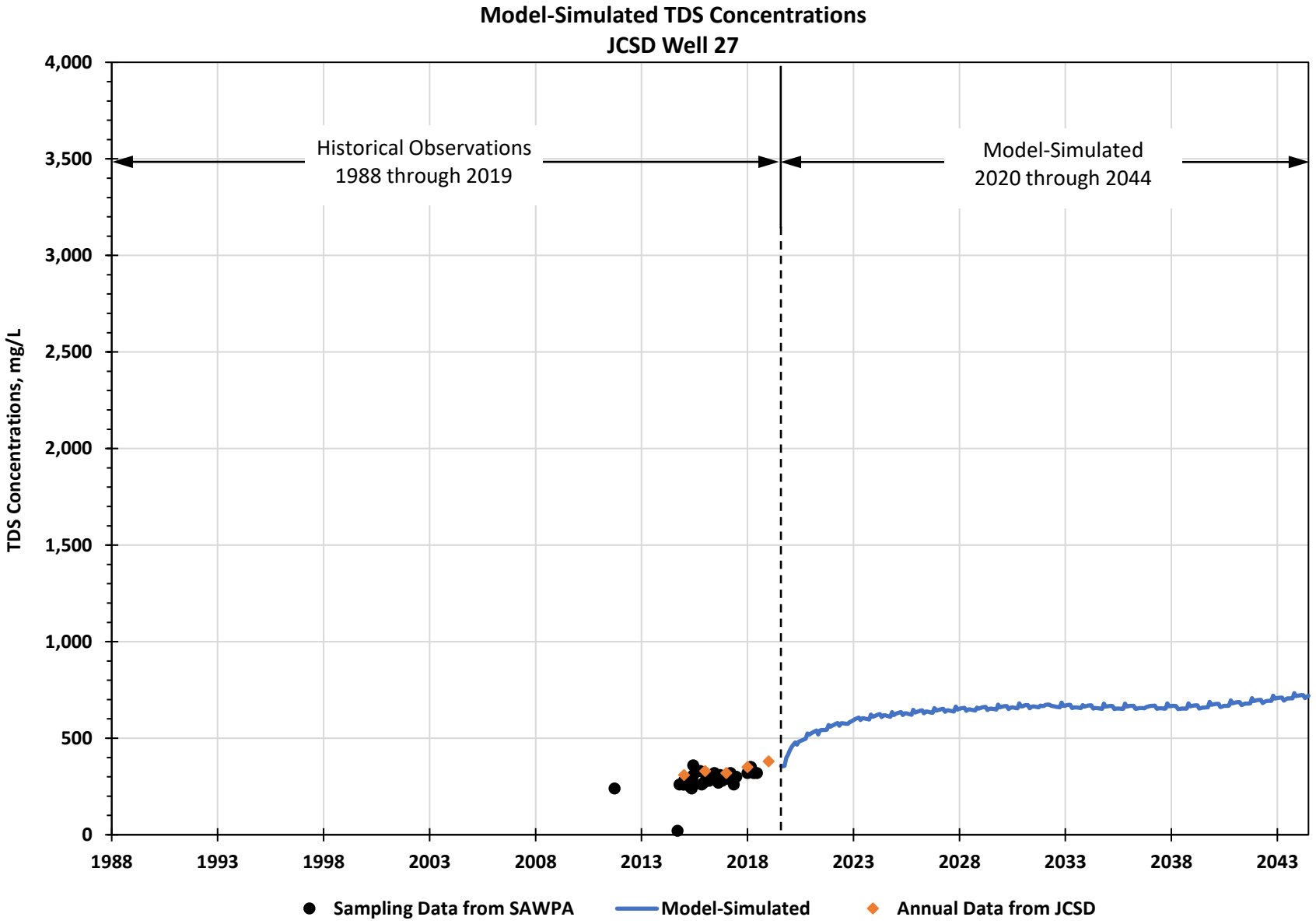

Model-Simulated TDS Concentrations
JCSD Well 18
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD

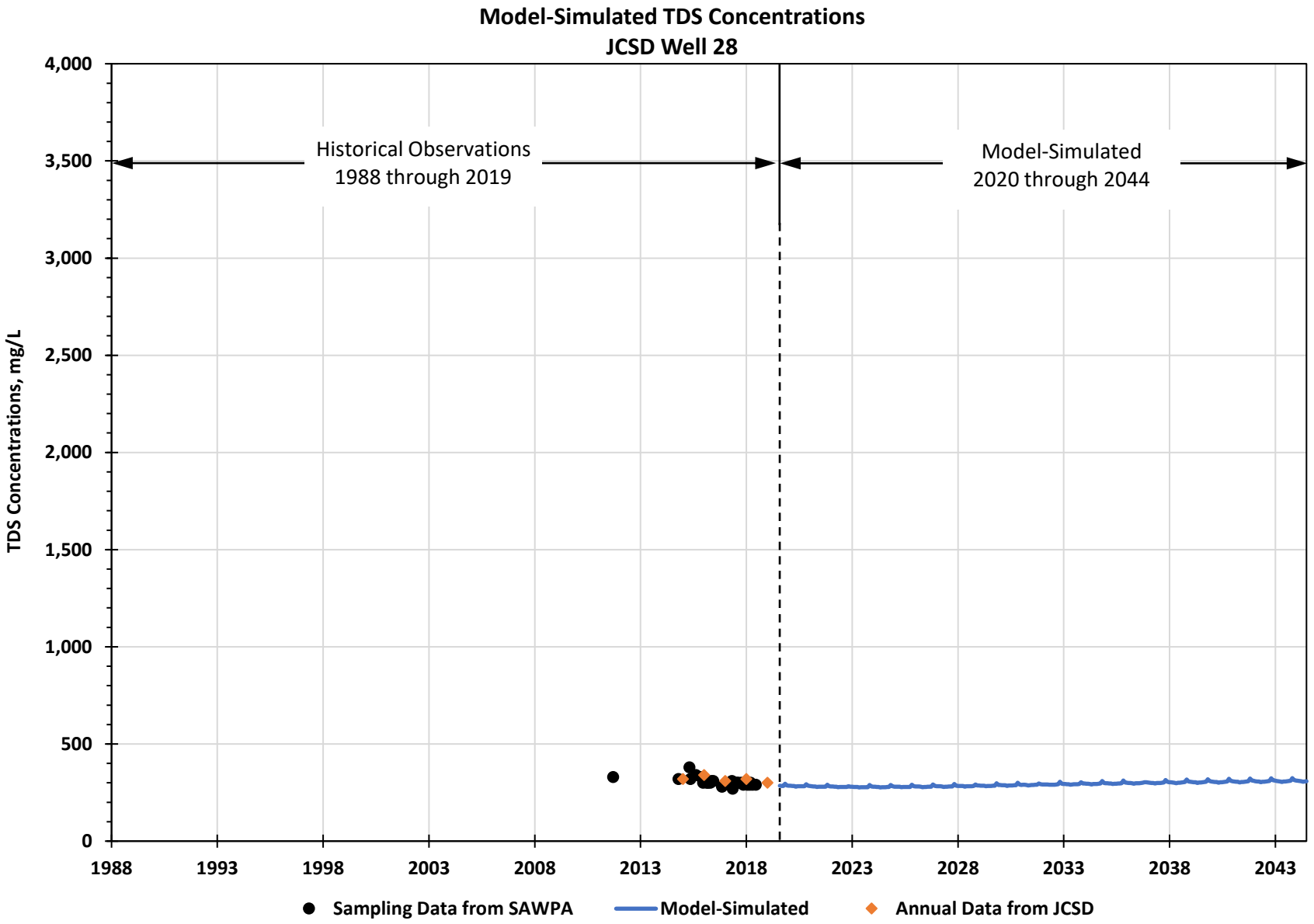

Model-Simulated TDS Concentrations
JCSD Well 19
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD


Model-Simulated TDS Concentrations
JCSD Well 22
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD


Model-Simulated TDS Concentrations
JCSD Well 23
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD


Model-Simulated TDS Concentrations
JCSD Well 25
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD


Model-Simulated TDS Concentrations
JCSD Well 27
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD

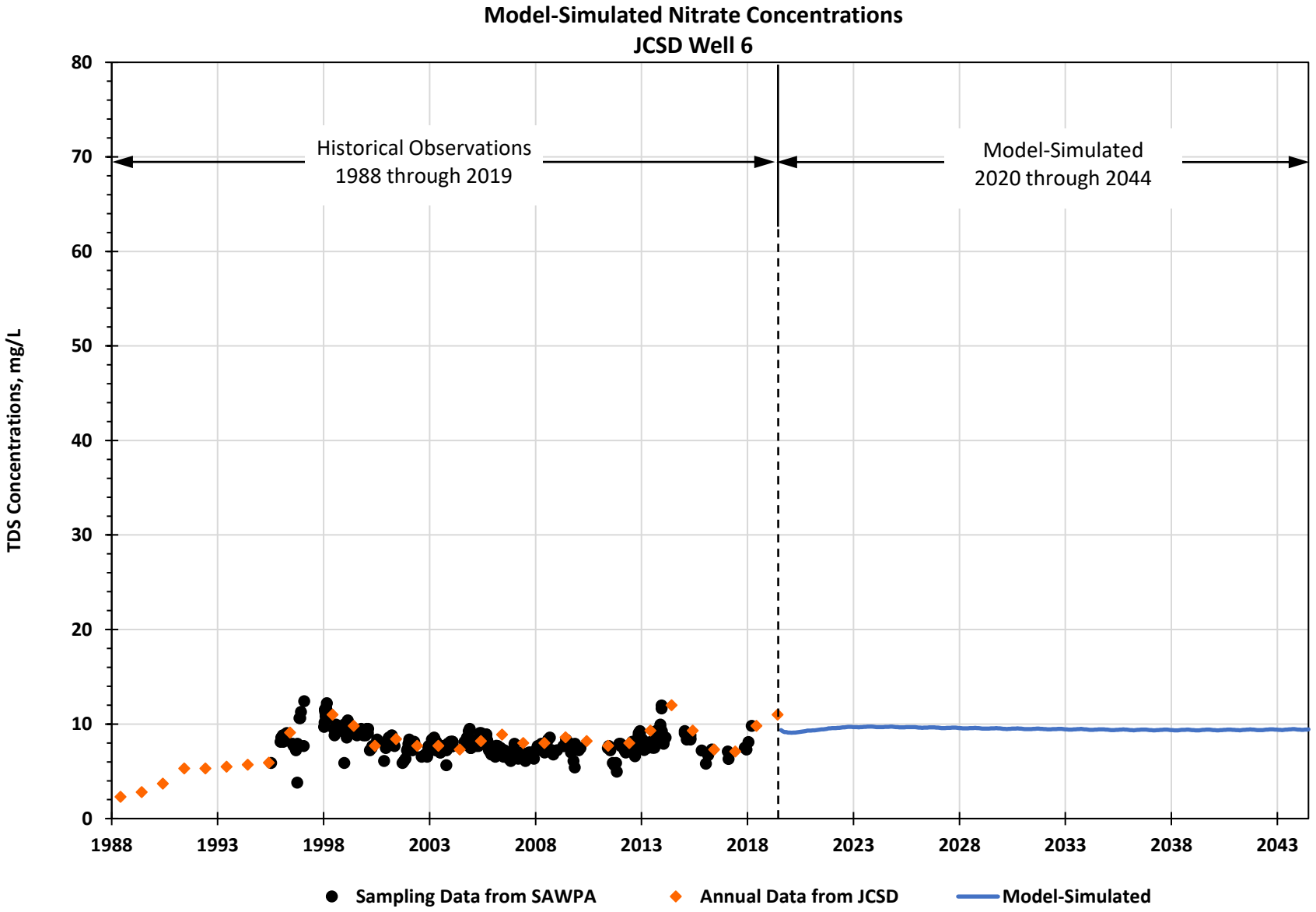

Model-Simulated TDS Concentrations
JCSD Well 28
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD

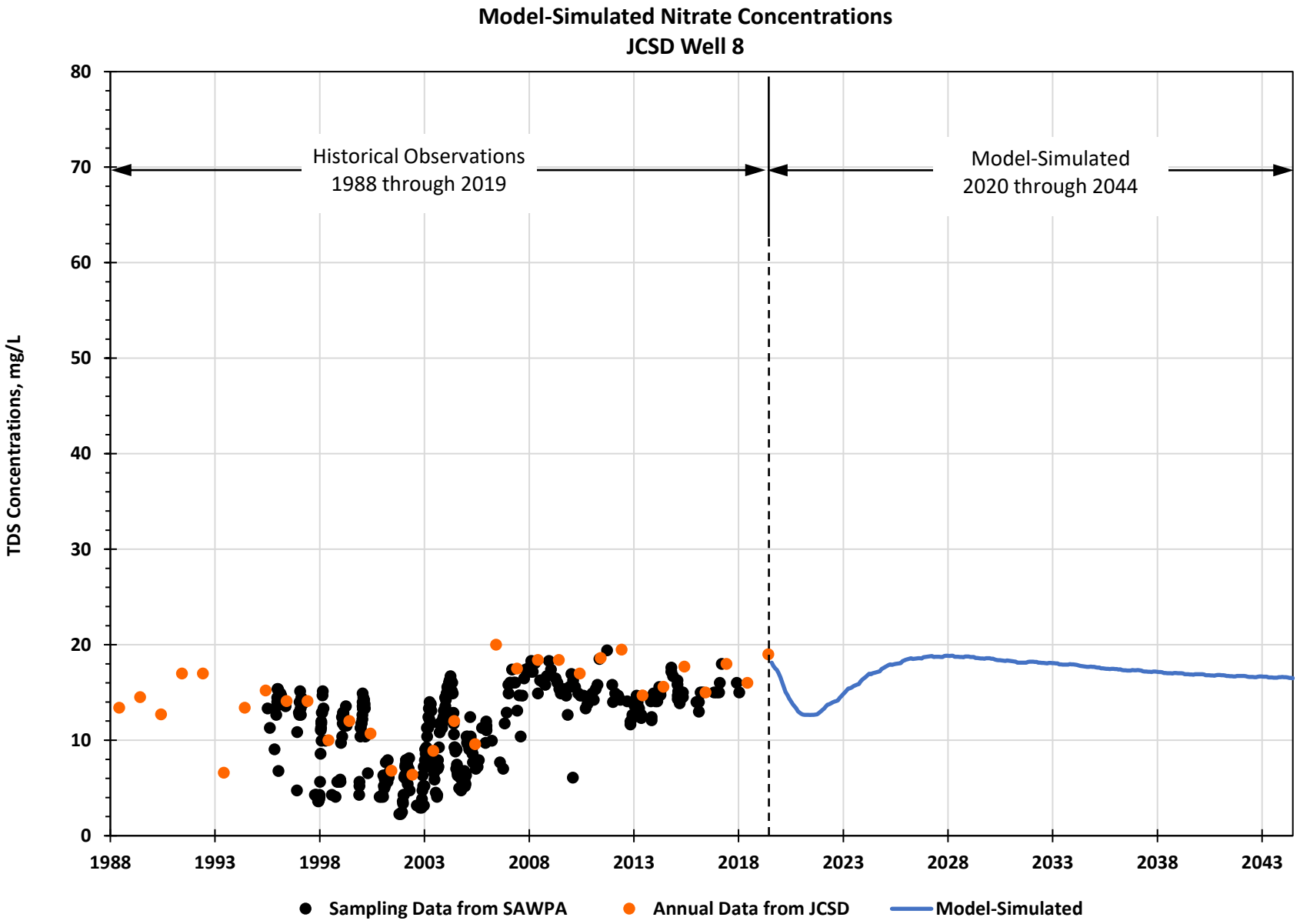
APPENDIX C

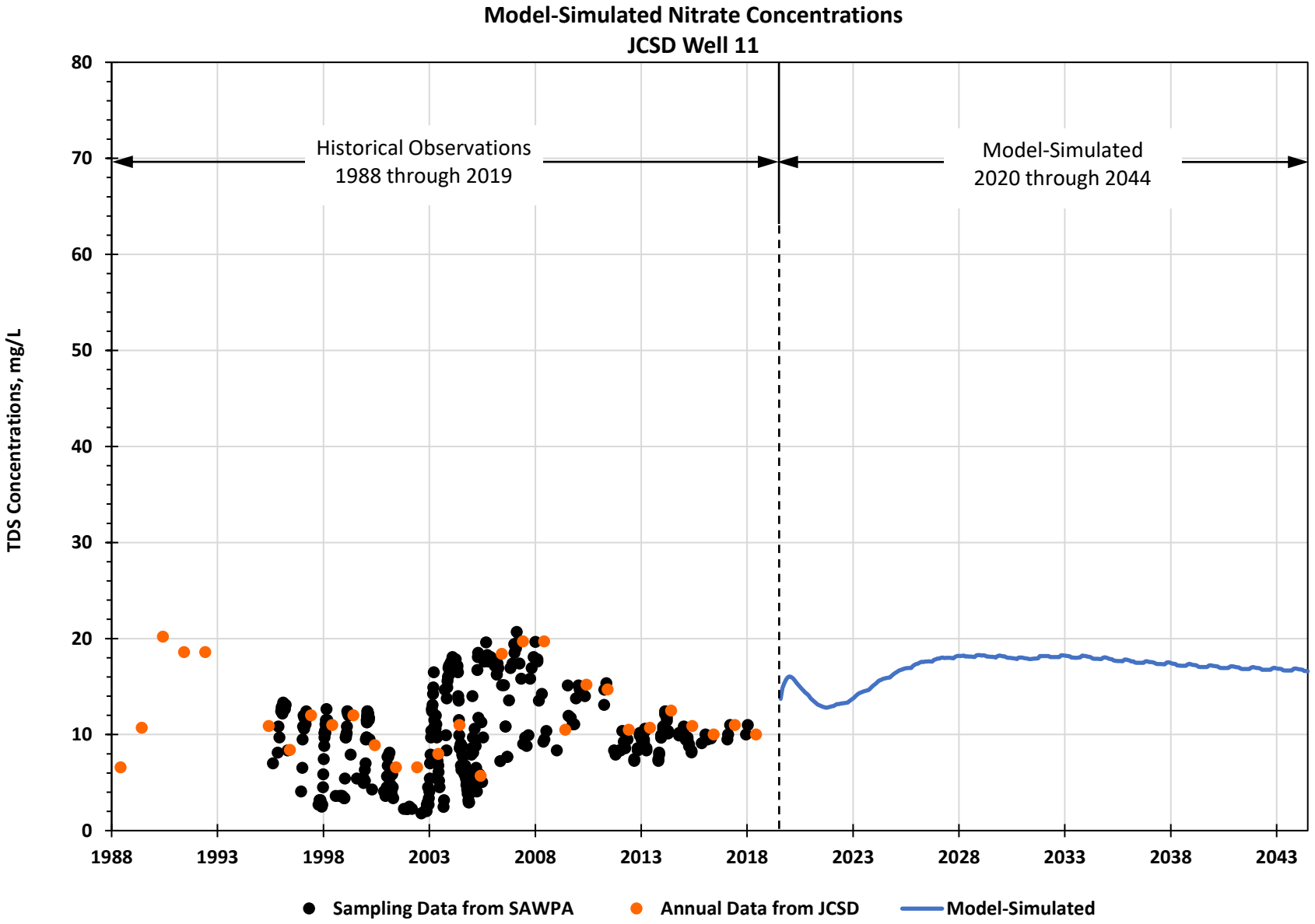
Historical and Model-Simulated Nitrate-N Concentrations

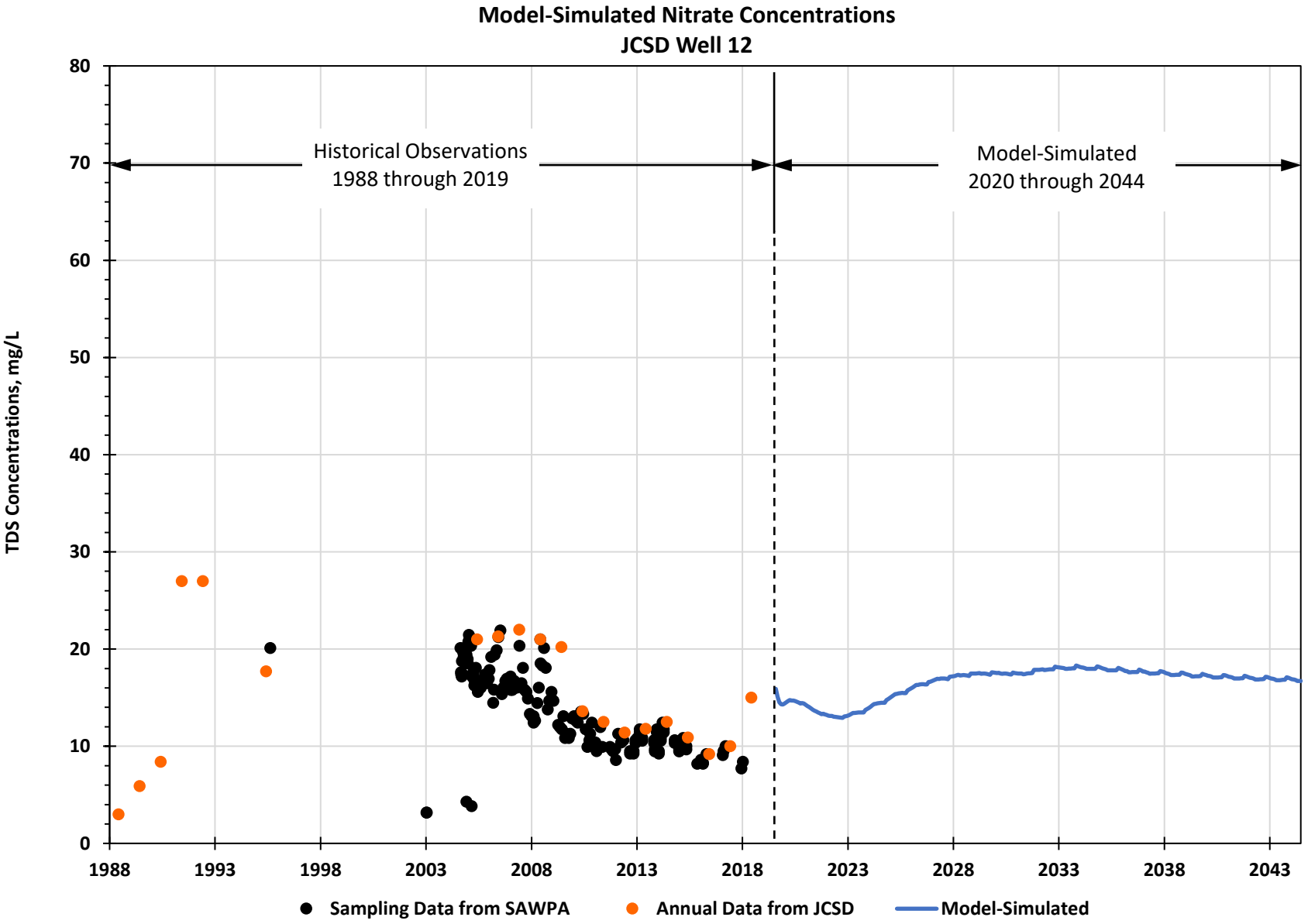
at JCSD Wells (Chemographs)

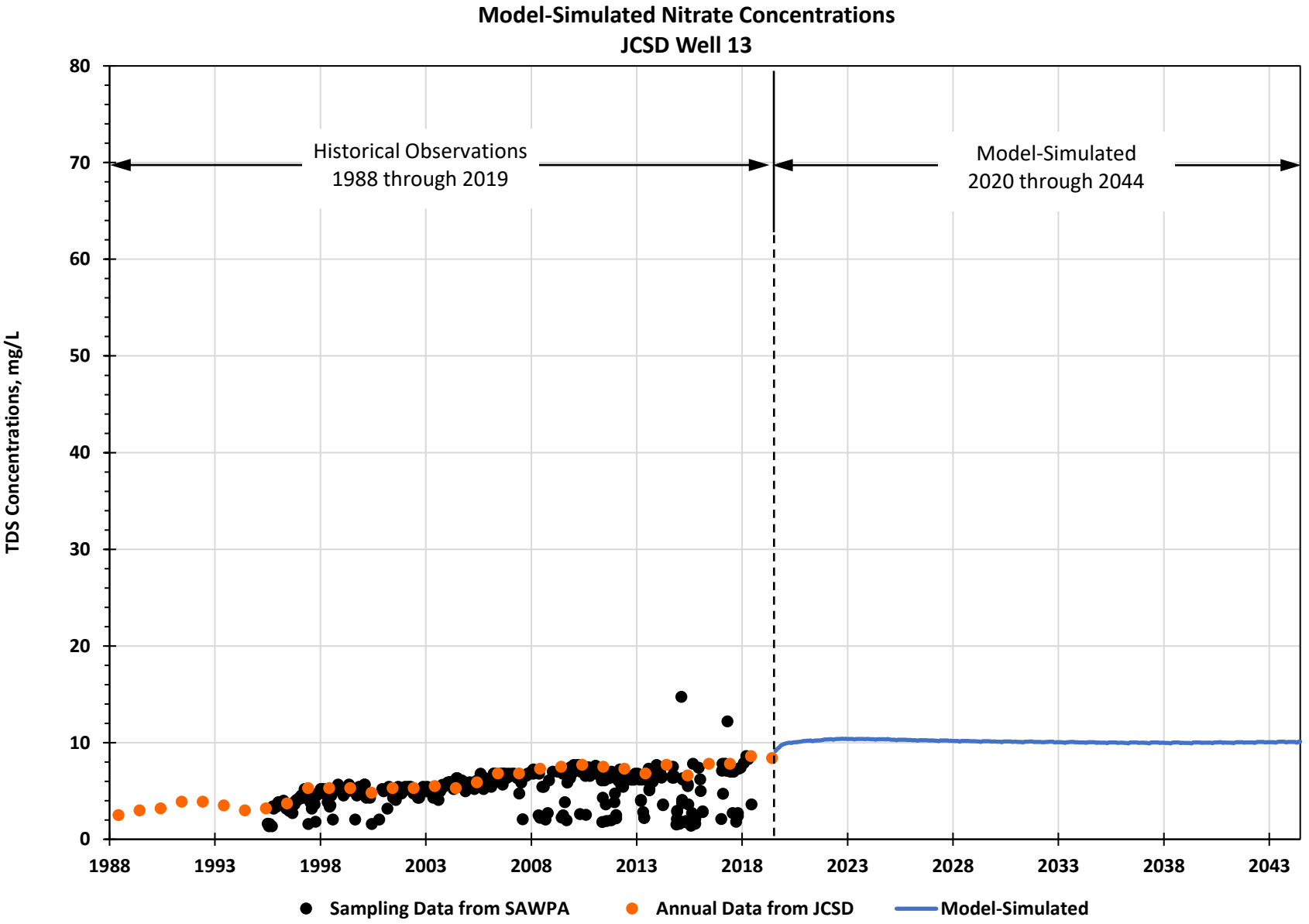
GEOSCIENCE

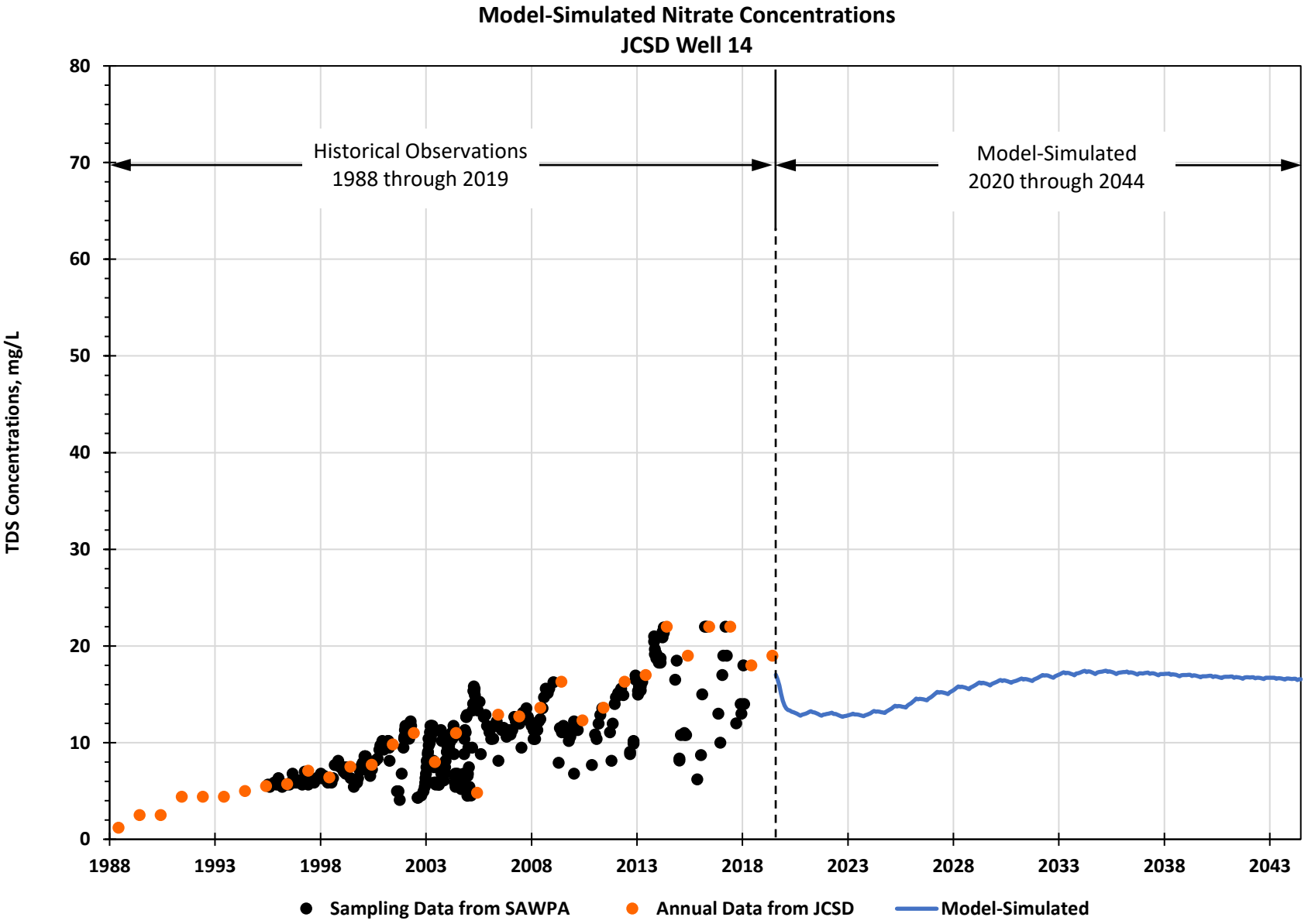

Model-Simulated Nitrate Concentrations
JCSD Well 6
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
80
70
60
50
40
30
20
10
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated

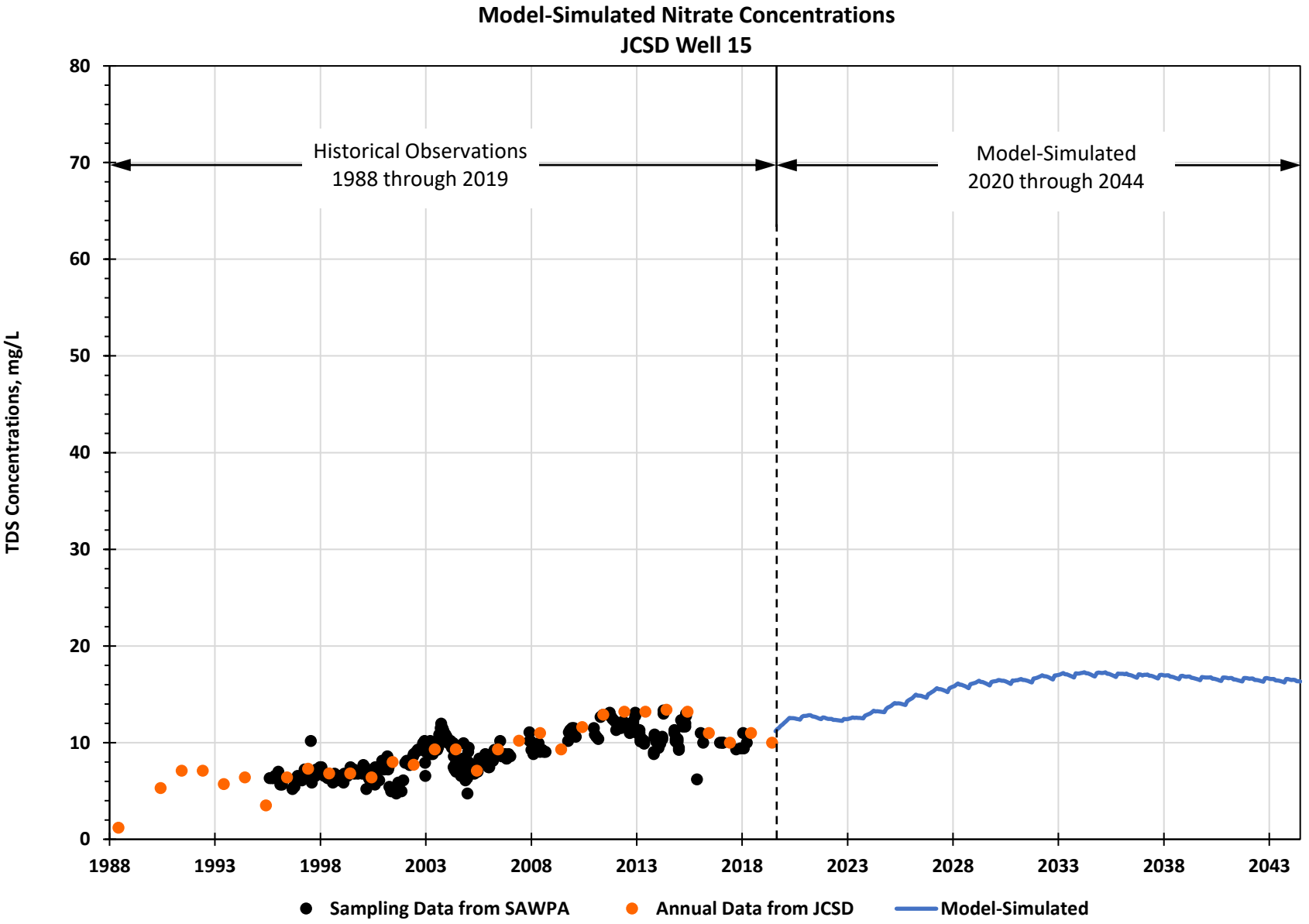

Model-Simulated Nitrate Concentrations
JCSD Well 8
TDS Concentrations, mg/L
80
70
60
50
40
30
20
10
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated

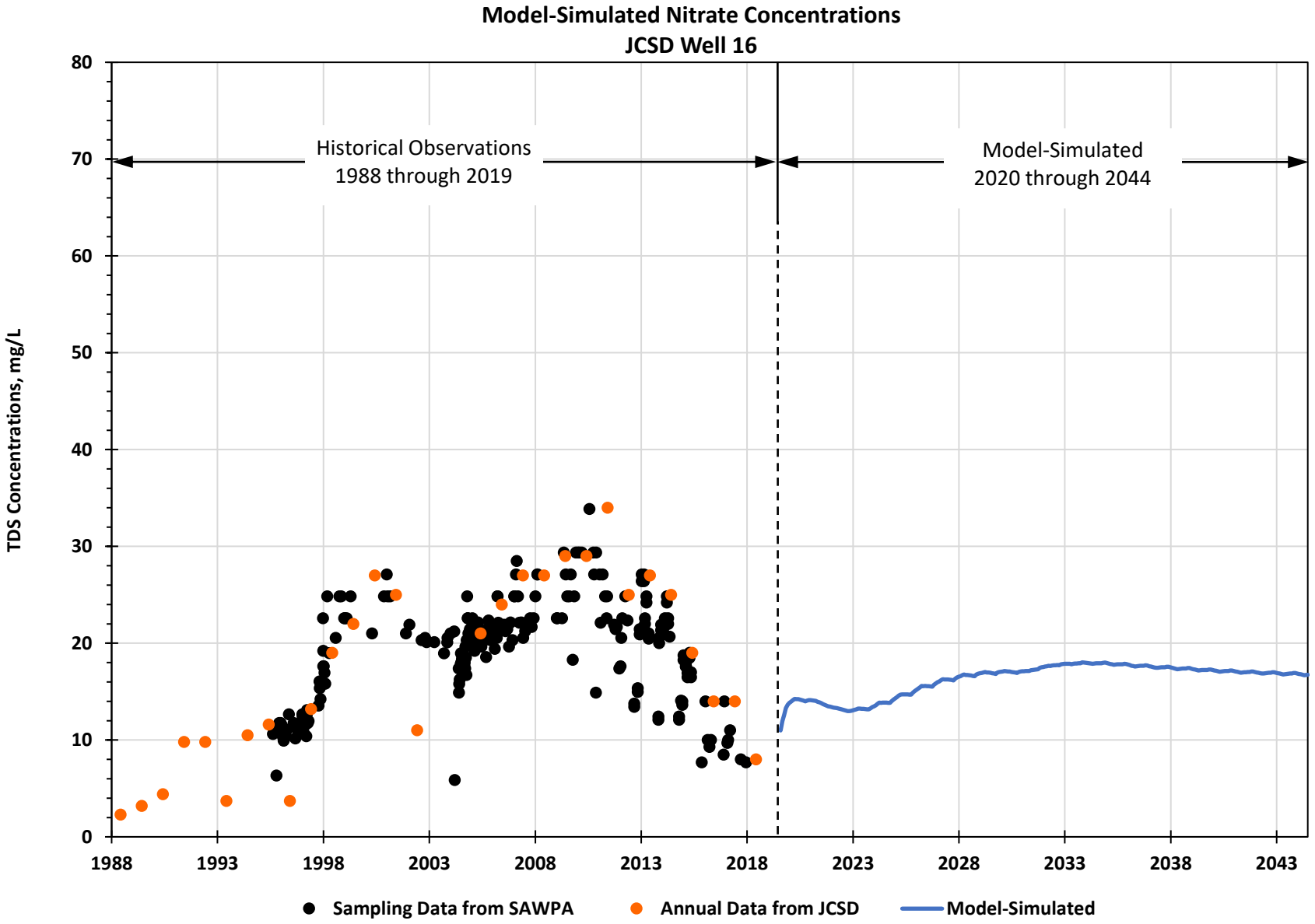

Model-Simulated Nitrate Concentrations
JCSD Well 11
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
0
10
20
30
40
50
60
70
80
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated

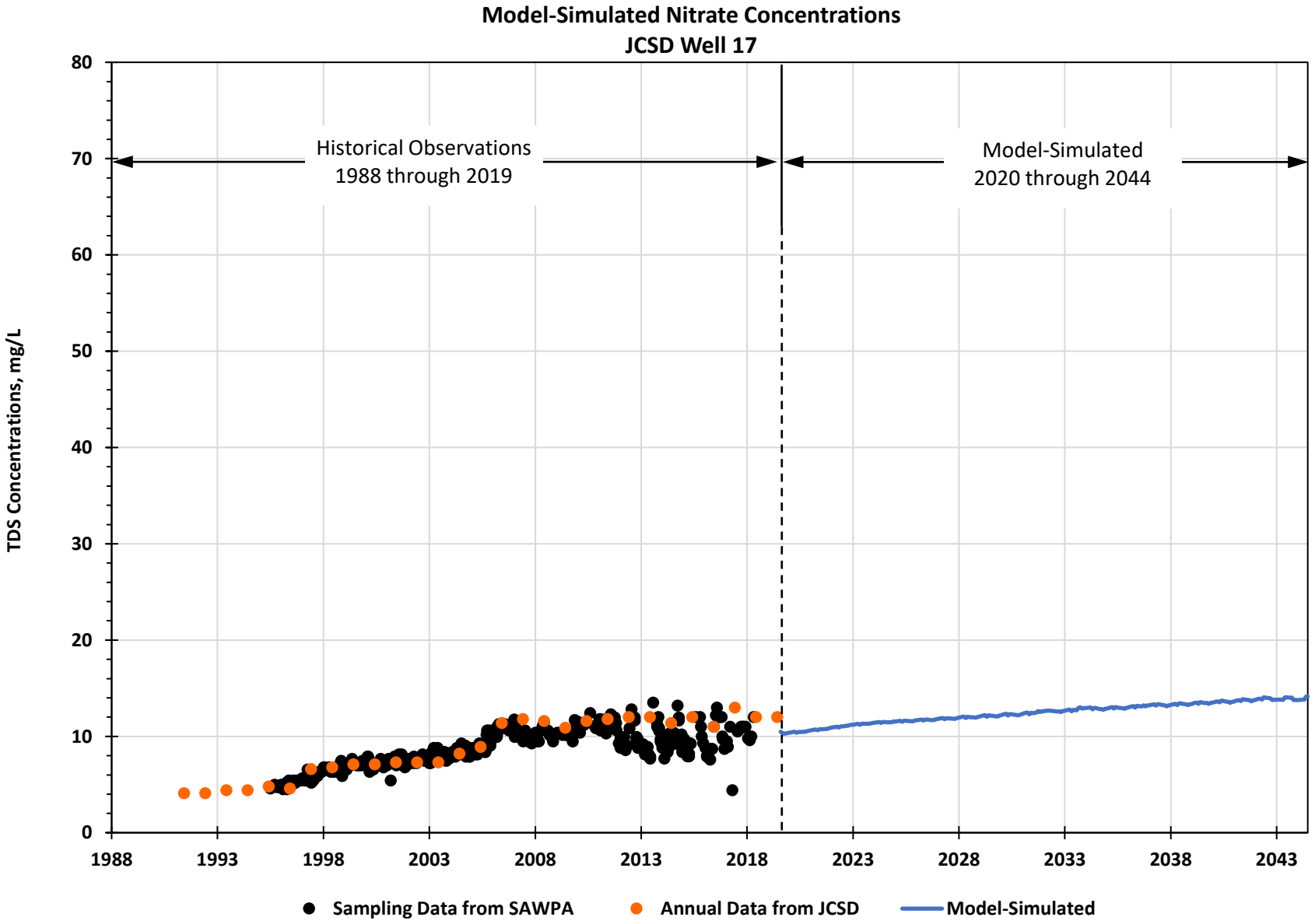

Model-Simulated Nitrate Concentrations
JCSD Well 12
TDS Concentrations, mg/L
0
10
20
30
40
50
60
70
80
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated

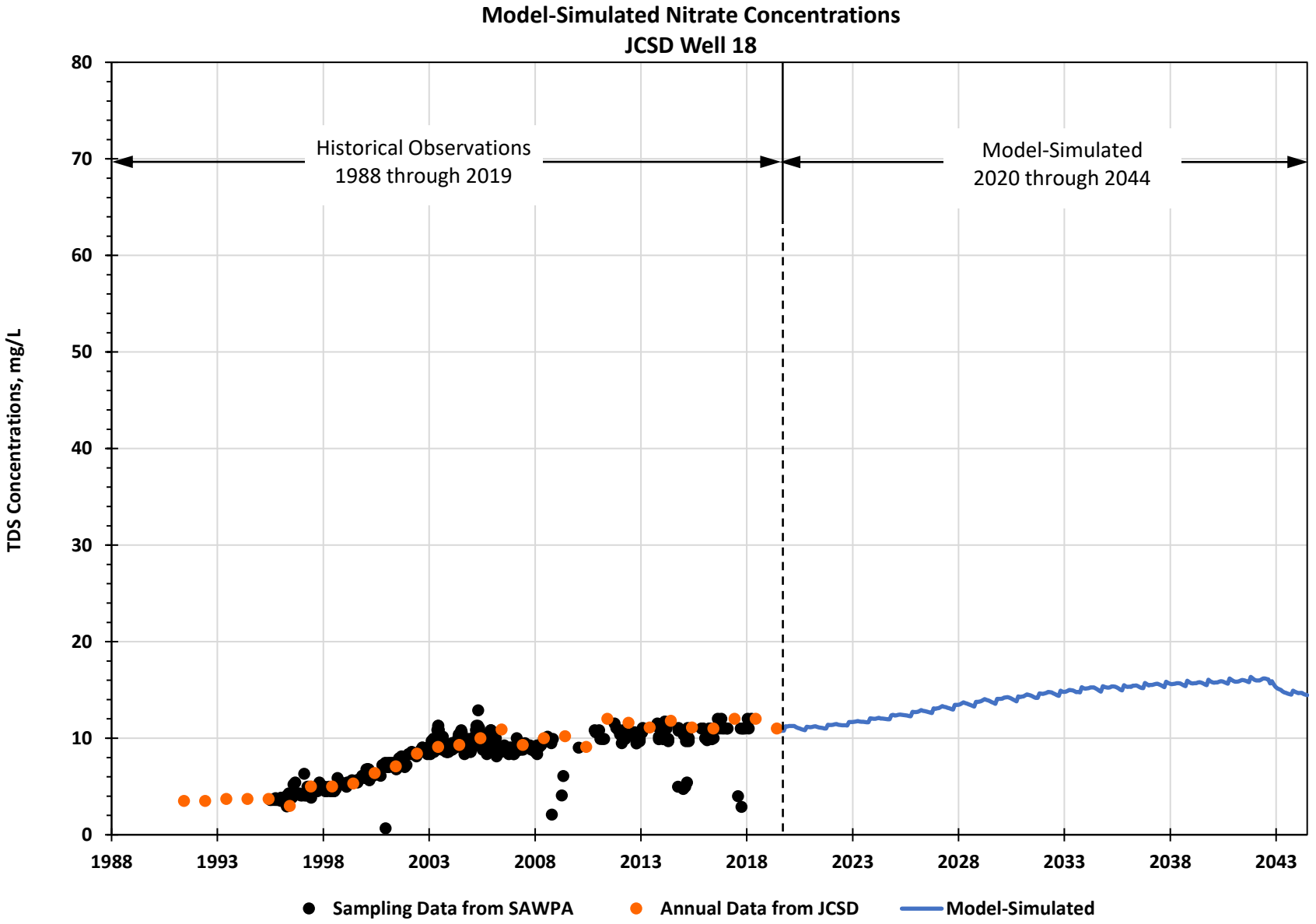

Model-Simulated Nitrate Concentrations
JCSD Well 13
TDS Concentrations, mg/L
80
70
60
50
40
30
20
10
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated

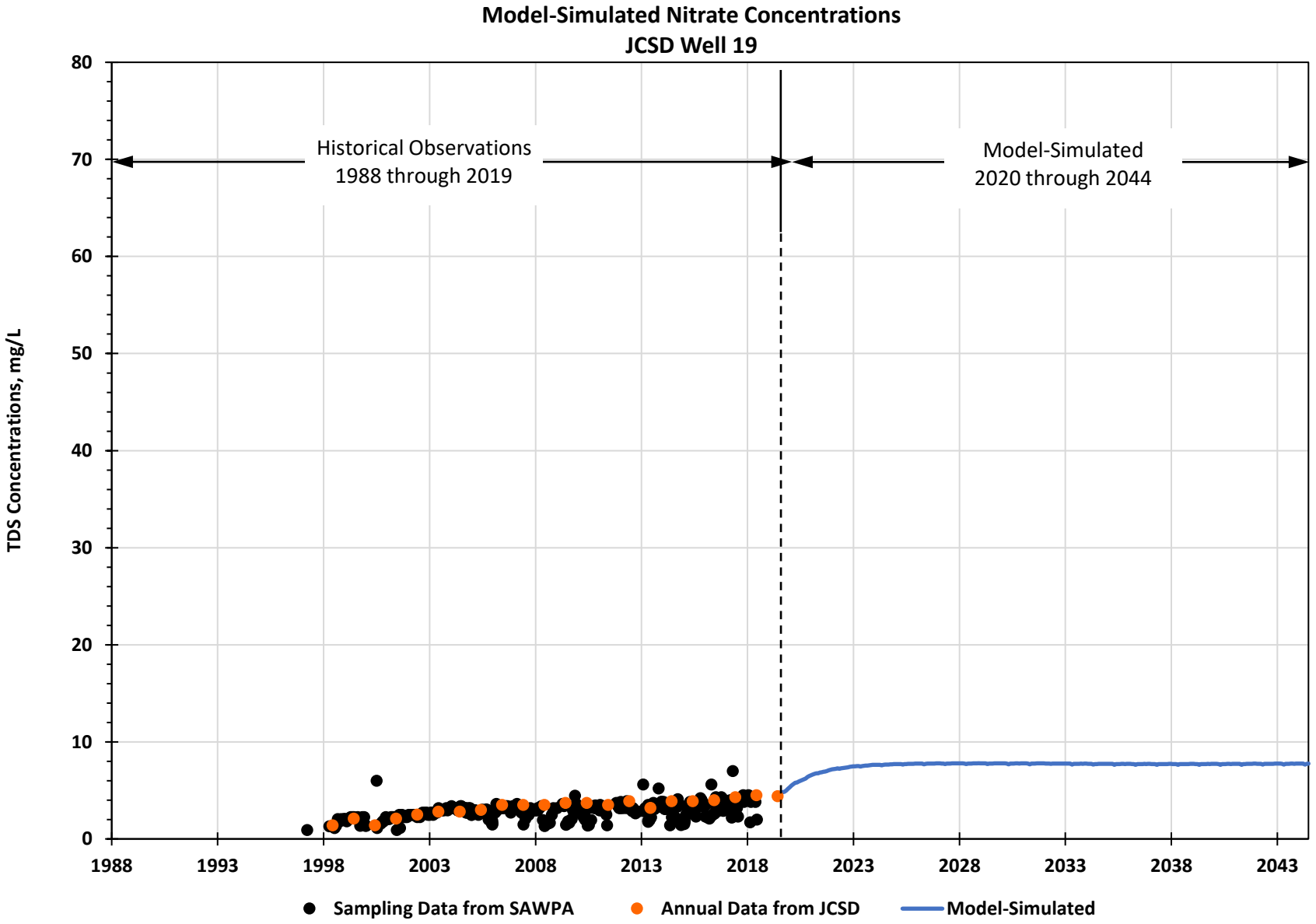

Model-Simulated Nitrate Concentrations
JCSD Well 14
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
0
10
20
30
40
50
60
70
80
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated

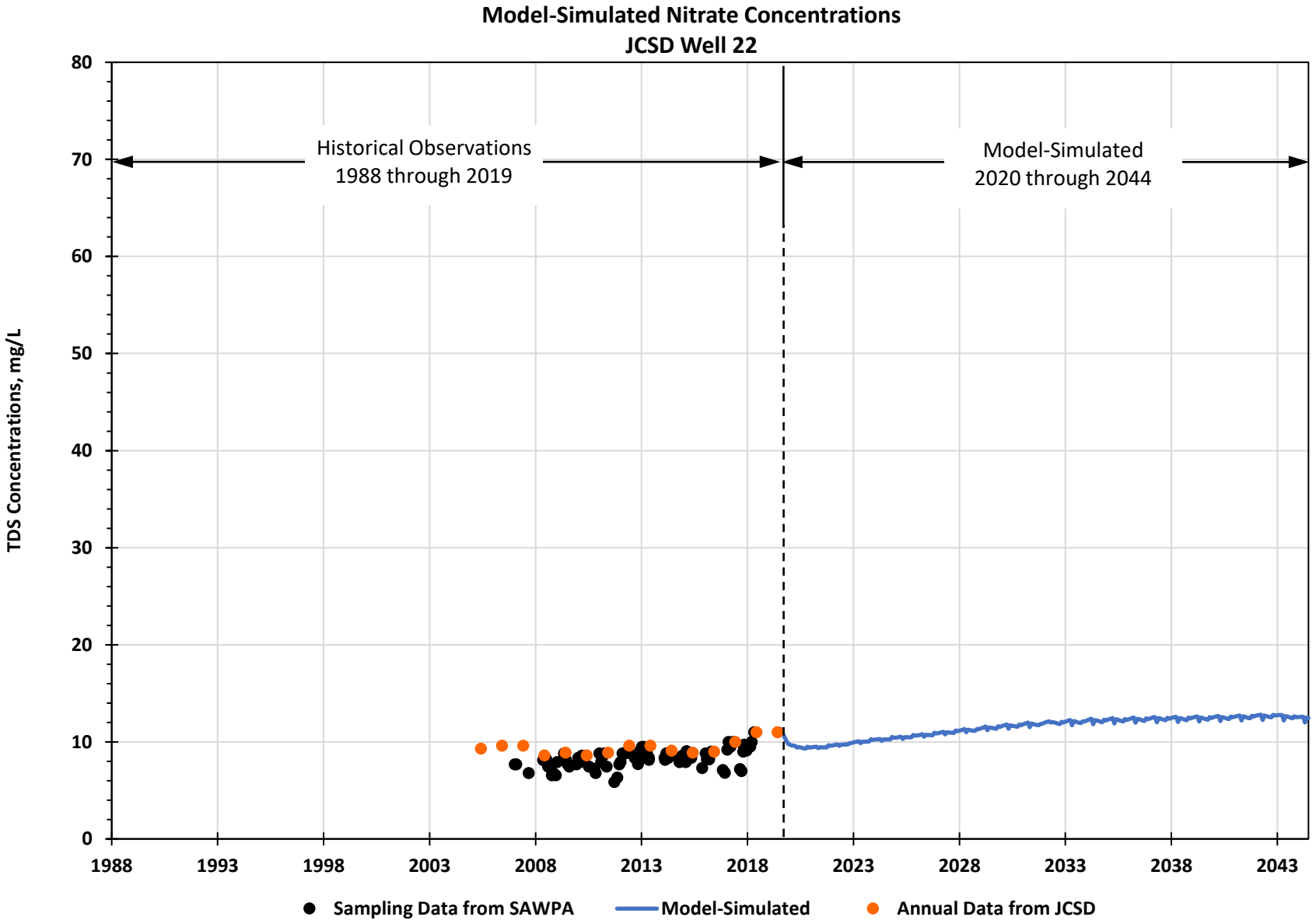

Model-Simulated Nitrate Concentrations
JCSD Well 15
TDS Concentrations, mg/L
0
10
20
30
40
50
60
70
80
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated

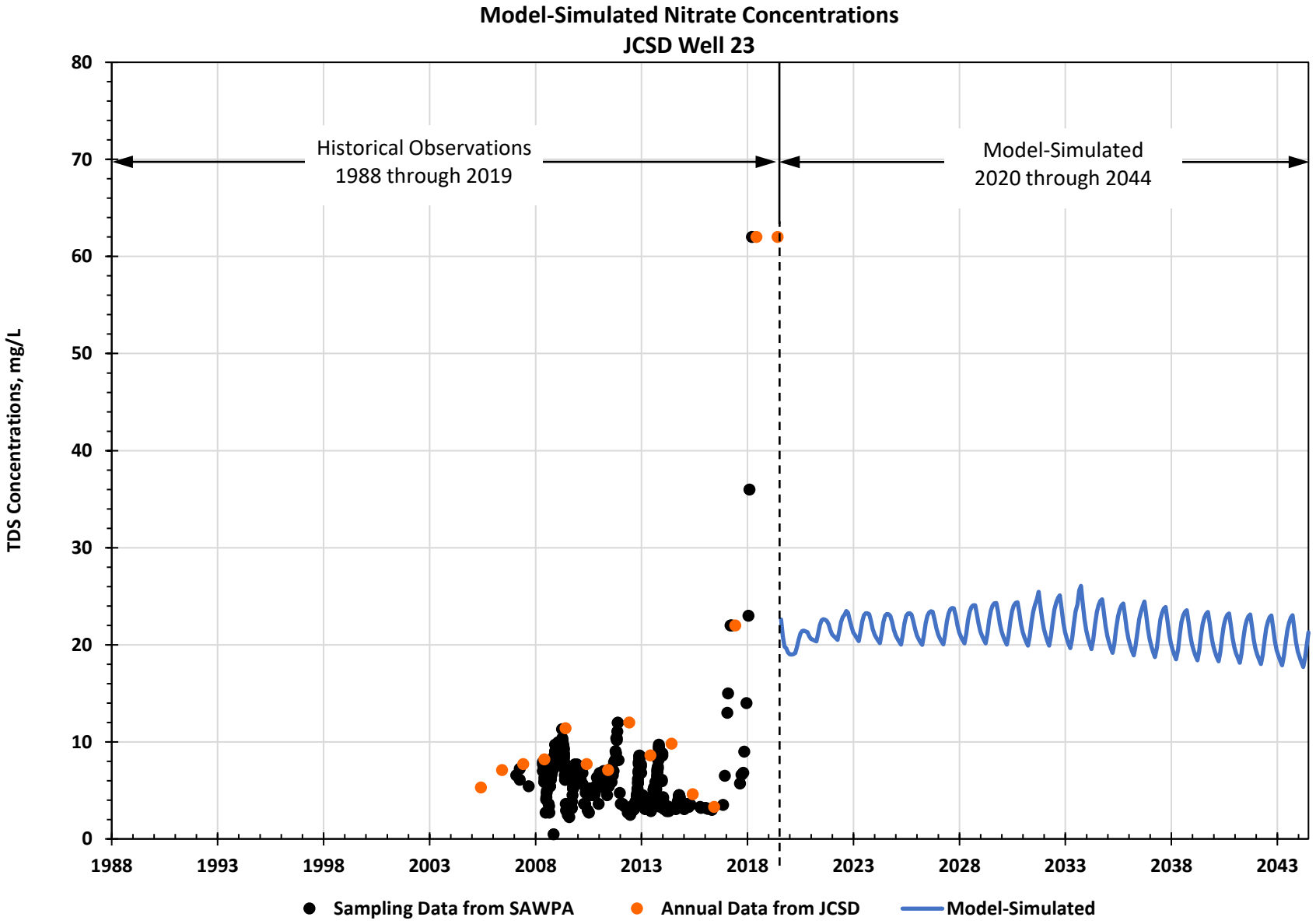

Model-Simulated Nitrate Concentrations
JCSD Well 16
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
0
10
20
30
40
50
60
70
80
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated

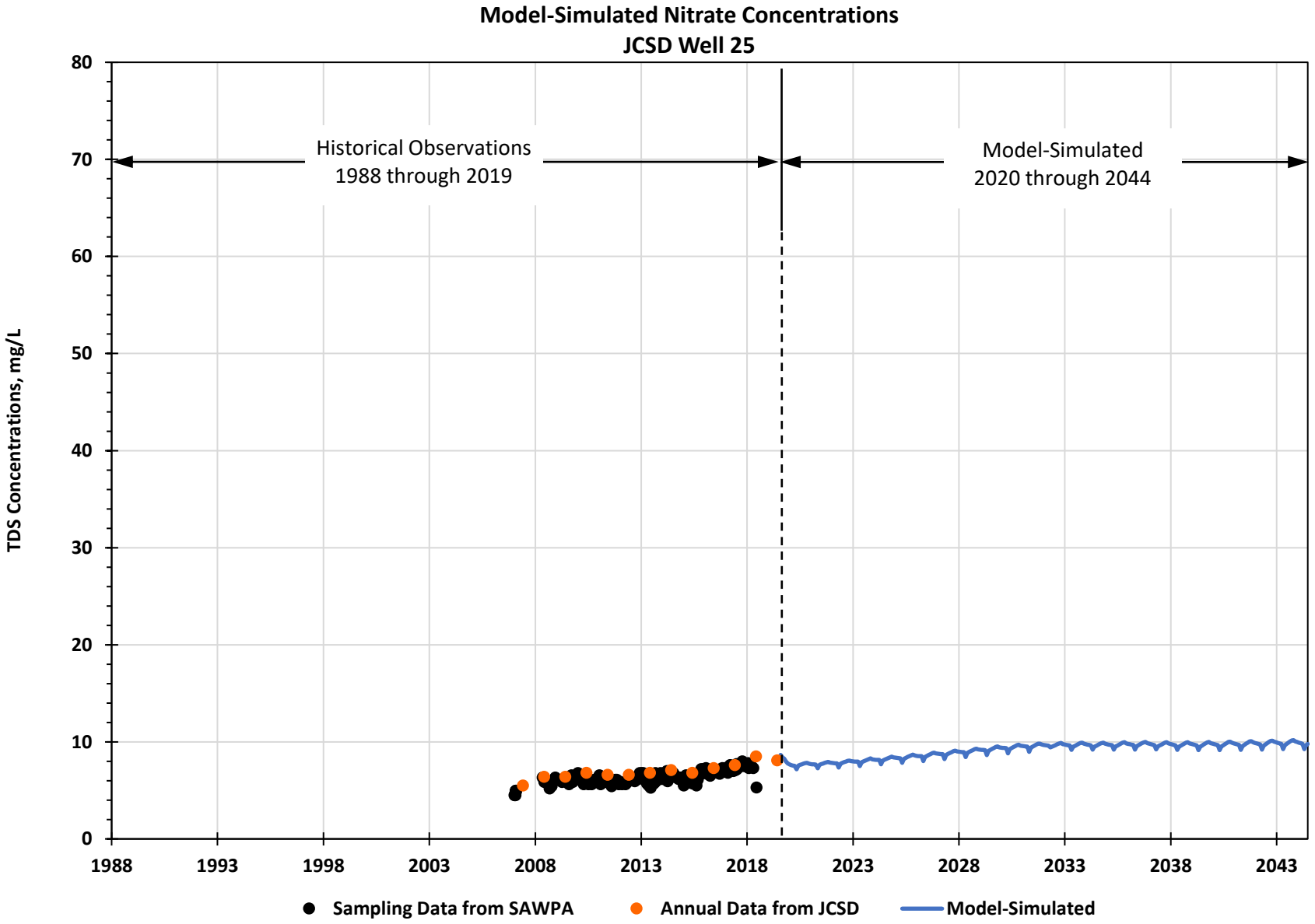

Model-Simulated Nitrate Concentrations
JCSD Well 17
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
0
10
20
30
40
50
60
70
80
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated

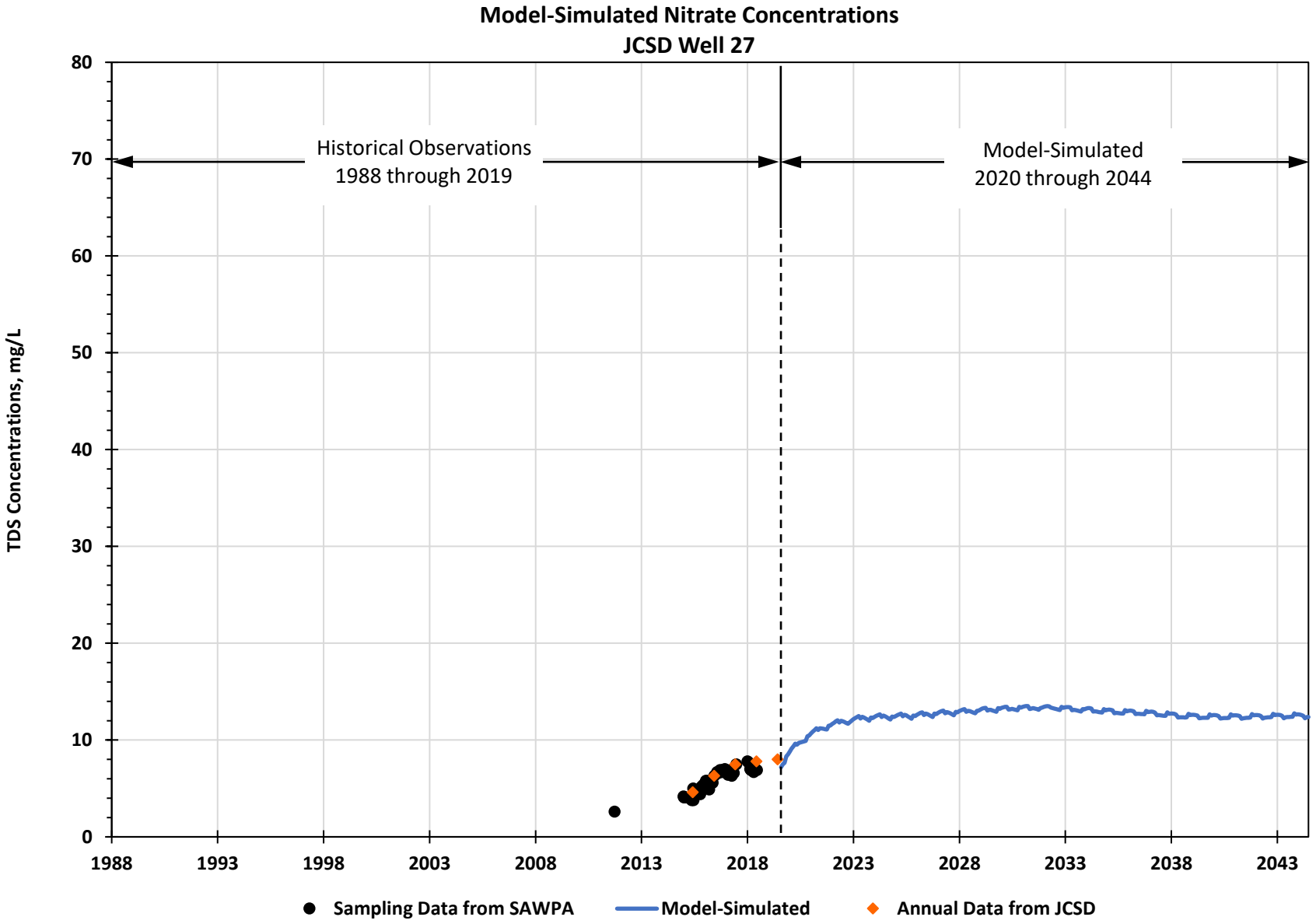

Model-Simulated Nitrate Concentrations
JCSD Well 18
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
0
10
20
30
40
50
60
70
80
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated

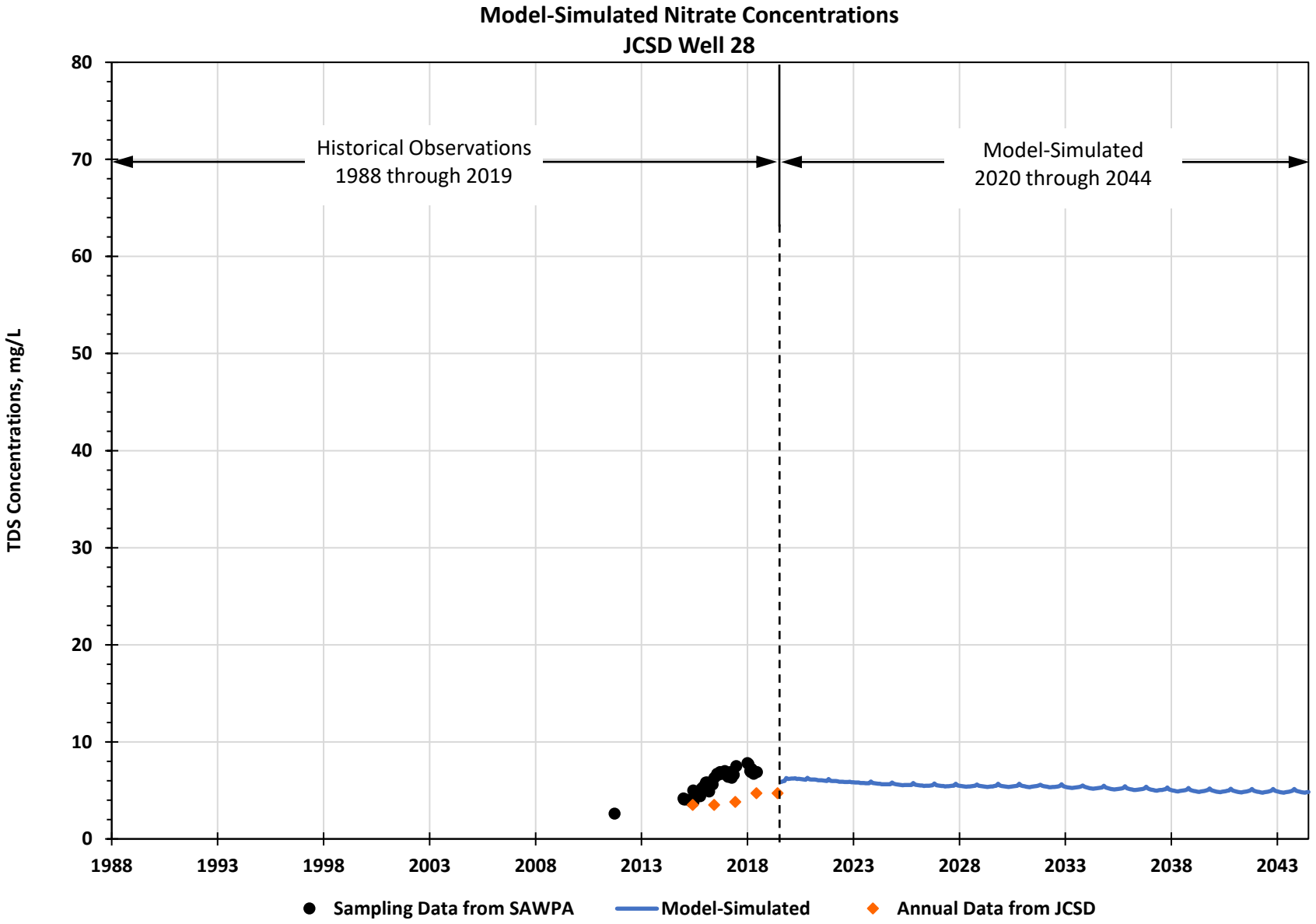

Model-Simulated Nitrate Concentrations
JCSD Well 19
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
80
70
60
50
40
30
20
10
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated


Model-Simulated Nitrate Concentrations
JCSD Well 22
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
0
10
20
30
40
50
60
70
80
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD


Model-Simulated Nitrate Concentrations
JCSD Well 23
TDS Concentrations, mg/L
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
0
10
20
30
40
50
60
70
80
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated


Model-Simulated Nitrate Concentrations
JCSD Well 25
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
80
70
60
50
40
30
20
10
0
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Annual Data from JCSD
Model-Simulated


Model-Simulated Nitrate Concentrations
JCSD Well 27
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
0
10
20
30
40
50
60
70
80
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD


Model-Simulated Nitrate Concentrations
JCSD Well 28
Historical Observations
1988 through 2019
Model-Simulated
2020 through 2044
TDS Concentrations, mg/L
0
10
20
30
40
50
60
70
80
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
Sampling Data from SAWPA
Model-Simulated
Annual Data from JCSD



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