Initial Study

Vincent Well Foundation Stabilization Project

City of San Bernardino Municipal Water Department

Prepared for:

City of San Bernardino Municipal Water Department
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San Bernardino, CA 92408

Prepared by:

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November 2020

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1 INTRODUCTION

The City of San Bernardino Municipal Water Department's Vincent Well provides drinking water mainly to the City of San Bernardino. The well is located within the Cajon Wash, an approximately 1,000 foot-wide braided channel that originates out of the San Gabriel mountains to the north and is a tributary to Lytle Creek to the south. Over the past several years, the well infrastructure has undergone several emergency repairs due to damage from storm flows within Cajon Creek.

The City of San Bernardino Municipal Water Department (Department) is proposing fortify the area surrounding the Vincent Well infrastructure (Project). The Project consists of installing gabion baskets within the subsurface adjacent to the well, in a horseshoe shape encompassing approximately 0.38 acres. This permanent repair will require permits from the Corps of Engineers, the Santa Ana Regional Water Quality Control Board (SARWQCB) and the California Department of Fish and Wildlife (CDFW). The SARWQCB and CDFW will also require compliance with the California Environmental Quality Act (CEQA) prior to submittal of the permit applications.

1.1 Background

The Department was created in 1905 as a municipal utility of the City of San Bernardino Charter and is governed by a Board of Water Commissioners. The Department obtains 100 percent of its water from pumping wells located in the Bunker Hill Groundwater Basin, a sub-basin of the San Bernardino Basin Area (SBBA). Management of this groundwater basin is coordinated through the San Bernardino Valley Municipal Water District (SBVMWD). The Department's service area has expanded to include portions of the City of San Bernardino and portions of unincorporated areas of the County of San Bernardino and is bounded on the north by the San Bernardino National Forest, on the east by the East Valley Water District and Redlands Municipal Utilities Department, on the south by the cities of Loma Linda and Colton, and on the west by the West Valley Water District, the city of Rialto, and the Muscoy Mutual Water Company.

The Department served a population of approximately 199,657 in 2015, which is expected to increase to approximately 234,800 by the year 2040. Customers are generally made up of single-family residential (51 percent), multifamily residential, commercial/industrial, municipal/ government, and landscape (*2015 San Bernardino Valley Regional Urban Water Management Plan* [UWMP])

The Department has drawn 100 percent of its water from wells in the SBBA. Currently, water is derived from 57 groundwater wells located throughout its service area. The wells range from 50 to 1,300 feet deep and have production capacities ranging from 50 to 3,500 gpm (2015 UWMP). Imported water is available to Department through the State Water Project water purchased from the SBVMWD. The SBMWD has not used State Water Project water for direct potable use in the past five years, and currently uses it for water recharge projects.

The Vincent Well is one of the Department's water production wells that was originally constructed in the Cajon Wash in 1929 by the Muscoy Water Company, acquired by the Department in 1949, and redeveloped in the same location in 1968. The well was originally an 8-foot-wide by 69-foot deep metal caisson that contained weep holes for water collection. The Department redeveloped the well in 1968 by drilling within the existing caisson, an 8-inch diameter, 199-foot-deep production well. The well site contains the well, a small building that houses the well, and an associated electric utility pole that provides electricity. According to the Department records, the existing well building was replaced in 1983 in its current location, but there is no information as to when the building was originally constructed.

The Cajon Wash is an approximately 1,000-foot-wide braided channel that originates out of the San Gabriel mountains to the north and is a tributary to Lytle Creek to the south. Lytle Creek is a tributary to the Santa Ana River. The area of active low flow varies but is approximately 300 feet wide in the vicinity of the well.

Over the years, the building and well infrastructure has been subject to extreme erosion from flashy storms. In 2017, the well infrastructure was significantly compromised, and the Department obtained emergency permits from various agencies to place rock slope protection around the well site. The Department is now seeking to provide a permanent solution to protect the well.

2 PROJECT LOCATION AND SETTING

The Vincent Well is located within the low-flow channel of Cajon Creek, at approximately 17230 Cajon Blvd, San Bernardino, CA 92407 in Section 19 of Township 2 North, Range 5 West on the *Devore* U. S. Geological Survey's (USGS) 7.5-minute topographic map. More specifically, it is located west of Interstate 15 (I-15) and Cajon Boulevard, within the Cajon Wash, approximately 2 miles northwest (upstream) of the I-15/I-215 interchange, in the City of San Bernardino, California at approximately 34.240102 latitude and -117.440237 longitude (Figure 1, Figure 2a and 2b).

The well and well house are situated at approximately 2,309 feet mean sea level (msl) (Figure 3). The actual elevation of the low flow channel of the wash varies with seasonal storms, but is roughly at the same elevation as the well infrastructure.

Project construction will occur at the well site and within approximately 20 feet of the existing well infrastructure. The Project improvements will face north, to prevent the erosion as the water in the wash travels south, downstream. Access to the proposed Project site will be via an existing graded, unimproved access road that provides access from the west side of Cajon Boulevard through the wash, to the Vincent Well (Figure 4).

The stockpile location is an approximate 2-acre upland area located approximately 1,700 feet northeast of the well construction site (Figure 4).

3 PROJECT COMPONENTS

The proposed Project will construct a surface and subsurface stabilization system around the existing Vincent Well site. The proposed stabilization system will consist of placing a series of rock-filled gabion baskets along a 2:1 slope that will extend to 20 feet below existing grade. The top of the proposed baskets will be located at least 10 feet from the well building. The proposed layout of the 2:1 slope is in a horseshoe shape with the bottom of the horseshoe facing upstream of the well site. One horseshoe leg is on the west side of the well building, and the other leg is on the east side of the building. The layout leg on the west side will extend to approximately 80 feet south of the building. The layout leg on the east side will extend to approximately 20 feet south of the building (Appendix A).

The base width of the excavation will be 28 feet. Gabion baskets will be placed at the innermost 12 feet of the base and connected to the gabions along the slope. The entire system will be underlain by geotextile fabric.

The other slopes required to construct the system will be excavated at 1.5:1. Excavated material will be used to construct a berm upstream of the site to divert flows in Cajon Wash around the construction zone. After the gabions are in place, the excavated material will be used as backfill and finish grade material. The finish grade of the wash will return the natural channel to its existing grade, but the slope of the channels will be at least 20 feet clear of the existing building.

Project design plans and specifications (90% level) are provided in Appendix A.

3.1 Construction Scenario

The initial area of excavation is anticipated to encompass approximately 40,340 square feet or approximately 0.92 acre. Within that area, gabions will be installed within approximately 16,756 square feet, or approximately 0.38 acre. The remaining 23,584 square feet (0.54 acre) from the construction will be backfilled to the finished grade.

Approximately 16,240 cubic yards of soil will be excavated, backfilling approximately 15,840, and the balance of approximately 400 cubic yards will be exported. The gabion slope protection encompasses approximately 1,862 cubic yards, which includes the gabion baskets that will be filled with rock sized to design specifications, with approximately 2,056 square yards of filter fabric that will be installed below grade.

Access to the site is via an existing graded road that extends from Cajon Boulevard, through the Cajon Wash, to the Vincent Well. The access road is approximately 2,368 linear feet from Cajon Boulevard to the well site and is approximately 12 feet wide. Of the approximately 2,368 linear feet, approximately 1,000 feet of the roadway (or approximately 0.28 acre) exists within the wash proper.

Groundwater was discovered at approximately 10 to 12 feet below grade during the emergency repairs conducted in March 2017. Construction is anticipated to occur within the drier months of the year, most likely August-September. However, it is anticipated that dewatering activities will be necessary during construction. Therefore, the contractor will develop a dewatering plan, which typically includes placing pumps in the excavation area and releasing water downstream. Dewatering may increase the number of construction days and material stockpiling methods in order for the soils to dry before placement and recompaction.

Construction is anticipated to occur in the drier months of the year, most likely in the August-September timeframe, and be completed in approximately three months.

3.2 Potential Construction Equipment

Project construction will require the use of heavy equipment. While the final types and numbers of construction equipment will be determined by the construction contractor, Table 1 is an example of the types and numbers of equipment that will be utilized for this work. There will be approximately 15 to 20 people working on-site.

Table 1
Potential Equipment for Vincent Well Stabilization Project

Equipment Type	Numbers of Equipment	Duration
Scrapers (Cat 637K Wheel Tractor-Scraper or similar)	2	3 months
Caterpillar 349L Track Excavator	1	3 months
Caterpillar 950 Wheel Front-End Loaders	2	3 months
Dump Trucks	2	3 months
Flatbed Trucks	2	3 months
Caterpillar D-8 or D-9 sized bulldozer	2	3 months
Water Truck	1	3 months
Concrete Trucks (10 yard)	1	3 months
Rock Haul Trucks (approx. 1500 cy in 7 yard trucks)	220	3 months – rock will be brought to site and baskets filled incrementally during construction
Dirt Haul Trucks (400 cy in 5 yard trucks)*	45	1 week

3.3 Right-of-Way Acquisition

No right-of-way acquisition is needed. The well site is within San Bernardino County Assessor Parcel Numbers 0151-30-103, owned by the City of San Bernardino. The stockpile location is located within portions of three parcels, all owned by the City of San Bernardino.

- 0349-06-1040
- 0349-06-1090
- 0349-06-1050

3.4 Utility Relocation

There is no utility relocation required for this project. During construction, all existing utilities in the construction zone will be protected in place.

3.5 Construction Staging and Access

Construction Staging

The proposed construction area is anticipated to be approximately 600 feet long by 600 feet wide, or approximately 8 acres, but the direct work will occur within approximately 20 feet of the existing well. Equipment staging and material storage will be located in a designated approximately 2-acre area out of the creek. The Project improvements will face north, to prevent the erosion as the water in the wash travels south, downstream. Access to the proposed Project site will be via an existing graded, unimproved access road that provides access from the west side of Cajon Boulevard through the wash, to the Vincent Well (Figure 4). All equipment and materials used for the day's work will be relocated to the designated staging and storage area after the end of each day.

Construction Access

Construction access will be via the yellow access gate northeast of staging area. Equipment will travel through partly through the upland area and partly through the Cajon wash on an existing designated route that has been used for decades as access to the well site (Figure 4).

3.6 Alternatives

Alternative 1 – Well Foundation Repair (Preferred Alternative)

For this alternative, the slope of the existing well will be secured from further erosion. According to a technical memo prepared by the Department's consulting engineers, upon completion of the remedial work that is recommended, the existing Vincent Well will have adequate erosion protection during a 100-year flood event.

Alternative 2 – Replace Vincent Well in New Location Out of Cajon Creek

For this alternative, the Vincent Well would be decommissioned, and drilled somewhere else in the SBBA, or in the upland area of Cajon Creek. This alternative involves a comprehensive hydrogeologic evaluation, which requires drilling exploratory wells and performing pumping tests in multiple locations. All of these activities will take years to complete, meanwhile, the existing water supply well will continue to sustain damage.

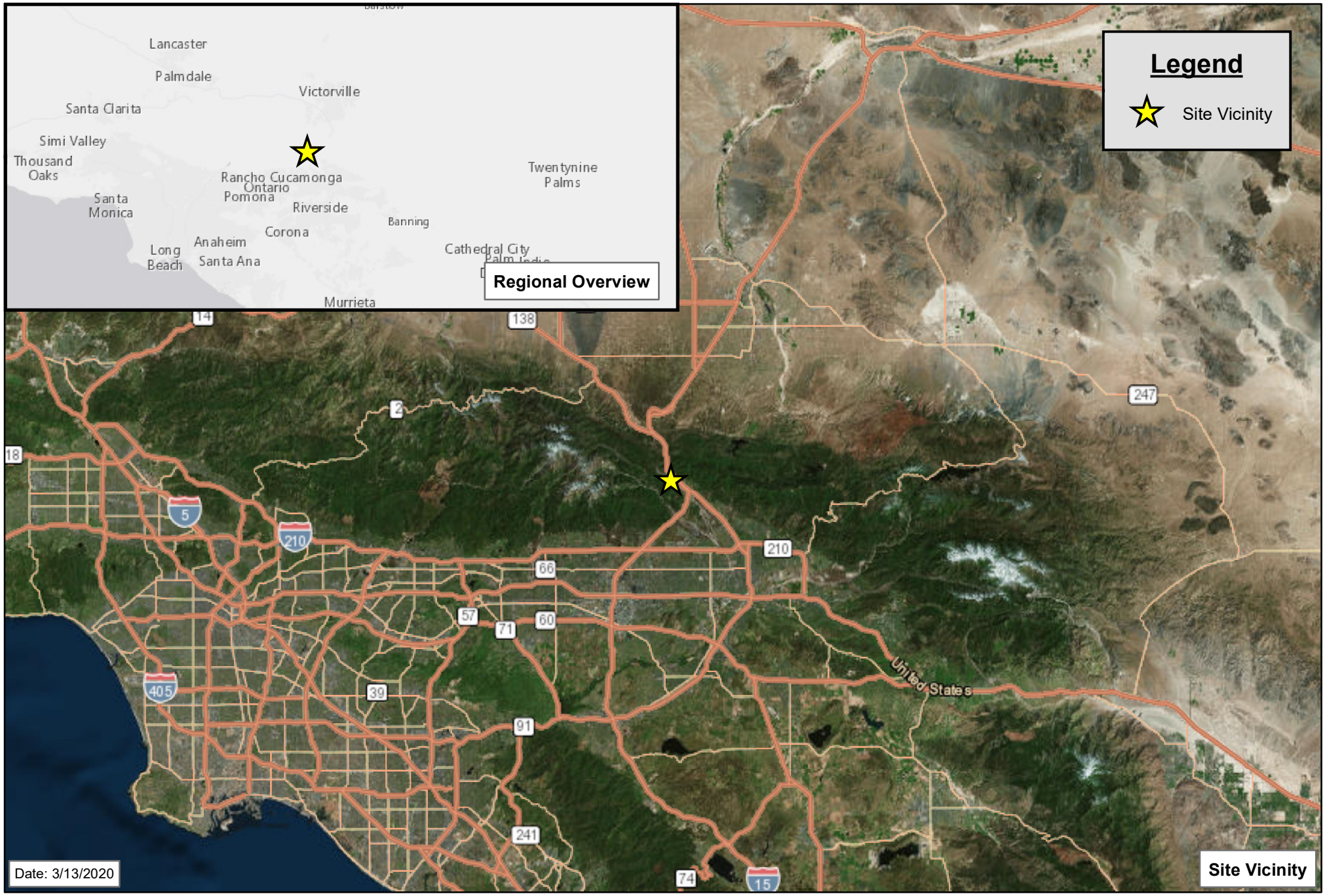
Alternative 3 – Decommission Vincent Well, No Relocation

For this alternative, the Vincent Well would be decommissioned and groundwater pumping would need to be increased in other Department wells to make up for its loss.

Well abandonment is only feasible if the Department's supply capacity exceeds its water demand in this area. The Cajon Well field consists of two high production water wells, Vincent Well and Cajon Canyon Well. The two wells are the only source of water for the Department's 2100 ft. pressure zone. Department's customers in this area depend solely on the water storage capacity within the Devore Reservoir which relies exclusively on the mentioned wells and the pipeline connecting them to the reservoir. Prior to the 2018 rainstorms, the Vincent Well was in good structural and working condition after the emergency well foundation repair in 2010.

Alternative 4 - No Action Alternative

Under the No Action Alternative, the Proposed Action would not be undertaken. No fortification of the Well Infrastructure would occur, and the well would continue to undergo emergency repairs as needed.



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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,

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Figure 1 - Regional Overview
Site Vicinity

Vincent Well
San Bernardino Municiple Water Department
San Bernardino, CA

Imagery Date: 8/6/2017

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

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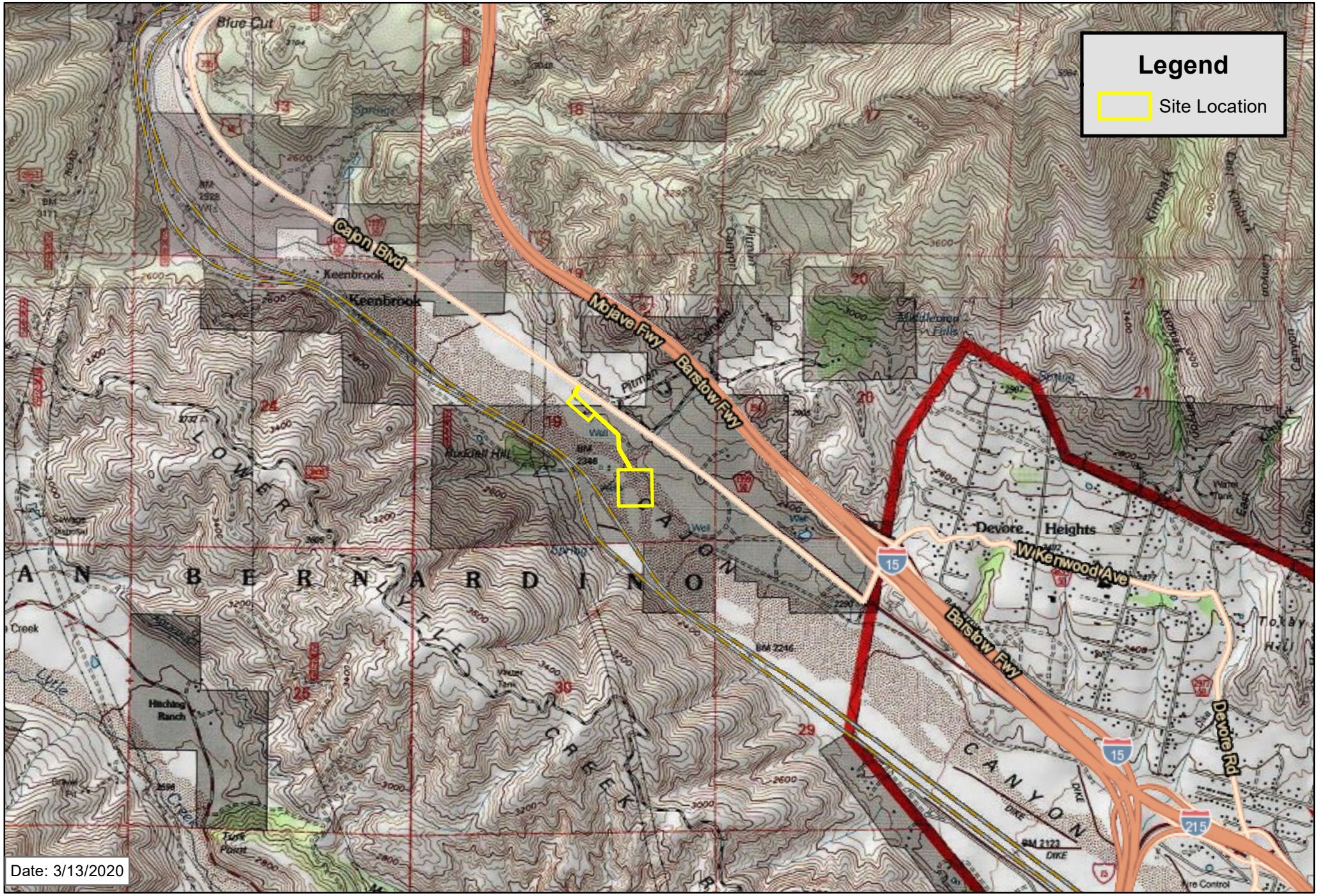
1 inch = 2,261 feet

Figure 2a
Site Location - Aerial

Vincent Well
San Bernardino Municiple Water Department
San Bernardino, CA



0 0.2 0.4 0.8 1.2 1.6 Miles

Imagery Date: 8/6/2017

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
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1 inch = 2,261 feet

Figure 2b
Site Location - Topographical

Vincent Well
San Bernardino Municiple Water Department
San Bernardino, CA


Vincent Well
Survey Area and Elevation Profile
Imagery Date: February 2018
2/2018
Legend
Elevation Profile
Vincent Well Survey Area
Well Location
Cajon Blvd
2309 ft
615 ft
0.4%
Graph: Min, Avg, Max Elevation: 2304, 2311, 2341 ft
Range Totals: Distance: 1144 ft Elev Gain/Loss: 47.4 ft, -32.2 ft Max Slope: 67.9%, -38.3% Avg Slope: 6.6%, -5.5%
2341 ft
2325 ft
2304 ft
2309 ft
0.4%
250 ft
500 ft
615 ft
750 ft
1000 ft
1144 ft
N
Google Earth
0
0.189
Miles
Imagery Date: 02/2018
Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,
Map Source: San Bernardino Municipal Water Department
JERICHO SYSTEMS
Figure 3
Elevation Profile
San Bernardino Municipal Water Department–
Vincent Well Jurisdictional Delineation

Imagery Date: 8/6/2017

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

JERICHO SYSTEMS INCORPORATED

1 inch = 333 feet

Figure 3
Construction Plan

Vincent Well
San Bernardino Municiple Water Department
San Bernardino, CA

4 ENVIRONMENTAL CHECKLIST FORM

1. Project Title: **Vincent Well Foundation Stabilization Project**

2. Lead Agency Name: City of San Bernardino Municipal Water Department
Address: 397 Chandler Place, San Bernardino, CA 92408

3. Contact Person: Miguel J. Guerrero, P.E., General Manager
City of San Bernardino Municipal Water Department
397 Chandler Place, San Bernardino, CA 92408
miguel.guerrero@sbmwd.org

Phone Number: (909) 384-5091

4. Project Location: Topographic Quad (USGS 7.5"): *Devore*
Topographic Quad Coordinates: Section 19, Township 2 North, Range 5 West
Latitude: 34.240102 N, Longitude: -117.440237 W
APN: 0151-30-103 (well site)
APNs: 0349-06-1040, 0349-06-1090, 0349-06-1050 (stockpile and access road)

6. General Plan Designation: Industrial, City of San Bernardino

7. Zoning: General Commercial-1, City of San Bernardino (well site)
Light Industrial, City of San Bernardino (stockpile and access road)

8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project and any secondary, support, or off-site features necessary for its implementation).

The City of San Bernardino Municipal Water Department (Department) is proposing to fortify the slope surrounding the Vincent Well infrastructure (Project). The Project consists of installing gabion baskets within the subsurface adjacent to the well, in a horseshoe shape encompassing approximately 0.38 acre.

The well and well house are situated at approximately 2,309 feet mean sea level (msl) (Figure 3). The actual elevation of the low flow channel of the wash varies with seasonal storms, but is roughly at the same elevation as the well infrastructure. Significant storm flows over the past several years have damaged the slope around the well house. Rip rap was placed in 2017 to protect it from future storms. However, a permanent solution is required.

The proposed construction area is anticipated to be approximately 600 feet long by 600 feet wide, or approximately 8 acres, but the direct work will occur within approximately 20 feet of the existing well. Equipment staging and material storage will be located in a designated approximately 2-acre area out of the creek. The Project improvements will face north, to prevent the erosion as the water in the wash travels south, downstream. Access to the proposed Project site will be via an existing graded, unimproved access road that provides access from the west side of Cajon Boulevard through the wash, to the Vincent Well (Figure 4).

The stockpile location is an approximate 2-acre upland area located approximately 1,700 feet northeast of the well construction site (Figure 4).

9. Surrounding land uses and setting (Briefly describe the project's surroundings)

The Vincent Well is situated in the low-flow channel of Cajon Wash, approximately 2 miles northwest (upstream) of the I-15/I-215 interchange, and approximately 1,000 feet west of Cajon Boulevard, in the City of San Bernardino, California at approximately 34.240102 latitude and -117.440237 longitude (Figure 1, Figure 2a, Figure 2b). The well and well house are situated at approximately 2,309 feet mean sea level (msl) (Figure 3). The actual elevation of the low flow channel of the wash varies with seasonal storms, but is roughly at the same elevation as the well infrastructure.

The surrounding land use is the Cajon Wash.

10. Other agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):

- Santa Ana Regional Water Quality Control Board (SARWQCB) – Clean Water Act Section 401 certification
- SARWQCB – Dewatering Permit/National Pollutant Discharge Elimination System (NPDES) permit coverage application
- US Army Corps of Engineers (USACE) – Clean Water Act Section 404 Certification
- California Dept. of Fish and Wildlife (CDFW) – Lake or Streambed Alteration Agreement

- Construction Compliance – Stormwater Discharge. Construction projects that disturb 1 acre of land or more are required to obtain coverage under the NPDES General Permit for Construction Activities (General Construction Permit), which requires the applicant to file a notice of intent (NOI) to discharge stormwater and to prepare and implement a SWPPP. The SWPPP includes an overview of the Best Management Practices (BMPs) that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. The SWPPP will also address post-construction measures for water quality protection.

Lead Agency Discretionary Actions:

Discretionary actions that may be taken by the Lead Agency include, but are not limited to, the following:

- Award contracts for construction

11. 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 significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

NOTE: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

On January 17, 2020, CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for a records search in the commission's Sacred Lands File. Following NAHC's recommendations and previously established consultation protocol, CRM TECH subsequently contacted the Gabrieleño Band of Mission Indians–Kizh Nation in writing on January 27, 2020, for additional information on potential Native American cultural resources in the project vicinity. Correspondence between CRM TECH and the Native American representatives is contained within the cultural resources report in Appendix D.

In response to CRM TECH's inquiry, NAHC states in a letter dated January 24, 2020, that the Sacred Lands File identified unspecified Native American cultural resource(s) in the vicinity of the project area but referred further inquiry regarding such resource(s) to the Gabrieleño Band of Mission Indians–Kizh Nation. When contacted by CRM TECH via e-mail, Brandy Salas, Tribal Administrative Specialist, replies in an e-mail dated February 11 that the Gabrieleño Band of Mission Indians–Kizh Nation would like to seek government-to-government consultation with the City of San Bernardino regarding this project. The responses from NAHC and Ms. Salas, along with a referral list provided by NAHC for other potential tribal contacts in the region, are contained in the cultural resources report in Appendix D.

On May 28, 2020, the Department notified the following tribal entity representatives of the Project and the timeframe in which to request consultation:

- Mr. Joseph Ontiveros, Director of Cultural Resources, Soboba Band of Luiseño Indians
- Ms. Lee Clauss, Vice President of Tribal Affairs, San Manuel Band of Mission Indians
- Mr. Andrew Salas, Chairman, Gabrieleno Band of Mission Indians - Kizh Nation

On June 22, 2020, Mr. Andrew Salas requested via email that tribe was requesting consultation. The Consultation meeting was held on August 20, 2020. Mitigation measures were submitted after the consultation and have been incorporated into the Initial Study.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The Proposed Project could potentially affect ("Potentially Significant" or "Less than Significant with Mitigation Incorporated") the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor and identifies where mitigation measures would be necessary to reduce all impacts to less than significant.

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

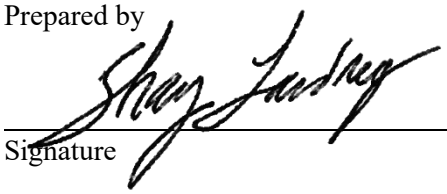
DETERMINATION (To be completed by the Lead Agency)

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

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

Prepared by:

Jericho Systems, Inc.
Prepared by



Signature Date

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

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

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

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

9) The explanation of each issue should identify:
   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

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

SUBSTANTIATION: (Check ☐ if project is located within a view-shed of any Scenic Route listed in the General Plan.

Environmental Setting

The Project area is located in the Cajon Wash, west of Interstate 15 (I-15) and Cajon Boulevard, within the Cajon Wash, approximately 2 miles northwest (upstream) of the I-15/I-215 interchange, in an unincorporated area of San Bernardino County, California at approximately 34.240102 latitude and -117.440237 longitude (Figure 1 and Figure 2a and 2b).

The well and well house are situated at approximately 2,309 feet mean sea level (msl) (Figure 3). The actual elevation of the low flow channel of the wash varies with seasonal storms, but is roughly at the same elevation as the well infrastructure.

Project activities, including construction and the stockpile, will occur at the well site and within approximately 20 feet of the existing well infrastructure. The Project improvements will face north, to prevent the erosion as the water in the wash travels south, downstream. Access to the proposed Project site will be via an existing graded, unimproved access road that provides access from the west side of Cajon Boulevard through the wash, to the Vincent Well (Figure 4).

There are no human sensitive receptors in the vicinity of the Project.

Impact Analysis

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

Less Than Significant. The CEQA Guidelines do not provide a definition of what constitutes a "scenic vista" or "scenic resource" or a reference as to from what vantage point(s) the scenic vista and/or resource, if any, should be observed. However, a scenic vista can generally be defined as a viewpoint from a public vantage that provides

expansive views of a highly-valued landscape for the benefit of the general public. Common examples include undeveloped hillsides, ridgelines, and open space areas that provide a unifying visual backdrop to a developed area. Scenic resources are those landscape patterns and features that are visually or aesthetically pleasing and that contribute affirmatively to the definition of a distinct community or region such as trees, rock outcroppings, and historic buildings.

The Project site is within Cajon Wash area with no housing on either side of the wash. The site is approximately 1,000 feet west of Cajon Boulevard, between Kenwood Avenue to the south and Matthews Ranch Road to the north. Cajon Boulevard, designated by the City of San Bernardino as a Major Arterial, is also known as the historic Route 66. Motorists along this section of roadway are afforded views of the wash and mountains uninterrupted by development. A railway exists in the background to the west.

The Project site is barely visible from Cajon Boulevard as it sits within the wash and is nearly 1,000 feet away. Motorists may see portions of the Project during construction, however, the site improvements will be below ground and will not be visible. Therefore, the Project would have a less than significant impact on scenic vistas.

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

No Impact. The Department of Transportation (Caltrans) manages the State Scenic Highway Program, provides guidance, and assists local government agencies, community organizations, and citizens with the process to officially designate scenic highways. The Project does not occur within a state scenic highway, nor will it connect to any scenic highway, nor can the Project be viewed from a state scenic highway. The Project will have no impact on scenic resources 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 a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant. The Project is located within a nonurbanized area. The City's Zoning for the Site is Industrial Extractive, which allows for mining operations in the Cajon Wash, however, there are currently no mining sites in the immediate Project vicinity. The site exists approximately 1,000 feet west of Cajon Boulevard, between Kenwood Avenue to the south and Matthews Ranch Road to the north. Cajon Boulevard, designated by the City of San Bernardino as a Major Arterial, is also known as the historic Route 66. Motorists along this section of roadway are afforded views of the wash and mountains uninterrupted by development. A railway exists in the background to the west. Motorists along Cajon Boulevard in the vicinity of the Project may see construction equipment; this will be a temporary visual interruption of views. The site itself is barely visible from Cajon Boulevard, and improvements will be below grade. Therefore, there will be a less than significant impact on the non-urbanized viewshed.

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

No Impact. The City of San Bernardino does not permit construction activities outside of daylight hours, so the construction associated with the proposed Project would not cause the emission of light beyond existing circumstances in that area. Additionally, there is no lighting at the current well site, and no lighting is planned to be installed with the Project.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

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

SUBSTANTIATION: (Check ☐ if project is located in the Important Farmlands Overlay):

Environmental Setting

The Project site occurs within an active wash that is unsuitable for agriculture or farming.

Impact Analysis

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?

No Impact. The Project site is not identified within the survey limits of California Department of Conservation, Farmland Mapping and Monitoring Important Farmland Finder. No land under Williamson Act Contract occurs at the Project alignment and no impacts will occur.

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

No Impact. None of the land on or near the Project site is currently under agricultural production, nor are any parcels under a Williamson Act contract. Therefore, no impact is anticipated from the proposed Project.

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))?

No Impact. Forest land is defined in Public Resources Code section 12220(g) as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." No timberland or lands zoned Timberland Production as defined above are within the Project sites. The Project is not located in an area zoned for forest land or timber production. Therefore, the Project will impact the ability of land's ability to support 10 percent native tree cover of any species; thus, no forest lands will be reclassified as non-forest lands under Public Resources Code Section 12220(g). Therefore, there will be no impacts under this criterion.

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

No Impact. As mentioned above, the disturbances associated with the Project activities would not impact the lands' ability to support 10-percent native tree cover of any species, and thus no forest lands as defined in Public Resources Code Section 12220(g) would be lost. In addition, no such lands would be converted to non-forest use as a result of the project construction and operations activities. Therefore, there will be no impacts under this criterion.

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?

No Impact. The construction and operation of the proposed Project do not involve other changes in the existing environment that could result in the conversion of farmland to non-agricultural use or forest land to non-forest land use. Therefore, there will be no impacts to this criterion.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

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

SUBSTANTIATION:

Air Quality Standards and Attainment

The project area is within the South Coast Air Basin (SCAB) which is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The SCAB is under the regulatory jurisdiction of the South Coast Air Quality Management District (SCAQMD). The local air quality management agency is required to monitor air pollutant levels to ensure that National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are met and, if they are not met, to develop strategies to meet the standards.

Depending on whether the standards are being met, the SCAB is classified as being in "attainment" or "nonattainment" for air quality. The SCAQMD's 2016 Air Quality Management Plan (AQMP) assesses the attainment status of the SCAB. The NAAQS and CAAQS attainment statuses for the SCAB are listed in Table 2. The SCAB is in nonattainment for the federal standards for ozone and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$) and the State standards for ozone, particulate matter 10 microns or less in diameter (PM_{10}) and $PM_{2.5}$. Areas of the SCAB located in Los Angeles County are also in nonattainment for lead (SCAQMD 2017). The SCAB is designated unclassifiable or in attainment for all other federal and State standards. Thus, the SCAB currently exceeds several State and federal ambient air quality standards and the SCAQMD is required to implement strategies that would reduce pollutant levels to recognized acceptable standards (e.g. be in attainment). The SCAQMD has adopted an AQMP that provides a strategy for the attainment of State and federal air quality standards.

Table 2
South Coast Air Basin Attainment Status

Pollutant	Averaging Time	CAAQS	NAAQS	
			Primary	Secondary
Ozone (O_3)	8-Hour	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	Same as Primary
	1-Hour	0.09 ppm (180 µg/m^3)	N/A	N/A
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	N/A
	1-Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	N/A
Nitrogen Dioxide (NO_2)	Annual	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
	1-Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	N/A
Sulfur Dioxide (SO_2)	24-Hour	0.04 ppm (105 µg/m^3)	N/A	N/A
	3-Hour	N/A	N/A	0.5 ppm (1300 µg/m^3)
	1-Hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	N/A
Particulate Matter (PM_{10})	AAM	20 µg/m^3	N/A	N/A
	24-Hour	50 µg/m^3	150 µg/m^3	Same as Primary
Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m^3	15.0 µg/m^3	Same as Primary
	24-Hour	N/A*	35 µg/m^3	Same as Primary
Lead (Pb)	Quarterly	N/A	1.5 µg/m^3	Same as Primary
	Monthly	1.5 µg/m^3	N/A	N/A
	3-Month	N/A	0.15 µg/m^3	Same as Primary
Sulfates	24-Hour	25 µg/m^3	N/A	N/A
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m^3)	N/A	N/A
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m^3)	N/A	N/A

ppm = parts per million (by volume)
N/A = Not applicable
µg/m^3 = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter
AAM = Annual arithmetic mean
* There is no separate 24-hour PM 2.5 standard in California; however, the U.S. EPA promulgated at 24-hour PM 2.5 ambient air quality standard of 35 µg/m^3.
Source: California Air Resources Board, Ambient Air Quality Standards (California and Federal), Available: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf

In an effort to monitor the various concentrations of air pollutants throughout the SCAB, the SCAQMD has divided the region into 38 source receptor areas (SRAs) in which over 30 monitoring stations operate.

Air Quality Management

The SCAQMD updates the AQMP every three years. Each iteration of the AQMP is an update of the previous plan and has a 20-year horizon. The latest AQMP, the 2016 AQMP, was adopted on March 3, 2017. The 2016 AQMP incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2012 AQMP, including the approval of the federal 8-hour ozone standard of 0.070 parts per million (ppm) that was finalized in 2015. The 2016 AQMP builds upon the approaches taken in the 2012 AQMP for the attainment of federal PM and ozone standards and highlights the significant amount of reductions to be achieved. It emphasizes the need for interagency planning to identify additional strategies to achieve reductions within the timeframes allowed under the federal Clean Air Act, especially in the area of mobile sources. The 2016 AQMP also includes a discussion of emerging issues and opportunities, such as fugitive toxic particulate emissions, zero-emission mobile source control strategies, and the interacting dynamics among climate, energy, and air pollution. The 2016 AQMP also includes attainment demonstrations of the new federal 8-hour ozone standard and vehicle miles travelled (VMT) emissions offsets, as per recent United States Environmental Protection Agency requirements (SCAQMD 2017).

Air Emission Thresholds

The SCAQMD provides numerical thresholds to analyze the significance of a project's construction and operational emissions impacts on regional air quality. These thresholds are designed so a project that is consistent with the thresholds would not have an individually or cumulatively significant impact to the SCAB's air quality.

Thresholds of Significance for Construction:

- 75 pounds per day of ROG
- 100 pounds per day of NO_x
- 550 pounds per day of CO
- 150 pounds per day of SO_X
- 150 pounds per day of PM_{10}
- 55 pounds per day of $PM_{2.5}$

Thresholds of Significance for Operations:

- 55 pounds per day of ROG
- 55 pounds per day of NO_x
- 550 pounds per day of CO
- 150 pounds per day of SO_X
- 150 pounds per day of PM_{10}
- 55 pounds per day of $PM_{2.5}$

Impact Analysis

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

No Impact. A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding the forecasts used in the development of the AQMP. The proposed improvement project would include slope stabilization, installation of gabion structures filled with rock, and the re-grading and stabilization on an existing embankment. The project does not include new housing or businesses, nor would operation and maintenance of the proposed project require new employees; therefore, the project would not generate population, housing, or employment growth. As a result, the project would not exceed the Southern California Association of Governments' projected growth forecasts, which underlie the emissions forecasts in the 2016 AQMP. Therefore, the project would not conflict with or obstruct implementation of the AQMP. No impact would occur, and no mitigation measures are required.

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

Less Than Significant. The project would generate short-term emissions associated with project construction and no operational emissions. The proposed improvement project would require earthmoving, material import, material removal, and other activities such as removal of plants and/or other organics during construction. The project's construction activities were screened for emission generation using SCAQMD "Air Quality Handbook" guidelines, Emission Factors for On-Road Heavy-Heavy Duty Diesel Trucks (2020), and SCAQMD Emission Factors for On-Road Heavy Duty Diesel Trucks (2021). These tables are used to generate emissions estimates for development projects. The criteria pollutants screened for included: reactive organic gases (ROG), nitrous oxides (NO_x), carbon monoxide (CO), and particulates (PM_{10} and $PM_{2.5}$). Two of these, ROG and NO_x, are ozone precursors.

Project construction emissions are considered short-term, temporary emissions and were calculated based on the estimated construction parameters listed below. The resulting emission levels as compared to SCAQMD thresholds are shown in Table 3. Results of the air quality modeling is presented in Appendix B.

Typical daily equipment:

- 1 Excavator
- 1 Dozer
- 2 Loader
- 2 Scrapper
- 6 Other Construction/Material Handling Equipment
- Material Export/Import: 18 trips per day, 40 miles haul distance.

Table 3
Construction Emissions
(Pounds per Day)

Source	**ROG**	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Excavator	0.6	3.2	4.1	0.1	0.1
Dozer	1.7	12.6	6.4	0.5	0.5
Compactor	3.1	21.3	12.7	0.9	0.9
Loader	1.2	7.6	7.0	0.4	0.4
Other Construction Equip.	2.3	14.1	14.0	0.6	0.6
Other Material Handling Equip.	0.7	5.2	3.5	0.2	0.2
Material Export/Import	0.7	8.4	3.6	0.7	0.7
Totals (lbs/day)	**10.2**	**72.5**	**51.4**	**3.3**	**3.3**
SCAQMD Threshold	75	100	550	150	55
Significant	**No**	**No**	**No**	**No**	**No**

Source: SCAQMD Off-Road Mobile Source Emissions Factors (2020)

As shown in Table 3, project emissions would not exceed SCAQMD thresholds. Therefore, less than significant impact is anticipated.

Compliance with SCAQMD Rules 402 and 403

Although the proposed Project does not exceed SCAQMD thresholds during construction activities, the SBCFCD is required to comply with all applicable SCAQMD rules and regulations as the SCAB is in non-attainment status

for ozone and suspended particulates (PM_{10}). The project shall comply with, Rules 402 nuisance, and 403 fugitive dust, which require the implementation of Best Available Control Measures (BACM) for each fugitive dust source; and the AQMP, which identifies Best Available Control Technologies (BACT) for area sources and point sources, respectively. This would include, but not be limited to the following BACMs and BACTs:

Exhaust emissions from construction vehicles and equipment and fugitive dust generated by equipment traveling over exposed surfaces would increase NO_X and PM_{10} levels in the area. Although the proposed project does not exceed SCAQMD thresholds during construction, the Department will be required to implement the following conditions as required by SCAQMD**:**

1. To reduce emissions, all equipment used in earthwork must be tuned and maintained to the manufacturer's specification to maximize efficient burning of vehicle fuel.

2. The project proponent shall ensure that construction personnel are informed of ride sharing and transit opportunities.

3. The operator shall maintain and effectively utilize and schedule on-site equipment in order to minimize exhaust emissions from truck idling.

4. The operator shall comply with all existing and future CARB and SCAQMD regulations related to diesel-fueled trucks, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel; and (4) use of alternative fuels or equipment.

Implementation of the Project does not exceed the SCAQMD significance thresholds for construction activities. Although there would be emissions from vehicles and equipment during construction, the emissions would be temporary, of short duration, and below the established thresholds. In addition, Project emissions of particulate matter would be reduced by implementing BACMs as outlined in SCAQMD dust control Rules 402 - Nuisance and 403 - Fugitive Dust. As no operational emissions will be generated, the Project would not generate long-term emissions of criteria pollutants that would exceed thresholds and would therefore not cause a cumulatively considerable increase in criteria pollutants. A less than significant impact is identified, and no mitigation measures are required.

c) Expose sensitive receptors to substantial pollutant concentrations?

No Impact. Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Sensitive receptors are defined as land uses that are more likely to be used by these population groups and include health care facilities, retirement homes, school and playground facilities, and residential areas. The project site is located adjacent to Interstate 15. No sensitive uses are within the vicinity. Therefore, project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant, and no mitigation measures are required.

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

No Impact. During construction, the project would generate oil and diesel fuel odors from use of heavy equipment. Construction-related odors would be limited to the three-month construction period. The project site is located adjacent to Interstate 15. No sensitive uses are within the vicinity Therefore, construction-related odor impacts would be less than significant, and no mitigation measures are required.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
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				X
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?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
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?				X

SUBSTANTIATION:

A biological resources assessment was conducted for this Project by Jericho Systems and is located in Appendix C.

Environmental Setting

Located within Cajon Wash, the Project site is on the south side of the San Bernardino Mountains near the Devore area of San Bernardino County. The Devore area is subject to both seasonal and annual variations in temperature and precipitation. Average annual maximum temperatures typically peak at 96 degrees Fahrenheit (°F) in August and fall to an annual minimum temperature of 41° F in December. Average annual precipitation is greatest from December through March and reaches a peak in February (3.83 inches). Precipitation is lowest in the month of July (0.04 inches). Annual precipitation averages 22.6 inches. Hydrologically, the subject parcel is located within the Bunker Hill Hydrologic Sub-Area (HSA 801.52) which comprises a 124,791 -acre drainage area within the larger Santa Ana Watershed (HUC 18070203).

Hydrologically, the project site is located within the Bunker Hill Sub-Area (HSA 801.52) which is within the larger Upper Santa Anna River Watershed (HUC 180702030508). Soils in this area consist of Soboba stony loamy sand and Tujunga gravelly loamy sand from 0-9 percent slopes.

According to the relevant literature and databases reviewed, approximately 44 sensitive species and 3 sensitive habitats have been documented to occur in the *Devore* and *Cajon* USGS 7.5-minute series quadrangles. Of the approximately 44 sensitive species identified in the *Devore* and *Cajon* quadrangles, 9 (two plant species and seven animal species) are State- and/or federally-listed as threatened or endangered species.

General Habitat and Wildlife

The habitat found within the project area consists of scale broom scrub (*lepidospartum squamatus* shrubland alliance), and ceanothus chaparral (*ceanothus ssp.* shrubland alliance).

Plant species observed at the site during Jericho's study include California sagebrush (*Artemisia californica*), hairy yerba santa (*Eriodictyon trichocalyx*), California buckwheat (*Eriogonum fasciculatum*), chaparral yucca (*Hesperoyucca whipplei*), scale broom (*Lepidospartum squamatum*), Yellow mustard (*hirschfeldia incana*), common fiddleneck (*Amsinckia intermedia*), white stemmed filaree (*Encelia farinose*), giant reed (*arundo donax*) and a mix of native and non-native grasses.

No wildlife was observed at the time of the site visit.

Threatened and Endangered Species

Based on the Project location and the sensitive species known to be in the vicinity, Jericho also conducted protocol surveys in the Spring of 2020 for the following species:

- Southwestern arroyo toad (*Anaxyrus californicus*) [ARTO]
- San Bernardino kangaroo rat (*Dipodomys merriami parvus*) [SBKR],
- coastal California gnatcatcher (*Polioptila californica californica*) [CAGN]
- slender-horned spineflower (*Dodecahema leptoceras*) [spineflower]

Although not a State- or federally-listed as threatened or endangered species, western burrowing owl (*Athene cunicularia hypugaea*) [BUOW]are considered a State and federal Species of Special Concern and are a migratory bird protected by the international treaty under the Migratory Bird Treaty Act of 1918 and by State law under the California Fish and Game Code (CDFG Code #3513 & #3503.5). Burrowing owl have been documented within similar facilities. Therefore, Jericho's general biological surveys also included a habitat assessment for burrowing owl.

<u>Southwestern arroyo toad</u>

The southwestern ARTO is a small, stocky, warty toad that is about 2 to 3 inches (in) (5.1 to 7.6 centimeters (cm)) in length (Stebbins 2003, p. 212). Arroyo toads are breeding habitat specialists and require slow-moving streams that are composed of sandy soils with sandy streamside terraces (Jericho, Appendix C). Reproduction is dependent upon the availability of very shallow, still, or low-flow pools in which breeding, egg-laying, and tadpole development occur. Suitable habitat for the ARTO is created and maintained by periodic flooding and scouring that modify stream channels, redistribute channel sediments, and alter pool location and form.

The results of Jericho's protocol survey were that the Project site does contain habitat that is considered suitable for ARTO, however, no ARTO were found during the focused protocol surveys conducted in 2020. The results concluded that the ARTO is currently absent from the project site and the project.

San Bernardino kangaroo rat

The federally-listed as endangered SBKR is one of three recognized subspecies of Merriam's kangaroo rat (*D. merriami*) in California. The Merriam's kangaroo rat is a small, burrowing rodent species that can be found within inland valleys and deserts of southwest United States of America and northern Mexico.

The SBKR has a restricted southern California distribution, confined to certain inland valley scrub communities and, more particularly, to scrub communities occurring along rivers, streams, and drainages within the San Bernardino, Menifee, and San Jacinto valleys. Most of these drainages have been historically altered due to a variety of reasons including, mining, off-road vehicle use, road and housing development, and flood control efforts. This increased use of river floodplain resources resulted in a reduction in both the amount and quality of habitat available for the SBKR.

The results of Jericho's focused live-trapping surveys that were conducted within the Project area on May 5 through May 9, 2020, were negative for SBKR (Appendix C). Therefore, SBKR are currently absent from the Project area.

Coastal California Gnatcatcher

The coastal CAGN is the northernmost subspecies of California gnatcatcher (Jericho, Appendix C). It is a small, non-migratory songbird (passerine) that occurs along the Pacific coastal regions of southern California and northern Baja California, Mexico, and occur in or near coastal scrub vegetation communities.

The results of Jericho's protocol level CAGN surveys was that no CAGN were detected.

Slender-horned spineflower [spineflower]

The State- and federally-listed as endangered slender-horned spineflower (spineflower) is an annual plant in the *Polygonaceae* (buckwheat family). Plants have a distinctive basal rosette of leaves ranging from 3 to 8 centimeters (1.2 to 3.1 inches) in diameter. The leaves frequently become reddish at maturity. The flower stalks are branched and erect 3 to 10 centimeters (1.2 to 4 inches) tall and the flowers are white to pink in color. This spineflower is found in drought prone habitats where germination is likely related to rainfall. This spineflower is typically found in alluvial fan scrub on benches and terraces away from active channels in areas receiving little surface disturbance from flooding, but subject to sheet or overland flows.

The results of Jericho's focused survey was that per the literature review, the nearest documented spineflower occurrence (2013) is approximately 0.6 mile northwest (upstream) of the Project area, within an upper terrace on the north side of the Cajon Wash. However, no spineflower were observed within the Project area during the focused survey. Therefore, spineflower is considered absent from the Project site.

Western burrowing owl

The BUOW is a ground dwelling owl typically found in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. The BUOW is heavily dependent upon the presence of mammal burrows, with ground squirrel burrows being a common choice, in its habitat to provide shelter from predators, inclement weather and to provide a nesting place (Jericho, Appendix C). They are also known to make use of human-created structures, such as cement culverts and pipes, for burrows. BUOW spend a great deal of time standing on dirt mounds at the entrance

to a burrow or perched on a fence post or other low to the ground perch from which they hunt for prey. They feed primarily on insects such as grasshoppers, June beetles and moths, but will also take small rodents, birds, and reptiles. They are active during the day and night, but are considered a crepuscular owl; generally observed in the early morning hours or at twilight. The breeding season for BUOW is February 1 through August 31.

The results of the habitat assessment for BUOW was that although the project area is mostly comprised of short, sparse vegetation and well-drained, friable soils, no suitably-sized burrows, burrow surrogates, or host burrowers were observed within the project area. Therefore, the project site is not suitable to support BUOW.

Sensitive Habitats

The only sensitive habitat community present within the project vicinity is Riversidean Alluvian Fan Sage Scrub (RAFSS), which is a rare and sensitive plant community that is adapted to the harsh conditions of flooding. It grows on sandy, rocky alluvium deposited by streams that experience infrequent episodes of flooding. Scale broom (*Lepidospartum squamatum*) is the indicator species for this habitat type and is dominant, co-dominant, or conspicuous in the shrub canopy. Because alluvial fan sage scrub is characterized by its diversity, it can also be described as an intermediate between chaparral and sage scrub habitats, in that all three vegetation communities share similar floral components. However, the distinguishing factor is that alluvial fan sage scrub undergoes periodic scouring from frequent flooding events, creating three seral stages: pioneer, intermediate, and mature. The RAFSS habitat found within the Project area is pioneer to intermediate stage.

The results of Jericho's assessment (Appendix C) was that although this habitat is present in the Project vicinity and the state habitat database classifies the project area as RAFSS, this habitat is not present within the immediate Project area. The Project area is dominated by sandy wash with little to no vegetation.

Critical Habitat

The Project area is designated by the US Fish and Wildlife Service as critical habitat for the following listed species:

- San Bernardino Kangaroo Rat
- Arroyo Toad

<u>San Bernardino Kangaroo Rat</u>

The 2002 critical habitat designation for the SBKR encompasses 33,295 acres of land in Riverside and San Bernardino counties, California. The areas designated as critical habitat for SBKR are identified in four separate units. The four units are within the geographical range of the SBKR and support the habitat the species requires for foraging, sheltering, reproduction, rearing of young, dispersal, and genetic exchange. The project site falls within the Lytle Creek and Cajon Creek critical habitat Unit (Unit 2), located in San Bernardino County. Unit 2 encompasses approximately 13,983 ac, and includes the Lytle Creek and Cajon Wash. The site is more specifically within Subunit A of Unit 2, which encompasses 12,289 ac and is comprised of primarily Cajon Wash. This unit contains upland refugia and tributaries that are occupied by the species, active hydrological channels, floodplain terraces, and areas of habitat immediately adjacent to floodplain terraces.

According to Jericho's report in Appendix C, the entire project site is mapped within Unit 2, Subunit A of designated SBKR critical habitat. The project proposes 1.62 acres of temporary impacts and 0.38 acre of permanent impacts. Therefore, the project will likely result in the loss of approximately 0.38 acre of suitable SBKR critical habitat.
The proposed construction would affect approximately 0.38 acre of SBKR critical habitat. As such, the project would affect approximately 0.003 percent of the total 12,289 acres of SBKR critical habitat that comprise Unit 2, Subunit A.

Southwestern arroyo toad

The areas designated as critical habitat for ARTO and are identified in 22 separate units. The 22 units are within the geographical range of the arroyo toad and support the habitat the species requires for foraging, sheltering, reproduction, rearing of young, dispersal, and genetic exchange. The Project site falls within the Upper Santa Ana River Basin/Cajon Wash critical habitat Unit (Unit 20), located in San Bernardino County. Unit 20 encompasses approximately 1,775 ac, and includes the Lytle Creek and Cajon Wash.

Based on the current knowledge of the biology, and ecology of the species, and the habitat requirements for sustaining the essential life-history functions of the species, the ARTO's PCEs include:

- Rivers or streams with hydrologic regimes that supply water to provide space, food, and cover needed to sustain eggs, tadpoles, metamorphosing juveniles, and adult breeding toads;
- Riparian and adjacent upland habitats, particularly low-gradient (typically less than 6 percent) stream segments and alluvial streamside terraces with sandy or fine gravel substrates that support the formation of shallow pools and sparsely vegetated sand and gravel bars for breeding and rearing of tadpoles and juveniles; and adjacent valley bottomlands that include areas of loose soil where toads can burrow underground, to provide foraging and living areas for juvenile and adult arroyo toads;
- A natural flooding regime, or one sufficiently corresponding to natural.
- Stream channels and adjacent upland habitats that allow for movement to breeding pools, foraging areas, overwintering sites, upstream and downstream dispersal, and connectivity to areas that contain suitable habitat.

Jericho's report identified that the entire project site is mapped within Unit 20 of designated ARTO critical habitat. The project proposes 0.38 acre of permanent impacts and 1.62 acres of temporary impacts. Therefore, the project will likely result in the loss of approximately 0.38 acre of suitable ARTO critical habitat. The proposed construction would affect approximately 0.38 acre of ARTO critical habitat. As such, the project would affect approximately 0.02 percent of the total 1,775 acres of ARTO critical habitat that comprise Unit 20.

Impact Analysis

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant With Mitigation Incorporated.

Critical Habitat

The Project is located in critical habitat for the SBKR and ARTO, although those species were not discovered to be present in the Project area during focused surveys. The Project will impact 0.38 acre of critical habitat for both species because the critical habitat for both species overlap the Project area.

Sensitive Species

The following sensitive species are known to be within the Project vicinity, and suitable habitat for these species exist within the Project area. However, none of the species were present during focused surveys (Jericho, Appendix C):

- Southwestern arroyo toad (*Anaxyrus californicus*) [ARTO]
- San Bernardino kangaroo rat (*Dipodomys merriami parvus*) [SBKR],
- coastal California gnatcatcher (*Polioptila californica californica*) [CAGN]
- slender-horned spineflower (*Dodecahema leptoceras*) [spineflower]
- Burrowing Owl [BUOW]

To reduce the potential impacts to these potential species, **Mitigation Measures BIO-1** through **BIO-12** are required. Mitigation measures are located at the end of this section.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant. Jericho evaluation identified that the RAFSS habitat found within the Project area is pioneer to intermediate stage. Although this habitat is present in the Project vicinity and the CNDDB Database classifies the project area as RAFSS, this habitat is not present within the immediate Project area. The Project area is dominated by sandy wash with little to no vegetation. Therefore, the project will not result in impacts to RAFSS habitat.

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

No Impact. There are no wetlands on site. No hydric vegetation, hydric soils, and/or wetland hydrology are present in any portion of the Project work area that qualify as wetlands. Therefore, there is no impact.

Portions of the Project area are within State and federal jurisdiction under the federal Clean Water Act and State Streambed Alteration Notification Program. The Department will be obtaining permits to construct the Project from the applicable agencies.

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?

Less Than Significant With Mitigation Incorporated. Nestable vegetation occurs within and adjacent to the Project alignment. Because construction may occur during the avian nesting season, **Mitigation Measure BIO-13** would reduce the potential impact to nesting birds to less than significant. Mitigation measures are located at the end of this section.

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

No Impact. The Project does not propose to remove trees, therefore, there is no impact.

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?

No Impact. The Project is not within any Habitat Conservation Plan or Natural Community Conservation Plan or other approved local, regional or state plan. Therefore, there is no impact.

Mitigation Measures:

BIO-1 Worker Environmental Awareness Program (WEAP) training shall be developed and provided by a biologist familiar with arroyo toad, SBKR, CAGN, burrowing owl, and their habitats. The WEAP training shall be presented by the biologist to all construction personnel. For the life of the project, each employee (including temporary contractors and subcontractors) will receive WEAP training prior to conducting any work on the site.

BIO-2 All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities shall occur in developed or designated non-sensitive habitat areas. The designated areas will be located to prevent any spill runoff from entering jurisdictional waters.

BIO-3 Prior to clearing or construction Environmentally Sensitive Area (ESA) fencing (i.e. black mesh silt fencing) shall be installed along the project limits to designate ESAs to be preserved and to prevent accidental deposition of fill material in areas where vegetation is adjacent to planned grading activities and prevent accidental encroachment outside the construction limits.

BIO-4 A biological monitor with small mammal handling experience and familiarity with San Bernardino kangaroo rat and southwestern arroyo toad life histories and diagnostic signs shall inspect the proposed ESA fence alignment and mark burrows to be avoided by fence installation activities. A biological monitor will be on site during ESA fence installation.

BIO-5 A biological monitor shall conduct periodic (weekly) checks of the ESA fence during all construction activities throughout the life of the Project. They will notify the construction supervisor of any breaches in the ESA fence. The construction contractor will be responsible for repairing any reaches within 24 of hours of notice by the biological monitor.

BIO-6 No grading or fill activity of any type shall be permitted outside the construction limits within the ESAs. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment should be operated to prevent accidental damage to nearby preserved areas. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within these protected zones. Silt fence barriers will be installed at the ESA boundary.

BIO-7 Due to the nature of soils in the project area, any piles of fill are considered an attractive nuisance to fossorial mammals. Therefore, all soil and fill piles shall be surrounded by silt fence or similar materials to prevent burrowing by small mammal species.

BIO-8 Unfilled holes or trenches shall be inspected for trapped animals each morning. Any wildlife discovered will be removed from the trench or hole by the biological monitor and released outside of the limits of construction. Unburied pipes or conduit laid in trenches overnight will be capped.

BIO-9 No nighttime construction will occur.

BIO-10 All construction-related activities by contractors, subcontractors, or their agents, and equipment (including vegetation removal, grading, equipment laydown and storage, and contractor parking) shall be restricted to the designated limits of construction. All movement of contractors,

subcontractors or their agents, and equipment shall be restricted to the limits of construction and staging areas.

BIO-11 Should any work occur beyond the fenced or otherwise demarcated limits of disturbance, the biological monitor shall request that the construction supervisor halt work until the problem has been remedied.

BIO-12 A weed abatement program shall be developed to minimize the importation of nonnative plant material during and after construction. Eradication strategies would be employed should an invasion occur.

BIO-13 Bird nesting season generally extends from February 1 through September 15 in southern California and specifically, April 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist shall conduct pre-construction Nesting Bird Surveys (NBS) prior to project-related disturbance to nestable vegetation to identify any active nests. If no active nests are found, no further action will be required. If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

Impact Conclusions:

No significant adverse effects are anticipated with the inclusion of the above mitigation measures.

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

SUBSTANTIATION:

Between January and April 2020, at the request of Jericho Systems, Inc., CRM TECH (Appendix D) performed a cultural resources study for the Vincent Well Flood Protection and Stream Stabilization Improvements Project in the Cajon Pass area near the City of San Bernardino, San Bernardino County, California.

The Study area encompassed a total of 12 acres and comprised the Vincent Well facility within the Cajon Wash, a staging area, and a 2,370-linear access road from Cajon Boulevard.

Environmental Setting

Current Setting

The Cajon Pass is located in a narrow canyon between the San Gabriel Mountains to the west and the San Bernardino Mountains to the east. Both of these mountain ranges are part of the Transverse Range that separate the Los Angeles Basin and the San Bernardino Valley on the south from the Mojave Desert on the north. The climate and environment of this region are typical of the southern California desert country, marked by extremes in temperature and aridity. In the Cajon Pass area, summer highs reach well over 100ºF, and winter lows dip below freezing. Average annual precipitation is roughly 16 inches, most of which occurs between November and March.

The access road in the project area is paved with weathered asphalt until it reaches the staging area, after which it is graded but unpaved. Beyond the staging area, the road and the well site are located within the northwest-southeast trending Cajon Creek wash between Cajon Boulevard (formerly U.S. Route 66) to the northeast and the Burlington Northern Santa Fe Railway (formerly the Atchison, Topeka and Santa Fe Railway) to the southwest. The ground surface in the project vicinity has been greatly disturbed by past flooding events and by construction activities associated with the existing well, the access road, and the well house in the project area.

The surface soils are rocky, gravelly, and sandy over a relatively level terrain, with elevations ranging between 2,300 feet and 3,020 feet above mean sea level, declining slightly to the southeast. The vegetation belongs to the coastal sage scrub community, dominated by sage and yerba santa but also including buckwheat, chamise, and other small shrubs and grasses. A group of pine and oak trees are located within the staging area, which was once occupied by a beekeeping colony of considerable size (NETR Online 2010-2016) but currently hosts only a few hive boxes.

Historical Context

In 1772, a small force of Spanish soldiers under the command of Pedro Fages, military *comandante* of Alta California, became the first Europeans to travel through the Cajon Pass area (Beck and Haase 1974:15; Robinson 1989:7). However, the mountain pass' significance as an important passage between the San Bernardino Valley and the Mojave Desert was not recognized immediately. In the decades after Fages' expedition, pioneer Spanish and American explorers such as Francisco Garcés (in 1776) and Jedediah Smith (in 1826 and 1827) crossed the San Bernardino Mountains by way of the Mojave River Valley, following the ancient Mojave Indian Trail (Hoover et al. 1966:317). It was not until the early 1830s, with the establishment of the Old Spanish Trail, a historic pack-train road between Santa Fe and Los Angeles, that Cajon Pass became the preferred route across the mountains (*ibid.*).

Since the 1830s, Cajon Pass has remained one of Southern California's primary gateways to the rest of the country. In the late 1840s and early 1850s, when the famous wagon road known as the Mormon Trail or the Salt Lake Trail was established, it traversed the Cajon Pass area along the same route as the earlier Old Spanish Trail (Ellerbe 1904:130; Hoover et al. 1966:317-319). During the 1860s, it is estimated as many as 2,000 emigrant wagons traveled annually on the Mormon Trail from Salt Lake City to Southern California (Robinson 1958:36).

In the 1910s-1930s, when the National Old Trails Highway was completed as a hard- surface automobile road through the Cajon Pass, a slightly different alignment was selected at a higher elevation from the old toll road, along that of present-day Cajon Boulevard. In the 1926 National Highway System, the National Old Trails Highway was designated a part of U.S. Route 66, while the segment in Cajon Canyon was also co- signed as Routes 91 and 395. Between 1952 and 1959, it was expanded into a divided highway with two traffic lanes in each direction and a wide median between them. What is now Cajon Boulevard corresponded to the southbound lanes of the highway, which appear to have been added at that time. By the 1980s, the status and importance of Route 66 was greatly reduced when the I-15 was completed some 1,500 feet further to the northeast (NETR Online 1966-1980).

The Project area lies within an active wash. And despite its location in this busy transportation corridor, the Project area, evidently remained vacant and undeveloped throughout the historic period. The only man-made feature known to be present within the project boundaries was the forerunner of the access road, which was in existence at least by 1952 and may have been as early as 1938 in a slightly different configuration. The existing well and the well house in the project area evidently dates to sometime between 1980 and 1994, well after the end of the historic period. No other permanent features were found within the project boundaries from the historic maps and aerial photographs. As mentioned above, the staging area has been used for beekeeping in recent years, where more than 100 hive boxes were observed in 2012-2018.

Outside but adjacent to the northern end of the project area, Cajon Boulevard was historically the southbound lanes of U.S. Route 66 (Site 36-002910), as noted above. Today, it remains in use as a two-lane country road with narrow hard shoulders and no curbs, while the northbound lanes of Route 66 and the former median lie abandoned to the northeast side. In comparison to the abandoned lanes further from the project area, the current appearance of Cajon Boulevard reflects the results of upgrading and maintenance in recent decades. As a working component of the modern transportation infrastructure, it, too, demonstrates no distinctively historical characters.

Previous Studies

In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, contacted Native American representatives, pursued historical background research, and carried out an intensive-level field survey of the entire project area.

Within the one-mile scope of the records search at the South Central Coastal Information Center (SCCIC), records show at least 20 additional studies on various tracts of land and linear features. In all, however, only roughly 10%

of the land within the scope of the records search has been surveyed for cultural resources, which resulted in the identification of 10 historical/archaeological sites. All 10 of the sites dated to the historic period, including the Atchison, Topeka and Santa Fe Railway and five minor culverts and a loading dock on the rail line, all recorded to the southwest of the project area. The other three sites were recorded to the northeast of the project area and represented the Devore Garage and two refuse scatters. None of these 10 sites were found in the immediate vicinity of the project area, and thus none of them require further consideration during this study.

In addition to these 10 sites, the segment of Cajon Boulevard adjacent to the project area is known to have been formerly a part of the famed U.S. Route 66, which has been recorded elsewhere in San Bernardino County as Site 36-002910 (CA-SBR-2910H). As one of the first transcontinental automobile highways to be completed in the U.S., an important route for the dust bowl migration in the 1930s, and a celebrated symbol of Americana in mid-20th century pop culture, Site 36-002910 was previously determined to be eligible for listing in the National Register of Historic Places (OHP 2000:140). For the purpose of this study, the segment of Cajon Boulevard adjacent to the project area is considered an extension of the recorded site.

Impact Analysis

a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5?

Less Than Significant. A "historical resource" as defined in 15064.5 applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the lead agency (Title 14 CCR §15064.5(a)(1)-(3)). Regarding the proper criteria for the evaluation of historical significance, CEQA guidelines mandate that "generally a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

(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.
(4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

Based on the literature and site reviews, no potential "historical resources" of either prehistoric or historical origin were identified within the Project area. Field observations confirm that the existing well and the well house, a small concrete block building, are clearly modern in appearance and consistent to a 1980s-1990s origin, as suggested by the historical aerial photographs. The access road consists of an asphalt-paved segment on the northwestern end and a mechanically graded but unpaved segment on the southeastern end. Although known to be more than 50 years of age, it is today a generic, nondescript minor road that demonstrates no particularly historical characters.

Outside but adjacent to the northern end of the project area, Cajon Boulevard was historically the southbound lanes of U.S. Route 66 (Site 36-002910H), as noted above. Today, it remains in use as a two-lane country road with narrow hard shoulders and no curbs, while the northbound lanes of Route 66 and the former median lie abandoned to the northeast side. In comparison to the abandoned lanes further from the project area, the current appearance of Cajon Boulevard reflects the results of upgrading and maintenance in recent decades. As a working component of the modern transportation infrastructure, it, too, demonstrates no distinctively historical characters.

Furthermore, the portion of the project near the extension of Site 36-002910 entails only improvement to the existing access road that intersects a small portion of Cajon Boulevard and has little potential to alter the existing condition, characteristics, or appearance of what remains of Route 66 as a whole. Given the limited scale of the proposed construction activities in relation to Site 36- 002910, this study concludes that the project will not cause a substantial adverse change in the significance of the site, either directly or indirectly.

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

Less Than Significant with Mitigation Incorporated. Because there are no archeological resources in the Project area, there will be no change in an archaeological resource. However, in the event an unanticipated resource is discovered, implementation of **Mitigation Measure CUL-1** through **CUL-3** are incorporated to ensure any potential impact will be less than significant. Mitigation measures are located at the end of this section.

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

Less Than Significant With Mitigation Incorporated. There are no known human remains within the vicinity of the project site, and no conditions exist that suggest human remains are likely to be found on the project site. It is not anticipated that implementation of the project would disturb human remains, including those interred outside of formal cemeteries. However, ground-disturbing activities, such as grading or excavation, have the potential to disturb human remains. If human remains are found, those remains would require proper treatment, in accordance with applicable laws. The Native American Graves Protection and Repatriation Act (NAGPRA) includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on federal and tribal lands, and penalties for noncompliance and illegal trafficking. State of California Public Resources Health and Safety Code Section 7050.5-7055 describes the general provisions regarding human remains, including the requirements if any human remains are accidentally discovered during excavation of a site. As required by state law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the Native American Heritage Commission and consultation with the individual identified by the Native American Heritage Commission to be the "most likely descendant." If human remains are found during excavation, excavation must stop in the vicinity of the find and any area that is reasonably suspected to overlie adjacent remains until the County Coroner has been called out by local law enforcement, and the remains have been investigated and appropriate recommendations have been made for the treatment and disposition of the remains.

Mitigation Measures CUL-3 would ensure the proper management of human remains if encountered on the project site. With the implementation of **Mitigation Measures CUL-1** through **CUL-3,** impacts would be less than significant. Mitigation measures are at the end of this section.

Mitigation Measures:

CUL-1 Worker Environmental Awareness Program (WEAP) training should be developed and implemented by a cultural resource specialist and provided for all construction personnel. For the life of the project, each employee (including temporary contractors and subcontractors) will receive WEAP training prior to conducting any work on the site.

CUL-2 In the event that pre-contact cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period, with the

approval of the qualified archaeologist. Additionally, if the archaeologist makes his/her initial assessment of the nature of the find to be Native American, the archaeologist will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD) so as to provide Tribal input with regards to significance and treatment.

CUL-3 If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and Public Resources Code Section 5097.98, and enforced for the duration of the project. These code provisions require notification of the County Coroner and the Native American Heritage Commission, who in turn must notify those persons believed to be most likely descended (MLD) from the deceased Native American for appropriate disposition of the remains. Excavation or disturbance may continue in other areas of the project site that are not reasonably suspected to overlie adjacent remains or archaeological resources.

Impact Conclusions:

No significant adverse effects are anticipated with the inclusion of the above mitigation measures.

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

California is one of the lowest per capita energy users in the United States, ranked 48th in the nation, due to its energy efficiency programs and mild climate (United States Energy Information Administration [EIA] 2018). California consumed 292,039 gigawatt-hours (GWh) of electricity and 2,110,829 million cubic feet of natural gas in 2017 (California Energy Commission [CEC] 2019; EIA 2018). In addition, Californians consume approximately 18.9 billion gallons of motor vehicle fuels per year (Federal Highway Administration 2019). The single largest end-use sector for energy consumption in California is transportation (39.8 percent), followed by industry (23.7 percent), commercial (18.9 percent), and residential (17.7 percent) (EIA 2018).

Most of California's electricity is generated in-state with approximately 30 percent imported from the Northwest (Alberta, British Columbia, Idaho, Montana, Oregon, South Dakota, Washington, and Wyoming) and Southwest (Arizona, Baja California, Colorado, Mexico, Nevada, New Mexico, Texas, and Utah) in 2017. In addition, approximately 30 percent of California's electricity supply comes from renewable energy sources such as wind, solar photovoltaic, geothermal, and biomass (CEC 2018). Adopted on September 10, 2018, SB 100 accelerates the State's Renewables Portfolio Standards Program by requiring electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

To reduce statewide vehicle emissions, California requires that all motorists use California Reformulated Gasoline, which is sourced almost exclusively from refineries located in California. Gasoline is the most used transportation fuel in California with 15.5 billion gallons sold in 2017 and is used by light-duty cars, pickup trucks, and sport utility vehicles (California Department of Tax and Fee Administration 2018). Diesel is the second most used fuel in California with 4.2 billion gallons sold in 2015 and is used primarily by heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles (CEC 2016). Both gasoline and diesel are primarily petroleum-based, and their consumption releases greenhouse gas (GHG) emissions, including CO_2 and NO_X. The transportation sector is the single largest source of GHG emissions in California, accounting for 41 percent of all inventoried emissions in 2016 (California Air Resources Board [CARB] 2018).

Building Energy Efficiency Standards

The California Energy Conservation and Development Commission (California Energy Commission) adopted Title 24, Part 6, of the California Code of Regulations; energy Conservation Standards for new residential and nonresidential buildings in June 1977 and standards are updated every three years. Title 24 ensures building designs conserve energy by requiring the use of new energy efficiency technologies and methods into new developments. Currently, the California Energy Commission (CEC) Title 24 2016 Building Energy Efficiency Standards are in effect; however, the updated 2019 Building Energy Efficiency Standards will take effect on January 1, 2020. The

2019 Building Energy Efficiency Standards states that nonresidential buildings will use about 30 percent less energy compared to the 2016 standards due mainly to lighting upgrades.

Senate Bill 350

Senate Bill (SB) 350 (de Leon) was signed into law in October 2015 and established new clean energy, clean air, and greenhouse gas reduction goals for 2030. SB 350 establishes periodic increases to the California Renewables Portfolio Standard (RPS) Program with the target to increase the amount of electricity generated per year from eligible renewable energy resources to an amount that equals at least 33% of the total electricity sold annually to retail customers, by December 31, 2020. The SB 350 specifically calls for the quantities of eligible renewable energy resources to be procured for all other compliance periods reflecting reasonable progress in each of the intervening years to ensure that the procurement of electricity products from eligible renewable energy resources achieves 40 percent by December 31, 2024, 45 percent by December 31, 2027, and 50 percent by December 31, 2030.

Senate Bill 100

Senate Bill 100 (SB 100) was signed into law September 2018 and increased the goal of the California RPS Program to achieve at least 50 percent renewable resources by 2026, 60 percent renewable resources by 2030, and 100 percent renewable resources by 2045. SB 100 also includes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Impact Analysis

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

Less Than Significant. Energy use during project construction would be primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery and employee trips. The anticipated energy consumption from construction equipment and vehicles is estimated at a total of 1,167 gallons of gasoline fuel and 13,656 gallons of diesel fuel.

Energy use during construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. In the interest of cost efficiency, construction contractors are not anticipated to utilize fuel in a manner that is wasteful or unnecessary. Therefore, project construction would not result in a potential impact due to wasteful, inefficient, or unnecessary consumption of energy resources, and no construction-related energy impact would occur. As the proposed project is a repair/improvement of an existing well, no operational emissions are anticipated. Therefore, impacts would be less than significant, and no mitigation measures are required.

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

No Impact. SB 100 mandates 100 percent clean electricity for California by 2045. SCE has achieved over 46% Carbon-Free energy sources as of the 2018 Suitability Report. The proposed project is a repair/improvement of an existing well and no operational emissions are anticipated. Therefore, approval of the improvements would not

conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur, and no mitigation measures are required.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GEOLOGY AND SOILS: Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
• 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.			X	
• Strong seismic ground shaking?			X	
• Seismic-related ground failure, including liquefaction?			X	
• Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?		X		
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 on- site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

SUBSTANTIATION:

Genterra Consultants, Inc prepared a Technical Memorandum and Field Observations and Recommendations report, dated June 21, 2018 (Appendix E).

For the Technical Memorandum, the following documents and information were reviewed:

- URS Corporation (2013). *Final Hydraulics Report for Cajon Creek in Devore, CA, I-15/I- 215 Interchange Improvement (Devore) Design-Build Project*;

- Gonzales, Portia (2010). Cajon Creek, Devore Heights, CA: *Hydrology and Hydraulics Study Using Geographical Information System, A Case Study*; and,

- Site photographs and maps

Environmental Setting

The City of San Bernardino lies at the southern base of the San Bernardino Mountains in the upper Santa Ana River Valley and the Santa Ana River Basin. The formations that underlie the lowland areas of the San Bernardino area are primarily sedimentary formations, composed of gravel, sand, sandy silt, clay and conglomerates that date from the younger Holocene to the Mesozoic age.

The Project area is located within Cajon Creek, one of the several perennial streams that emanate from the San Bernardino Mountains.

Soils

Soils in the San Bernardino area formed primarily from alluvial sediments that either eroded from bedrock in the adjacent mountains or were washed by rivers and creeks into the valley region. Soils in the Project area consist of Riverwash-Soboba families association 2 to 15 percent slopes (EsD), and are excessively drained.

For hydraulics and soils information, Genterra Consultants utilized the location of the I-15/I-215 improvement project, described in the 2013 URS Corporation Report, which is approximately two miles downstream of the Vincent Well. The geotechnical and hydraulics information in that report are considered applicable to the Vincent Well site due to the relative proximity and the fact that soil types are similar. Grain size distribution analyses performed on seven near-surface samples at the I-15/I-215 site identified the soils as poorly graded sand (SP) and poorly graded sand with gravel (SP). The site photographs also show cobbles and boulders on the surface. The scour analyses at this site assume that the soil profile consists of predominantly SP soils to the depth of scour potential and also assume that the grain size distribution of the soils is similar to that determined for the near-surface soils.

The Genterra memorandum identified that the contractor should expect very difficult excavation conditions during the construction of the remedial work, primarily encountering sub. Based on our experience, the construction contractor should anticipate cobbles and large boulders within the required excavation for the project as well as during the site preparation.

Expansive soils are considered those that contain a significant amount of clay and are subject to swelling as a response to changes in water content. Soils with a high content of expansive material can form cracks in drier seasons, and impact building loads. In the Project area, expansive soils are not considered a hazard because the soils contain little clay and are primarily derived from the regional granitic bedrock.

Faults

The San Bernardino Mountains are part of the Transverse Ranges of Southern California, a mountain chain formed by tectonic forces between the North American and Pacific Plates along the San Andreas Fault. Within the San Bernardino Mountains area, the San Andreas fault makes a left-step and bends to trend in a more westerly direction.

San Bernardino is located between several active fault zones including: the San Andreas Fault, the San Jacinto Fault, the Glen Helen Fault, and the Loma Linda Fault. Each of these faults is classified as Alquist Priolo Special Study Zones under the Alquist-Priolo Earthquake Fault Zoning Act. The California Department of Conservation has designated certain faults within the planning area as part of the State of California Alquist-Priolo Special Study Zones. These zones extend parallel to and extend from approximately 200 to 500 feet from designated faults.

The Project Area is within seismically active southern California, with several active faults in the vicinity. However, the Project Study Area is not within a known earthquake fault or an Alquist-Priolo Study Zone, nor is it included within the Seismic Hazards Mapping Act. The closest fault to the Project is the San Jacinto fault (San Bernardino section), which parallels the alignment, approximately 900 feet to the west.

Landslides

Seismically induced landslides and rock falls may occur in areas with steep slopes. The County of San Bernardino Geologic Hazard Overlay for San Bernardino does not indicate that there are areas of landslides in the Project area.

Liquefaction and Lateral Spreading

Liquefaction is a term used to describe a condition that occurs when saturated sandy soil loses strength and cohesion due to ground shaking during an earthquake. Groundwater saturation of sediments is required in order for earthquake- induced liquefaction to occur. Groundwater depth shallower than 10 feet to the surface is considered to have the highest liquefaction susceptibility. Groundwater 10 to 30 feet below the surface is considered to have a moderately high to moderate susceptibility. Groundwater 30 to 50 feet deep can create a moderate to low susceptibility to liquefaction.

The County of San Bernardino Geologic Hazard Overlay maps for the City of San Bernardino identify that the Project area has a high potential for susceptibility to liquefaction. The Genterra design technical report also indicated a likelihood for groundwater to impact construction.

Lateral spreading occurs when liquefaction of a subsurface layer causes the mass to flow down the slope, moving blocks of ground at the surface. Areas at risk of lateral spreading are generally considered to be coincident with potential liquefaction areas.

Impact Analysis

a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

- *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.*
- *Strong seismic ground shaking?*
- *Seismic related ground failure, including liquefaction?*
- *Landslides?*

Less Than Significant. The Project occurs within the San Bernardino valley, a seismically active region. However, the Project is not within an Alquist-Priolo Earthquake Fault Zone as the San Jacinto Fault is located nearly 900 feet from the Project. However, the fault zone for the San Jacinto Fault is mapped adjacent to the Project alignment (CGS, July 1, 2019).

The Project is within Cajon Creek and has a high potential for liquefaction, (County of San Bernardino, March 9, 2010). The area is not subject to landslides as the Project area is relatively flat, and there are no hills directly above the Project alignment that could pose a landslide threat.

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

Less Than Significant With Mitigation. Proposed construction activities include the removal of existing soil and vegetation which could expose soils to erosion. To ensure the control of erosion, the Department is required to implement Best Management Practices (BMPs) for both wind and water erosion. For potential wind erosion, during construction, contractors will be required to use water trucks to control dust and stabilize any temporary stockpiles of soil (until removed from the sites). Department contractors will be required to comply with the site's Stormwater Pollution Prevention Plan (SWPPP) BMPs that may include a combination of erosion control blankets, fiber rolls, silt fences, and stabilized construction methods to prevent trackout of soil onto roadways.

For potential wind erosion, contractors must comply with SCAQMD Rule 403 which requires the implementation of best available dust control measures (BACM) during active operations that are capable of generating fugitive dust. These may include but are not limited to applying water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes and using tarps or other suitable enclosures on haul trucks.

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 on- site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant. Soils in the Project consist of Riverwash-Soboba families association 2 to 15 percent slopes (EsD), and are excessively drained. The Genterra report identifies that the grain size distribution analyses performed on seven near-surface samples at the I-15/I-215 site identified the soils as poorly graded sand (SP) and poorly graded sand with gravel (SP). The site photographs also show cobbles and boulders on the surface. The scour analyses at this site assume that the soil profile consists of predominantly of SP soils to the depth of scour potential and also assume that the grain size distribution of the soils is similar to that determined for the near-surface soils.

The Geneterra report (Appendix E) also identified that while no standing water was observed on the ground surface during the time of the engineering site visit on May 23, 2018, the Project site was identified to have high liquefaction susceptibility by the County of San Bernardino.

However, the Project is designed in accordance with engineering standards. The Project is to stabilize a small, uninhabitable building. Therefore, the impacts from liquefaction are anticipated to be less than significant.

There are no topographical reliefs near the Project site where the Project would result in off-site landslide or lateral spreading. The Project site is not in an area that is subject to subsidence. Therefore, there are no impacts to these geologic features.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant. Expansive soils are considered those that contain a significant amount of clay and are subject to swelling as a response to changes in water content. Soils with a high content of expansive material can form cracks in drier seasons, and impact building loads. In the Project area, expansive soils are not considered a

hazard because the soils contain little clay and are primarily derived from the regional granitic bedrock. Therefore, there is a less than significant impact.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. None of the Project activities propose or involve the use of septic tanks or alternative wastewater disposal systems. Therefore, there is no impact.

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

Less Than Significant With Mitigation. There are no unique geological features that have been identified in the Project alignment. Paleontological resources may occur within the soils found within the Project area. Project excavations could be up to 18 feet deep. However, because this has been an active wash, there is little likelihood of unearthing paleontological resources. Therefore, the impacts are anticipated to be less than significant. However, accommodate any unanticipated resources **Mitigation Measure GEO-1** is required:

Mitigation Measures:

Due to the size of the construction area, the contractor is required to prepare a SWPPP which will mitigate for topsoil erosion. However, other mitigation measures are required as follows:

GEO-1 Worker Environmental Awareness Program (WEAP) training should be developed and implemented by a paleontological resource specialist and provided for all construction personnel. For the life of the project, each employee (including temporary contractors and subcontractors) will receive WEAP training prior to conducting any work on the site.

GEO-2 Due to the depth of the excavation, a paleontological resource impact mitigation program should be developed and implemented during the project to prevent impacts on paleontological resources or reduce them to a level less than significant. As the primary component of the mitigation program, all earth-moving operations in the project area that reach beyond a depth of 2 feet below the ground surface should be monitored for potential paleontological resources.

Impact Conclusions:

No significant adverse effects are anticipated with the inclusion of the above mitigation measures.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Climate change is the observed increase in the average temperature of the earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-twentieth century (IPCC 2007).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), fluorinated gases such as hydrofluorocarbons (HFC) and perfluorocarbons (PFC), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs as it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6 (United States Environmental Protection Agency 2018). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). As GHGs absorb different amounts of heat, a common reference gas, CO_2 is used to relate the amount of heat absorbed to the amount of gas emitted, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted during a 100-year period multiplied by its GWP. CO_2 has a 100-year GWP of 1 (one). By contrast, CH_4 has a GWP of 25, meaning its global warming effect is 25 times greater than CO_2 on a molecule per molecule basis (IPCC 2007).

Project implementation would generate GHG emissions through the burning of fossil fuels and other construction-related emission sources, thus potentially contributing to cumulative impacts related to climate change. In response to an increase in man-made GHG concentrations over the past 150 years, California implemented Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006." AB 32 codified the statewide goal of reducing emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels) and adopted regulations to require reporting and verification of statewide GHG emissions.

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, which requires the State to further reduce GHGs to 40 percent below 1990 levels by 2030. SB 32 extends AB 32, directing CARB to reduce GHGs to 40 percent below 1990 levels by 2030. In response, on December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) CO_2e by 2030 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects as they include all emissions sectors in the state.

The vast majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines Section 15064[h][1]).

Significance Thresholds

According to CEQA Guidelines section 15064.4, when making a determination of the significance of greenhouse gas emissions, the "lead agency shall have discretion to determine, in the context of a particular project, whether to (1) quantity greenhouse gas emissions resulting from a project and/or (2) rely on a qualitative analysis or performance based standards. Moreover, CEQA Guidelines section 15064.7(c) provides that "a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts" on the condition that "the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

San Bernardino County GHG Reduction Plan

In September 2011, the County adopted a Greenhouse Gas Emissions (GHG) Reduction Plan (September 2011) (GHG Plan). The GHG Plan presents a comprehensive set of actions to reduce the County's internal and external GHG emissions to 15% below current levels (2007 levels) by 2020, consistent with the AB 32 Scoping Plan. GHG emissions impacts are assessed through the GHG Development Review Process (DRP) by applying appropriate reduction requirements as part of the discretionary approval of new development projects. Through its development review process, the County will implement CEQA requiring new development projects to quantify project GHG emissions and adopt feasible mitigation to reduce project emissions below a level of significance. A review standard of 3,000 metric tons of CO2 equivalent (MTCO2e) per year is used to identify projects that require the use of Screening Tables or a project-specific technical analysis to quantify and mitigate project emissions.

Impact Analysis

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?

Less Than Significant. Project emissions were estimated using SCAQMD "Air Quality Handbook", On-Road Heavy-Heavy Duty Diesel Trucks (2020) and SCAQMD Off-Road Mobile Source Emissions Factors (2021). Emission estimates are based on the assumptions outlined in the Air Quality Section. Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, CH_4, and N_2O as these make up 98.9 percent of all GHG emissions by volume and are the GHG emissions that the project would emit in the largest quantities (IPCC 2007). Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (2008) CEQA and Climate Change white paper and included the use of the California Climate Action Registry (2009) General Reporting Protocol. CO_2, CH_4, and N_2O emissions were quantified using the Emissions Factors (see Appendix A for calculations).

Project construction would generate GHG emissions from the operation of heavy equipment. As the proposed project is a repair/improvement of an existing well, no operational emissions are anticipated. As shown in Table 4, emissions from project construction would be approximately 579.2 MT of CO2e total over the entire construction period, or approximately 19.3 MT of CO2e per year when amortized over a 30-year period in accordance with SCAQMD recommendations (SCAQMD 2008b).

Table 4
Greenhouse Gas Construction Emissions
(MT Per Year)

Source/Phase	CO_2	CH_4	N_20
Excavator	960	0.0	0.0
Dozer	1,912	0.2	0.3
Scraper	4,192	1.2	1.0
Loader	1,744	0.1	0.4
Other Construction Equip.	4,880	0.2	4.9
Other Material Handling Equip.	1,128	0.1	1.0
Material Export/Import	3,034	0.0	0.0
Total (CO2e)	**579.2**		
Amortized over 30 years	**19.3**		
San Bernardino County GHG Threshold	3,000		
Significant	**No**		

Source: SCAQMD: Emission Factors for On-Road Heavy Duty Diesel Trucks 2021;
N_2O: California Climate Action Registry General Reporting Protocol, 2009I;
Table A9-8-C SCAQMD Handbook; Climate Leaders EPA, Section 3, Table 2
Duration: 3 Month (70 days) Construction Period

As discussed, the proposed project would have a significant impact related to GHG emissions if project-related emissions would exceed 3,000 MT of CO2e per year. The project's GHG emissions would be approximately 19.3 MT of CO2e per year; therefore, the proposed project would not exceed the threshold. Impacts would be less than significant, and no mitigation measures are required.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
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?				X
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 for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?			X	

Environmental Setting

The section was developed by reviewing general and comprehensive plans, county and city websites, querying Federal and State databases, and evaluating aerial imagery.

The City of San Bernardino defines hazardous materials as any materials that, because of their quantity, concentration, physical or chemical characteristics, pose a significant present or potential hazard to human health and safety or to the environment if released into the environment (General Plan, City of San Bernardino, November 1, 2005).

Regulatory Setting

Hazardous materials and hazardous wastes are heavily regulated by a range of federal, State and local agencies. One of the primary hazardous materials regulatory agencies is the California Environmental Protection Agency

(EPA) Department of Toxic Substances Control (DTSC). DTSC is authorized by the U.S. EPA to enforce and implement federal hazardous materials laws and regulations.

Federal and State hazardous materials regulations require all businesses that handle more than a specified amount of hazardous materials or extremely hazardous materials to obtain a hazardous materials permit and submit a business plan to its local Certified Unified Program Agency (CUPA). The CUPA also ensures local compliance with all applicable hazardous materials regulations. For the City of San Bernardino, the CUPA is the San Bernardino County Fire Department, Hazardous Materials Division which also manages the following hazardous waste programs:

- Hazardous Materials Release Response Plans and Inventory
- California Accidental Release Program
- Underground Storage Tanks
- Aboveground Petroleum Storage Act/Spill Prevention, Control, and Countermeasure Plan
- Hazardous Waste Generation and Onsite Treatment
- Hazardous Materials Management Plans and Inventory

Hazardous Waste Sites Near the Project Area

State and Federal databases were reviewed to identify hazardous waste facilities including Federal Superfund sites, State Response sites, Voluntary Cleanup sites, School Cleanup sites, Permitted Operating sites, Corrective Action sites, and Tiered Permit sites within or adjacent to the Project. The database search revealed that there were no sites of concern within the Project area.

Impact Analysis

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

Less Than Significant. Project construction would involve the use of heavy equipment, which would contain fuels, oils, lubricants, solvents, and various other possible contaminants. Temporary storage tanks necessary to store fuel and/or other flammable or combustible liquids that may be required for the Project during construction would be regulated through the applicable federal, State, and local regulations as overseen by agencies such as the State Department of Health Services and San Bernardino County.

Therefore, impacts related to construction hazards are considered less than significant with mitigation incorporated.

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?

Less Than Significant With Mitigation Incorporated. The potential exists for localized spills of petroleum-based products or other chemicals during construction. These spills could expose construction workers and the public to hazardous materials either directly, at the site of the spill, or indirectly, by introducing these substances into stormwater runoff.

Because construction will occur within the Cajon Wash, **Mitigation Measure HAZ-1** and **HAZ-2** are required to reduce impacts to less than significant. This measure, located at the end of this section, requires the preparation of

a Hazardous Materials Management and Spill Prevention Plan to address prevention such as requiring equipment working in the wash to have underlayment to catch spills, and developing spill containment around the work site.

Because the Project area is greater than 1 acre, the Project is required to prepare an SWPPP under the NPDES General Permit for Storm Water Discharges Associated with Construction Activity (Construction General Permit) (Order No. 2009-0009-DWQ, NPDES No. CAR000002). Compliance with SWRCB's General Construction Activity Stormwater Permit regulations requiring a SWPPP would also ensure hazardous materials generated during construction would not create a significant impact.

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

No Impact. The Project is located in the Cajon Wash. There are no schools located 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?

No Impact. The proposed Project is not located on a site which is included on a list of hazardous materials sites. Therefore, there is no impact.

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 for people residing or working in the project area?

No Impact. There are several airports in the vicinity, but none are located within 2 miles of the Project site. These airports include: the San Bernardino International Airport, located approximately 14 miles southeast of the Project Site, and the Ontario International Airport, located approximately 15 miles southwest of the Project alignment.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant. The Project site is located within the Cajon Wash. Equipment traveling to the site will utilize main roadways such as Cajon Boulevard, and non-public roads to access the site. No part of the Project construction or operations would impede or redirect emergency response within the area.

g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?

Less Than Significant. The Project site is located in an area that consists of vacant land and commercial uses in an urban setting, and not located adjacent to an area susceptible to wildland fires. Therefore, there is a less than significant impact.

Mitigation Measures:

HAZ – 1 A hazardous spill prevention plan shall be prepared by the Department to minimize the likelihood of a spill shall be prepared prior to construction. The plan shall state the actions

that would be required if a spill occurs to prevent contamination of surface waters and provide for cleanup of the spill. The plan shall follow Federal, state, and local safety guidelines and standards to avoid increased exposure to these pollutants.

HAZ – 2 If a contaminated area is encountered during construction, construction shall cease in the vicinity of the contaminated area. The construction contractor shall notify all appropriate authorities, including the EPA and the Department. If necessary, the contaminated site shall be remediated to minimize the potential for exposure of the public and to allow the Project to be safety constructed.

Impact Conclusion:

No significant adverse effects are anticipated with the inclusion of the above mitigation measures.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?		X		
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
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:			X	
• result in substantial erosion or siltation onsite or offsite;			X	
• substantially increase the rate or amount of surface water runoff in a manner which would result in flooding on or offsite;			X	
• create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or				X
• impede or redirect flood flows?				X
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation??				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Genterra Consultants, Inc prepared a Technical Memorandum and Field Observations and Recommendations report, dated June 21, 2018 (Appendix E).

For the Technical Memorandum, the following documents and information were reviewed:

- URS Corporation (2013). *Final Hydraulics Report for Cajon Creek in Devore, CA, I-15/I- 215 Interchange Improvement (Devore) Design-Build Project*;
- Gonzales, Portia (2010). Cajon Creek, Devore Heights, CA: *Hydrology and Hydraulics Study Using Geographical Information System, A Case Study*; and,
- Site photographs and maps

The hydraulics study in the URS Corporation Report identifies the peak flow rates for the 100-year and 100-year bulked flow as 20,500 cubic feet per second (cfs) and 30,750 cfs, respectively. Both flows were used to evaluate scour potential using guidelines in the Federal Highway Administration *Hydraulic Engineering Circular No. 20 (HEC-20), Stream Stability of Highway Structures (April 2012)*.

For highway bridge analyses, scour is the sum of the following three components:

- Long-term aggradation and degradation of the channel bed;
- General scour due to contraction scour and other general scour; and,
- Local scour at the piers (at the Vincent Well in this case) and abutments.

Environmental Setting

Groundwater from the Bunker Hill Basin is the primary source of water supply for the City of San Bernardino, and is supplied by the City of San Bernardino Municipal Water Department. The Department obtains 100 percent of its water from pumping wells located in the Bunker Hill Groundwater Basin, a sub-basin of the San Bernardino Basin Area (SBBA). Management of this groundwater basin is coordinated through the San Bernardino Valley Municipal Water District (SBVMWD). Groundwater recharge occurs by water conducting through the precipitation and by stream flow from rain and snowmelt from the San Bernardino Mountains. The average annual rainfall for the City is 16 inches a year. The Bunker Hill Basin has the capacity to provide 70,000 acre-foot per year of water from groundwater and surface water sources. While groundwater is the principal source of supply in the planning area, other sources of water supply include: the State Water Project (SWP), the Santa Ana River, Mill Creek, and Lytle Creek (City of San Bernardino, November 1, 205).

The Department has drawn 100 percent of its water from wells in the SBBA. Currently, water is derived from 57 groundwater wells located throughout its service area. The wells range from 50 to 1,300 feet deep and have production capacities ranging from 50 to 3,500 gpm (2015 UWMP). Imported water is available to the Department through the State Water Project water purchased from the SBVMWD. The SBMWD has not used State Water Project water for direct potable use in the past five years, and currently uses it for water recharge projects.

The Vincent Well is one of the Department's water production wells that was originally constructed in the Cajon Wash in 1929 by the Muscoy Water Company, acquired by the Department in 1949, and redeveloped in the same location in 1968. The well was originally an 8-foot-wide by 69-foot deep metal caisson that contained weep holes for water collection. The Department redeveloped the well in 1968 by drilling within the existing caisson, an 8-inch diameter, 199-foot-deep production well. The well site contains the well, a small building that houses the well, and an associated electric utility pole that provides electricity. According to the Department records, the existing well building was replaced in 1983 in its current location, but there is no information as to when the building was originally constructed.

The Cajon Wash is an approximately 1,000-foot-wide braided channel that originates out of the San Gabriel mountains to the north and is a tributary to Lytle Creek to the south. Lytle Creek is a tributary to the Santa Ana River. The area of active low flow varies but is approximately 300 feet wide in the vicinity of the well.

The Project area is identified by Federal Emergency Management Agency (FEMA) as Flood Zone X, or "Area of Minimal Flood Hazard" (FEMA, 8/28/2008). However, over the years, the building and well infrastructure have been subject to extreme erosion from flashy storms. In 2017, the well infrastructure was significantly compromised, and the Department obtained emergency permits from various agencies to place rock slope protection around the well site. The Department is now seeking to provide a permanent solution to protect the well.

Construction activities would require the storage and use of hazardous materials and other urban pollutants such as gasoline, diesel fuel, oils, solvents, and trash, which could enter drainages and degrade downstream water quality and/or violate applicable water quality standards or waste discharge requirements.

However, the RWQCB requires that dischargers whose construction projects disturb one (1) or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD). The SWPPP would include BMPs to be implemented during and after project construction to minimize erosion and sedimentation of downstream watercourses.

Project Hydrology

The Genterra memo identified that long-term scour at the I-15/I-215 site was 8.2 feet in 37 years for an average of 0.2 feet per year. This time period ended in 2013. A flash flood occurred in 2017, and scour was as much as 8 feet deep in the vicinity of the Vincent Well. The estimated long-term scour, including the 2017 event, is 16.2 feet in 41 years for an average of 0.4 feet per year. For the Vincent Well, the projected time period for well protection is 50 years. Based on an average of 0.4 feet per year, the estimated long-term scour is 20 feet.

General scour primarily results from increased velocity at the channel cross section due to contraction. At the I-15/I-215 site the contraction was determined to be negligible because it is minimal in comparison to the width of the cross section. Since less contraction would occur at the well than at the bridge, general scour is also considered to be minimal at the well. Any increase in velocity resulting from this contraction, particularly during the 100-year event, would be negligible, according to the Genterra memo.

Local scour is the result of flow around the piers or, in this case, the Vincent Well. At the I-15/I- 215 site, using Equation 7.1 in HEC-18, this was calculated to range between 12 feet and 14.1 feet. A more complex analysis was conducted for one of the bents resulting in an estimated scour depth of as much as 24.4 feet based on the bulked 100-year flow rate. The complex analysis does not appear applicable to the Vincent Well site based on geometry and existing conditions. Therefore, local scour at the well is not expected to exceed 15 feet.

Impact Analysis

a) Violate any water quality standards or waste discharge requirements?

Less Than Significant With Mitigation Incorporated. Genterra noted that site conditions at the time of their site visit included the surface of the Project area covered with alluvial materials consisting of poorly graded sand, poorly graded sand with gravel, poorly graded gravel, well-graded sand, well-graded sand with gravel, poorly graded gravel, well-graded gravel, cobbles, and boulders. Also, very thin layers of silt were observed on the surface of the river channel. A portion of the east side slope of the west channel near the Vincent Well was covered with grouted riprap, but it was partially undermined due to recent flow in the channel.

Groundwater may be present within the limits of excavation or a few feet within the bottom of the proposed excavation, and therefore an appropriate dewatering plan should be prepared, and a dewatering permit obtained from the Santa Ana Regional Water Quality Control Board (SARWQCB). Since the project site is located within a creek, the moisture content of the subsurface materials can vary substantially (very dry to very wet) during the construction period and therefore significant delay should be anticipated in processing the subsurface materials to make it as a suitable fill material.

Because the construction area is greater than 1 acre, an SWPPP will be prepared, and the contractor will obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Therefore, compliance with these permits will ensure compliance with waste discharge requirements. Therefore, there is a less than significant impact. However, to ensure the project complies with the permits, **Mitigation Measure HYD-1**, located at the end of this section is required.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. The Vincent Well is one of the Department's water production wells that was originally constructed in the Cajon Wash in 1929 by the Muscoy Water Company, acquired by the Department in 1949, and redeveloped in the same location in 1968. The well was originally an 8-foot-wide by 69-foot deep metal caisson that contained weep holes for water collection. The Department redeveloped the well in 1968 by drilling within the existing caisson, an 8-inch diameter, 199-foot-deep production well. The well site contains the well, a small building that houses the well, and an associated electric utility pole that provides electricity. According to the Department records, the existing well building was replaced in 1983 in its current location, but there is no information as to when the building was originally constructed.

There Project serves to protect the existing well infrastructure. Therefore, the Project will not cause a substantial decrease in groundwater supplies.

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:

- *result in substantial erosion or siltation onsite or offsite;*
- *substantially increase the rate or amount of surface water runoff in a manner which would result in flooding on or offsite;*
- *create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
- *impede or redirect flood flows?*

Less Than Significant. The well and well house are situated at approximately 2,309 feet msl. The actual elevation of the low flow channel of the wash varies with seasonal storms but is roughly at the same elevation as the well infrastructure. Genterra's technical memo extrapolated hydrological information from nearby projects to determine the potential impacts to surface flows from fortifying the area around the well. The technical memo identified that fortifying the bank around the Vincent Well would cause minimal scour and would not substantially change the drainage patterns at the well site or result in substantial erosion or siltation.

The Project does not add pavement or impervious services that would exceed the capacity of the stormwater system or create surface runoff.

The Department's contractor will need to obtain a dewatering permit from the SARWQCB. Dewatering activities will generally consist of pumping water outside of the excavation area and outletting it downstream within Cajon Creek. This activity will be governed by the conditions of the permit and will be a temporary activity to facilitate construction. Therefore, there will be a less than significant impact.

Therefore, overall, there is a less than significant impact to this criterion.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. The Project area is identified by Federal Emergency Management Agency (FEMA) as Flood Zone X, or "Area of Minimal Flood Hazard" (FEMA FIRM Map 06071C7905H, 8/28/2008). The definition of Flood Zone X is "Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood."

The Project area is not near a lake or the coast, therefore, there is no impact to this criterion.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant. The Department was created in 1905 as a municipal utility of the City of San Bernardino Charter and is governed by a Water Board. The Department obtains 100 percent of its water from pumping wells located in the Bunker Hill Groundwater Basin, a sub-basin of the San Bernardino Basin Area (SBBA). Management of this groundwater basin is coordinated through the San Bernardino Valley Municipal Water District (SBVMWD). The Department's service area has expanded to include portions of the City of San Bernardino and portions of unincorporated areas of the County of San Bernardino and is bounded on the north by the San Bernardino National Forest, on the east by the East Valley Water District and Redlands Municipal Utilities Department, on the south by the cities of Loma Linda and Colton, and on the west by the West Valley Water District, the city of Rialto, and the Muscoy Mutual Water Company.

The Department served a population of approximately 199,657 in 2015, which is expected to increase to approximately 234,800 by the year 2040. Customers are generally made up of single-family residential (51 percent), multifamily residential, commercial/industrial, municipal/ government, and landscape (*2015 San Bernardino Valley Regional Urban Water Management Plan* [UWMP]).

The Department has drawn 100 percent of its water from wells in the SBBA. Currently, water is derived from 57 groundwater wells located throughout its service area. The wells range from 50 to 1,300 feet deep and have production capacities ranging from 50 to 3,500 gpm (2015 UWMP). Imported water is available to Department through the State Water Project water purchased from the SBVMWD. The SBMWD has not used State Water Project water for direct potable use in the past five years, and currently uses it for water recharge projects.

The Department is a key water provider in the San Bernardino area, and follows a water quality control plan and practices sustainable groundwater management. Therefore, there is a less than significant impact.

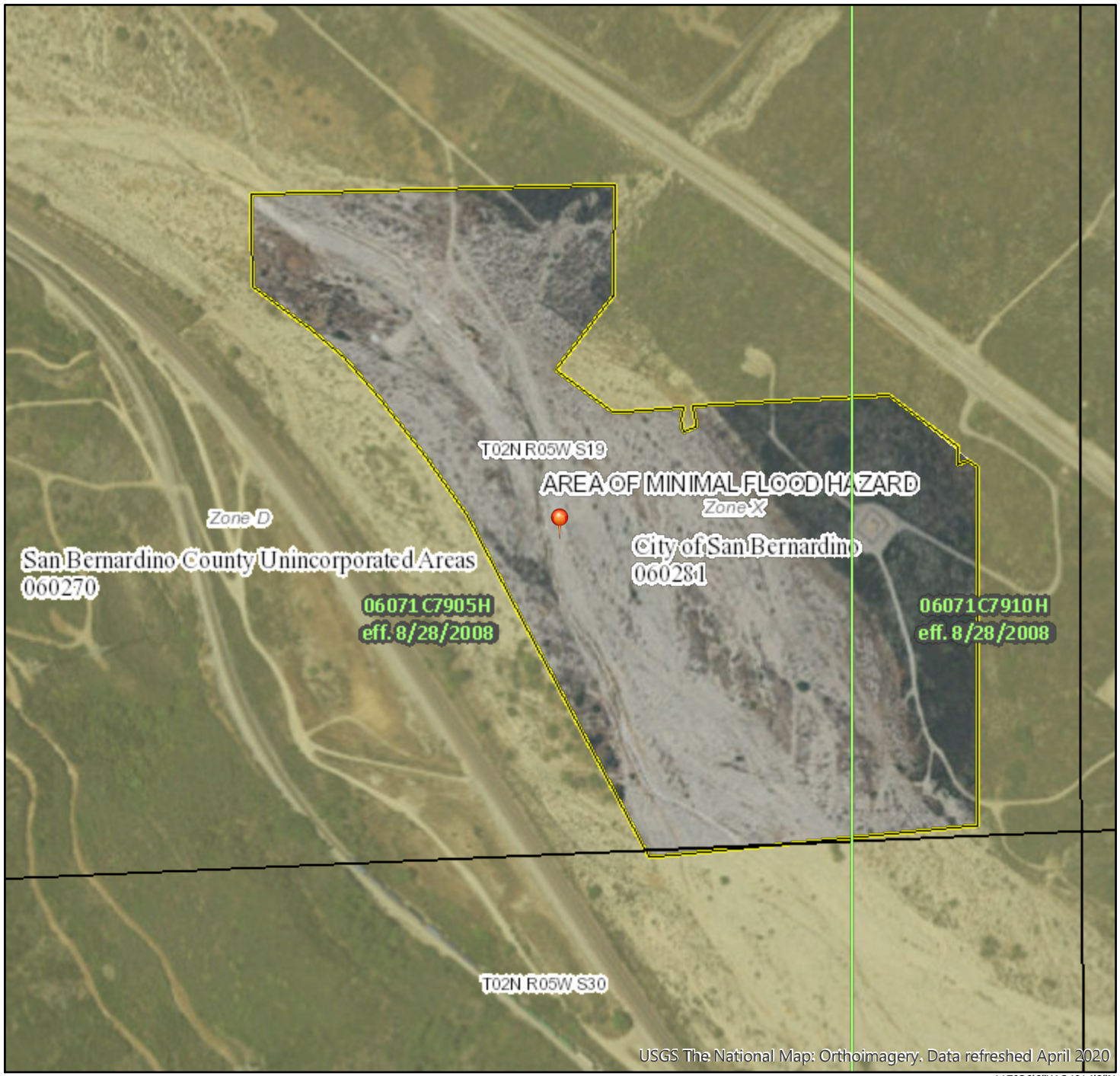
Mitigation Measures:

HYD-1 **Prepare and Implement Storm Water Pollution Prevention Plan (SWPPP)**. Prior to beginning construction, the Department and/or its contractor shall prepare and submit a Notice of Intent to the Santa Ana Regional Water Quality Control Board (RWQCB) providing notification and intent to comply with the State of California General Construction Permit. Also, a SWPPP shall be reviewed and approved by the Department for water quality construction activities on-site. A copy of the SWPPP shall be made available and implemented at the construction site at all times. The SWPPP shall outline the source control and/or treatment control BMPs to avoid or mitigate runoff pollutants at the construction site to the "maximum extent practicable." All recommendations in the Plan shall be implemented during area demolition/preparation, grading, and construction.

The Project shall comply with each of the recommendations detailed in the Plan, and other such measure(s) as the Department deems necessary to mitigate potential storm water runoff impacts.

Impact Conclusions:

No significant adverse effects are anticipated with the inclusion of the above mitigation measure.



0 250 500 1,000 1,500 2,000 Feet

1:6,000

117°26'6"W 34°14'9"N

Figure X-1

FEMA 100-Year Floodplain

FEMA

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/23/2020 at 1:33 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

Environmental Setting

The entire Project area is located in the Cajon Wash portion within the City of San Bernardino.

Impact Analysis

a) Physically divide an established community?

No Impact. The Project occurs within an unoccupied area, and within the active channel of the Cajon Wash. No impacts to this criterion would result from development of the Proposed Project.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The Proposed Project area is zoned for Industrial use and mineral extraction. The facility has been in operation since the 1950s. No impact would result from development of the Proposed Project.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
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?			X	

Environmental Setting

Mineral extraction is an important component of San Bernardino's economy. In the San Bernardino City area, the bulk of the construction aggregate is found in the natural sand and gravel deposits of Cajon Wash, Lytle Creek, Warm Creek, City Creek, and the Santa Ana River (City of San Bernardino, November 1, 2005). The Lytle Creek Wash is located immediately to the west of the Project alignment. Aggregate processing exists within the Lytle Creek Wash north of the 210 Freeway, approximately 1.5 miles north of the Project area, by the Vulcan Materials Company.

Mineral deposits are important to many industries, including construction, transportation, and chemical processing. The value of mineral deposits is enhanced by their close proximity to urban areas. However, these mineral deposits are endangered by the same urbanization that enhances their value (City of San Bernardino, November 1, 2005). The non-renewable characteristic of mineral deposits necessitates careful and efficient development to prevent the unnecessary waste of these deposits due to careless exploitation and uncontrolled urbanization.

The State of California Department of Conservation classifies areas of important minerals:

MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.

MRZ-3: Areas containing mineral deposits, the significance of which cannot be evaluated from available data.

MRZ-4: Areas of no known mineral occurrences where geologic information does not rule out the presence or absence of significant mineral resources.

The Department of Conservation has mapped the areas of the Project as MRZ-2, where significant mineral deposits are present. The MRZ-2 designation in this area primarily follows the Cajon Creek/Lytle Creek wash alignment, and its historic floodplain.

Impact Analysis

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?

Less Than Significant. The Project area is classified as MRZ-2 by the State of California Department of Conservation, as are many areas within the San Bernardino region. Approximately 16,240 cubic yards of soil will be excavated, approximately 15,840 cubic yards of soil will be backfilled, and the balance of approximately 400 cubic yards will be exported. Therefore, because the Project will primarily use the on-site soils and only a small quantity of soil will be exported, there is a less than significant impact to this criterion.

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?

Less Than Significant. The Project area is classified as MRZ-2 by the State of California Department of Conservation and is included in the City's General Plan. Approximately 16,240 cubic yards of soil will be excavated, approximately 15,840 cubic yards of soil will be backfilled, and the balance of approximately 400 cubic yards will be exported to local suppliers for re-use. Therefore, there is a less than significant impact.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project site in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
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?				X

Noise is generally described as unwanted sound. Sound is a physical disturbance in a medium, such as air, that is capable of being detected by the human ear. Sound waves in air are caused by variations in pressure above and below the static value of atmospheric pressure. The unit of sound pressure ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB) on a logarithmic scale. The "pitch" (high or low) of the sound is a description of the frequency, which is measured in Hertz (Hz). Most common environmental sounds are a composite of frequencies. A normal human ear can usually detect sounds within frequencies from 20 to 20,000 Hz. However, humans are most sensitive to frequencies in the range of 500 to 4,000 Hz.

Certain frequencies are given more "weight" during assessment because human hearing is not equally sensitive to all frequencies of sound. The A-weighted decibel (dBA) scale corresponds to the sensitivity range for human hearing. Noise levels capable of being heard by humans are measured in dBA. A noise level change of 3 dBA or less is barely perceptible to average human hearing. However, a 5 dBA change in noise level is clearly noticeable. A 10 dBA change is perceived as a doubling or halving of noise loudness, while a 20 dBA change is considered a "dramatic change" in loudness. The Community Noise Equivalent Level (CNEL) is a weighted average of noise level over time. It is used to compare the noisiness of neighborhoods. A CNEL exceeding 60db is generally considered unacceptable for a residential neighborhood.

Sound from a source spreads out as it travels away from the source, and the sound pressure level diminishes with distance. Individual sound sources are considered "point sources" when the distance from the source is large compared to the size of the source (e.g., construction equipment and turbines). Sound from a point source radiates hemispherically, which yields a 6 dB sound level reduction for each doubling of the distance from the source. If the sound source is long in one dimension, the source is considered a "line source," (i.e., roadways and railroads). Sound from a line source radiates cylindrically, which typically yields a 3 dB sound level reduction for each doubling of the distance from the source.

Regulatory Setting

City of San Bernardino General Plan Noise Element

The City of San Bernardino General Plan Noise Element identifies several policies to minimize the impacts of excessive noise levels throughout the community. The Noise Element provides policy guidance which addresses the generation, mitigation, avoidance, and the control of excessive noise. To protect City of San Bernardino residents from excessive noise levels, the Noise Element contains the following three goals:

14.1 Ensure that residents are protected from excessive noise through careful land planning.
14.2 Encourage the reduction of noise from transportation-related noise sources such as motor vehicles, aircraft operations, and railroad movements.
14.3 Protect residents from the negative effects of "spill over" or nuisance noise.

Land Use Compatibility

The noise criteria identified in the City of San Bernardino Noise Element are guidelines to evaluate the land use compatibility of transportation-related noise. The compatibility criteria, shown on Table 5, provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

The *Land Use Compatibility for Community Noise Exposure* guidelines indicate that residential land uses, such as the existing residential homes in the Project study area, are considered *normally acceptable* with noise levels below 60 dBA Community Noise Equivalent Level (CNEL) and *conditionally acceptable* with noise levels of less than 70 dBA CNEL.

Transportation Noise Standards

To encourage the reduction of noise from transportation-related noise sources such as motor vehicles, aircraft operations and railroad movements (Goal 14.2), Table N-3 of the City of San Bernardino General Plan Noise Element, shown on Table 6 identifies allowable exterior noise level of 65 dBA CNEL and an interior noise level limit of 45 dBA CNEL for new residential developments.

Construction Noise Standards

To analyze noise impacts originating from the construction of the Vincent Well Stabilization Project, noise standards for construction activities are typically found in a jurisdiction's Municipal Code. However, neither the City of San Bernardino General Plan or Development Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or periodic noise increase*.

Vibration Standards

The City of San Bernardino Development Code, Section 19.20.030.28 indicates: *No vibration associated with any use shall be permitted which is discernible beyond the boundary line of the property*; however, no specific vibration standards are identified.

Table 5
Land Use Compatibility for Community Noise Exposure

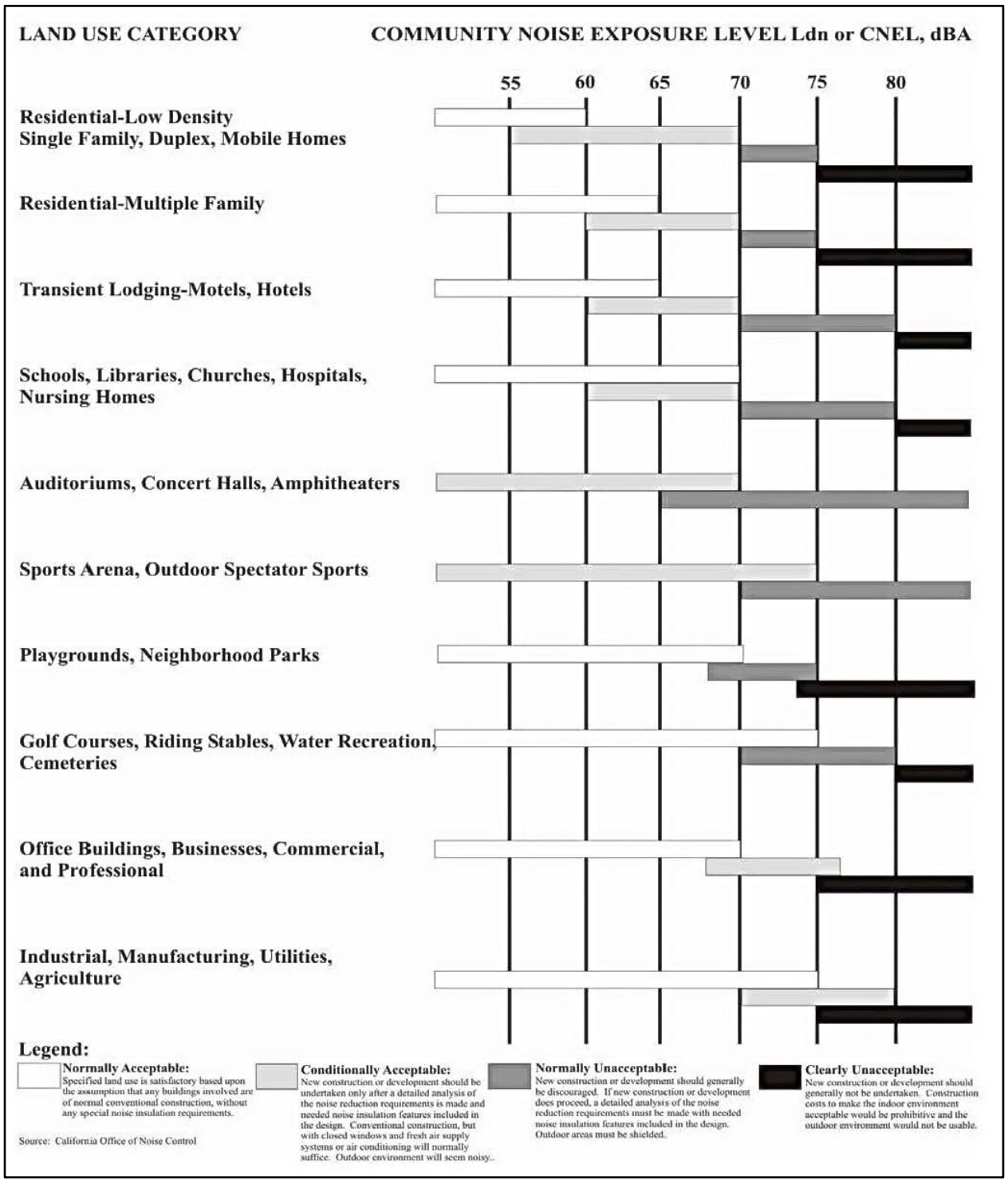


Table 6
Interior and Exterior Noise Standards

Land Use		*CNEL (dBA)*	
Categories	***Uses***	***Interior*** [1]	***Exterior*** [2]
Residential	Single and multi-family, duplex	45[3]	65
	Mobile homes	----	65[4]
Commercial	Hotel, motel, transient housing	45	---
	Commercial retail, bank, restaurant	55	---
	Office building, research and development, professional offices	50	---
	Amphitheater, concert hall, auditorium, movie theater	45	---
	Gymnasium (Multipurpose)	50	---
	Sports Club	55	---
	Manufacturing, warehousing, wholesale, utilities	65	---
	Movie Theaters	45	---
Institutional/ Public	Hospital, school classrooms/playgrounds	45	65
	Church, library	45	---
Open Space	Parks	---	65

[1] Indoor environment excluding: bathrooms, kitchens, toilets, closets, and corridors

[2] Outdoor environment limited to:

- Private yard of single-family dwellings
- Multi-family private patios or balconies accessed from within the dwelling (Balconies 6 feet deep or less are exempt)
- Mobile home parks
- Park picnic areas
- School playgrounds
- Hospital patios

[3] Noise level requirement with closed windows, mechanical ventilation or other means of natural ventilation shall be provided as per Chapter 12, Section 1205 of the Uniform Building Code.

[4] Exterior noise levels should be such that interior noise levels will not exceed 45 dBA CNEL.

Source: City of San Bernardino General Plan Noise Element, Table N-3.

Environmental Setting

The Project proposes to fortify the existing Vincent Well within Cajon Wash by excavating and placing rock immediately around the well and wellhouse. The well is within the Cajon Wash, and the nearest residential and sensitive receptors are located more than 1 mile to the southeast.

Construction Noise Analysis

Since the City of San Bernardino General Plan and Municipal Codes do not identify specific construction noise level thresholds, a threshold is identified based on the National Institute for Occupational Safety and Health (NIOSH) limits for construction noise.

Construction Vibration Analysis

Sources of vibration can include geotechnical drill rigs, excavators, dump trucks, backhoes, and other general construction equipment. According to the Federal Transportation Administration (FTA) guidelines, a vibration level of 65 decibel notation (VdB) is the threshold of perceptibility for humans. The FTA guidelines also state that, for a significant impact to occur, vibration levels must exceed 80 VdB during infrequent events (FTA 2006). Based on the approach set forth in the FTA guidelines, this analysis adopts a threshold of significance of 80 VdB for groundborne vibration impacts. Table 7 identifies typical construction equipment and vibration levels.

Table 7
Vibration Source Levels for Typical Construction Equipment

Equipment	Vibration Level at 25 feet (VdB)
Large bulldozer	87
Caisson drilling	87
Loaded trucks	86
Jackhammer	79
Small bulldozer	58

Source: FTA 2011

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. At distances ranging from 17 to 420 feet from Project construction activity, root-mean-square (RMS) construction vibration levels are expected to approach 0.11 in/sec RMS. This is less than the vibration standard of 0.7 in/sec RMS, identified in Section 15.68.020 of the City of San Bernardino Municipal Code. Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period but will occur only during the times that heavy construction equipment is operating simultaneously adjacent to the Project site perimeter.

Impact Analysis

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project site in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant. The Project vicinity already experience significant ambient noise due to the presence of a major railroad track within 1,000 feet of the Project site. There are no noise receptors in the Project vicinity. Due to the short-term and temporary nature of construction activities, the increase in ambient noise levels is not anticipated to be substantial, and thus impacts are anticipated to be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant. As with item a) above, the Project vicinity already experiences significant vibration due to the presence of a major railroad track within 1,000 feet of the Project site. There are no receptors in the Project vicinity. Due to the short-term and temporary nature of construction activities, the increase in vibration and/or vibration levels is not anticipated to be substantial, and thus impacts are anticipated to be less than significant.

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?

No Impact. There are no airports or private airstrips within 2 miles of the Project alignment. Therefore, there is no impact.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X

Environmental Setting

The Project is within an active wash, and there are no residences or businesses within the vicinity of the Project area.

Impact Analysis

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The Project involves reinforcing an existing public water well used for water supply. The Project would not introduce population growth to the area. No impact is anticipated.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project involves improvements to an existing water well within an active stream channel. The Project would not result in displacement of residential land uses, including homeless camps; therefore, no impact would occur.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusions:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. PUBLIC SERVICES: a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			X	
Police protection?				X
Schools?				X
Recreation/Parks?				X
Other public facilities?				X

Environmental Setting

The City of San Bernardino has a population of approximately 200,000 people within approximately 99.6 square miles, attended to by a variety of public services designed to maintain and improve the public welfare. Table 8 identifies the public services closest to the Project site.

Fire services are provided for the entire City by the San Bernardino Fire District, specifically Division 6. The City of San Bernardino provides police services; the Project area is part of the Western Division of the San Bernardino City Police Department. All police services are dispatched from a central location.

Table 8
Public Services

Public Service Type	Name/Address	Distance from Project Site
Fire Protection	San Bernardino County Fire Station 232, 6065 Palm Ave, San Bernardino	Approx. 1.5 miles southeast
Police Station	710 N. D Street, San Bernardino	Approx. 10 miles south
Schools	Kimbark Elementary School, 18021 Kenwood Avenue San Bernardino	Approx. 2 miles east
Recreation/Parks	Anne Shirrells Park, 1367 N California St, San Bernardino	Approx. 0.5 mile east

Impact Analysis

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire Protection, Police Protection, Schools, Recreation/Parks, or Other Public Facilities.

Less Than Significant. The Proposed project may utilize public services of Fire and Police in the event of an emergency such as a worker injury or theft. However, the needs of the proposed Project can be handled with the existing public services and not result in the need for any of the public service facilities to expand facilities. The proposed Project will not utilize schools or public parks, nor will the proposed Project increase the need for these facilities in a manner that would exceed existing capacity.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
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?				X

Environmental Setting

The City of San Bernardino Parks, Recreation and Community Services Department offers 38 parks, (includes open spaces and ballfields), 31 playground areas and several park locations with walking tracks for recreational activities. The Cajon Wash is not a formal park, however, it is publicly accessible for hiking and equestrian uses.

Impact Analysis

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?

No Impact. The Project is to reinforce the Vincent Well. There are no components of the project that would require the construction or expansion of new parks or recreational facilities, nor would development of the Proposed Project result in residential or commercial land uses generating population growth, facilitating increased use of existing facilities which would cause or accelerate substantial physical deterioration of existing facilities. Therefore, no impact related to recreational facilities would result from development of the Proposed Project.

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?

No Impact. See answer to subsection a), above.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. TRANSPORTATION / TRAFFIC: Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				X
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?			X	

Environmental Setting

The Project is located in the Cajon Wash in the City of San Bernardino, in the County of San Bernardino. As the County's largest city and given its location, San Bernardino's transportation system serves the mobility of over 186,000 residents, according to the City of San Bernardino's General Plan.

The Project construction will require the use of heavy equipment. Given the location of the Project being in the Cajon Wash, Project equipment will access the site via Cajon Boulevard, and into staging yard.

Equipment to be used for the site includes the following:

Equipment Type	Numbers of Equipment
Scrapers (Cat 637K Wheel Tractor-Scraper or similar)	2
Caterpillar 349L Track Excavator	1
Caterpillar 950 Wheel Front-End Loaders	2
Dump Trucks	2
Flatbed Trucks	2
Caterpillar D-8 or D-9 sized bulldozer	2
Water Truck	1
Concrete Trucks (10 yard)	10
Rock Haul Trucks (approx. 1500 cy in 7 yard trucks	220
Dirt Haul Trucks (400 cy in 5 yard trucks)*	45

Impact Analysis

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

No Impact. The Project is located in an area without access to public transit or bicycle/pedestrian facilities. There is no plan to provide public transit infrastructure to the area at this time. No pedestrian or bicycle infrastructure is proposed at the Project site. There is no impact to this criterion.

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

Less Than Significant. Prior to January 2019, traffic impacts were assessed using the LOS methodology. Senate Bill 743 (SB 743, 2013) required that the analysis be examined, and an alternative method adopted. In December 2018, the California Governor's Office of Planning and Research issued revised CEQA Guidelines Section 15064.3(b) which sets forth the criteria for analyzing transportation impacts. Specifically, this section of the Guidelines focuses on assessing land use projects and transportation projects through associated vehicle miles traveled (VMT), and not LOS. Subsection (b)(4) and subsection (c) allows a lead agency to choose the most appropriate method to evaluate VMT, but all agencies must have their methodology adopted by July 1, 2020, in accordance with SB 743.

Subsection (b)(2) states that transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. It further states that to the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

The Project is located in the Cajon Wash, not on a major arterial. Equipment and materials will be brought to the site once and stored throughout the Project duration.

Per the CEQA Guidelines Section 15064.3(b), the Project is neither a land use project nor a transportation project. Therefore, a VMT analysis is not required. Therefore, the Project is consistent with CEQA Guidelines § 15064.3, subdivision (b), and there is a less than significant impact to this criterion.

c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The Project is to rehabilitate a well in the Cajon Wash. There are no road improvements proposed as part of the Project. Therefore, there is no impact.

d) Result in inadequate emergency access?

Less Than Significant. Construction equipment will enter the site and park in a staging area for the duration of the Project construction. Dump trucks…. The equipment and dump trucks will be transported and utilize roadways consistent with all Department of Transportation guidelines, and will not result in inadequate emergency access. Therefore, there will be a less than significant impact.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial 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:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or		X		
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in 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.		X		

Between January and April 2020, at the request of Jericho Systems, Inc., CRM TECH (Appendix D) performed a cultural resources study for the Vincent Well Flood Protection and Stream Stabilization Improvements Project in the Cajon Pass area near the City of San Bernardino, San Bernardino County, California.

The Study area encompassed a total of 12 acres and comprised the Vincent Well facility within the Cajon Wash, a staging area, and a 2,370-linear access road from Cajon Boulevard.

On January 17, 2020, CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for a records search in the commission's Sacred Lands File. Following NAHC's recommendations and previously established consultation protocol, CRM TECH subsequently contacted the Gabrieleño Band of Mission Indians–Kizh Nation in writing on January 27, 2020, for additional information on potential Native American cultural resources in the project vicinity. Correspondence between CRM TECH and the Native American representatives is contained within CRM TECH's report in Appendix D.

Environmental Setting

The San Bernardino area is a part of the homeland of the Serrano people, which is centered in the San Bernardino Mountains. Together with that of the Vanyume people, linguistically a subgroup, the traditional territory of the Serrano also includes part of the San Gabriel Mountains, much of the San Bernardino Valley, and the Mojave River valley in the southern portion of the Mojave Desert, reaching as far east as the Cady, Bullion, Sheep Hole, and Coxcomb Mountains. The name "Serrano" was derived from a Spanish term meaning "mountaineer" or "highlander." The basic written sources on Serrano culture are Kroeber (1925), Strong (1929), and Bean and Smith (1978). The following ethnographic discussion of the Serrano people is based mainly on these sources.

Prior to European contact, the Serrano were primarily hunter-gatherers and occasionally fishers, and settled mostly on elevated terraces, hills, and finger ridges near where flowing water emerged from the mountains. They were loosely organized into exogamous clans, which were led by hereditary heads, and the clans in turn were affiliated with one of two exogamous moieties. The clans were patrilineal, but their exact structure, function, and number are unknown, except that the clans were the largest autonomous political and landholding units. There was no pan-tribal political union among the clans, but they shared and cultivated strong trade, ceremonial, and marital connections that sometimes also extended to other surrounding nations, such as the Kitanemuk, the Tataviam, and the Cahuilla.

Although contact with Europeans may have occurred as early as 1771 or 1772, Spanish influence on Serrano lifeways was negligible until the 1810s, when a mission *asistencia* was established on the southern edge of Serrano territory. Between then and the end of the mission era in 1834, most of the Serrano in the western portion of their traditional territory were removed to the nearby missions. In the eastern portion, a series of punitive expeditions in 1866-1870 resulted in the death or displacement of almost all remaining Serrano population in the San Bernardino Mountains. Today, most Serrano descendants are affiliated with the San Manuel Band of Mission Indians, the Morongo Band of Mission Indians, or the Serrano Nation of Indians.

Cultural Resources Study

In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, contacted Native American representatives, pursued historical background research, and carried out an intensive-level field survey of the entire project area. In a letter dated January 24, 2020, the Native American Heritage Commission (NAHC) reported that the record search result for the project was positive for potential tribal cultural resources and recommended contacting the Gabrieleno Band of Mission Indians—Kizh Nation for further information. On February 11, 2020, Brandy Salas of the Gabrieleno Band of Mission Indians - Kizh Nation responded to CRM Tech that the tribe would be interested in consulting on the Project.

In compliance with AB 52 regarding consultation with Native American Tribes, the City of San Bernardino sent letters to potentially affected tribes describing the proposed Project and its location and requested a response regarding the potential for impacts to Tribal Cultural Resources to occur. The Gabrieleno Band of Mission Indians-Kitzh Nation (tribe) responded that the Project area has a potential for high cultural sensitivity and requested that mitigation measures be added to reduce potential impacts to undetermined Native American resources.

Impact Analysis

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k),

Less Than Significant Impact With Mitigation Incorporated. There are no resources that have been identified as eligible for listing to the California Register of Historic Places within or near the Project site. However, based on AB 52 tribal consultation, Gabrieleno Band of Mission Indians-Kitzh Nation requested mitigation measures to be included in the project. **Mitigation Measure TCR-1** and **TCR-2** are included to reduce potential impacts to potential Native American resources.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in 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.

Less Than Significant Impact With Mitigation Incorporated. CRM Tech's communication with the Gabrieleno Band of Mission Indians-Kitzh Nation identified that there is a high potential to unearth sensitive resources due to subsurface excavation. There are no resources supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. However, based on AB 52 tribal consultation, the Gabrieleno Band of Mission Indians-Kitzh Nation requested mitigation measures to be included in the project. **Mitigation Measure TCR-1** and **TCR-2** are included to reduce potential impacts to potential Native American resources.

Mitigation Measures:

TCR-1 **Retain a Native American Monitor/Consultant:** Prior to the commencement of any ground disturbing activity at the project site, the project applicant shall retain a Native American Monitor approved by the Gabrieleno Band of Mission Indians-Kizh Nation – the tribe that consulted on this project pursuant to Assembly Bill A52 - SB18 (the "Tribe" or the "Consulting Tribe"). A copy of the executed contract shall be submitted to the Lead Agency prior to the issuance of any permit necessary to commence a ground- disturbing activity. The Tribal monitor will only be present on-site during the construction phases that involve ground-disturbing activities. Ground disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when all ground-disturbing activities on the Project Site are completed, or when the Tribal Representatives and Tribal Monitor have indicated that all upcoming ground-disturbing activities at the Project Site have little to no potential for impacting Tribal Cultural Resources. Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 50 feet) until the find can be assessed. All Tribal Cultural Resources unearthed by project activities shall be evaluated by the Tribal monitor approved by the Consulting Tribe and a qualified archaeologist if one is present. If the resources are Native American in origin, the Consulting Tribe will retain it/them in the form and/or manner the Tribe deems appropriate, for educational, cultural and/or historic purposes. If human remains and/or grave goods are discovered or recognized at the Project Site, all ground disturbance shall immediately cease, and the county coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Work may continue in other parts of the Project site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

TCR-2 **Unanticipated Discovery of Human Remains and Associated Funerary Objects:** Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to

the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC and PRC 5097.98 shall be followed.

Upon discovery of human remains, the tribal and/or archaeological monitor/consultant/consultant will immediately divert work at minimum of 100 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).

The Department shall work closely with the MLD to accommodate their treatment procedures.

Impact Conclusions:

No significant adverse effects are anticipated with the inclusion of the above mitigation measures.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIX. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?				X
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
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?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X

Environmental Setting

The City of San Bernardino Municipal Water Department owns and operates water and wastewater systems that service the City of San Bernardino. The City of San Bernardino Public Works Department maintains the City's network of storm drains. Solid waste collection within much of the City and a portion of the unincorporated planning area is provided by the Solid Waste Services and Refuse and Recycling Division of the City of San Bernardino Department of Public Services.

Southern California Edison (SCE) provides electrical utility service, and the Southern California Gas Company (SCG) provides natural gas.

The County of San Bernardino Solid Waste Management Division (SWMD) is responsible for the operation and management of the solid waste disposal system which consists of six regional landfills, eight transfer stations and five community collection centers throughout the County. The closest landfills to the Project site include the Mid-Valley Landfill in Fontana and the San Timoteo Landfill in Redlands.

Impact Analysis

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

No Impact. The Project will reinforce an existing well in an existing active wash. No component of the Project will expand water, wastewater treatment, drainage or other utilities during construction or operations.

Several of SCE's subtransmission and distribution line facilities are located near the Project site, and the site is served by SCE electricity. The Project will not increase the need for additional electricity.

Water will be used for construction, primarily for dust control, and the City has ample rights and supplies to service the Project needs. The Project's wastewater need is only anticipated during construction in the form of "porta-potties" for construction workers. This use will not result in the need for expanded water or wastewater systems.

Therefore, the overall impact to this criterion is no impact.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less Than Significant. The Project will only require water during construction for dust control. The City has sufficient rights to serve the Project construction. Therefore, the impact is less than significant.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less Than Significant. The Project will not require the use of wastewater treatment services beyond providing wastewater for construction workers during construction. Therefore, the impact is less than significant.

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?

Less Than Significant. Construction activities may generate small quantities of solid waste, inert materials, and green waste. All waste would be properly disposed of in accordance with all local statutes and regulations. Therefore, the impact is less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. The small quantities of solid waste generated by the Project during construction activities would be handled in accordance with all applicable Federal, State, and local statutes and regulations. No impacts would occur under this criterion.

Mitigation Measures:

No mitigation measures are required.

Impact Conclusion:

No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?		X		
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?			X	
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?			X	

Environmental Setting

The fire hazard of an area is typically based on the density and type of vegetation, topography, weather, dwelling unit density, and whether or not there are local mitigation measures in place that help reduce the zone's fire rating such as an extensive network of fire hydrants, fire-rated construction, or fuel modification zones (The Planning Center, July 25, 2005).

According to the City's Municipal Code Chapter 19.15, the City identifies three foothill fire zones with different degrees of hazard based on slope, type of fuel present and natural barriers:

- Fire Zone A - Extreme Hazard that includes areas with slopes of 30 percent or greater
- Fire Zone B - High Hazard that includes area with slopes between 15 and 30 percent
- Fire Zone C - Moderate Hazard that includes slopes between 0 and 15 percent,
- Fire Zone C, Abutting Wildlands - includes those lots on the perimeter of a tract that are adjacent to wildlands.

The City of San Bernardino fire zones are located primarily along the foothills of the San Bernardino Mountains, north of Interstate 210, due to the steep terrain, highly flammable chaparral vegetation, and high winds that correspond with seasonal dry periods.

The Project area is not located in any of the fire foothill zones, nor is designated as a fire zone by the City. The closest fire zone is the I-15/SR-138 area, located approximately 2.5 miles northeast of the Project site. This area is designated as an Extreme Fire Hazard Area according to the City's General Plan.

The City's Municipal Code also defines "wildlands" as "*Any area of land that is essentially unimproved, in a natural state of hydrology, vegetation and animal life, and not under cultivation*." The Cajon Wash area could meet the

City's definitions of "wildlands," however, the well is located in the low flow channel of the wash, in an area that has sparse vegetation.

Impact Analysis

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant. The City of San Bernardino has an Emergency Operations Plan (EOP) that addresses the City's planned response to large-scale emergencies resulting from natural disasters, technological incidences, and national security emergencies. The EOP describes the overall responsibilities of the federal, State, county, and City of Chino for protecting life and property and ensuring the overall well-being of the population. At the local level the San Bernardino Fire Department is responsible for implementation of the EOP.

The construction and operation of the proposed Project would not place any permanent or temporary physical barriers on any existing public streets, or on the new roadway. Therefore, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plans. There is a Less Than Significant Impact to this criterion.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?

Less Than Significant With Mitigation Incorporated. The Project area is not identified as being within a high fire area as designated by the City of San Bernardino. The City of San Bernardino's municipal code identifies "wildlands" as those areas where there is low-lying vegetation near homes. The Project area is located in an area of coastal sage scrub and ruderal vegetation contained within the wash bed, and homes are more than a mile away. Therefore, the Project area does not meet the City's definition of "wildlands." The Project area is not near homes, which is required by the City's Municipal Code definition of "wildlands." The active channel of the Cajon Wash contains network of bladed roads that can act as a fire break in the event of a fire. And though there is a low risk of a fire, sparks from equipment during construction may ignite vegetation in the area of construction during extremely high winds. Therefore, **Mitigation Measure FIRE-1** is incorporated to ensure the potential risk is less than significant. The mitigation measure is located at the end of this section.

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?

Less Than Significant. The Project area is located within the active channel of the Cajon Wash. The active channel of the Cajon Wash contains network of bladed roads can act as a fire break in the event of a fire, and there is an established access road directly to the well site. Department operations personnel routinely travel to the Project site for well maintenance. The purpose of the Project is to fortify the existing pad of the existing well infrastructure, building, and utility pole. There is no installation or maintenance of the area surrounding the well that would exacerbate a fire risk or result in temporary ongoing impacts to the environment. Therefore, there is a less than significant impact to fire risk.

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?

Less Than Significant. The Project area is not within an area that is subject to downstream flooding or landslides and is not located along the foothills where post-fire instability or drainage changes could impact the Project. Stormwater runoff will be addressed by the Project's SWPPP. The Project location, design, and compliance with the Best Management Practices outlined in in the SWPPP ensures that drainage issues are adequately addressed on site and the potential for flooding would be less than significant.

Mitigation Measures:

FIRE-1 During construction, all staging areas, welding areas, or areas slated for construction using spark-producing equipment will be cleared of dried vegetation or other material that could ignite. Spark arresting equipment shall be in good working order. The Department and/or its contractor shall require all vehicles and crews working at the project site to have access to functional fire extinguishers at all times. In addition, construction crews are required to have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. The contractor also shall provide a safety plan for the implementation of additional protocols when the National Weather Service issues a Red Flag Warning. Such protocols should address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements.

Impact Conclusion:

No significant adverse effects are anticipated with the inclusion of the above mitigation measure.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XXI. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
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)?		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

SUBSTANTIATION:

a) *Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

Less Than Significant With Mitigation Incorporated. Based on the native habitat components and known occurrence and persistence of sensitive species within or adjacent to the Project area, this project could result in impacts to these resources. However, mitigation measures **BIO-1** through **BIO-6** are included in this document to address the potential impacts and reduce them to a less than significant impact level. With implementation of these measures, no significant adverse impacts to biological resources will result from project implementation.

Similarly, no cultural resources with significant values were found in the project footprint. However, a potential exists to accidentally expose subsurface cultural resources during construction. Contingency mitigation measures are included in this document to address this potential impact and reduce it to a less than significant impact level. With implementation **Mitigation Measures CUL-2** and **CUL-3** of the cultural resources mitigation measures, and **Mitigation Measure GEO-1 and GEO-2** (paleontological impacts), no significant adverse impacts to cultural resources or paleontological impacts will result from project implementation.

Additionally, while no tribal resources were specifically identified, the result of tribal consultation indicated a potential to impact tribal resources during subsurface excavation. **Mitigation Measures TCR-1** and **TCR-2** are included to reduce potential impacts to tribal cultural resources.

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)?

Less Than Significant With Mitigation Incorporated. There are no projects that have been identified to occur within Vincent Well area during the time of the proposed construction. Potential project-level impacts have been identified in the categories of biological resources, cultural resources, geology and soils, hazards and hazardous materials, and hydrology and water quality, and wildfire. The evaluation contained in this document determined that potential impacts to the environment can be reduced to a less than significant level with implementation of the identified mitigation measures. Based on data provided in this document, including the type of project proposed and its location, it is concluded that implementation of the proposed project will not result in impacts that are either individually or cumulatively considerable or significant when viewed in relation to past, present or probable future projects.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant With Mitigation Incorporated. The proposed project will not result in any identifiable substantial adverse effects on humans either directly or indirectly. The goal of the proposed Project is to stabilize a City Department water well production site. The issues for which mitigation has been provided to control potential harm to humans are geology and soils, hazards and hazardous materials, and hydrology and water quality, and wildfire. With implementation of the required mitigation no substantial adverse effect to humans will result from carrying out the proposed Project.

CONCLUSION

Therefore, based on the findings in this Initial Study, the City of San Bernardino Municipal Water Department (Department), acting as the CEQA lead agency for this proposed project, will process a Mitigated Negative Declaration (MND) as the appropriate CEQA environmental determination for the proposed project. The Department will issue a Notice of Intent to Adopt a Mitigated Negative Declaration and circulate the MND package for review for the required 30-day period. Following receipt of comments, the Department will compile responses to any comments and prepare a final MND package for consideration by Department. Based on the final MND package, the Department will consider whether implementation of the proposed project as defined in this document can proceed as determined by the Department at the completion of the review process.

If you or your agency comments on this proposed MND, you or your agency will be provided responses to comments and notified of the date of the District's final review and decision. A decision by the Department to approve the MND would be based on all of the information available in the whole of the record before the Department at the conclusion of the CEQA environmental review process for this proposed project. Completion of the CEQA review process would allow implementation of the proposed project in accordance with any approved mitigation measures and conditions of approval for the project.

5 SUMMARY OF MITIGATION MEASURES

The following mitigation measures were identified to reduce impacts to less than significant:

BIOLOGY

BIO-1 Worker Environmental Awareness Program (WEAP) training shall be developed and provided by a biologist familiar with arroyo toad, SBKR, CAGN, burrowing owl, and their habitats. The WEAP training shall be presented by the biologist to all construction personnel. For the life of the project, each employee (including temporary contractors and subcontractors) will receive WEAP training prior to conducting any work on the site.

BIO-2 All equipment maintenance, staging, and dispensing of fuel, oil, or any other such activities shall occur in developed or designated non-sensitive habitat areas. The designated areas shall be located to prevent any spill runoff from entering jurisdictional waters.

BIO-3 Prior to clearing or construction Environmentally Sensitive Area (ESA) fencing (i.e. black mesh silt fencing) shall be installed along the project limits to designate ESAs to be preserved and to prevent accidental deposition of fill material in areas where vegetation is adjacent to planned grading activities and prevent accidental encroachment outside the construction limits.

BIO-4 A biological monitor with small mammal handling experience and familiarity with San Bernardino kangaroo rat and southwestern arroyo toad life histories and diagnostic signs shall inspect the proposed ESA fence alignment and mark burrows to be avoided by fence installation activities. A biological monitor will be on site during ESA fence installation.

BIO-5 A biological monitor shall conduct periodic (weekly) checks of the ESA fence during all construction activities throughout the life of the Project. They will notify the construction supervisor of any breaches in the ESA fence. The construction contractor will be responsible for repairing any reaches within 24 of hours of notice by the biological monitor.

BIO-6 No grading or fill activity of any type shall be permitted outside the construction limits within the ESAs. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment should be operated to prevent accidental damage to nearby preserved areas. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within these protected zones. Silt fence barriers will be installed at the ESA boundary.

BIO-7 Due to the nature of soils in the project area, any piles of fill are considered an attractive nuisance to fossorial mammals. Therefore, all soil and fill piles shall be surrounded by silt fence or similar materials to prevent burrowing by small mammal species.

BIO-8 Unfilled holes or trenches shall be inspected for trapped animals each morning. Any wildlife discovered will be removed from the trench or hole by the biological monitor and released outside of the limits of construction. Unburied pipes or conduit laid in trenches overnight will be capped.

BIO-9 No nighttime construction will occur.

BIO-10 All construction-related activities by contractors, subcontractors, or their agents, and equipment (including vegetation removal, grading, equipment laydown and storage, and contractor parking)

shall be restricted to the designated limits of construction. All movement of contractors, subcontractors or their agents, and equipment shall be restricted to the limits of construction and staging areas.

BIO-11 Should any work occur beyond the fenced or otherwise demarcated limits of disturbance, the biological monitor shall request that the construction supervisor halt work until the problem has been remedied.

BIO-12 A weed abatement program shall be developed to minimize the importation of nonnative plant material during and after construction. Eradication strategies would be employed should an invasion occur.

BIO-13 Bird nesting season generally extends from February 1 through September 15 in southern California and specifically, April 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist shall conduct pre-construction Nesting Bird Surveys (NBS) prior to project-related disturbance to nestable vegetation to identify any active nests. If no active nests are found, no further action will be required. If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

CULTURAL RESOURCES

CUL-1 Worker Environmental Awareness Program (WEAP) training should be developed and implemented by a cultural resource specialist and provided for all construction personnel. For the life of the project, each employee (including temporary contractors and subcontractors) will receive WEAP training prior to conducting any work on the site.

CUL-2 In the event that pre-contact cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period, with the approval of the qualified archaeologist. Additionally, if the archaeologist makes his/her initial assessment of the nature of the find to be Native American, the archaeologist will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD) so as to provide Tribal input with regards to significance and treatment.

CUL-3 If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and Public Resources Code Section 5097.98, and enforced for the duration of the project. These code provisions require notification of the County Coroner and the Native American Heritage Commission, who in turn must notify those persons believed to be most likely descended (MLD) from the deceased Native American for appropriate disposition of the remains. Excavation or disturbance may continue in other areas of the project site that are not reasonably suspected to overlie adjacent remains or archaeological resources.

GEOLOGY AND SOILS

GEO-1 Worker Environmental Awareness Program (WEAP) training should be developed and implemented by a paleontological resource specialist and provided for all construction personnel. For the life of the project, each employee (including temporary contractors and subcontractors) will receive WEAP training prior to conducting any work on the site.

GEO-2 Due to the depth of the excavation, a paleontological resource impact mitigation program should be developed and implemented during the project to prevent impacts on paleontological resources or reduce them to a level less than significant. As the primary component of the mitigation program, all earth-moving operations in the project area that reach beyond a depth of 2 feet below the ground surface should be monitored for potential paleontological resources.

HAZARDS AND HAZARDOUS MATERIALS

HAZ – 1 A hazardous spill prevention plan shall be prepared by the Department to minimize the likelihood of a spill shall be prepared prior to construction. The plan shall state the actions that would be required if a spill occurs to prevent contamination of surface waters and provide for cleanup of the spill. The plan shall follow Federal, state, and local safety guidelines and standards to avoid increased exposure to these pollutants.

HAZ – 2 If a contaminated area is encountered during construction, construction shall cease in the vicinity of the contaminated area. The construction contractor shall notify all appropriate authorities, including the EPA and the Department. If necessary, the contaminated site shall be remediated to minimize the potential for exposure of the public and to allow the Project to be safety constructed.

HYDROLOGY

HYD-1 **Prepare and Implement Storm Water Pollution Prevention Plan (SWPPP**). Prior to beginning construction, the Department and/or its contractor shall prepare and submit a Notice of Intent to the Santa Ana Regional Water Quality Control Board (RWQCB) providing notification and intent to comply with the State of California General Construction Permit. Also, a SWPPP shall be reviewed and approved by the Department for water quality construction activities on-site. A copy of the SWPPP shall be made available and implemented at the construction site at all times. The SWPPP shall outline the source control and/or treatment control BMPs to avoid or mitigate runoff pollutants at the construction site to the "maximum extent practicable." All recommendations in the Plan shall be implemented during area demolition/preparation, grading, and construction. The Project shall comply with each of the recommendations detailed in the Plan, and other such measure(s) as the Department deems necessary to mitigate potential storm water runoff impacts.

TRIBAL CULTURAL RESOURCES

TCR-1 **Retain a Native American Monitor/Consultant:** Prior to the commencement of any ground disturbing activity at the project site, the project applicant shall retain a Native American Monitor approved by the Gabrieleno Band of Mission Indians-Kizh Nation – the tribe that consulted on this project pursuant to Assembly Bill A52 - SB18 (the "Tribe" or the "Consulting Tribe"). A copy of the executed contract shall be submitted to the Lead Agency prior to the issuance of any permit

necessary to commence a ground- disturbing activity. The Tribal monitor will only be present on-site during the construction phases that involve ground-disturbing activities. Ground disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when all ground-disturbing activities on the Project Site are completed, or when the Tribal Representatives and Tribal Monitor have indicated that all upcoming ground-disturbing activities at the Project Site have little to no potential for impacting Tribal Cultural Resources. Upon discovery of any Tribal Cultural Resources, construction activities shall cease in the immediate vicinity of the find (not less than the surrounding 50 feet) until the find can be assessed. All Tribal Cultural Resources unearthed by project activities shall be evaluated by the Tribal monitor approved by the Consulting Tribe and a qualified archaeologist if one is present. If the resources are Native American in origin, the Consulting Tribe will retain it/them in the form and/or manner the Tribe deems appropriate, for educational, cultural and/or historic purposes. If human remains and/or grave goods are discovered or recognized at the Project Site, all ground disturbance shall immediately cease, and the county coroner shall be notified per Public Resources Code Section 5097.98, and Health & Safety Code Section 7050.5. Human remains and grave/burial goods shall be treated alike per California Public Resources Code section 5097.98(d)(1) and (2). Work may continue in other parts of the Project site while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5[f]). Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin (non-TCR) shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, it shall be offered to a local school or historical society in the area for educational purposes.

TCR-2 **Unanticipated Discovery of Human Remains and Associated Funerary Objects:** Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC and PRC 5097.98 shall be followed.

Upon discovery of human remains, the tribal and/or archaeological monitor/consultant/consultant will immediately divert work at minimum of 100 feet and place an exclusion zone around the discovery location. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are human and subsequently Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).

The Department shall work closely with the MLD to accommodate their treatment procedures.

WILDFIRE

FIRE-1 During construction, all staging areas, welding areas, or areas slated for construction using spark-producing equipment will be cleared of dried vegetation or other material that could ignite. Spark arresting equipment shall be in good working order. The Department and/or its contractor shall require all vehicles and crews working at the project site to have access to functional fire extinguishers at all times. In addition, construction crews are required to have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. The contractor also shall provide a safety plan for the implementation of additional protocols when the National Weather Service issues a Red Flag Warning. Such protocols should address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements.

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APPENDICES

Appendix A – Project Engineering Plans

Appendix B – Air Quality Analysis

Appendix C – Biological Resources Assessment

Appendix D – Cultural Resources Assessment

Appendix E – Design Technical Memo

Appendix F – Response to Comments (reserved)