

INITIAL STUDY

FOR THE

RIVERSIDE HIGHLAND WATER COMPANY
WELL DEVELOPMENT PROJECT

Prepared for:

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ENVIRONMENTAL CHECKLIST FORM

INTRODUCTION

1. Project Title: Riverside Highland Water Company Well Development Project
2. Lead Agency Name: City of Colton
Address: 659 N. La Cadena Drive
Colton, CA 92324
3. Contact Person: Mr. Mark Tomich
Phone Number: 909-370-5079
E-mail: mtomich@ci.colton.ca.us
4. Project Location: 800 E Washington Street, Colton, CA 92324. The Project is located off of west RV Center Drive.
5. Project Sponsor's Name and Address: Riverside Highland Water Company, POC: Don Hough
12374 Michigan Street, Grand Terrace, CA 92313-5602
6. General Plan Designation: Medium Density Residential
7. Zoning: Medium Density Residential (R-2)
8. Project Description:

Introduction

Riverside Highland Water Company (RHWCO, Company) is a mutual shareholder owned water company that is regulated by the California Corporation Commission and is governed by a nine-member Board of Directors. RHWCO has over 3,900 domestic potable water customers, and serves water in three communities and two counties. The Company's domestic customers in some locations consume an average of 248 gallons per day (GPD), while others, on large hillside lots in high fire zones, average 1,163 GPD. RHWCO will install a single production well at a site near RV Center Drive in the City of Colton. This new well will require construction of a new pipeline to connect to the Company's existing water distribution system.

Location

The proposed project site is located within an existing multi-family residential development parking lot, adjacent to RV Center Drive in the City of Colton California. Figures 1 and 2 show the regional and site location. The well development site is located south of East Washington Street and east of RV Center Drive near its western terminus at East Washington Street. Entrances to the site will be provided just northeast and just southwest of the parcel upon which the new well will be placed as shown on Figure 3. A pipeline will connect to the new well on RV Center Drive, then the pipeline will be constructed northwest to Washington Street, east on Washington Street to Santo Antonio Drive, and finally north on Santo Antonio Drive where it will connect to RHWCO's existing 18" water line as shown on Figure 4. The electrical connection

for the well will be obtained through an onsite electrical panel box that will connect to the adjacent power distribution system.

Project Characteristics

The proposed well site is located in the middle-southern portion of the City of Colton, near the City's border with Grand Terrace. Development of the Project conforms to the designation in the City's General Plan, in that water infrastructure Projects are considered a use allowed within any land use designation. RHWCO seeks to develop a new well to connect to their existing potable water distribution system, which will require the construction of a new pipeline to connect to RHWCO's existing water distribution system.

The following summary of information is provided regarding the drilling, construction, development and testing of the new well. The total area of disturbance shown on Figure 3 is approximately one to one and a half acres. Once the well is completed the area of aboveground disturbance will be less than 10,000 square feet (about 1/4 acre). The Company has retained ownership of this parcel and its use for the well will not reduce any existing parking at the adjacent apartment complex nor will it adversely impact a current access routes to the apartment.

The proposed well will be drilled to about 500 to 600 feet below the ground surface. Drilling will be accomplished by using a reverse rotary drill unit. Once the well is completed to the desired depth, it will be pumped to test the production rate and quality of the water. The groundwater extracted from the well will be passed through the Baker tanks to settle out any sediment and then delivered to the local drainage system for disposal, assuming the water quality meets Regional Board discharge requirement standards. Assuming the well produces a sufficient quantity of groundwater of adequate quality, the well will be equipped for production and converted to a production well.

It is anticipated that about five persons will be on the site at any one time to support drilling the well: three drillers, the hydrologist inspector, and a foreman. Daily trips to complete the well will average about 10 roundtrips per day, including: two roundtrips for drill rigs; between 6 and 12 roundtrips for cement trucks; a few trips to deliver pipe; and about 20 trips per day for employees. It is estimated that it will require about 8 weeks to drill the well, with 24-hour drilling activities limited to about 4-5 days (surrounding housing to be notified in advance). The objective for the well is to generate a minimum 1,800 gpm. Assuming the groundwater quality is potable (see the discussion under Hydrology and Water Quality), the new well will be connected to the Company's distribution system located about 3,000 feet to the nearest connection point. The well pump will be located aboveground and placed in an enclosed structure. The groundwater will be treated with a sodium hypochlorite disinfectant at the wellhead.

The project hydrologist has provided the following more detailed sequence of events that will be implemented in support of the proposed project.

- The bucket auger drill rig will come onsite and drill and install conductor casing and cement sanitary seal.
- The reverse rotary drill rig will mobilize to the site and set up, including sound walls.
- Drill the pilot borehole and collect associated data, such as lithology, geophysical logs, and isolated aquifer zone testing.

- Deliver the well construction materials.
- Drill enlarged borehole to target depth.
- Construct the well.
- Conduct initial well development by airlift/swab.
- Demobilize the drill rig and mobilize the test pump.
- Conduct final development by pumping.
- Conduct pumping tests.
- Temporarily cap the well and demobilize remaining equipment.
- Return the site to original condition.
- Connect well to the Company's potable Distribution System.

The project requires the construction of a 2,700 linear foot (LF) 12" pipeline to connect to RHWCO's existing potable water distribution, as shown on Figures 5-9, which depict the engineering plans for the proposed pipeline. The pipeline will connect to proposed well discharge pipe on Santo Antonio Drive/RV Center Drive, and eventually connect to the RHWCO's 18" transmission line on Santo Antonio Drive at the north end of the proposed pipeline. The pipeline will require construction of a self-tapping valve to the existing water line, a 45° elbow, and several 90° elbows to accommodate the curves of the roadways in which the pipeline will be constructed. The new pipeline will be constructed within existing roadways, with the exception of the pipeline that will connect to the new well, as outlined on Figure 6. The new pipeline will be placed no less than 36" from the finished grade below ground and will generally be constructed within the median of the roadways to avoid road closure. Construction of the proposed pipeline is anticipated to require approximately 6 weeks to complete.

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

- To the west of the site the following land uses exist: Medium Density Residential (approximately 120 feet to the west) and Open Space-Resource.
- To the north of the site the following land uses exist: Medium Density Residential (approximately 110 feet to the north) and Open Space-Resource. The Santa Ana River is located to the north of the site.
- To the east of the site the land use is Medium Density Residential (approximately 78 feet to the east).
- To the south of the site the land use is Medium Density Residential (approximately 200 feet to the south).

Farther to the east and south is land designated for General Commercial, most of which consists of large lot RV and Furniture Sales.

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

Other than Riverside Highland Water Company there are several other agencies with possible jurisdiction/responsibility over the proposed project. First among these is the California State Water Resources Control Board Division of Drinking Water (State Board). The State Board ultimately approves connection of the new well to the Company's water distribution system after

determining that the water quality is adequate to supply potable water to the Company's customers. The existing Company water supply permit will be modified to include the new well assuming it produces water of adequate quality. Finally, based on the amount of area disturbed to support well drilling (about one acre), it may be necessary to file a General Construction Permit Notice of Intent with the State Water Resources Control Board. Regardless, the Company will prepare a Storm Water Pollution Prevention Plan (SWPPP) to ensure water quality degradation does not occur during site ground disturbing activities during construction. This SWPPP will be coordinated with the Santa Ana Regional Water Quality Control Board as part of the project's compliance with the General Construction Permit.

No other permits have been identified as being required to support the proposed project.

11. Have California Native American tribes traditionally and cultural affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun? Yes. The AB-52 consultation process has begun and letters pursuant to AB-52 were sent out on September 6, 2018 to the San Manuel Band of Mission Indians, Gabrieleño Band of Mission Indians, San Gabriel Band of Mission Indians, and the Morongo Band of Mission Indians. The San Manuel Band of Mission Indians responded via email on October 4, 2018. The tribe requested inclusion of a mitigation measure to protect any Native American cultural resources discovered during the construction of the Project. The Gabrieleño Band of Mission Indians responded on September 10, 2018 requesting consultation and the Morongo Band of Mission Indians responded on September 14, 2018 requesting consultation; however, the Gabrieleño and Morongo Tribes ultimately concluded that they do not have any tribal cultural resource concerns for the proposed Project. No response was received from the San Gabriel Band of Mission Indians.

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

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology & Water Quality |
| <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Transportation / Traffic | <input checked="" type="checkbox"/> Tribal Cultural Resources | <input checked="" type="checkbox"/> Utilities / Service Systems |
| <input checked="" type="checkbox"/> Mandatory Findings of Significance | | |

DETERMINATION (To be completed by the Lead Agency)

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

<input type="checkbox"/>	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Tom Dodson & Associates
Prepared by _____

August 31, 2018
Date _____

Lead Agency (signature) _____

Date _____

DETERMINATION (To be completed by the Lead Agency)

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

<input type="checkbox"/>	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Tom Dodson & Associates
Prepared by

August 31, 2018
Date


Lead Agency (signature)

2-25-19
Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant Impact* – Adverse impacts to scenic vistas can occur in one of two ways. First, an area itself may contain existing scenic vistas that would be altered by new development. A review of the project area determined that there are no scenic vistas located internally within the area proposed for the development of the new Riverside Highland Water Company (RHWCO) Well. Therefore, the development of the new RHWCO well is not expected to impact any important onsite scenic vistas. A scenic vista impact can also occur when a scenic vista can be viewed from the project area or immediate vicinity and a proposed development may interfere with the view to a scenic vista. The City of Colton General Plan does not identify any scenic vistas within the City. The Project is located in an area in which views are extremely limited due to the single-family and multi-family residential developments in the vicinity of the project site. Additionally, the proposed well will be located within the existing multi-family residential housing complex (Nova Pointe Apartments) parking lot. The proposed well, once developed and tested, will be enclosed within a small structure which will be designed to conform to the surrounding setting, and will not impede any views to the north toward the Santa Ana River for residents within the vicinity of the project. Though the views to the north include the San Bernardino Mountains, the residential development impedes these views from being seen in the vicinity of the Project site. Therefore, due to the lack of any views within the vicinity of the Project, implementation of the proposed development is not expected to cause any substantial effects on any important scenic vistas. This potential impact is considered a less than significant adverse aesthetic impact. No mitigation is required.
- b. *No Impact* – The project site not contain any scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway corridor. The project site is located within an existing multi-family residential housing complex parking lot, and therefore the project site is entirely paved with asphalt. There are several trees that line the street adjacent to the development, but none will be impacted by the proposed project. Therefore, the project will not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. No impacts are anticipated, and no mitigation is required.
- c. *Less Than Significant Impact* – The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. The construction of the well will alter the visual setting of the site minimally, with the construction of a small building to house the proposed well. However, this building will be located within the parking lot of the multi-family residential housing, which in itself does not have a distinct visual character that would be degraded by placing well housing in the paved parking lot. The well housing will be constructed to conform to the

surrounding visual setting, and therefore, development of the proposed well will not substantially degrade the existing visual character or quality of the site and its surroundings.

- d. *Less Than Significant Impact* – The surrounding land uses within the project footprint consist mainly of Multi-Family Residential uses, with residents of the multi-family residential complex within which the well site is located approximately 75 feet north of the well site. Thus, the proposed project has a potential to create a new source of substantial lighting or glare during construction that could adversely affect nighttime views at the adjacent residences, and residences can be considered a light sensitive land use. There will not be a new permanent light source to support operations of the well for security purposes, as this is not required to operate the well. Furthermore, well drilling will occur only during daylight hours. Therefore, lighting and glare impacts will be less than significant. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
<p>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:</p>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* – The proposed RHWCO well is in an area that is urbanized. Neither the project site nor the adjacent and surrounding properties are designated for agricultural use; no agricultural activities exist in the project area; and there is no potential for impact to any agricultural uses or values as a result of project implementation. According to the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, no prime farmland, unique farmland, or farmland of statewide importance exists within the vicinity of the proposed project (Figure II-1). No adverse impact to any agricultural resources would occur from implementing the proposed project. No mitigation is required.
- b. *No Impact* – There are no agricultural uses currently on the Project site or on adjacent properties. The project site is zoned for Medium Density Residential and the General Plan land use

designation is Medium Density Residential. No potential exists for a conflict between the proposed project and agricultural zoning or Williamson Act contracts within the project area. No mitigation is required.

- c. *No Impact* – Please refer to issues II(a) and II(b) above. The project site is in an urbanized area and neither the land use designation (Commercial General/Residential Suburban) nor zoning classification (Medium Density Residential) supports forest land or timberland uses or designations. No potential exists for a conflict between the proposed project and forest/timberland zoning. No mitigation is required.
- d. *No Impact* – There are no forest lands within the project area, which is because the project area is urbanized. No potential for loss of forest land would occur if the project is implemented. No mitigation is required.
- e. *No Impact* – Because the project site and surrounding area do not support either agricultural or forestry uses and, furthermore, because the project site and environs are not designated for such uses, implementation of the proposed project would not cause or result in the conversion of Farmland or forest land to alternative use. No adverse impact would occur. No mitigation is 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: The following information utilized in this section was obtained from the technical study "Air Quality and GHG Impact Analysis Riverside Highland Water Company Well Development Project, City of Colton, California" prepared by Giroux & Associates dated September 26, 2017 and is provided as Appendix 1 to this Initial Study.

Background

Climate

The climate of western San Bernardino County, as with all of Southern California, is governed largely by the strength and location of the semi-permanent high pressure center over the Pacific Ocean and the moderating effects of the nearby vast oceanic heat reservoir. Local climatic conditions are characterized by very warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and comfortable humidity. Unfortunately, the same climatic conditions that create such a desirable living climate combine to severely restrict the ability of the local atmosphere to disperse the large volumes of air pollution generated by the population and industry attracted in part by the climate. The City of Colton is situated in an area where the pollutants generated in coastal portions of the Los Angeles basin undergo photochemical reactions and then move inland across the project site during the daily sea breeze cycle. The resulting smog at times gives western San Bernardino County some of the worst air quality in all of California. Fortunately, significant air quality improvement in the last decade suggests that healthful air quality may someday be attained despite the limited regional meteorological dispersion potential.

Winds across the project area are an important meteorological parameter because they control both the initial rate of dilution of locally generated air pollutant emissions as well as controlling their regional trajectory. Winds across the project site display a very unidirectional onshore flow from the southwest-west that is strongest in summer with a weaker offshore return flow from the northeast that is strongest on winter nights when the land is colder than the ocean. The onshore winds during the day average

6-10 mph while the offshore flow is often calm or drifts slowly westward at 1-3 mph. The combination of winds and inversions are critical determinants in leading to the degraded air quality in summer, and the generally good air quality in winter in the project area.

Air Quality Standards

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated and in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table III-1.

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards presented in Table III-1. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O₃, CO (except 8-hour Lake Tahoe), SO₂, NO₂, PM₁₀, PM_{2.5}, and visible reducing particles are not to be exceeded at any time in any consecutive three-year period; all other values are not to be equaled or exceeded. The air quality in a region is considered to be in attainment by federal standards if the measured ambient air pollutant levels for O₃, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean are not exceeded more than once per year. The O₃ standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

Baseline Air Quality

Existing and probable future levels of air quality in the project area can be best inferred from ambient air quality measurements conducted by the South Coast Air Quality Management District (SCAQMD) at the Riverside Rubidoux Air Monitoring Station. Table III-2 summarizes the last five years of published data from this monitoring station. The following conclusions can be drawn from this data:

- 1, Photochemical smog (ozone) levels often exceed standards. The 1-hour state standard was violated an average of 27 times a year in the last five years near Riverside. The 8-hour state ozone standard has been exceeded an average of 61 times a year in the past five years. The Federal eight-hour ozone standard has averaged around 40 violations per year since 2012. While ozone levels are still high, they are much lower than 10 to 20 years ago. Attainment of all clean air standards in the project vicinity is not likely to occur soon, but the severity and frequency of violations is expected to continue to slowly decline during the current decade.
2. Carbon monoxide measurements at the Riverside Rubidoux station fluctuate but were lowest in 2012. Federal and state standards have not been exceeded in the last five years. Despite continued basin-wide growth, maximum one- or 8-hour CO levels at the closest air monitoring station are less than the 25 percent of their most stringent standards because of continued vehicular improvements. These data suggests that baseline CO levels in the project area are generally healthful and can accommodate a reasonable level of additional traffic emissions before any adverse air quality effects would be expected.

**Table III-1
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O3)	1 Hour	0.09 ppm (180 µg/m3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m3)		0.075 ppm (147 µg/m3)		
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m3	Gravimetric or Beta Attenuation	150 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m3		–		
Fine Particulate Matter (PM2.5)	24 Hour	–	–	35 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m3	Gravimetric or Beta Attenuation	15 µg/m3		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m3)	–	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9 ppm (10 mg/m3)		9 ppm (10 mg/m3)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 g/m3)		–	–	
Nitrogen Dioxide (NO2) ⁸	1 Hour	0.18 ppm (339 µg/m3)	Gas Phase Chemiluminescence	100 ppb (118 µg/m3)	–	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)		0.053 ppm (100 µg/m3)	Same as Primary Standard	
Sulfur Dioxide (SO2) ⁹	1 Hour	0.25 ppm (655 µg/m3)	Ultraviolet Fluorescence	75 ppb (196 µg/m3)	–	Ultraviolet Flourescence; Spectrophotometry (Paraosaniline Method)
	3 Hour	–		–	0.5 ppm (1300 µg/m3)	
	24 Hour	0.04 ppm (105 µg/m3)		0.14 ppm (for certain areas) ⁹	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) ⁹	–	
Lead ^{8,10,11}	30-Day Average	1.5 µg/m3	Atomic Absorption	–	–	–
	Calendar Quarter	–		1.5 µg/m3 (for certain areas) ¹¹	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Avg	–		0.15 µg/m3)		
Visibility Reducing Particles ¹²	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24 Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride ¹⁰	24 Hour	0.01 ppm (26 µg/m3)	Gas Chromatography			

Footnotes

- 1 California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter – PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- 2 National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year, with a 24-hour average concentration above 150 µg/m³, is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
- 3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- 4 Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
- 5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- 6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- 7 Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
- 8 To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- 9 On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- 10 The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- 11 The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- 12 In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

**Table III-2
AIR QUALITY MONITORING SUMMARY (2012-2016)
(Number of Days Standards Were Exceeded, and Maximum Levels During Such Violations)
(Entries shown as ratios = samples exceeding standard/samples taken)**

Pollutant/Standard	2012	2013	2014	2015	2016
Ozone					
1-Hour > 0.09 ppm (S)	27	13	29	31	33
8-Hour > 0.07 ppm (S)	70	38	69	59	71
8- Hour > 0.075 ppm (F)	47	26	41	39	47
Max. 1-Hour Conc. (ppm)	0.13	0.12	0.14	0.13	0.14
Max. 8-Hour Conc. (ppm)	0.10	0.10	0.10	0.11	0.10
Carbon Monoxide					
1-hour > 20. ppm (S)	0	0	0	0	0
8- Hour > 9. ppm (S,F)	0	0	0	0	0
Max 8-hour Conc. (ppm)	1.6	2.0	1.9	1.7	1.7
Nitrogen Dioxide					
1-Hour > 0.18 ppm (S)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.06	0.06	0.06	0.06	0.07
Respirable Particulates (PM-10)					
24-hour > 50 µg/m ³ (S)	19/121	10/119	10/361	67/354	58/302
24-hour > 150 µg/m ³ (F)	0/121	0/119	0/361	0/354	0/302
Max. 24-Hr. Conc. (µg/m ³)	67.	135.	100.	61.	82.
Fine Particulates (PM-2.5)					
24-Hour > 35 µg/m ³ (F)	7/352	6/353	0/110	17/343	4/357
Max. 24-Hr. Conc. (µg/m ³)	38.1	60.3	30.9	56.6	39.1

Source: South Coast AQMD, Riverside/Rubidoux Air Monitoring Station (4144); (S) = state standard, (F) = federal standard

3. PM-10 levels as measured at Riverside Rubidoux exceed the state standard less than 13 percent of measured days, but no days in excess of the national particulate standard have been recorded for the same period. Particulate levels have traditionally been high in Riverside County because of agricultural activities, dry soil conditions and upwind industrial development.
4. A substantial fraction of PM-10 is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). The federal standard is exceeded on approximately 2 percent of measured days. Year 2014 showed the lowest maximum 24-hour concentration. However, both the frequency of violations of particulate standards, and high percentage of PM-2.5, are air quality concerns in the project area.

Air Quality Planning

For a detailed discussion of the Air Quality Plans in place that are applicable to the Project and surrounding area, see Appendix 1, pages 10-12.

AQMPs are required to be updated every three years. The 2012 AQMP was adopted in early 2013. An updated AQMP must therefore be adopted in 2016. Planning for the 2016 AQMP is currently on-going. The 2016 AQMP was published for review with a revised Draft 2016 AQMP document released in October. The Draft AQMP was recently approved by the SCQAMD in March 2017; and the California Air Resources Board (CARB) approved this document on March 23, 2017. The document was forwarded to the federal Environmental Protection Agency on April 27, 2017 and is currently under review for incorporation for the federal State Implementation Plan. (Personal Communication, Michael Kraus, May 30, 2017). The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2037
Annual PM-2.5 (12 $\mu\text{g}/\text{m}^3$)	2025
8-hour ozone (80 ppb)	2024 (old standard)
8-hour ozone (75 ppb)	2032 (current standard)
1-hour ozone (120 ppb)	2032 (rescinded standard)
24-hour PM-2.5 (35 $\mu\text{g}/\text{m}^3$)	2019

The key challenge is that NO_x emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional NO_x control measures are adopted and implemented, attainment goals may not be met.

In summary, the proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing water improvement projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

Standards of Significance

Air quality impacts are considered “significant” if they cause clean air standards to be violated where they are currently met, or if they “substantially” contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

- a. Conflicts with or obstructs implementation of the applicable air quality plan.
- b. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.
- c. Results in a cumulatively considerable net increase of any criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- d. Exposes sensitive receptors to substantial pollutant concentrations.
- e. Creates objectionable odors affecting a substantial number of people.

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

**Table III-3
DAILY EMISSIONS THRESHOLDS**

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Additional Indicators

In its CEQA Handbook, the SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation.
- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.
- Project could generate vehicle trips that cause a CO hot spot.

Impact Analysis

- No Impact* – Projects, such as the proposed development of a new well, do not directly relate to the AQMP in that there are no specific air quality programs or regulations governing general development. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use are the primary yardsticks by which impact significance of planned growth is determined. Based on the analysis of the City's General Plan Land Use section, the proposed project is consistent with the adopted City General Plan. Thus, the proposed project is consistent with regional planning forecasts maintained by the Southern California Association of Governments (SCAG) regional plans. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant only because of consistency with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis. As the analysis of project-related emissions provided below indicates, the proposed project will not cause or be exposed to significant air pollution, and is, therefore, consistent with the applicable air quality plan, and as such, no impacts under this issue are anticipated to occur.
- Less Than Significant With Mitigation Incorporated* – Air pollution emissions associated with the proposed project would occur over both a short and long-term time period. Short-term emissions include fugitive dust from construction activities (i.e., site prep, demolition of the existing asphalt, and exhaust emission) at the proposed Project site. Long-term emissions generated by future operation of the proposed project primarily include energy consumption. However, there is no direct nexus between consumption and the type of power source or the air basin where the source is located. Operational air pollution emissions from electrical generation are therefore not attributable on a project-specific basis. The construction and operational emissions were estimated and compared to the SCAQMD significance thresholds using the CalEEMod model. Although exhaust emissions will result from on and off-site construction equipment, the exact types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. Estimated construction emissions were modeled using CalEEMod2016.3.1 to identify maximum daily emissions for each pollutant during project construction. The project involves the construction of a new potable water well with associated structures. The approximate ground disturbance area is 1.5 acres. Construction will occur in three phases: well drilling, then equipping and then pipeline installation. The well equipping phases will start after the well is drilled and tested. Project construction activities are estimated to require the following construction fleet and schedule which was modeled in CalEEMod and shown in Table III-4.

**Table III-4
CalEEMod CONSTRUCTION ACTIVITY EQUIPMENT FLEET AND WORKDAYS**

Casing and Well Drilling (40 days)	1 Drill Rig
	1 Pump
	1 Loader/Backhoe
Equipping (60 days)	1 Crane
	1 Welder
	1 Loader/Backhoe
	1 Generator Set
	1 Forklift
Pipeline Installation (40 days)	1 Concrete Saw
	1 Trencher
	1 Forklift
	1 Loader/Backhoe

Utilizing this indicated equipment fleet and durations shown in Table III-4 the following worst case daily construction emissions are calculated by CalEEMod and are listed in Table III-5.

**Table III-5
CONSTRUCTION ACTIVITY EMISSIONS / MAXIMUM DAILY EMISSIONS (pounds/day)**

Maximal Construction Emissions	ROG	NOx	CO	SO₂	PM-10	PM-2.5
Year 2018						
Unmitigated	1.9	15.4	11.5	0.0	5.3	3.0
Mitigated	1.9	15.4	11.5	0.0	2.8	1.7
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated be below SCAQMD CEQA thresholds without the need for added mitigation. The only model-based mitigation measured applied for this project was:

- Water exposed dirt surfaces two times per day to minimize the generation of fugitive dust generation.

Therefore the following mitigation measure shall be implemented as part of the proposed project to minimize construction-related air quality emissions:

AIR-1 ***Fugitive Dust Control. The following measures shall be incorporated into Project plans and specifications for implementation:***

- ***Apply soil stabilizers or moisten inactive areas;***
- ***Prepare a high wind dust control plan;***
- ***Address previously disturbed areas is subsequent construction is delayed;***
- ***Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day);***

- **Cover all stock piles with tarps at the end of each day or as needed;**
- **Provide water spray during loading and unloading of earthen materials;**
- **Minimize in-out traffic from construction zone;**
- **Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard; and**
- **Sweep streets daily if visible soil material is carried out from the construction site.**

Localized Significance

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board’s Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD’s Mobile Source Committee in February 2005. Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NOx), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. LSTs are only applicable to on-site emissions.

LST screening tables are available for 25, 50, 100, 200 and 500-meter source-receptor distances. For this project the most stringent 25 meter distance was used to reflect the nearest adjacent residences (78 feet to the east). The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites for varying distances. For this project the most stringent thresholds for a 1-acre site were used. The following thresholds and emissions in Table III-6 are therefore determined (pounds per day):

**Table III-6
LST AND PROJECT EMISSIONS (pounds/day)**

LST 1 acre/25 meters Central San Bernardino Valley	CO	NOx	PM-10	PM-2.5
LST Thresholds	667	118	4	3
Max On-Site Emissions Total				
Unmitigated	12	15	5	3
Mitigated	12	15	3	2

CalEEMod Output in Appendix

LSTs were compared to the maximum daily construction activities. As seen above, emissions will meet the LST for construction thresholds with the application of the following mitigation measure:

- Exposed surfaces will be watered two times per day

LST impacts are therefore considered less than significant with implementation of mitigation measure AIR-1.

Ozone precursor emissions (ROG and NOx) are calculated to be below SCAQMD CEQA thresholds during construction. However, because of the non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. The following mitigation measures shall be implemented:

AIR-2 Exhaust Emissions Control

- ***Utilize well-tuned off-road construction equipment.***
- ***Establish a preference for contractors using Tier 3-rated or better heavy equipment.***
- ***Enforce 5-minute idling limits for both on-road trucks and off-road equipment.***

With the implementation of these mitigation measures, any Project-related construction impacts will remain less than significant.

Operational Impacts

Operational air pollution emissions will be minimal. Electrical generation of power will be used for pumping. Electrical consumption has no single uniquely related air pollution emissions source because power is supplied to and drawn from a regional grid. Electrical power is generated regionally by a combination of non-combustion (nuclear, hydroelectric, solar, wind, geothermal, etc.) and fossil fuel combustion sources. There is no direct nexus between consumption and the type of power source or the air basin where the source is located. Operational air pollution emissions from electrical generation are therefore not attributable on a project-specific basis. Therefore, no operation-related air quality impacts are anticipated.

- c&d. ***Less Than Significant With Mitigation Incorporated*** – The evaluation presented under issue III(b) above addresses cumulative impacts of project emissions and the findings remain the same as outlined in the preceding text. Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure. Additionally, as discussed above, implementation of the proposed project will not result in substantial pollutant concentrations and therefore will not expose sensitive receptors in the area to such impacts, particularly due to the brief exposure to such pollutants during construction. Therefore, with the implementation of the above mitigation measures, impacts under these issues are considered less than significant.
- e. ***Less Than Significant Impact*** – Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The Project does not propose any such uses or activities that would result in potentially significant operational source odor impacts. Project operations (pumping, treatment and storage) are an essentially closed system with negligible odor potential. Groundwater contains minimal organic matter capable of odor generation. Chlorine storage and dispensing is prevented from being released to the atmosphere by a required containment system. The well will use low concentrations of chlorine for water disinfection but it will be injected into the water stream and have no airborne pathways. The solution will be stored in tanks and the solution will be pumped to the inline mixer. The dosing is controlled by a metering pump installed close to the storage tank. The quality of the disinfected water coming out of the online mixer will be analyzed by a Chlorine Analyzer. Chemical levels will be diluted to below their odor threshold.

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: The following information utilized in this section of the Initial Study was obtained from the U.S. Fish and Wildlife Service IPaC Trust Resources Report generated on June 8, 2017, pertaining to the RHWCO Well Development project area only, which is provided as Appendix 2 to this document.

- a. *No Impact* – The RHWCO Well Development project site and surrounding area are urbanized, and the site itself contains no natural habitat and no potential to support any candidate or special status species. The entirety of the site is paved with asphalt, as it is located in the parking lot of a gated apartment complex. Thus, with no habitat or species of concern located within the project area, the implementation of the RHWCO Well Development Project has no potential to impact any native biological resources. No mitigation is required.
- b. *No Impact* – The project site and surrounding area do not contain any riparian habitat or other sensitive natural community resources. Therefore, no adverse impact to riparian habitat or any native biological resources would occur from implementing the proposed project. No mitigation is required.

- c. *No Impact* – According to the IPaC Trust Resources Report (Appendix 2), the project site does not contain any wetlands as defined by Section 404 of the Clean Water Act, or any other sensitive natural community resource. Therefore, no impacts under this issue can occur, and no mitigation is required.
- d. *No Impact* – As indicated previously, the site and environs are completely urbanized; no large areas of open space exist in the immediate project area that would facilitate wildlife movement, with the exception of the Santa Ana River, which is located approximately 600 feet north of the project site. However, due to the developed nature of the Project site as it presently exists, and the constraints to wildlife movement due to the existing arterial roadway system and the fence surrounding the entirety of the apartment complex in which the project site is located, any wildlife movement within the vicinity of the project is not likely. Additionally, the proposed project will be located within an existing developed site, and will not change the overall character of the site as a result of implementation of a new enclosed well. Therefore, with no native habitat, and no wildlife corridors that traverse the project site, implementation of the proposed project has no potential to interfere with the movement of native animals of any kind, or to impede the use of any native wildlife nursery sites. Any impacts to wildlife movement as a result of project implementation are considered less than significant. No mitigation is required.
- e. *No Impact* – The project area does not contain any native plants, including trees. There are random trees on the outskirts of the site, as well as several weeds that are dispersed throughout the site, but these non-native species that are not covered by local policies or ordinances. Therefore, the proposed project does not have a potential to conflict with any policies or ordinances that protect native biological resources. No conflicts will occur as a result of project implementation. No mitigation is required.
- f. *No Impact* – The RHWCO Well Development project site and surrounding area are not covered by an adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP), and there are no other adopted plans to protect native habitats or natural communities that affect the project site. The City of Colton’s General Plan does not identify any adopted plans to protect native habitats or natural communities. Therefore, no impacts are anticipated and no mitigation is required.

	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

a&b. *Less Than Significant With Mitigation Incorporated* – CEQA establishes that "a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (PRC §21084.1). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired."

The project site has been previously engineered and is currently paved with asphalt in an existing apartment complex parking lot. The project, therefore, has no significant potential of containing any surface cultural resources. No historical or archaeological sites or isolates are known to be located within the Project boundaries; thus, none of them requires further consideration during this study.

In light of this information and pursuant to PRC §21084.1, the following conclusions have been reached for the Project:

- No historical resources within or adjacent to the Project area have any potential to be disturbed as they are not within the proposed area in which the facilities will be constructed and developed, and thus, the Project as it is currently proposed will not cause a substantial adverse change to any known historical resources.
- No further cultural resources investigation is necessary for the proposed project unless construction plans undergo such changes as to include areas not covered by this study.

However, if buried cultural materials are discovered during any earth-moving operations associated with the Project, the following mitigation measure shall be implemented:

CUL-1 Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the City onsite inspector. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.

With the above contingency mitigation incorporation, potential for impact to cultural resources will be reduced to a less than significant level. No additional mitigation is required.

- c. *Less Than Significant With Mitigation Incorporated* – The potential for discovering paleontological resources during development of the Project is considered highly unlikely based on the fact that the site has been previously engineered and disturbed at depth. No unique geologic features are known or suspected to occur on or beneath the sites. However, because the Project has not been surveyed in recent history, and the fact that these resources are located beneath the surface and can only be discovered as a result of ground disturbance activities; therefore, the following measure shall be implemented:

CUL-2 Should any paleontological resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the City onsite inspector. The paleontological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.

With incorporation of this contingency mitigation, the potential for impact to paleontological resources will be reduced to a less than significant level. No additional mitigation is required.

- d. *Less Than Significant Impact* – As noted in the discussion above, no available information suggests that human remains may occur within the APE and the potential for such an occurrence is considered very low. State law (Section 7050.5 of the Health and Safety Code) as well as local laws requires that the Police Department, County Sheriff and Coroner's Office receive notification if human remains are encountered. Compliance with these laws is considered adequate mitigation for potential impacts and no further mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
<ul style="list-style-type: none"> 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. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<ul style="list-style-type: none"> Strong seismic ground shaking? 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> Seismic-related ground failure, including liquefaction? 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> Landslides? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

a. Ground Rupture

No Impact – According to the Regulatory Map obtained from the California Department of Conservation showing Alquist-Priolo Earthquake Fault Zones and other seismic hazards (Figure VI-1), the project footprint and general area do not have any known faults, active or inactive. Therefore, no potential exists for the proposed project to experience any fault rupture along a delineated active fault.

Strong Seismic Ground Shaking

Less Than Significant Impact – The proposed project site, as with most of southern California, is in a seismically active area and will most likely be subject to substantial ground shaking during the life of the project. Due to the proximity of the Rialto-Colton fault, located less than one mile north of the project site, and the San Jacinto fault zone, located approximately 2 miles north of the project site,

the project area can be exposed to significant ground shaking during major earthquakes on either of these regional faults (Figure VI-2 and VI-3). Wells are not typically susceptible to severe damage from ground shaking. However, because there is a potential for the proposed well development to be subject to relatively strong ground motion, any structures associated with the development of the well will be designed to meet seismic specifications for the project area based on the current Uniform Building Code. No significant impacts are forecast to occur.

Seismic-Related Ground Failure Including Liquefaction

Less Than Significant Impact – According to the San Bernardino County Land Use Plan General Plan Geologic Hazard Overlays (Figure VI-4), the Project site is located in an area that is considered moderately susceptible to seismic-related ground failure, including liquefaction. However, due to the developed nature of the proposed project site, which currently consists of a portion of a paved parking lot, and the type of project (well development), liquefaction at the site is not anticipated to expose people or structures to potential substantial adverse seismic effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

Landslides

No Impact – According to the map prepared for the San Bernardino County Land Use Plan General Plan Geologic Hazard Overlays (Figure VI-4), the Project site is not located in an area that is considered susceptible to landslides. Therefore, the Project will not expose people or structures to potential substantial adverse landslide effects, including the risk of loss, injury, or death involving landslides. No impacts under this issue are anticipated and no mitigation is required.

- b. *Less Than Significant With Mitigation Incorporated* – Due to the existing graded and disturbed nature of the project footprint, and the type of project being proposed, a potential for soil erosion and loss of top soils is generally considered less than significant. The project footprint is covered almost entirely by asphalt, with a small area between the roadway and the well site containing landscaping that is part of the surrounding multi-family residential development. However, the project may result in exposing some soil to erosion during site grading activities before the well is drilled and the pipeline is constructed within existing roadways. Due to the disturbed nature of the existing site and the flat topography, it is concluded that the potential for this project to cause substantial soil erosion is low. However, due to the forecast area of disturbance, the Project will require the implementation of a Storm Water Pollution Prevention Plan (SWPPP) during construction and will be required to meet install best management practices to achieve current water quality controls after construction is completed and the well and pipeline are in operation. The proposed project will also be required to meet NPDES requirements. These will be met by requiring the construction contractor to use BMPs to control potential erosion and drainage off-site. Implementation of BMPs in conjunction with the following mitigation measure will be sufficient to prevent any significant impacts under this issue:

GEO-1 *Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill material. If covering is not feasible, then measures such as the use of straw bales or sand bags shall be used to capture and hold eroded material on the Project site for future cleanup.*

GEO-2 *Excavated areas shall be properly backfilled and compacted. Paved areas disturbed by this Project will be repaved in such a manner that roadways and other disturbed areas are returned to as near the pre-Project condition as is feasible.*

GEO-3 *All exposed, disturbed soil (trenches, stored backfill, etc.) will be sprayed with water or soil binders twice a day or more frequently if fugitive dust is observed migrating from the site within which the water facilities are being installed.*

GEO-4 *The length of trench, which can be left open at any given time, will be limited to that needed to reasonable perform construction activities. This will serve to reduce the amount of backfill stored onsite at any given time.*

- c. *Less Than Significant Impact* – The Project site is generally flat. The Project site is currently graded and paved, and will be repaved where applicable upon completion of the well development and construction of the well enclosure. As discussed under issue VI(a) above, liquefaction is a concern at the site, however, compliance with Uniform Building Code design requirements is considered significant seismic protection for this uninhabited well facility. Additionally, according to the United States Department of Agriculture (USDA) Natural Resources Conservation Service Web Soil Service, the soils in the site vicinity are mostly Tujunga loamy sand. This soil class is well drained, and is in a low runoff class (see Appendix 3).¹ Therefore, due to the nature of the proposed project, and the type of soil unit underlying the project site, the proposed project has a less than significant potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse. No further mitigation is required.

¹https://soilseries.sc.egov.usda.gov/OSD_Docs/T/TUJUNGA.html

- d. *Less Than Significant Impact* – The Project footprint is currently graded and paved, and will be repaved where applicable upon completion of the well development and construction of the well enclosure. As previously stated, according to the United States Department of Agriculture Web Soil Survey, the project Area of Potential Effect (APE) is underlain by Tujunga gravelly loam sand (see Appendix 3). This soil class is well drained, and is in a low runoff class. Therefore, the development of the RHWCO well will not create a substantial risk to life or property by being placed on expansive soils because none exist on the site. Any impacts are considered less than significant. No mitigation is required.
- e. *No Impact* – The project does not propose any septic tanks or alternative wastewater disposal systems. Therefore, determining if the Project site soils are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater does not apply. No impacts are anticipated. No mitigation is required.

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

SUBSTANTIATION: The following information utilized in this section was obtained from the technical study “Air Quality and GHG Impact Analysis Riverside Highland Water Company Well Development Project, City of Colton, California” prepared by Giroux & Associates dated September 26, 2017 and is provided as Appendix 1 to this Initial Study.

a&b. Less Than Significant Impact –

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. Many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and greater magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases in the earth’s atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Many scientists believe that this increased rate of climate change is the result of greenhouse gases resulting from human activity and industrialization over the past 200 years.

An individual project like the Project evaluated in the Greenhouse Gas Analysis cannot generate enough greenhouse gas emissions to effect a discernible change in global climate. However, the Project may participate in the potential for GCC by its incremental contribution of greenhouse gasses combined with the cumulative increase of all other sources of greenhouse gases, which when taken together constitute potential influences on GCC.

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO₂ (Carbon Dioxide), N₂O (Nitrous Oxide), CH₄ (Methane), hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the Earth’s atmosphere, but prevent radiative heat from escaping, thus warming the Earth’s atmosphere. GCC can occur naturally as it has in the past with the previous ice ages. According to the California Air Resources Board (CARB), the climate change since the industrial revolution differs from previous climate changes in both rate and magnitude.

CARB compiles GHG inventories for the State of California. CARB GHG inventory data indicates that in 2014 (the most recent inventory of record) California GHG emissions totaled approximately 441.5 Million Metric Tons of Carbon Dioxide Equivalent (MMTCO_{2e}). “In 2010, California accounted for 6.8 percent of all emissions in the country [United States], and ranked second highest among the states with total emissions of 453 MMTCO_{2e}, only behind Texas with 763 MMTCO_{2e}. From a per capita standpoint, California has the 45th lowest emissions with 12.1 MMTCO_{2e} /person in 2010.”

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit

projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO₂ equivalent/year. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO₂e for all land use projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis.

Construction Activity GHG Emissions

The project is assumed to be built in one year. During project construction, the CalEEMod2016.3.1 computer model predicts that the construction activities will generate the annual CO₂e emissions identified below.

Construction Emissions (Metric Tons CO₂e)	
	CO₂e
Year 2018	117.2
Amortized	3.9
Threshold	3,000

CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are less-than-significant. Hence, the project will not result in generation of a significant level of greenhouse gases.

Finally, the City of Colton has not yet developed a Greenhouse Gas Reduction or Climate Action Plan. The applicable GHG planning document is AB-32. As discussed above, the project is not expected to result in a significant increase in GHG emissions. As a result, the project results in GHG emissions below the recommended SCAQMD 3,000-ton threshold. Therefore, the project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions. Impacts are therefore considered less than significant and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant Impact* – The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. However, operation and testing of the proposed RHWCO cell would store chemicals required for the treating of water extracted from the well. The well operation will include routine use of 12.5% sodium hypochlorite, which is a potentially hazardous substance. RHWCO has developed safety standards and operational procedures for safe transport and use of its operational and maintenance materials that are potentially hazardous. These procedures will comply with all federal, state and local regulations will ensure that the Project operates in a manner that poses no substantial hazards to the public or the environment. No additional mitigation is necessary to ensure the impact of managing these chemicals result in a less than significant impact on the environment. Therefore, potential impacts to the public or the environment through accidental release due to the

routine transport, use, or disposal of hazardous materials would be less than significant. RHWCO has standard operational procedures for safe transport and use of its operational and maintenance materials. No additional measures are necessary to ensure the impact of managing this chemical result in a less than significant impact on the environment.

- b. *Less Than Significant With Mitigation Incorporated* – The proposed project would not 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.

During construction or maintenance activities in support of the proposed project, fuels, oils, solvents, and other petroleum materials classified as "hazardous" will be used to support these operations. Mitigation designed to reduce, control or remediate potential accidental releases must be implemented to prevent the creation of new contaminated areas that may require remediation in the future and to minimize exposure of humans to public health risks from accidental releases. The following mitigation measure will be incorporated into the Storm Water Pollution Prevention Plan (SWPPP) prepared for the project, which would reduce such accidental spill hazards to a less than significant level.

HAZ-1 All spills or leakage of petroleum products during construction activities will be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility.

By implementing this measure, potentially substantial adverse environmental impacts from accidental releases associated with installation of the proposed well can be reduced to a less than significant level.

- c. *Less Than Significant Impact* – The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The nearest school to the proposed project is Terrace View Elementary School, located at 22731 Grand Terrace Rd, Grand Terrace, CA 92313, which is approximately one half mile to the southeast. Terrace View Elementary school is part of the Colton Joint Unified School District, which serves the City of Colton and communities within Bloomington, Grand Terrace, and Loma Linda. As such, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste during construction or operation in a quantity that would pose any danger to people adjacent to, or in the general vicinity of, the project site. Therefore, the impacts of the proposed project to this issue area would be considered less than significant.
- d. *Less Than Significant Impact* – The proposed project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment. None of the proposed actions related to the development of the RHWCO well would be near to or impact a site known to have hazardous materials or a site under remediation for hazardous materials or associated issues. A review of the California State Water Resources Control Board GeoTracker database indicates that no open hazardous materials cleanup sites are located within a 2,500-foot radius of the proposed well development site (Figure VIII-1). The nearest sites are two Leaking Underground Storage Tank (LUST) Cleanup Site located just outside of the 2,500-foot boundary; however, these sites have been remediated as indicated in Figures VIII-2 through VIII-5. Therefore, the proposed project is not forecast to result in a significant hazard to the public or the environment associated with this issue area. No mitigation is required.

- e. *No Impact* – The nearest public airport is the San Bernardino International Airport approximately 4 miles to the northeast of the project site. According to the City of San Bernardino General Plan San Bernardino International Airport Planning Boundaries map—provided as Figure VIII-6—the project site is not located within the designated planning boundary; therefore, the project area has no potential to cause or experience any routine or substantial adverse impact related to public airport operations. No impacts will occur as a result of project implementation and no mitigation is required.
- f. *No Impact* – There are no private airstrips located within two miles of the Project site. Therefore, the project area has no potential to cause or experience any adverse impact related to private airstrip operations. No impacts will occur as a result of project implementation.
- g. *Less Than Significant Impact* – The proposed well development will be confined to the project site and is not anticipated to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. However, the proposed pipeline will be developed within existing roadways, which will require access to existing rights-of-way during construction of the proposed pipeline. A limited potential to interfere with an emergency response or evacuation plan will occur during construction. No known emergency response or evacuation plans or routes are known to exist in the vicinity of the Project and no such plans will be affected by the Project. Refer to the Transportation/Traffic Section of this document. Mitigation to address traffic disruption and emergency access issues are included in this section. Impacts are reduced to a less than significant level with mitigation incorporated. No additional mitigation is required.
- h. *Less Than Significant Impact* – The proposed project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildland are adjacent to urbanized areas or where residences are intermixed with wildland. According to the San Bernardino County Land Use Plan General Plan Hazards Overlap map (Figure VIII-7) and Colton's Hazard Mitigation Plan, the proposed project is not located in a fire safety overlay district. The proposed well and associated facilities will involve the extraction of ground water, and should therefore not contribute to a wildland fire risk.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

a&f. *Less Than Significant With Mitigation Incorporated* - Installation of the proposed well and connecting pipeline includes activities that have a potential to violate water quality standards or waste discharge requirements due to direct discharge of water brought to the surface during well testing. Prior to pumping large quantities of water from the proposed municipal-supply water well, RHWCO will need to test the quality of the water to verify that it does not contain contaminants that would exceed the standard water quality objectives for this portion of the Santa Ana River Watershed. The Santa Ana Regional Water Quality Control Board would have jurisdiction over the

groundwater quality and surface water discharges for the new well. A General Permit within the Regional Board's jurisdiction covers the discharge of groundwater generated from well drilling and development activities. This General Permit establishes specific performance requirements for discharges from well activities and the proposed project must comply with these requirements. Before discharge from the well test program can proceed, sampling must be completed to ensure that maximum contaminant levels (MCLs) are not exceeded in the groundwater brought to the surface and discharged. If water quality is degraded it must be blended to a level below MCLs or any specific pollutant exceeding MCLs must be treated and brought into compliance with General Permit discharge requirements prior to discharge to meet the MCL requirements for that pollutant. The following mitigation measure ensures that no significantly degraded groundwater (above MCLs) will be discharged during well testing:

HYD-1 RHWCO shall test the groundwater produced from the well prior to discharge. Prior to or during discharge any contaminants shall be blended below the pertinent MCL or treated prior to discharge, including sediment or other material.

The proposed project may result in some soil erosion during excavating and construction activities. Due to the disturbed nature of the project site, which is located within a paved parking lot of an apartment complex, and the flat topography, it is concluded that the potential for this project to cause substantial soil erosion, and subsequent water quality impacts, is low. The proposed project will be required to meet NPDES requirements. RHWCO must file a Notice of Intent (NOI) with the State Water Resources Control Board and obtain a general construction National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit prior to the start of construction. Obtaining coverage under the General Construction NPDES permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which specifies Best Management Practices (BMPs) that must be implemented during construction. Compliance with the terms and conditions of the NPDES and the SWPPP is mandatory and is judged adequate mitigation by the regulatory agencies for potential impacts to stormwater during construction activities. Implementation of the following mitigation measure, as well as mitigation measures HAZ-1, and HYD-4 under issue IX(c-e) below, is considered adequate to reduce potential impacts to stormwater runoff to a less than significant level.

HYD-2 RHWCO shall require that the construction contractor prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. The SWPPP shall include a Spill Prevention and Cleanup Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented in the SWPPP may include but not be limited to:

- ***The use of silt fences or coir rolls;***
- ***The use of temporary stormwater desilting or retention basins;***
- ***The use of water bars to reduce the velocity of stormwater runoff;***
- ***The use of wheel washers on construction equipment leaving the site;***
- ***The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;***
- ***The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or***

stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and

- ***Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.***

- b. *Less Than Significant With Mitigation Incorporated* – The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a substantial lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). The proposed well will extract groundwater from the Riverside North Groundwater Basin. The proposed drilling, testing, and development of the new well, if approved for the use will be connected to the existing RHWCO water supply. According to the 2015 San Bernardino Valley Regional Urban Water Management Plan, RHWCO has the right to construct new wells within its service area and outside of its service area as the need arises, therefore RHWCO has a right to develop and extract water from the proposed well under their current agreements with associated water agencies within the San Bernardino Valley Region. The proposed depth of water production for this well is approximately 500-600 feet below the ground surface, or as directed by the hydrogeologist. This well is not designed to interfere with any wells located within the same aquifer. The location of the new well is fairly close to the Santa Ana River, which has fast recharge in the spring and based on data from other RHWCO wells in the area, the groundwater level varies dependent on rainfall, but maintains an average level of approximately 137 feet below ground surface (bgs). Based on the available data, this site is best suited for recharge and will have the least impact on the basin. However, since pumping tests will not be conducted until the proposed well is completed, the following mitigation measure shall be implemented by RHWCO to ensure that other wells within this local aquifer do not incur a significant adverse impact from pumping the proposed well.

HYD-3 RHWCO shall conduct a pump test of the new well and determine whether any other wells are located within the cone of depression once the well reaches equilibrium. If any wells are adversely impacted by future cumulative groundwater extractions from the proposed well, RHWCO shall offset this impact through provision of water service; or adjusting the flow rates or hours of operation to mitigate adverse impacts.

With implementation of the above mitigation measure, the impacts to this issue would be reduced to less than significant. No additional mitigation is required.

- c-e. *Less Than Significant With Mitigation Incorporated* – The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite or exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

The project site is not located adjacent to any existing drainage channels, and any discharge offsite would be required to meet NPDES water quality requirements. The proposed well site is already disturbed and would have no potential to interfere with the discharge of stormwater over the long-term as the site will remain essentially the same, with only the small area (covering approximately three parking spaces within an existing parking lot) that will be enclosed as a result of the well development.

Cities require implementation of a set of BMPs to control discharges that surface runoff with pollutants could cause that may cause a significant adverse impact to surface water quality. Storm water pollution prevention BMPs will be incorporated to control pollution from construction activities in the vicinity of the project site. These measures, such as berms, coir rolls, silt fencing, detention

basins, etc., are mandatory, as are the measures for ongoing non-point source pollution controls implemented by the local jurisdictions once the project is completed. The mandatory BMPs applied in conjunction with Mitigation Measures HAZ-1, and HYD-2 in conjunction with measure HYD-4 below, are deemed sufficient to reduce potential surface water quality impacts to a less than significant level. This is because the stormwater discharge will be treated to the point that the discharge will meet requirements for stormwater runoff from construction sites. No additional mitigation is required.

HYD-4 RHWCO and construction contractor shall select best management practices applicable to the project site and activities on the site to achieve a reduction in pollutants to the maximum extent practicable (including but not limited the development and implementation of a SWPPP), both during and following development of the proposed municipal-supply water well and associated facilities, and to control urban runoff after the project is constructed and the well (if approved for operation post well testing) is in operation.

- g. *No Impact* – The proposed project would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. According to the San Bernardino County Land Use Plan General Plan Hazard Overlay Map (Figure VIII-7), the project site is located in Zone X – Inside the 500 year flood plain. Thus, implementation of the project would not housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. No impacts are anticipated and no mitigation is required.
- h. *No Impact* – See response IX.g. above. The project site is not located within a 100-year flood hazard area and any structures onsite will not alter or redirect any future flood flows on the project site. No impact can occur and no mitigation is required.
- i. *No impact* – No human occupancy structures are proposed as part of the project. The project has no potential to expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. No impact can be identified and no mitigation is required.
- j. *No impact* – There is no water source in the vicinity of the project that could generate these water hazards.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* – According to the City of Colton General Plan Land Use Map (Figure X-1), the proposed project is designated for Medium Density Residential upon which water facilities, such as wells, are allowed to be developed. The proposed project is located within an existing apartment complex parking lot. The project does not involve construction of new structures that would cause any physical division of communities. Since the proposed project occurs within and supports existing land use designations, no potential exists for the proposed project to physically divide an existing community. No impact will result and no mitigation is required.
- b. *No Impact* – Please reference discussion X(a) above. In general, water production facilities are zone independent because they are needed to support all types of land uses. Thus, implementation will not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. There is no specific plan or local coastal program that would apply to the Project area. No impacts are anticipated and no mitigation is required.
- c. *No Impact* – The City of Colton does identify any habitat conservation planning areas or natural community conservation planning areas that would apply to the project area. Therefore, the RHWCO well development has no potential to conflict with such planning areas.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

a&b. *No Impact* – Implementation of the Project will not result in the loss of availability of any known mineral resources that would be of value to the region and the residents of the state. According to the City of Colton General Plan, the main mineral resource within the City is limestone; deposits of limestone can be found in and around Slover Mountain. The project is not located in an area identified by the City’s General Plan as containing any known important mineral resources, and is located within a developed site containing an apartment complex and a surrounding parking lot. Therefore, the development of the Project will not cause any loss of mineral resource values to the region or residents of the state, nor would it result in the loss of any locally important mineral resources identified in the City of Colton General Plan. No impacts would occur under this issue. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

Background

Noise is generally described as unwanted sound. Once the well is developed and tested as a production well, the proposed well will be outfitted with a vertical turbine pump that will be housed in a noise minimizing structure. The location for this proposed well is within an existing apartment complex parking lot, which houses residents approximately 75 feet north/northeast of the project site.

The unit of sound pressure ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB). Sound or noise can vary in intensity by over one million times within the range of human hearing. A logarithmic loudness scale, similar to the Richter scale for earthquake magnitude, is therefore used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all sound frequencies within the entire spectrum. Noise levels at maximum human sensitivity from around 500 to 2,000 cycles per second are factored more heavily into sound descriptions in a process called "A-weighting," written as "dBA."

Leq is a time-averaged sound level; a single-number value that expresses the time-varying sound level for the specified period as though it were a constant sound level with the same total sound energy as the time-varying level. Its unit is the decibel (dB). The most common averaging period for Leq is hourly.

Because community receptors are more sensitive to unwanted noise intrusion during more sensitive evening and nighttime hours, state law requires that an artificial dBA increment be added to quiet time noise levels. The State of California has established guidelines for acceptable community noise levels that are based on the Community Noise Equivalent Level (CNEL) rating scale (a 24-hour integrated noise

measurement scale). The guidelines rank noise land use compatibility in terms of "normally acceptable," "conditionally acceptable," and "clearly unacceptable" noise levels for various land use types. The State Guidelines, Land Use Compatibility for Community Noise Exposure, single-family homes are "normally acceptable" in exterior noise environments up to 60 dB CNEL and "conditionally acceptable" up to 70 dB CNEL based on this scale. Multiple family residential uses are "normally acceptable" up to 65 dB CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries and churches are "normally acceptable" up to 70 dB CNEL, as are office buildings and business, commercial and professional uses with some structural noise attenuation.

- a. *Less Than Significant With Mitigation Incorporated* – Implementation of the proposed project will generate noise. Generally, well drilling equipment can generate noise levels of about 70 to 90 dBA at a distance of 50 feet from the equipment. Drilling of the 36-inch minimum diameter surface casing/sanitary seal borehole to 50 feet and drilling, by reverse circulation methods, a 17.5-inch minimum diameter pilot borehole from 50 ft to between 500-600 ft below ground surface (bgs) will occur over a 12-hour period until the well is completed to the design depth of about 500-600 ft bgs. Stationary source noise diminishes at a rate of about 6 dB for each doubling of the distance from the source. This means that periodic construction noise levels at the nearest receptor would be only slightly less on the exterior of the nearest receptor located approximately 75 feet from the project site. The City of Colton does not have a noise ordinance that provides maximum permissible noise levels that are quantifiable, therefore, the County of San Bernardino noise ordinance will be applied to the proposed project. The well drilling will likely exceed the County's noise standard of 65 dBA at the exterior of the nearest receptors. This increase in noise level will be short term (about 18 days). The increased noise levels will not be severe enough to pose a health or hearing hazard, but could be considered a short-term nuisance. The pipeline will be constructed at a similar distance or more from the nearest residences within the alignment. Pipeline construction will be limited to daylight hours to prevent significant impacts during the 6-week construction period. Once the new RHWCO well becomes operational, the well will be outfitted with a vertical turbine pump, which will generate noise. However, this noise can be mitigated, as outlined in the mitigation measure below—by constructing a wooden or concrete housing unit to reduce operational noise levels to a less than significant impact. The pipeline will not generate any noise once constructed. Additionally, to reduce potential short-term effects of noise and long-term noise effects from the well pump to the greatest extent feasible, the mitigation measures presented below will be implemented—which include constructing temporary noise barrier walls and equipment to meet specified noise level limits during construction activities.

NOI-1 Noise measures shall be implemented to reduce noise levels to the greatest extent feasible (at or below 65 dBA). Measures shall include portable noise barriers and scheduling specific construction activities to avoid conflict with adjacent sensitive receptors. No well drilling activities shall occur before 7:30 a.m. or after 6:00 p.m., and shall be limited to Monday through Friday.

NOI-2 All construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by applicant personnel during construction activities.

NOI-3 RHWCO will establish a noise complaint/response program and will respond to any noise complaints received for this project by measuring noise levels at the affected receptor. If the noise level exceeds a Ldn of 65 dBA exterior or a Ldn of 45 dBA interior at the receptor, the applicant will implement adequate measures to reduce noise levels to the greatest extent feasible, including portable noise barriers or scheduling specific construction activities to avoid conflict with adjacent sensitive receptors.

NOI-4 All construction activities other than specific well drilling intervals shall be restricted to daylight hours, Monday – Saturday, unless an emergency exists.

NOI-5 Well pump noise levels to be limited to 50 dB(A) or below at the exterior of the nearest sensitive noise receptor. This shall be accomplished by installing surface well housing, housed in concrete block structure that attenuates noise to meet this performance standard.

- b. *Less Than Significant With Mitigation Incorporated* – Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by vibration of room surfaces is called structure borne noises. Sources of groundborne vibrations include natural phenomena (e.g. earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g. explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous or transient. Vibration is often described in units of velocity (inches per second), and discussed in decibel (dB) units in order to compress the range of numbers required to describe vibration. Vibration impacts related to human development are generally associated with activities such as train operations, construction, and heavy truck movements.

The background vibration-velocity level in residential areas is generally 50 VdB; Groundborne vibration is normally perceptible to humans at approximately 65 VdB, while 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible. Construction activity can result in varying degrees of groundborne vibration, and can occur as a result of well drilling activities. The City of Colton Municipal Code section 18.42.050 states the following:

“Vibration. The City prohibits all activities from that generate ground vibration by equipment other than motor vehicles, trains or by temporary construction or demolition, which is perceptible without instruments by the average person at or beyond any lot line of the lot containing the activities.”

In the short term, construction of the new well will have some potential to create vibration at the nearest sensitive receptor within vicinity of the project. However, these temporary construction impacts are considered allowable by the City’s Municipal Code and General Plan, therefore, these short-term impacts are considered less than significant. No long-term impacts to nearby sensitive receptors would occur as a result of implementation of the new well because vibration as a result of well operation would be minimal. Therefore, with implementation of the following mitigation measure, impacts will be considered less than significant.

NOI-6 During future construction activities with heavy equipment within 300 feet of occupied residences, vibration field tests shall be conducted at the nearest occupied residences. To the extent feasible, if vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold.

- c. *Less Than Significant With Mitigation Incorporated* – This project includes the installation of an above ground pump motor at the proposed well site. As previously stated, once the well becomes operational, the above ground pump motor will generate noise; however, this noise will be mitigated (as outlined in the mitigation measure NOI-5) by constructing a block masonry housing unit to reduce operational noise levels to a less than significant impact. The noise generated by the operation of the proposed well would not result in noise levels that exceed the standards deemed acceptable by the City of Colton and the County of San Bernardino. Implementation of mitigation measure NOI-5 is considered adequate to reduce the level of impact to less than significant.
- d. *Less Than Significant With Mitigation Incorporated* – The proposed project will involve construction operations that have the potential to cause short-term significant noise impacts. In the short term, well drilling, pipeline trenching, construction, development and testing activities will result in noise

generated by excavators, drilling rig/drilling equipment (mast and draw-works, air compressors, drilling fluid pumps, drill pipe, etc), trenchers, and other noise making equipment required to complete well construction. Noise generated from a drill rig will reach approximately 80 dBA at a receptor located at a distance of 50 feet, though the nearest sensitive receptor is located approximately 75 feet from the project site. As outlined in item (a) this project will have a temporary impact on ambient noise levels during construction and operation. The mitigation measures set forth in that section are considered adequate to reduce construction and operation noise below 65 dB at the exterior of the closest resident, and thereby reduce the level of impact to less than significant. No further mitigation is required.

- e. *No Impact* – There nearest public airport is the San Bernardino International Airport approximately 4 miles to the northeast of the project site. According to the City of Colton General Plan Airport Noise Contours Map, provided as Figure XII-1, the project site is not located within the designated Noise Contour area; therefore, the project area has no potential to expose people residing or working in the project area to excessive noise levels as a result of the site's proximity to the airport. No impacts will occur as a result of project implementation. No mitigation is required.
- f. *No Impact* – There are no private airstrips located within two miles of the Project site. Therefore, the project area has no potential to expose people residing or working in the project area to excessive noise levels as a result of the site's proximity to a private airstrip. No impacts will occur as a result of project implementation.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant Impact* – Implementation of the Project will not induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). This project proposes to develop a new well and connecting pipeline in the City of Colton, which will connect to RHWCO’s existing water distribution system. Though construction of the new RHWCO well will require a temporary work force, this is short-term and with a maximum of about 10 employees will not induce substantial population growth. Additionally, the number of employees needed to operate the new well is minimal, as it is projected that one to two employees will visit the site on an as needed or scheduled maintenance basis. It is unknown whether these employees will be existing or new to RHWCO. Due to the serious drought within the community and throughout California, the development of a new well will be important to provide water to the existing population within RHWCO’s service area and to any projected growth within their service area. The Project itself will not directly induce population growth as it does not propose any housing and any indirect impacts of increasing the amount of water available within the RHWCO service area is considered less than significant. No mitigation is required.
- b. *No Impact* – Implementation of the Project will not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere. There is no housing located within the project footprint. Additionally, though the project site is located within the parking lot adjacent to an apartment complex, the Project will only impact the parking lot surrounding the apartment complex at the project location. Therefore, there will be no need to construct replacement housing or parking. No impacts are anticipated and no mitigation is required.
- c. *No Impact* – Please reference Response XIII(b) above. There is no existing housing located within the project site. Therefore, no people will be displaced that would result in a need to construct replacement housing. No impacts are anticipated and no mitigation is required.

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

SUBSTANTIATION

- a. *Less Than Significant Impact* – The fire station that serves the project is approximately one mile east of the project site; Colton Fire Department Station 214, is located on Meadow Lane, just north of Washington Street. The City of Colton Fire Department provides fire protection and emergency medical services for the City of Colton. The proposed project may require the use of chemicals such as sodium hypochlorite. Proper storage and handling are required to prevent any potential fire hazards; however, compliance with Federal, State, and local standards pertaining to hazardous materials would prevent a significant impact from occurring. The proposed Project will develop a well for RHWCO that will connect to the existing RHWCO water distribution system. The proposed structure—the masonry building enclosing the well and above ground pump motor—does not present a substantial fire hazard because the materials used to construct the enclosure are considered fire-resistant. Thus, with compliance to Federal, State, and local standards, no new or altered fire protection facilities will be required to serve this Project. Any impact to the existing fire protection system is considered random and less than significant. No mitigation is required.
- b. *Less Than Significant Impact* – The City of Colton receives police services through the City of Colton Police Department. The Department enforces local, state, and federal laws; performs investigations and makes arrests; and responds to City emergencies. The Police Department is located at 650 North La Cadena Drive, Colton, CA 92324. Colton’s Police Department is staffed with 51 sworn officers and 32 non-sworn employees. The proposed project will not include the kind of use that would likely attract criminal activity, except for random trespass and theft; however, any random trespass is unlikely because the project site will be fenced and the well itself will be enclosed. This will prevent any trespass from occurring during both operations and construction of the Project. The proposed well would not be readily accessible to the public as the project site is located within an existing fenced apartment complex, which only allows for resident and resident guest access. The potential for greater demand of police protection services or expansion of police infrastructure as a result of implementation of the proposed project is considered less than significant. No mitigation is required.
- c-e. *No Impact* – The Project will not generate significant numbers of new long-term jobs, nor attract new residents to the area. As a result, the implementation of the Project will not 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 public services to include: schools, parks, or other recreational activities. No impacts to schools, parks, or other public facilities are anticipated. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* – As previously discussed in Section XII, Population and Housing and Section XIII, Public Services, this Project will not contribute to an increase in the population beyond that already allowed or planned for by local and regional planning documents. The proposed project will not increase the use of recreational facilities, nor will it result in the physical deterioration of other surrounding facilities. No impact is forecast and no mitigation is required.

- b. *No Impact* – The proposed Project will develop a well to serve the RHWCO service area and will connect to RHWCO’s existing water distribution system through a new pipeline. The well will be installed and operated by RHWCO. The Project does not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. As previously stated, the well will be located within the parking lot of an existing apartment complex and will not impact any facilities located within this apartment complex. The pipeline will be located within existing road rights-of-way. Furthermore, the proposed project is not forecast to induce substantial population growth as the well will operate without daily in-person supervision; visits will occur by RHWCO employees on an as needed or scheduled maintenance basis. Therefore, no impacts are anticipated to occur under this issue, and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. TRANSPORTATION / TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

a&b. *Less Than Significant With Mitigation Incorporated* – The project footprint extends from the apartment complex in which the new well will be located, to the adjacent roadways in which the pipeline will be location on the following roadways: RV Center Drive, Washington Street, and finally Santo Antonio Drive, which is where the pipeline will connect to RHWCO’s existing water distribution system. The pipeline alignment will be constructed within existing rights-of-way within RV Center Drive, Washington Street, and Santo Antonio Drive; the exact locations of which are described in the Project Description, under Location. The roads within which the pipelines will be installed are all paved, developed roads ranging from 2 to 4 lanes in total. In the short term, construction of the proposed well and pipeline will result in the generation of around 15-20 additional roundtrips per day on the adjacent roadways by construction personnel and the removal of any graded material and delivery of well construction materials. No new roads are required to construct or operate this Project. However, construction within existing roadways is necessary to complete construction of the connecting pipeline, for a period of approximately 6 weeks. No temporary roadway closure will be required though one lane may be require closure at any given time throughout construction; during construction traffic will be managed through implementation of a traffic management plan in order to mitigate the congestion caused by constructing the pipeline within public right-of-ways or shoulders on various surrounding roadways.

Implementation of the Project has the potential to conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit; however, with the implementation of the following mitigation measure requiring a construction traffic management plan, the impacts of implementing the project would be considered less than significant as traffic flow can be maintained within the less than one-half mile pipeline alignment. Similarly, the Project could conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways; however, with the implementation of the following mitigation measure requiring a construction traffic management plan, the impacts of implementing the project would be considered less than significant. No additional mitigation is required.

TRAF-1 *A construction contractor will provide adequate traffic management resources, as determined by the City of Colton. The City shall require a construction traffic management plan for work in public roads that complies with the Work Area Traffic Control Handbook, or other applicable standard, to provide adequate traffic control and safety during excavation activities. The traffic management plan shall be prepared and approved by the City prior to initiation of excavation or pipeline construction. At a minimum this plan shall include how to minimize the amount of time spent on construction activities; how to minimize disruption of vehicle and alternative modes of transport traffic at all times, but particularly during periods of high traffic volumes; how to maintain safe traffic flow on local streets affected by construction at all times, including through the use of adequate signage, protective devices, flag persons or police assistance to ensure that traffic can flow adequately during construction; the identification of alternative routes that can meet the traffic flow requirements of a specific area, including communication (signs, webpages, etc.) with drivers and neighborhoods where construction activities will occur; and at the end of each construction day roadways shall be prepared for continued utilization without any significant roadway hazards remaining.*

TRAF-2 *The City shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable City of Colton standard design requirements.*

- c. *No Impact* – According to the City of San Bernardino General Plan San Bernardino International Airport Planning Boundaries map—provided as Figure VIII-6—the Project site is not located within the designated planning boundary. As a result, project implementation would not result in any changes in air traffic patterns at the San Bernardino International Airport, located approximately 4 miles northeast of the project site. No impacts to aviation activity will occur as a result of project implementation. No mitigation is required.
- d. *Less Than Significant With Mitigation Incorporated* – The Project will temporarily alter existing roadway operations during construction of the proposed pipeline. However, this alteration will not create any hazards due to design features of incompatible uses. The proposed Project will install 2,700 LF of pipeline within existing rights-of-way, but with implementation of mitigation measures TRAF-1 and TRAF-2 above, which require implementation of a construction traffic management plan, any potential increase in hazards due to design features or incompatible use will be

considered less than significant in the short term. In the long term, no impacts to any hazards or incompatible uses in existing roadways are anticipated because once the pipeline alignment is installed, the roadways will be returned to their original condition, or better.

Primary access to the well development site will be provided by entrances to the apartment complex on RV Center Drive, which has outlets at two locations on Washington Street. The primary access point is located just north of the project site; because the well will be developed within an existing parking lot, plenty of space for resident access to the apartment complex is available surrounding the well development location. Access to the site must comply with all City design standards, and would be reviewed by the City to ensure that inadequate design features or incompatible uses do not occur. Additionally, the proposed Project would be required to comply with all applicable fire code and ordinance requirements for construction and access to the site. Emergency response and evacuation procedures would be coordinated with the City, as well as the police and fire departments. Thus, any impacts are considered less than significant with implementation of mitigation measures TRAF-1 and TRAF-2, and no additional mitigation is required.

- e. *Less Than Significant With Mitigation Incorporated* – The well development site includes access to public roadways through two driveways, which are gated due to restricted access to the apartment complex. Access to the site is considered adequate for emergency purposes. The construction of the well would occur within an existing parking lot. The physical location of the proposed well development site will encompass approximately three parking spaces once completed, though these parking spaces are “no parking” zones at present and therefore no parking spaces will be eliminated as a result of the proposed project and both during construction and operation phases, resident access within the apartment complex will not be blocked by either the well or construction equipment. As stated under issue XVI(d) above, the Project will be required to comply with all City design standards and comply with all applicable fire code and ordinance requirements for access to the site.

No known emergency plans or routes or emergency responses or evacuation plans will be affected by this Project in the long term. During construction, a potential exists for short-term hazards and constraints on both normal and emergency access to roadways within the project footprint, especially when constructing the connecting pipeline because it will require partial lane closure within existing rights-of-way on 4- and 2-lane roadways. However, implementation of mitigation measure TRAF-1 and TRAF-2 will reduce impacts to a level of less than significant. With compliance of the above standards and ordinances, a design review by the City, and implementation of identified mitigation measures, the Project will provide adequate emergency access. No further mitigation is required.

- f. *Less Than Significant With Mitigation Incorporated* – The operation of the proposed RHWCO well and connecting pipeline has no potential to impact alternative transportation plans, policies, or programs. The Project operations in the long term will not generate significant additional traffic and no new public roads or alterations to any existing public roads will result. Construction of the proposed pipeline alignment has the potential to impact public transit, bicycle, or pedestrian facilities, and could otherwise decrease the performance or safety of such facilities during this phase. However, with the implementation of the construction traffic management plan required by the above mitigation measures TRAF-1 and TRAF-2, the impacts to public transit, bicycle or pedestrian facilities would be reduced to less than significant. No additional mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial change in the significance of tribal cultural resources, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to the California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: Please refer to the discussion under Section 5, Cultural Resources.

A Tribal Resource is defined in the Public Resources Code section 21074 and includes the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following: included or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources as defined in subdivision (k) of Section 5020.1;
- 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purpose of this paragraph, the lead agency shall consider the significance of the resources to a California American tribe;
- A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape;
- A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “non-unique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal resource if it conforms with the criteria of subdivision (a).

a&b. *Less Than Significant With Mitigation Incorporated* – The City of Colton initiated AB 52 consultation on September 6, 2018 with the four tribes that previously requested consultation the City under AB 52: San Manuel Band of Mission Indians, Gabrieleño Band of Mission Indians, San Gabriel Band of Mission Indians, and the Morongo Band of Mission Indians. No response was received from the San Gabriel Band of Mission Indians. The San Manuel Band of Mission Indians (SMBMI) responded via email on October 4, 2018. The tribe requested inclusion of a mitigation measure to

protect any Native American cultural resources discovered during the construction of the Project. The Gabrieleño Band of Mission Indians responded on September 10, 2018 requesting consultation and the Morongo Band of Mission Indians responded on September 14, 2018 requesting consultation; however, the Gabrieleño and Morongo Tribes ultimately concluded that they do not have any tribal cultural resource concerns for the proposed Project. As a result of the consultation with the tribes the following mitigation measure has been agreed to by the City of Colton and SMBMI:

- TCR-1** *In the event that Native American 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. Additionally, San Manuel Band of Mission Indians will be contacted if any such find occurs and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment. The archaeologist shall complete an isolate/site record for the find and submit this document to the applicant and Lead Agency for dissemination to the San Manuel Band of Mission Indians.*
- TCR-2** *If significant Native American historical resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, an SOI-qualified archaeologist shall be retained to develop a cultural resources Treatment Plan, as well as a Discovery and Monitoring Plan, the drafts of which shall be provided to San Manuel Band of Mission Indians for review and comment. The Lead Agency and/or applicant shall, in good faith, consult with San Manuel Band of Mission Indians on the disposition and treatment of any other cultural materials encountered during the project.*
- TCR-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 that code enforced for the duration of the project.*

With the incorporation of this mitigation measure, as well as the mitigation identified under Cultural Resources, any impacts under this issue are considered less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm-water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

a-c. *Less Than Significant With Mitigation Incorporated* – The proposed project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB). The proposed development of the well with a new pipeline connection will result in the construction of a new water facility—as the well itself will be a type of water facility. However, the construction of the well would not cause a significant environmental effect. The construction and development of a new well will fulfill current and future water needs of the customers in RHWCO's service area. Development of such water facilities will not cause a significant environmental effect if the recommended mitigation measures—as identified in previous sections—are implemented.

The project-related disturbed areas will not generate substantial additional runoff as the areas are already disturbed and are topographically flat. The area of overall disturbance at the well development site is small (about the size of three parking spaces), and runoff within the site is directed to the curb, which faces RV Center Drive within the gated apartment complex, and runs off into adjacent storm drains. The proposed pipeline alignment will occur within existing roadways, and once constructed the drainage pattern within the roadways will remain essentially the same. It is not anticipated that the storm drains will be relocated or impacted by the construction of the pipeline. As such, no substantial increase in runoff is forecast to result from implementing the proposed project. No discharge that would exceed treatment requirements of the Santa Ana Regional Water Quality Control Board is associated with the proposed project. However, in order to alleviate any potential impacts, RHWCO will implement mitigation measure HYD-2, which identifies

specific requirements to ensure that any discharged water will meet water quality standards of the aforementioned RWQCBs and that no significant degradation of surface water quality will result from the proposed project.

- d. *Less Than Significant With Mitigation Incorporated* – The proposed well and pipeline development is necessary to add new water to RHWCO’s system in order to provide an adequate amount of water to meet customer demand. With the implementation of mitigation measure HYD-3, which ensures that RHWCO will not cause other wells within the area to experience a severe impact from drawing additional water from the Riverside North groundwater basin, any impacts under this issue are considered less than significant. As previously stated, according to the 2015 San Bernardino Valley Regional Urban Water Management Plan, RHWCO has the right to construct new wells within its service area and outside of its service area as the need arises, therefore RHWCO has a right to develop and extract water from the proposed well under their current agreements with associated water agencies within the San Bernardino Valley Region. Based on the available data, the proposed project site is best suited for recharge and will have the least impact on the basin. Therefore, the Project will have sufficient water supply to serve the construction needs, and the development of the new well with the amended entitlements, will allow RHWCO to serve the community with a greater water supply to provide necessary water in the drought. The project will require permission from the State Water Resources Board (SWRCB) Division of Drinking Water to connect the new well to RHWCO’s existing distribution system. No further mitigation is required.
- e. *No Impact* – The proposed project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments. The proposed project will develop a new well to supply water to RHWCO’s service area as the need for water within the service area grows in the future; no potential exists to adversely impact a wastewater treatment provider. No mitigation is required.
- f&g. *Less Than Significant With Mitigation Incorporated* – This project will result in construction waste from the removal of asphalt, concrete, and similar materials. The inert wastes can be disposed of at existing municipal solid waste facilities, which have adequate capacity to accept inert wastes generated by this project or can be recycled onsite. The Project will not require trash services from the City of Colton’s trash, green waste, and recycling provider, CR&R, as it will not require on-site employee oversight except on an as needed or scheduled maintenance basis. Once in operation, the only above-ground features of the project will be the developed well and the building in which the new well will be housed. Construction and demolition (C & D) waste will be recycled to the maximum extent feasible in accordance with the California Green Building Code, and any residual materials will be delivered to one of several C & D disposal sites in the area surrounding the project site. The Project will not conflict with any state, federal, or local regulations regarding solid waste. Solid waste will be disposed of in accordance with existing regulations at an existing licensed landfill—such as the San Timoteo Solid Waste Disposal Site—with adequate capacity to handle the waste. The nearest landfill to the Project area is the San Timoteo Solid Waste Disposal Site, which has a maximum permitted capacity of 2,000 tons per day, and a remaining capacity of 13,605,488 cubic yards (CY), with a maximum permitted capacity of 20,400,000 CY according to CalRecycle. To further reduce potential impacts to solid waste facilities due to the large scale of the materials that may require disposal or recycling as a result of the construction of the pipeline alignment, the following mitigation measure will be implemented:

UTIL-1 *The contract with demolition and construction contractors shall include the California Green Building Code requirement for construction debris recycling, such that all materials that can feasibly be recycled shall be salvaged and recycled. This includes, but is not limited to, wood, metals, concrete, road base, and asphalt. The contractor shall submit a recycling*

plan to the City for review and approval prior to the start of demolition/construction activities to accomplish this objective.

Therefore, with the above mitigation measure, the Project is expected to comply with all regulations related to solid waste under federal, state, and local statutes and be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs. No further mitigation is necessary.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to 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, 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

The analysis in this Initial Study and the findings reached indicate that the proposed project can be implemented without causing any new project specific or cumulatively considerable unavoidable significant adverse environmental impacts. Mitigation is required to control potential environmental impacts of the proposed project to a less than significant impact level. The following findings are based on the detailed analysis of the Initial Study of all environmental topics and the implementation of the mitigation measures identified in the previous text and summarized following this section.

- a. *Less Than Significant With Mitigation Incorporated* – The Project has no potential to cause a significant impact to any known any biological or cultural resources. The project has been identified as having no potential to degrade the quality of the natural environment, substantially reduce 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, or reduce the number or restrict the range of a rare or endangered plant or animal. The Project site is in an urban area with developed structures and infrastructure surrounding the property and no natural biological habitat exists within the area of potential effects (APE). Based on the historic disturbance of the site, and its current disturbed condition, the potential for impacting cultural or biological resources is low. No cultural resources could be affected because the site itself has been graded and previously disturbed so it is not anticipated that any resources could be affected by the Project because no cultural resources exist. However, because it is not known what could be unearthed upon any drilling and trenching activities, contingency mitigation measures are provided to ensure that, in the unlikely event that any resources are found, they are protected from any potential impacts. Please see biological and cultural sections of this Initial Study.
- b. *Less Than Significant With Mitigation Incorporated* – Based on the analysis in this Initial Study, the proposed new RHWCW well and new pipeline connection have the potential to cause impacts that are individually or cumulatively considerable. There are no other projects in the project vicinity to which this project would make a cumulatively considerable impact. The issues of Aesthetics, Air

Quality, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation and Traffic, and Utilities and Service Systems require the implementation of mitigation measures to reduce impacts to a less than significant level and ensure that cumulative effects are not cumulatively considerable. All other environmental issues were found to have no significant impacts without implementation of mitigation. The potential cumulative environmental effects of implementing the proposed project have been determined to be less than considerable and thus, less than significant impacts.

- c. *Less Than Significant With Mitigation Incorporated* – The proposed project includes activities that have a potential to cause direct substantial adverse effects on humans. The issues of Aesthetics, Air Quality (temporarily), Geology and Soils, Hazards and Hazardous Materials, and Noise require the implementation of mitigation measures to reduce human impacts to a less than significant level. All other environmental issues were found to have no significant impacts on humans without implementation of mitigation. The potential for direct human effects from implementing the proposed project have been determined to be less than significant.

Conclusion

This document evaluated all CEQA issues contained in the latest Initial Study Checklist form. The evaluation determined that either no impact or less than significant impacts would be associated with the issues of Agricultural And Forestry Resources, Biological Resources, Cultural Resources, Greenhouse Gas Emissions, Land Use And Planning, Mineral Resources, Population/Housing, Public Services, Recreation, and Tribal Resources. The issues of Aesthetics, Air Quality, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation and Traffic, and Utilities and Service Systems require the implementation of mitigation measures to reduce impacts to a less than significant level. The required mitigation has been proposed in this Initial Study to reduce impacts for these issues to a less than significant impact.

Based on the findings in this Initial Study, the City of Colton proposes to adopt a Mitigated Negative Declaration (MND) for the RHWCO Well Development Project. A Notice of Intent to Adopt a Mitigated Negative Declaration (NOI) will be issued for this project by the City. The Initial Study and NOI will be circulated for 30 days of public comment because this project involves the state as either a responsible or trustee agency. At the end of the 30-day review period, a final MND package will be prepared and it will be reviewed by the City for a possible adoption at a future Planning Commission meeting, the date for which has not yet been determined. If you or your agency comments on the MND/NOI for this project, you will be notified about the meeting date in accordance with the requirements in Section 21092.5 of CEQA (statute).

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino*, (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors*, (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Revised 2016

Authority: Public Resources Code sections 21083 and 21083.09

Reference: Public Resources Code sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3/ 21084.2 and 21084.3

SUMMARY OF MITIGATION MEASURES

Air Quality

AIR-1 Fugitive Dust Control. The following measures shall be incorporated into Project plans and specifications for implementation:

- Apply soil stabilizers or moisten inactive areas;
- Prepare a high wind dust control plan;
- Address previously disturbed areas if subsequent construction is delayed;
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day);
- Cover all stock piles with tarps at the end of each day or as needed;
- Provide water spray during loading and unloading of earthen materials;
- Minimize in-out traffic from construction zone;
- Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard; and
- Sweep streets daily if visible soil material is carried out from the construction site.

AIR-2 Exhaust Emissions Control

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3-rated or better heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

Cultural Resources

CUL-1 Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the City onsite inspector. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.

CUL-2 Should any paleontological resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the City onsite inspector. The paleontological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.

Geology and Soils

GEO-1 Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill material. If covering is not feasible, then measures such as the use of straw bales or sand bags shall be used to capture and hold eroded material on the Project site for future cleanup.

GEO-2 Excavated areas shall be properly backfilled and compacted. Paved areas disturbed by this Project will be repaved in such a manner that roadways and other disturbed areas are returned to as near the pre-Project condition as is feasible.

GEO-3 All exposed, disturbed soil (trenches, stored backfill, etc.) will be sprayed with water or soil binders twice a day or more frequently if fugitive dust is observed migrating from the site within which the water facilities are being installed.

GEO-4 The length of trench, which can be left open at any given time, will be limited to that needed to reasonable perform construction activities. This will serve to reduce the amount of backfill stored onsite at any given time.

Hazards and Hazardous Materials

HAZ-1 All spills or leakage of petroleum products during construction activities will be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility.

Hydrology and Water Quality

HYD-1 RHWCO shall test the groundwater produced from the well prior to discharge. Prior to or during discharge any contaminants shall be blended below the pertinent MCL or treated prior to discharge, including sediment or other material.

HYD-2 RHWCO shall require that the construction contractor prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. The SWPPP shall include a Spill Prevention and Cleanup Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented in the SWPPP may include but not be limited to:

- The use of silt fences or coir rolls;
- The use of temporary stormwater desilting or retention basins;
- The use of water bars to reduce the velocity of stormwater runoff;
- The use of wheel washers on construction equipment leaving the site;
- The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;
- The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and
- Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.

HYD-3 RHWCO shall conduct a pump test of the new well and determine whether any other wells are located within the cone of depression once the well reaches equilibrium. If any wells are adversely impacted by future cumulative groundwater extractions from the proposed well, RHWCO shall offset this impact through provision of water service; or adjusting the flow rates or hours of operation to mitigate adverse impacts.

HYD-4 RHWCO and construction contractor shall select best management practices applicable to the project site and activities on the site to achieve a reduction in pollutants to the maximum extent practicable (including but not limited the development and implementation of a SWPPP), both during and following development of the proposed municipal-supply water well and associated facilities, and to control urban runoff after the project is constructed and the well (if approved for operation post well testing) is in operation.

Noise

- NOI-1 Noise measures shall be implemented to reduce noise levels to the greatest extent feasible (at or below 65 dBA). Measures shall include portable noise barriers and scheduling specific construction activities to avoid conflict with adjacent sensitive receptors. No well drilling activities shall occur before 7:30 a.m. or after 6:00 p.m., and shall be limited to Monday through Friday.
- NOI-2 All construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by applicant personnel during construction activities.
- NOI-3 RHWCO will establish a noise complaint/response program and will respond to any noise complaints received for this project by measuring noise levels at the affected receptor. If the noise level exceeds a Ldn of 65 dBA exterior or a Ldn of 45 dBA interior at the receptor, the applicant will implement adequate measures to reduce noise levels to the greatest extent feasible, including portable noise barriers or scheduling specific construction activities to avoid conflict with adjacent sensitive receptors.
- NOI-4 All construction activities other than specific well drilling intervals shall be restricted to daylight hours, Monday – Saturday, unless an emergency exists.
- NOI-5 Well pump noise levels to be limited to 50 dB(A) or below at the exterior of the nearest sensitive noise receptor. This shall be accomplished by installing surface well housing, housed in concrete block structure that attenuates noise to meet this performance standard.
- NOI-6 During future construction activities with heavy equipment within 300 feet of occupied residences, vibration field tests shall be conducted at the nearest occupied residences. To the extent feasible, if vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold.

Transportation / Traffic

- TRAF-1 A construction contractor will provide adequate traffic management resources, as determined by the City of Colton. The City shall require a construction traffic management plan for work in public roads that complies with the Work Area Traffic Control Handbook, or other applicable standard, to provide adequate traffic control and safety during excavation activities. The traffic management plan shall be prepared and approved by the City prior to initiation of excavation or pipeline construction. At a minimum this plan shall include how to minimize the amount of time spent on construction activities; how to minimize disruption of vehicle and alternative modes of transport traffic at all times, but particularly during periods of high traffic volumes; how to maintain safe traffic flow on local streets affected by construction at all times, including through the use of adequate signage, protective devices, flag persons or police assistance to ensure that traffic can flow adequately during construction; the identification of alternative routes that can meet the traffic flow requirements of a specific area, including communication (signs, webpages, etc.) with drivers and neighborhoods where construction activities will occur; and at the end of each construction day roadways shall be prepared for continued utilization without any significant roadway hazards remaining.
- TRAF-2 The City shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable City of Colton standard design requirements.

Tribal Cultural Resources

- TCR-1 In the event that Native American 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. Additionally, San Manuel Band of Mission Indians will be contacted if any such find occurs and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment. The archaeologist shall complete an isolate/site record for the find and submit this document to the applicant and Lead Agency for dissemination to the San Manuel Band of Mission Indians.
- TCR-2 If significant Native American historical resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, an SOI-qualified archaeologist shall be retained to develop a cultural resources Treatment Plan, as well as a Discovery and Monitoring Plan, the drafts of which shall be provided to San Manuel Band of Mission Indians for review and comment. The Lead Agency and/or applicant shall, in good faith, consult with San Manuel Band of Mission Indians on the disposition and treatment of any other cultural materials encountered during the project.
- TCR-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 that code enforced for the duration of the project.

Utilities and Service Systems

- UTIL-1 The contract with demolition and construction contractors shall include the California Green Building Code requirement for construction debris recycling, such that all materials that can feasibly be recycled shall be salvaged and recycled. This includes, but is not limited to, wood, metals, concrete, road base, and asphalt. The contractor shall submit a recycling plan to the City for review and approval prior to the start of demolition/construction activities to accomplish this objective.

REFERENCES

City of San Bernardino General Plan, November 1, 2005

County of San Bernardino General Plan, April 12, 2007

Giroux & Associates, Air Quality and GHG Impact Analysis Riverside Highland Water Company Well Development Project, City of Colton, California dated September 26, 2017

South Coast Air Quality Management District CEQA Air Quality Handbook, November, 1993 Rev.

U.S. Department of Agriculture, Natural Resources Conservation Service, National Cooperative Soil Survey, "*Soil Map—San Bernardino County Southwestern Park, California*" generated June 2, 2017

U.S. Fish and Wildlife Service IPaC Trust Resources Report generated on June 8, 2017

https://soilseries.sc.egov.usda.gov/OSD_Docs/T/TUJUNGA.html

FIGURES

FIGURE 1
Regional Location

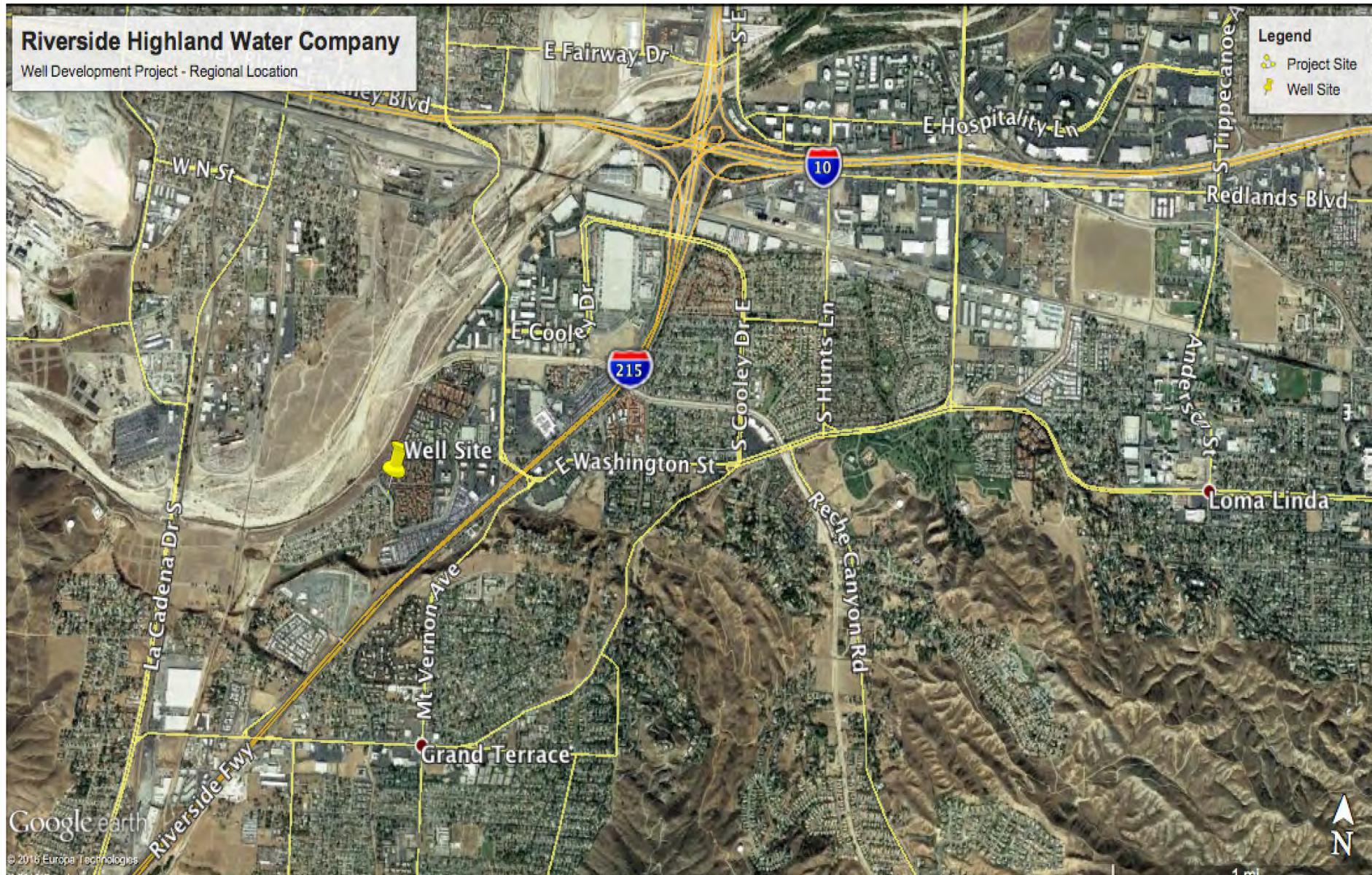


FIGURE 2
Site Location



FIGURE 3
Site Entrances #1 and #2

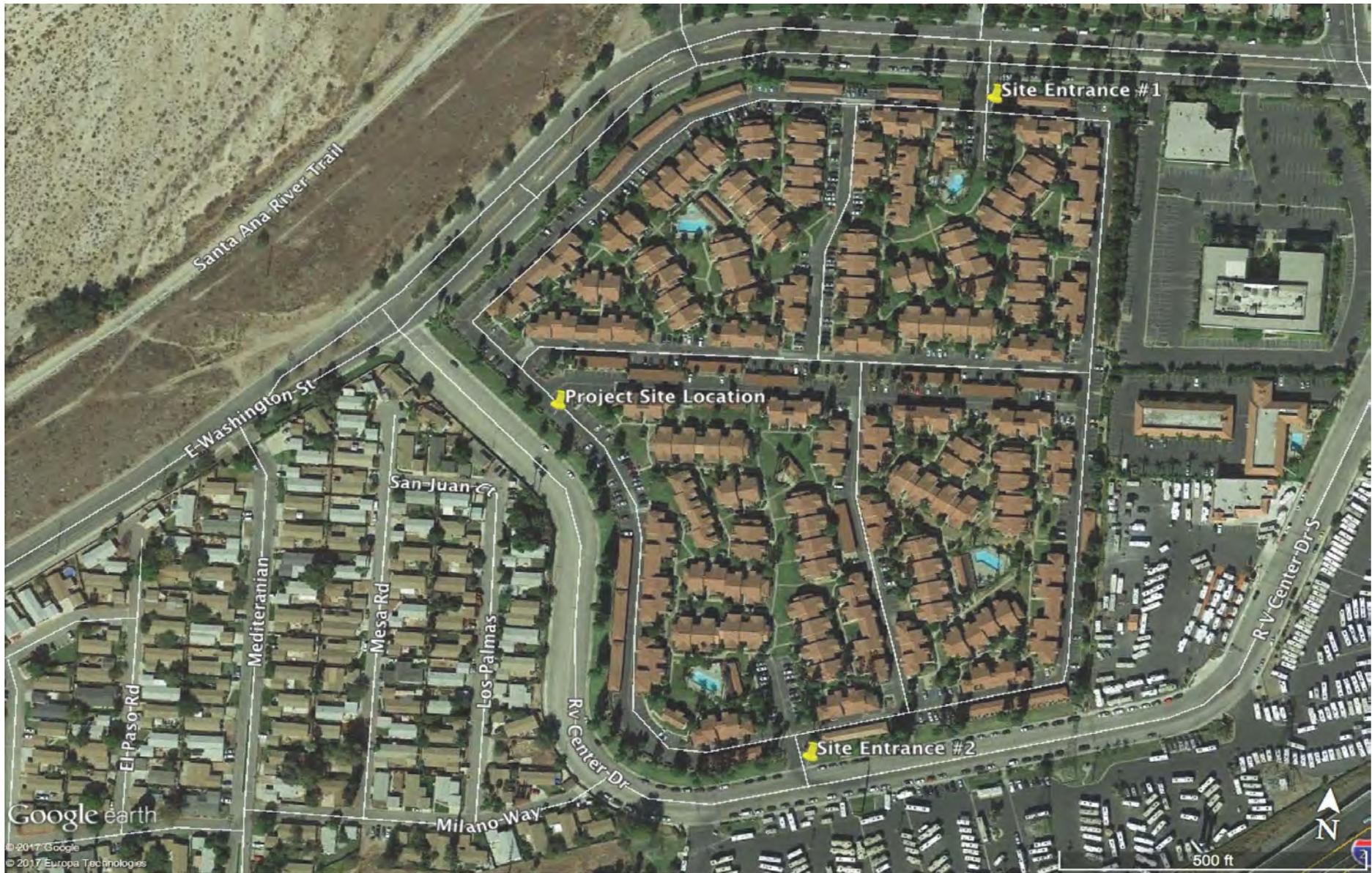
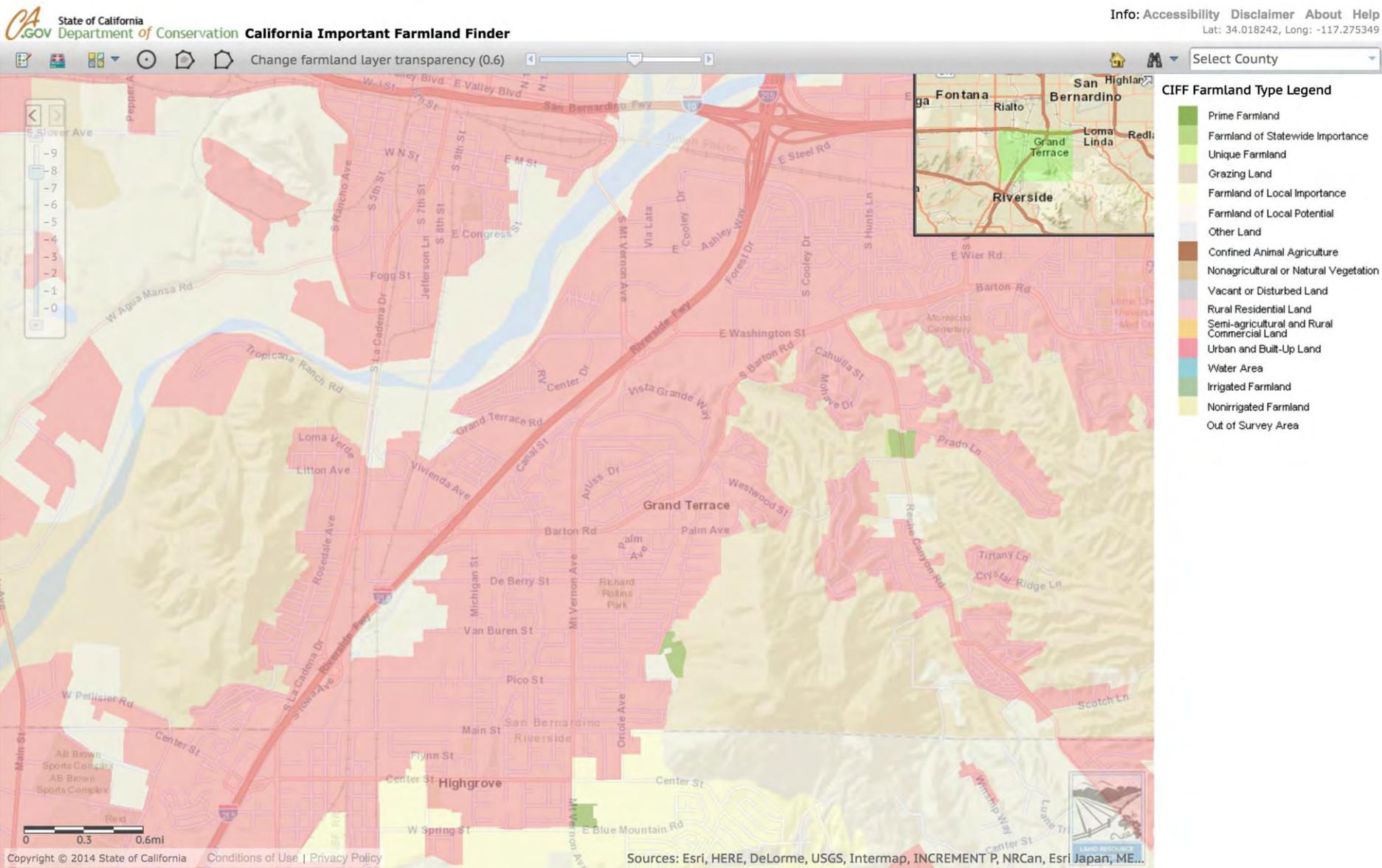


FIGURE II-1 Farmland Map



**FIGURE VI-1
Seismic Hazards Map**

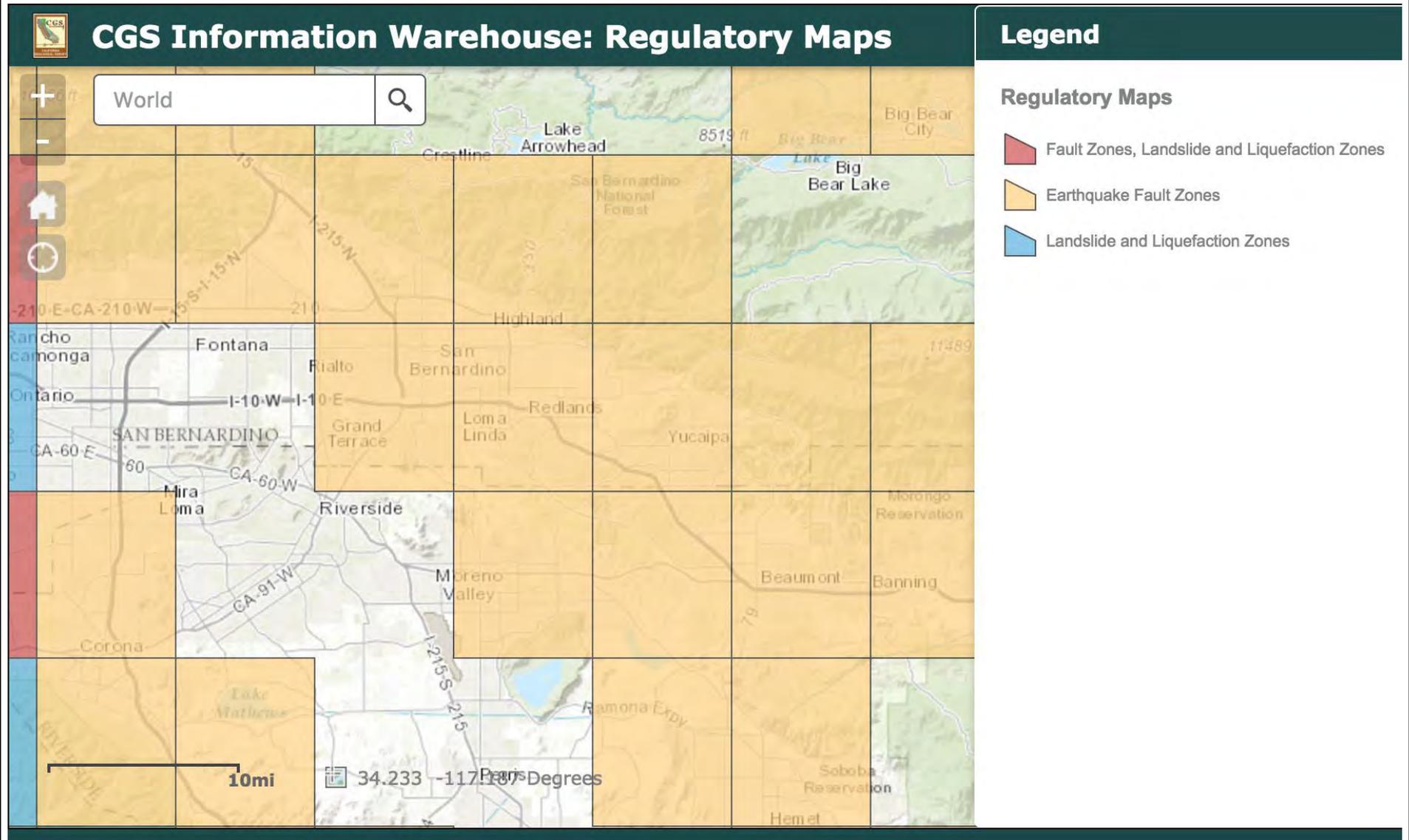


FIGURE VI-2 USGS Quarternary Faults

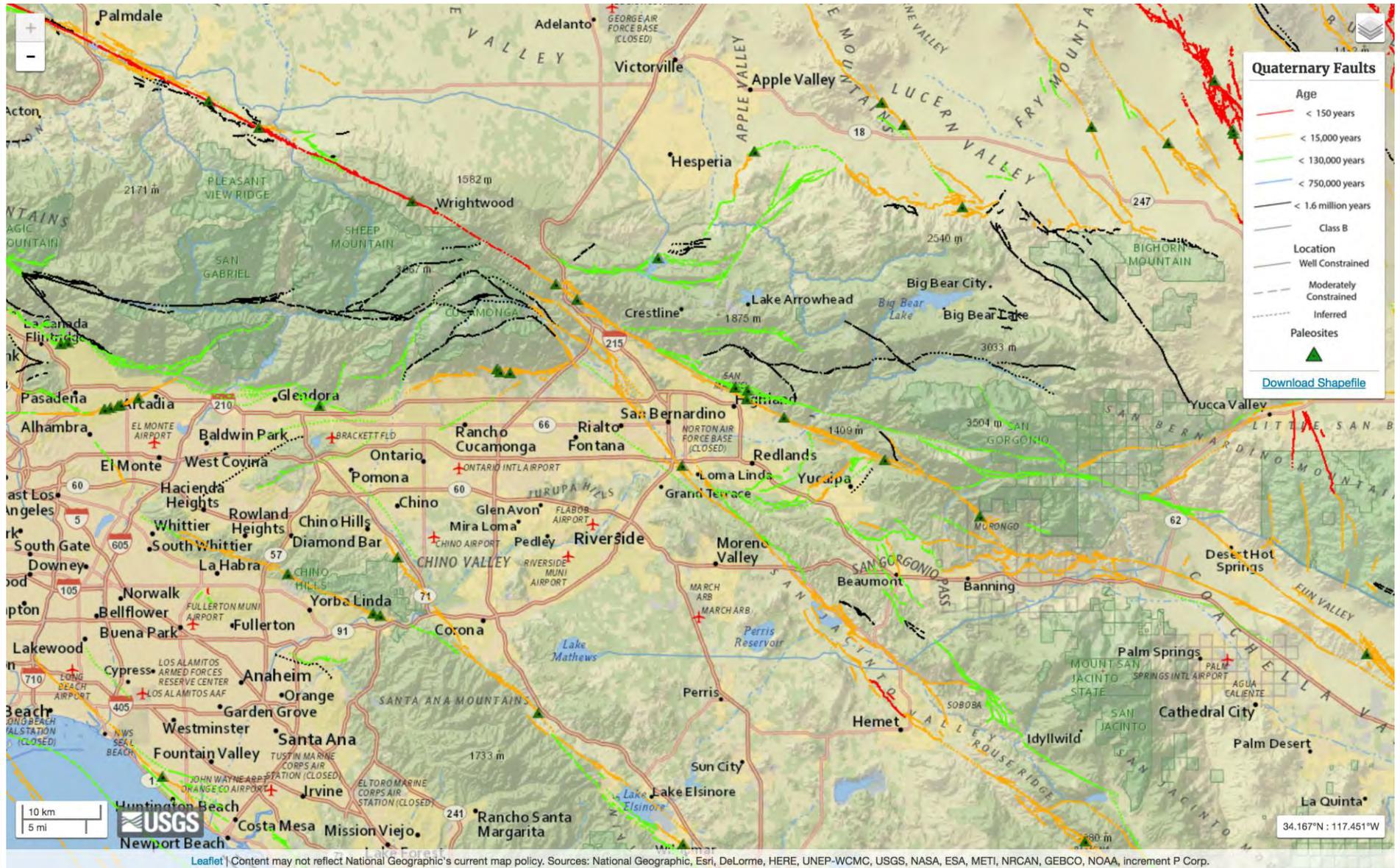
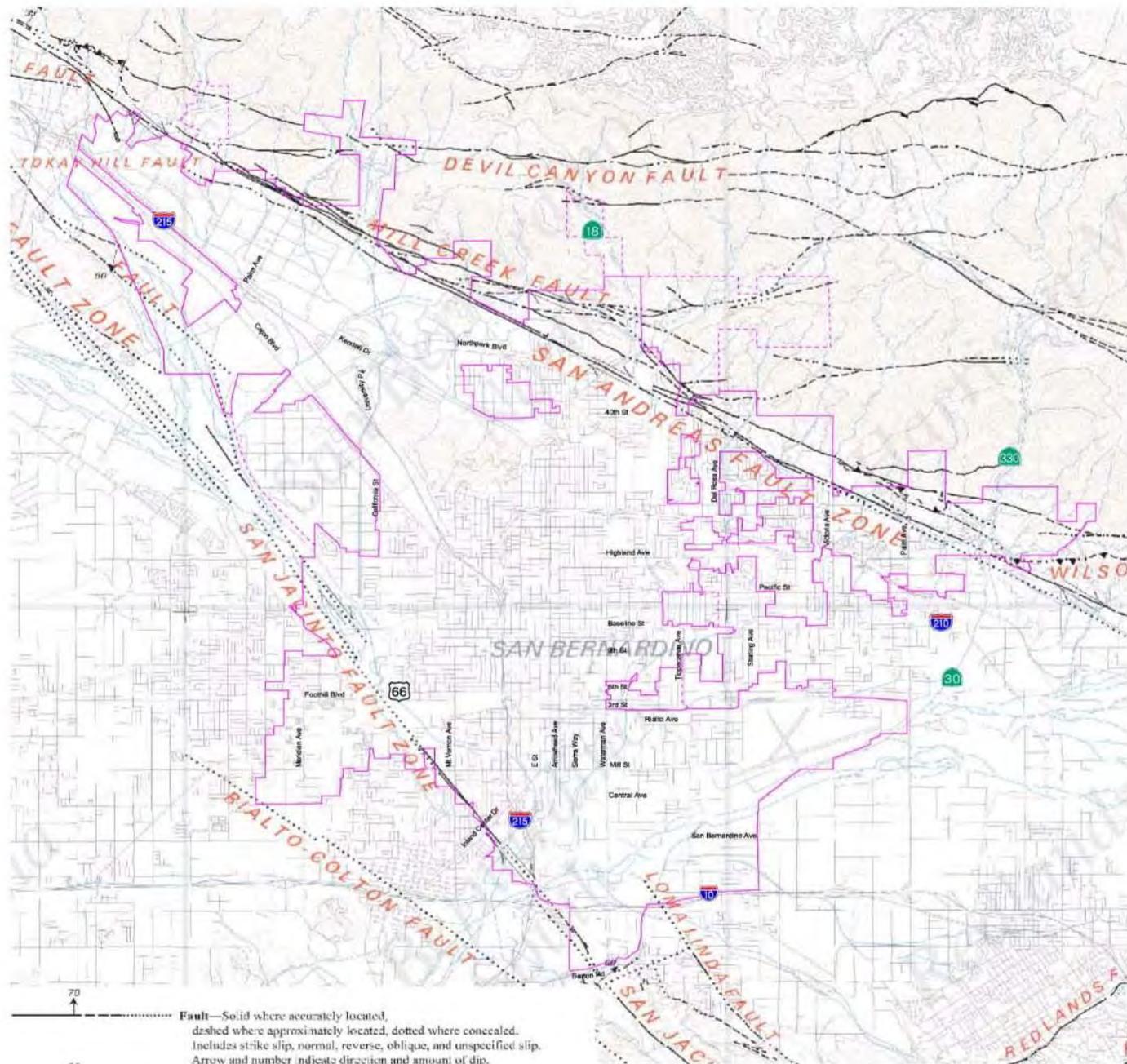
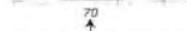


FIGURE VI-3 Regional Faults



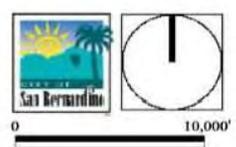

Fault—Solid where accurately located, dashed where approximately located, dotted where concealed. Includes strike slip, normal, reverse, oblique, and unspecified slip. Arrow and number indicate direction and amount of dip.


Thrust fault—Teeth on upper plate; solid where accurately located, dashed where approximately located, dotted where concealed. Arrow and number indicate direction and amount of dip.


Rotational slip normal fault—Bars on hanging wall side; solid where accurately located, dashed where approximately located, dotted where concealed.

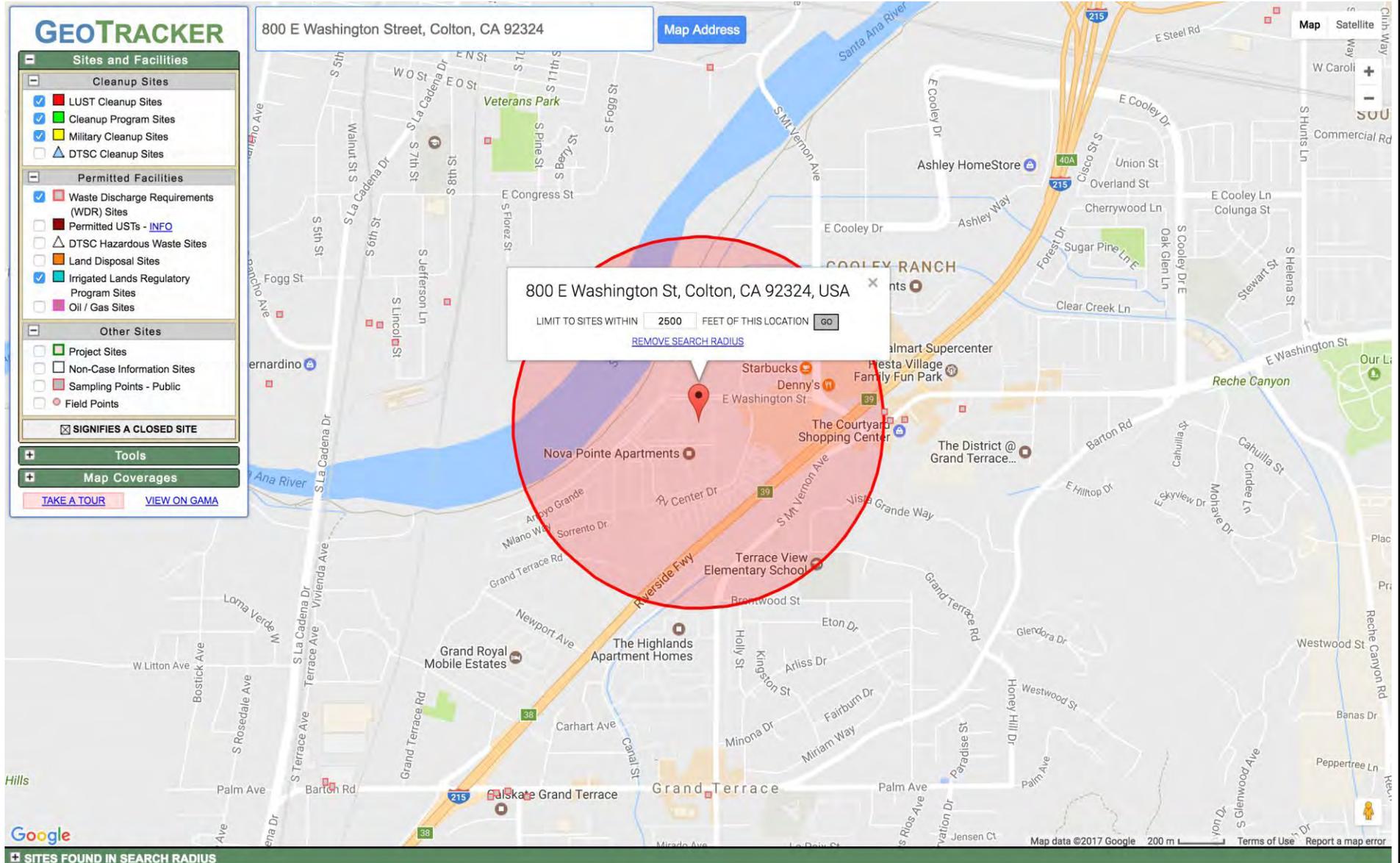

City Boundary


Sphere Boundary

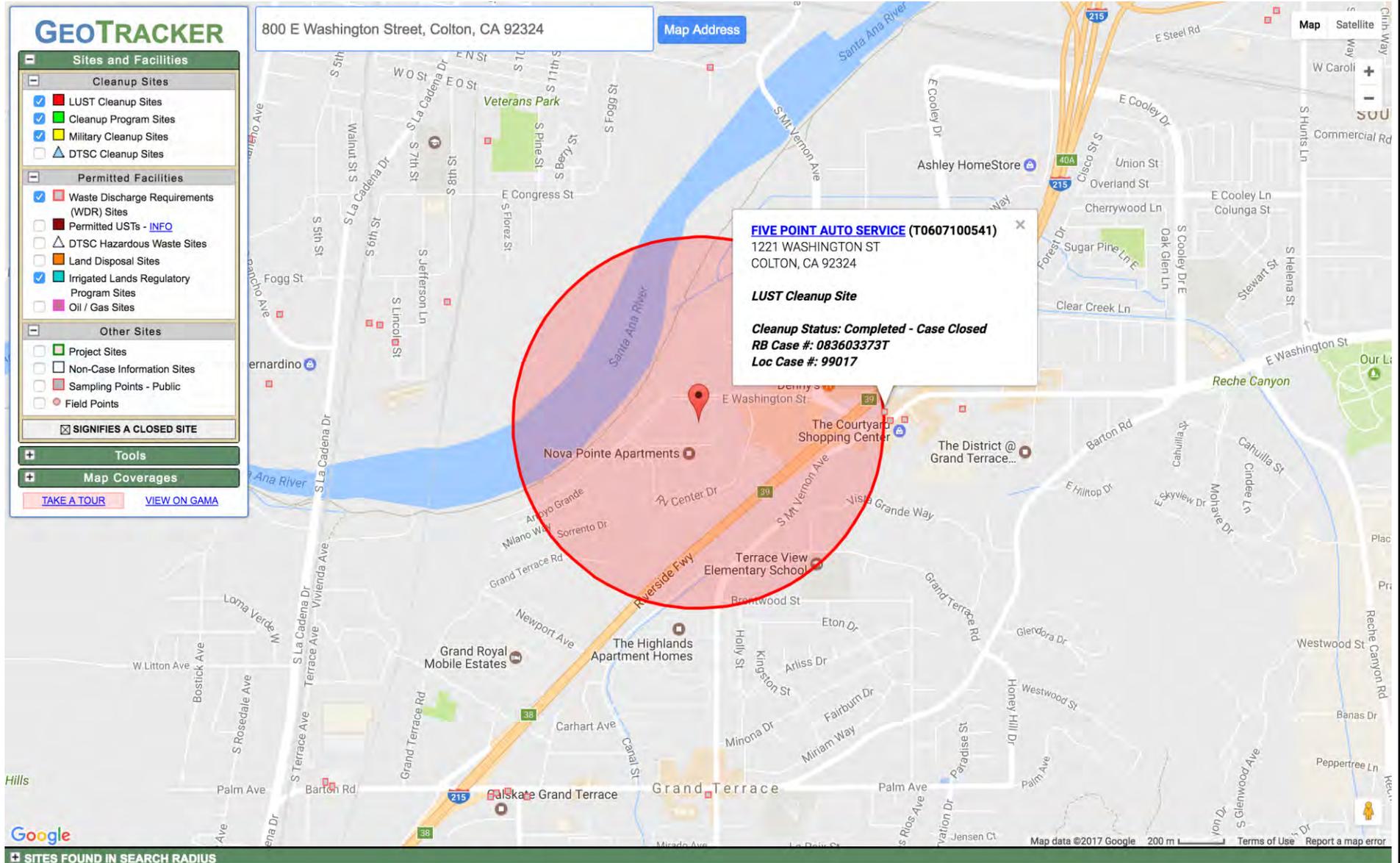


Source: City of San Bernardino General Plan (Figure S-4), November 2005

**FIGURE VIII-1
GeoTracker (page 1)**



**FIGURE VIII-2
GeoTracker (page 2)**



**FIGURE VIII-3
GeoTracker (page 3)**

CA .GOV STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER

Home Tools Reports UST Case Closures Information

FIVE POINT AUTO SERVICE (T0607100541) - (MAP) [SIGN UP FOR EMAIL ALERTS](#)

1221 WASHINGTON ST
COLTON, CA 92324
SAN BERNARDINO COUNTY
LUST CLEANUP SITE
[PRINTABLE CASE SUMMARY / CSM REPORT](#)

CLEANUP OVERSIGHT AGENCIES
SAN BERNARDINO COUNTY (LEAD) - CASE #: 99017
SANTA ANA RWQCB (REGION 8) - CASE #: 083603373T
CASEWORKER: [TOM E. MBEKE-EKANEM](#)
CUF Claim #: 14182
CUF Priority Assigned: B
CUF Amount Paid: \$61,010

Summary Cleanup Action Report Regulatory Activities Environmental Data (ESI) Site Maps / Documents Community Involvement Related Cases LUST CUF Data

Regulatory Profile [PRINTABLE CASE SUMMARY](#)

CLEANUP STATUS - [DEFINITIONS](#)
COMPLETED - CASE CLOSED AS OF 10/10/2002 - [CLEANUP STATUS HISTORY](#)

POTENTIAL CONTAMINANTS OF CONCERN
GASOLINE

POTENTIAL MEDIA OF CONCERN
AQUIFER USED FOR DRINKING WATER SUPPLY, SOIL

FILE LOCATION
LOCAL AGENCY

USER DEFINED BENEFICIAL USE
SW - MUNICIPAL AND DOMESTIC SUPPLY

DESIGNATED BENEFICIAL USE(S) - [DEFINITIONS](#)
MUN, AGR, IND, PROC

DWR GROUNDWATER SUB-BASIN NAME
Upper Santa Ana Valley - Riverside-Arlington (8-2.03)

CALWATER WATERSHED NAME
Santa Ana River - Colton-Rialto - Colton (801.44)

Site History
No site history available

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**FIGURE VIII-4
GeoTracker (page 4)**

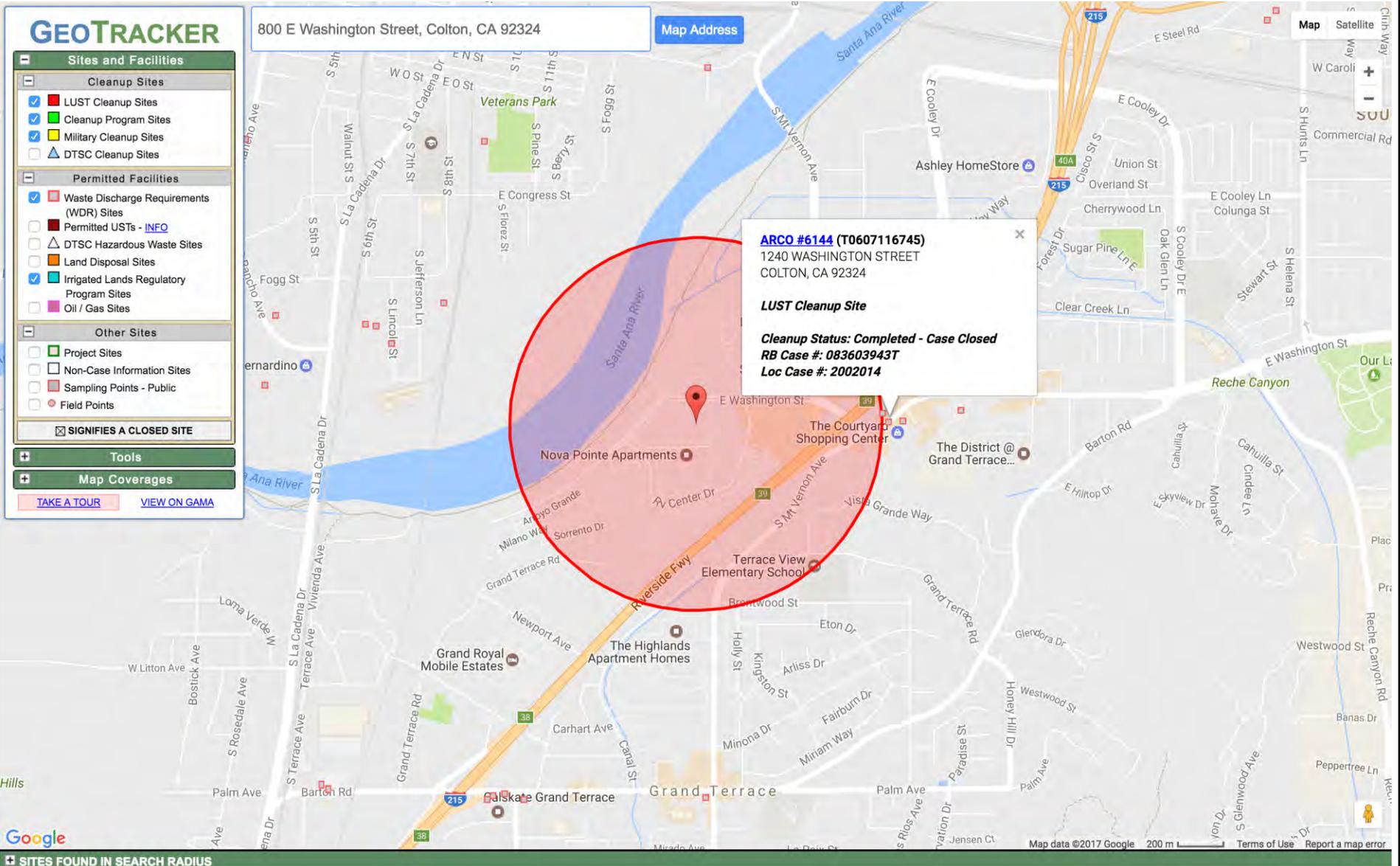


FIGURE VIII-5
GeoTracker (page 5)

CA.GOV STATE WATER RESOURCES CONTROL BOARD
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SAN BERNARDINO COUNTY
LUST CLEANUP SITE
[PRINTABLE CASE SUMMARY / CSM REPORT](#)

CLEANUP OVERSIGHT AGENCIES
SAN BERNARDINO COUNTY (LEAD) - CASE #: 2002014
SANTA ANA RWQCB (REGION 8) - CASE #: 083603943T
CASEWORKER: [VALERIE JAHN-BULL](#)

CUF Claim #: 10714
CUF Priority Assigned: D
CUF Amount Paid:

Summary Cleanup Action Report Regulatory Activities Environmental Data (ESI) Site Maps / Documents Community Involvement Related Cases

Regulatory Profile [PRINTABLE CASE SUMMARY](#)

CLEANUP STATUS - [DEFINITIONS](#)
COMPLETED - CASE CLOSED AS OF 3/25/2005 - [CLEANUP STATUS HISTORY](#)

POTENTIAL CONTAMINANTS OF CONCERN
GASOLINE

POTENTIAL MEDIA OF CONCERN
UNDER INVESTIGATION

FILE LOCATION
LOCAL AGENCY

USER DEFINED BENEFICIAL USE
SW - NO BENEFICIAL USE

DESIGNATED BENEFICIAL USE(S) - [DEFINITIONS](#)
MUN, AGR, IND, PROC

DWR GROUNDWATER SUB-BASIN NAME
Upper Santa Ana Valley - Riverside-Arlington (8-2.03)

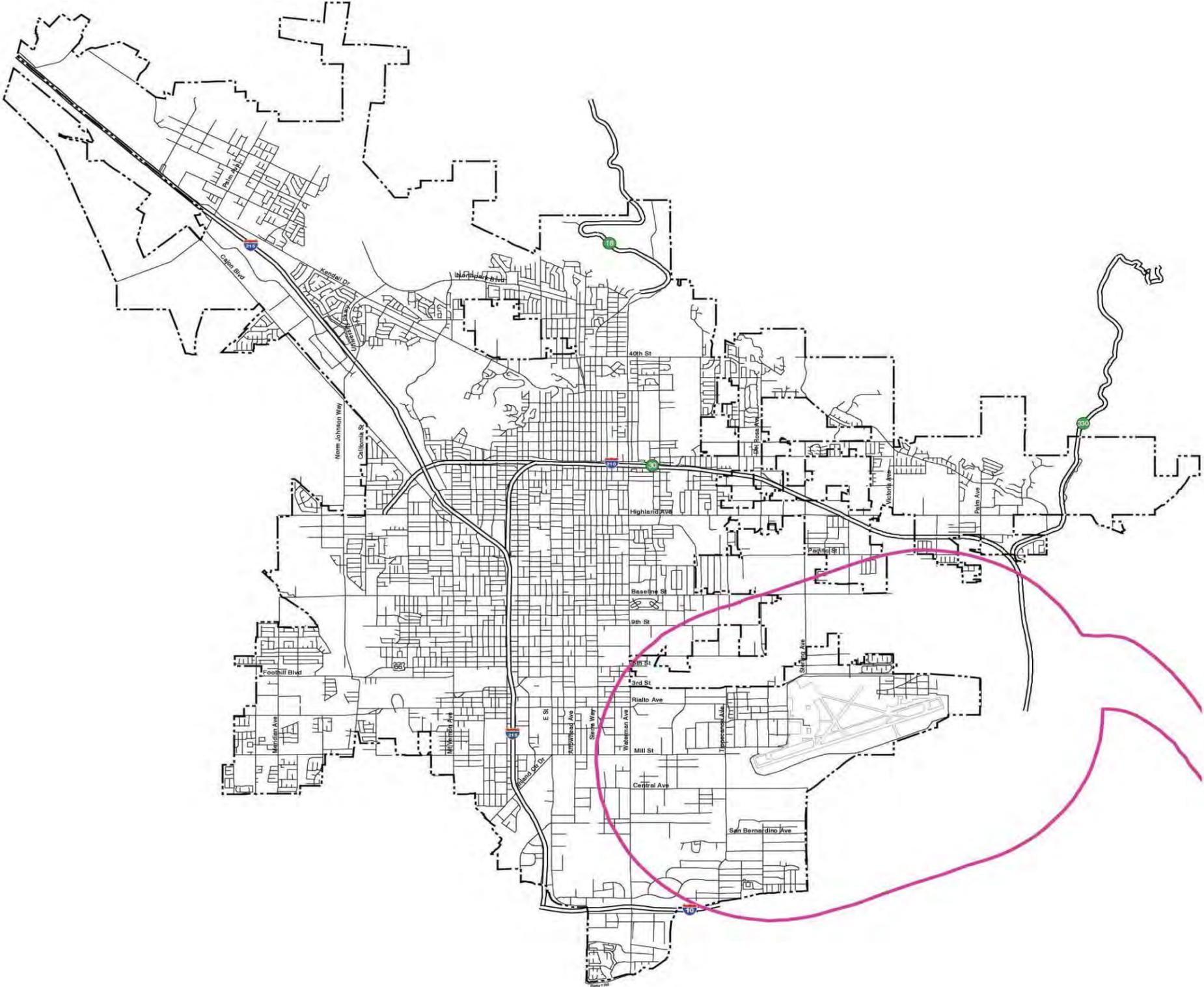
CALWATER WATERSHED NAME
Santa Ana River - Colton-Rialto - Colton (801.44)

Site History
No site history available

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**FIGURE VIII-6
San Bernardino International Airport Planning Boundaries**



-  Airport Influence Area
-  City Boundary

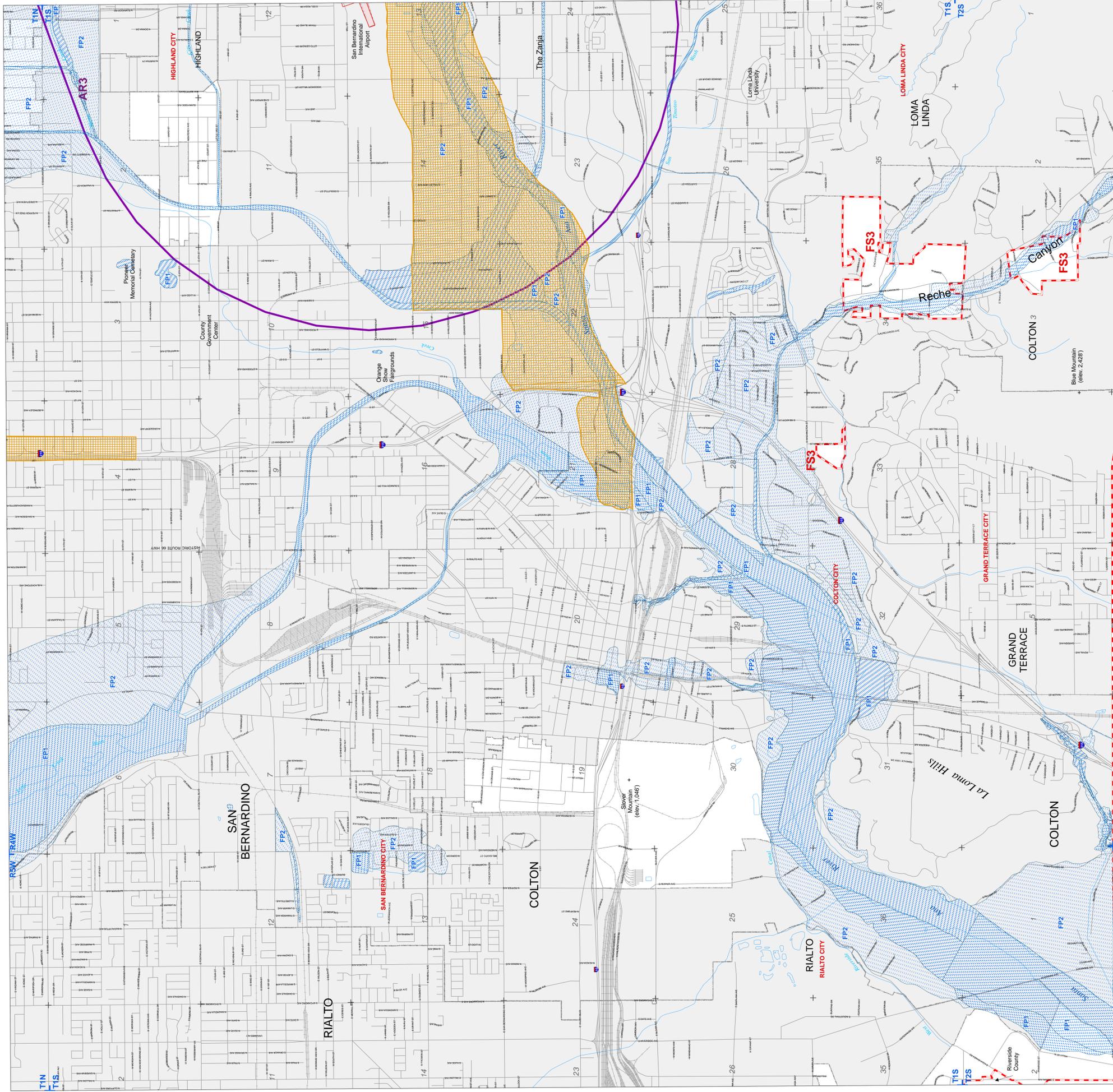
To be included upon adoption of the Comprehensive Land Use Plan for the SBIA, as may be appropriate:

-  Runway Protection Zone
-  Inner Turning Zone
-  Inner Safety Zone
-  Outer Safety Zone
-  Traffic Pattern Zone
-  CNEL Noise Contours

Note: As of the adoption of this General Plan, the Airport Master Plan and the Comprehensive Land Use Plan (CLUP) for the San Bernardino International Airport (SBIA) were in the process of being prepared. As a consequence, the precise noise contours and safety zones were not available to include in this Plan. Upon adoption of the Airport Master Plan and CLUP for the SBIA, the new noise and safety zones will be incorporated into this Figure and, if necessary, the Airport Influence Area adjusted.



Source: City of San Bernardino General Plan (LU-4), November 2005



RIVERSIDE COUNTY

FIGURE VIII-7

San Bernardino County Land Use Plan
GENERAL PLAN
 Hazard Overlays

Dam Inundation
 Area of Inundation
 Line of Inundation
 Dam
 Limit of Study

Map data compiled on 7/26/12 and 12/15/2012.
 Map data compiled on 7/26/12 and 12/15/2012.
 Positional accuracy of map data is at least plus or minus 300 feet.
 minus 300 feet.

Flood Plain Safety (FP) Overlay District
 FP1 (Zone A - Inside 100 Year Flood Plain)
 FP2 (Zone X - Inside 500 Year Flood Plain)
 FP3 (Local Flood Data)

Map data compiled on 7/26/12 and 12/15/2012.
 Map data compiled on 7/26/12 and 12/15/2012.
 Positional accuracy of flood data is plus or minus 150 feet.
 plus or minus 150 feet.

Noise Hazard (NH) Overlay District
 Noise Contour in LDN
 Runway Location

Map data compiled on 7/26/12 and 12/15/2012.
 Map data compiled on 7/26/12 and 12/15/2012.
 Positional accuracy of map data is at least plus or minus 750 feet.
 plus or minus 750 feet.

Fire Safety (FS) Overlay District
 Fire Safety Boundary
 Fire Safety Area 1
 Fire Safety Area 2

Map data compiled on 7/26/12 and 12/15/2012.
 Map data compiled on 7/26/12 and 12/15/2012.
 Positional accuracy of map data is at least plus or minus 750 feet.
 plus or minus 750 feet.

Airport Safety Review
 AR3 (Airport Safety Review Area 3)
 AR4 (Airport Safety Review Area 4)

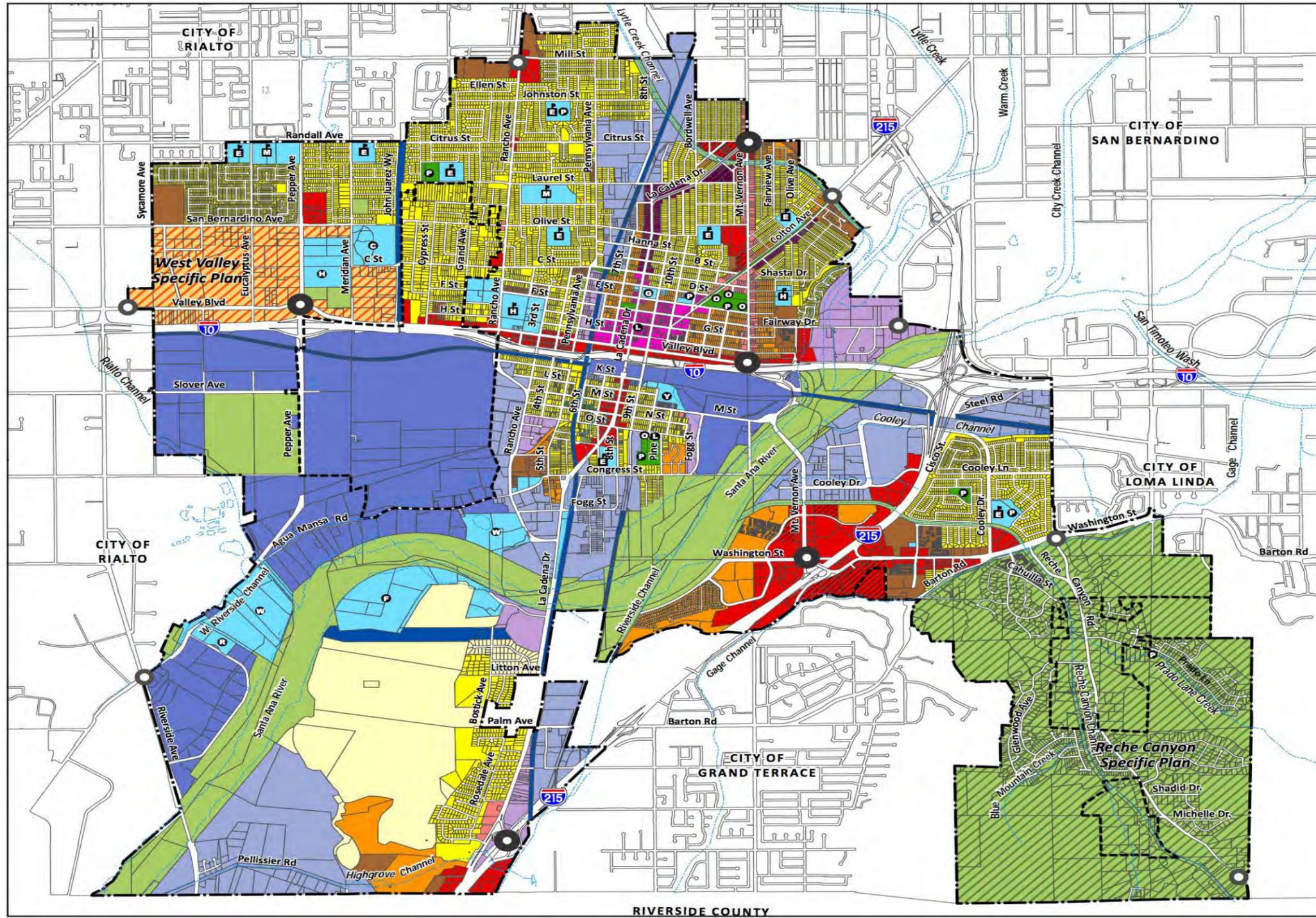
Map data compiled on 7/26/12 and 12/15/2012.
 Map data compiled on 7/26/12 and 12/15/2012.
 Positional accuracy of map data is at least plus or minus 300 feet.
 plus or minus 300 feet.



SCALE 1:14,400



**FIGURE X-1
Land Use Plan**



**Figure LU-6:
Land Use Plan**

Land Use Designations

- Very Low Density Residential (0.1 - 2.0 DU/AC)
- Low Density Residential (2.1-8.0 DU/AC)
- Medium Density Residential (8.1-16.0 DU/AC)
- High Density Residential (14.1-22.0 DU/AC)
- Neighborhood Commercial
- General Commercial
- Industrial Park
- Light Industrial
- Heavy Industrial
- Mixed Use - Downtown (2.0-30.0 DU/AC; 2.0 FAR)
- Mixed Use - Neighborhood (2.0-8.0 DU/AC; 1.0 FAR)
- Open Space - Recreation
- Open Space - Resource
- Public/Institution
- Railroad/Utility Corridor

Specific Plans

- Reche Canyon Specific Plan
- West Valley Specific Plan

Overlay District

- Residential Overlay

Community Gateways

- Major Gateway
- Minor Gateway

Public Facilities/Institutions

 Elementary School	 Hospital (Private)
 Middle School	 Library
 High School	 Landfill
 Cemetery	 City Maintenance Yard
 Community Center	 Parks
 City Hall	 Power Plant
	 Wastewater Facility

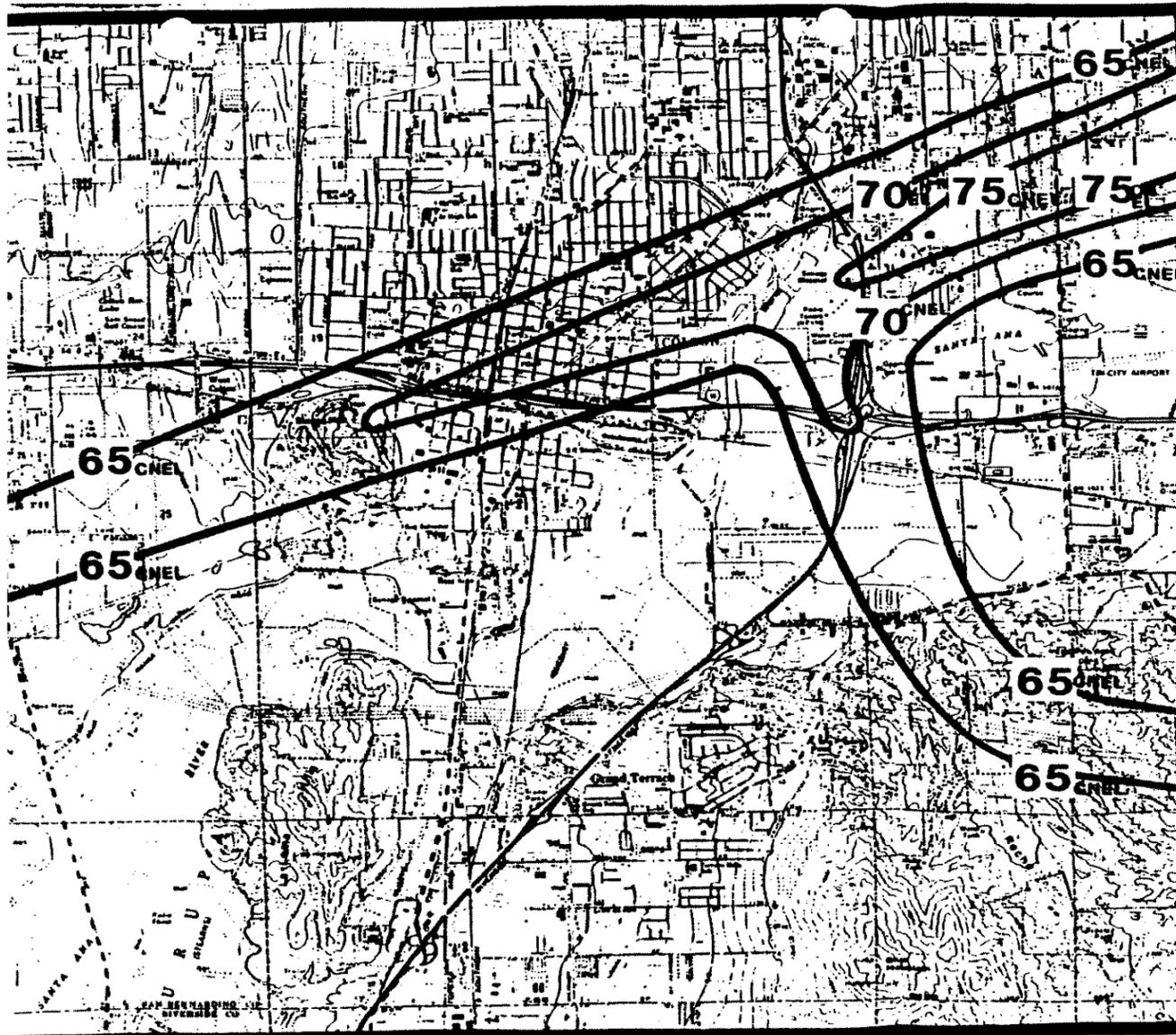
Base Map

- City Boundary
- Sphere of Influence
- Watercourse

Date: May 21, 2012
 Prepared by: Hogle-Ireland, Inc.
 Source: San Bernardino County Assessor, 2010 and City of Colton, 2011.

Feet
 0 2,000 4,000 6,000 8,000

FIGURE XII-1
Airport Noise Contour Map



AIRPORT NOISE CONTOURS

**ASSESSMENT OF NOISE IMPACTS
WITHIN THE CITY OF COLTON**



FIGURE 5-

APPENDIX 1

AIR QUALITY and GHG IMPACT ANALYSES
RIVERSIDE HIGHLAND WATER COMPANY WELL DEVELOPMENT PROJECT
CITY OF COLTON, CALIFORNIA

Prepared for:

Tom Dodson & Associates
Attn: Kaitlyn Dodson
2150 N. Arrowhead Avenue
San Bernardino, California 92405

Date:

September 26, 2017

Project No.: P17-036 AQ

ATMOSPHERIC SETTING

The climate of western San Bernardino County, as with all of Southern California, is governed largely by the strength and location of the semi-permanent high pressure center over the Pacific Ocean and the moderating effects of the nearby vast oceanic heat reservoir. Local climatic conditions are characterized by very warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and comfortable humidities. Unfortunately, the same climatic conditions that create such a desirable living climate combine to severely restrict the ability of the local atmosphere to disperse the large volumes of air pollution generated by the population and industry attracted in part by the climate.

The City of Colton is situated in an area where the pollutants generated in coastal portions of the Los Angeles basin undergo photochemical reactions and then move inland across the project site during the daily sea breeze cycle. The resulting smog at times gives western San Bernardino County some of the worst air quality in all of California. Fortunately, significant air quality improvement in the last decade suggests that healthful air quality may someday be attained despite the limited regional meteorological dispersion potential.

Winds across the project area are an important meteorological parameter because they control both the initial rate of dilution of locally generated air pollutant emissions as well as controlling their regional trajectory. Winds across the project site display a very unidirectional onshore flow from the southwest-west that is strongest in summer with a weaker offshore return flow from the northeast that is strongest on winter nights when the land is colder than the ocean. The onshore winds during the day average 6-10 mph while the offshore flow is often calm or drifts slowly westward at 1-3 mph.

During the daytime, any locally generated air emissions are readily transported northeastward toward the San Bernardino Mountains without generating any localized air quality impacts. The nocturnal drainage winds which move slowly across the area have some potential for localized stagnation, but fortunately, these winds have their origin in the adjacent mountains where background pollution levels are low such that any localized contributions do not create any unhealthful impacts.

One other important local wind pattern within the project vicinity drainages occurs when high pressure over the Great Basin creates funneled, gusty down-canyon flows. The air moving downslope is warmed by a process called "adiabatic compression." Because the air was already dry at the top of the mountains, it is super-dry when it reaches the bottoms of local canyons. Such "Santa Ana" downslope winds can create dust storms, promote wildfires, blow over trucks and campers on freeways and also can cause adverse psychological reactions in some people.

In conjunction with the two characteristic wind regimes that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which the pollutants are mixed. The summer on-shore flow is capped by a massive dome of warm, sinking air which caps a shallow layer of cooler ocean air. These marine/subsidence inversions act like a giant lid over the basin. They allow for local

mixing of emissions, but they confine the entire polluted air mass within the basin until it escapes into the desert or along the thermal chimneys formed along heated mountain slopes.

In winter, when the air near the ground cools while the air aloft remains warm, radiation inversions are formed that trap low-level emissions such as automobile exhaust near their source. As background levels of primary vehicular exhaust rise during the seaward return flow, the combination of rising non-local baseline levels plus emissions trapped locally by these radiation inversions creates micro-scale air pollution "hot spots" near freeways, shopping centers and other traffic concentrations in coastal areas of the Los Angeles Basin. Because the nocturnal airflow across the project site has its origin in very lightly developed areas of the San Bernardino Mountains, background pollution levels at night in winter are very low in the project vicinity. Localized air pollution contributions are insufficient to create a "hot spot" potential when superimposed upon the clean nocturnal baseline. The combination of winds and inversions are critical determinants in leading to the degraded air quality in summer, and the generally good air quality in winter in the project area.

AIR QUALITY SETTING

AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule, which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to "non-attainment" for the 8-hour ozone standard.

Table 1

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

Table 1 (continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

Table 2
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter. 	<ul style="list-style-type: none"> • Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions. 	<ul style="list-style-type: none"> • Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with nitrogen oxides in sunlight. 	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	<ul style="list-style-type: none"> • Contaminated soil. 	<ul style="list-style-type: none"> • Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Respirable Particulate Matter (PM-10)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions. 	<ul style="list-style-type: none"> • Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	<ul style="list-style-type: none"> • Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics. 	<ul style="list-style-type: none"> • Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes. 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide (NO₂) that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO₂ standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December, 2012, the federal annual standard for PM-2.5 was reduced from 15 µg/m³ to 12 µg/m³ which matches the California AAQS. The severity of the basin's non-attainment status for PM-2.5 may be increased by this action and thus require accelerated planning for future PM-2.5 attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2015 after extensive analysis and public input. The adopted national 8-hour ozone standard is 0.07 ppm which matches the current California standard. It will require three years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2022. Ultimate attainment of the new standard in ozone problem areas such as Southern California might be after 2025.

In 2010 a new federal one-hour primary standard for nitrogen dioxide (NO₂) was adopted. This standard is more stringent than the existing state standard. Based upon air quality monitoring data in the South Coast Air Basin, the California Air Resources Board has requested the EPA to designate the basin as being in attainment for this standard. The federal standard for sulfur dioxide (SO₂) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO₂ is typically not a problem pollutant.

BASELINE AIR QUALITY

Existing and probable future levels of air quality in the project area can be best inferred from ambient air quality measurements conducted by the South Coast Air Quality Management District (SCAQMD) at the Riverside Rubidoux Air Monitoring Station. Table 3 summarizes the last five years of published data from this monitoring station. The following conclusions can be drawn from this data:

1. Photochemical smog (ozone) levels often exceed standards. The 1-hour state standard was violated an average of 27 times a year in the last five years near Riverside. The 8-hour state ozone standard has been exceeded an average of 61 times a year in the past five years. The Federal eight-hour ozone standard has averaged around 40 violations per year since 2012. While ozone levels are still high, they are much lower than 10 to 20 years ago. Attainment of all clean air standards in the project vicinity is not likely to occur soon, but the severity and frequency of violations is expected to continue to slowly decline during the current decade.
2. Carbon monoxide measurements at the Riverside Rubidoux station fluctuate but were lowest in 2012. Federal and state standards have not been exceeded in the last five years. Despite continued basin-wide growth, maximum one- or 8-hour CO levels at the closest air monitoring station are less than the 25 percent of their most stringent standards because of continued vehicular improvements. These data suggests that baseline CO levels in the project area are generally healthful and can accommodate a reasonable level of additional traffic emissions before any adverse air quality effects would be expected.
3. PM-10 levels as measured at Riverside Rubidoux exceed the state standard less than 13 percent of measured days, but no days in excess of the national particulate standard have been recorded for the same period. Particulate levels have traditionally been high in Riverside County because of agricultural activities, dry soil conditions and upwind industrial development.
4. A substantial fraction of PM-10 is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). The federal standard is exceeded on approximately 2 percent of measured days. Year 2014 showed the lowest maximum 24-hour concentration. However, both the frequency of violations of particulate standards, as well as high percentage of PM-2.5, are air quality concerns in the project area.

Table 3

Air Quality Monitoring Summary (2012-2016)
(Number of Days Standards Were Exceeded, and
Maximum Levels During Such Violations)
(Entries shown as ratios = samples exceeding standard/samples taken)

Pollutant/Standard	2012	2013	2014	2015	2016
Ozone					
1-Hour > 0.09 ppm (S)	27	13	29	31	33
8-Hour > 0.07 ppm (S)	70	38	69	59	71
8- Hour > 0.075 ppm (F)	47	26	41	39	47
Max. 1-Hour Conc. (ppm)	0.13	0.12	0.14	0.13	0.14
Max. 8-Hour Conc. (ppm)	0.10	0.10	0.10	0.11	0.10
Carbon Monoxide					
1-hour > 20. ppm (S)	0	0	0	0	0
8- Hour > 9. ppm (S,F)	0	0	0	0	0
Max 8-hour Conc. (ppm)	1.6	2.0	1.9	1.7	1.7
Nitrogen Dioxide					
1-Hour > 0.18 ppm (S)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.06	0.06	0.06	0.06	0.07
Respirable Particulates (PM-10)					
24-hour > 50 µg/m ³ (S)	19/121	10/119	10/361	67/354	58/302
24-hour > 150 µg/m ³ (F)	0/121	0/119	0/361	0/354	0/302
Max. 24-Hr. Conc. (µg/m ³)	67.	135.	100.	61.	82.
Fine Particulates (PM-2.5)					
24-Hour > 35 µg/m ³ (F)	7/352	6/353	0/110	17/343	4/357
Max. 24-Hr. Conc. (µg/m ³)	38.1	60.3	30.9	56.6	39.1

Source: South Coast AQMD Riverside/Rubidoux Air Monitoring Station (4144)
(S) = state standard, (F) = federal standard

AIR QUALITY PLANNING

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with “serious” or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised and approved over the past decade. The most current regional attainment emissions forecast for ozone precursors (ROG and NO_x) and for carbon monoxide (CO) and for particulate matter are shown in Table 4. Substantial reductions in emissions of ROG, NO_x and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air “blueprint” in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date was to “slip” from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Because projected attainment by 2021 required control technologies that did not exist yet, the SCAQMD requested a voluntary “bump-up” from a “severe non-attainment” area to an “extreme non-attainment” designation for ozone. The extreme designation was to allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on “black-box” measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from “severe-17” to “extreme.” This reclassification set a later attainment deadline (2024), but also required the air basin to adopt even more stringent emissions controls.

Table 4**South Coast Air Basin Emissions Forecasts (Emissions in tons/day)**

Pollutant	2010^a	2015^b	2020^b	2025^b
NOx	603	451	357	289
VOC	544	429	400	393
PM-10	160	155	161	165
PM-2.5	71	67	67	68

^a2010 Base Year.

^bWith current emissions reduction programs and adopted growth forecasts.

Source: California Air Resources Board, 2013 Almanac of Air Quality

In other air quality attainment plan reviews, EPA had disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA stated that the current attainment plan relied on PM-2.5 control regulations that had not yet been approved or implemented. It was expected that a number of rules that were pending approval would remove the identified deficiencies. If these issues were not resolved within the next several years, federal funding sanctions for transportation projects could result. The 2012 AQMP included in the current California State Implementation Plan (SIP) was expected to remedy identified PM-2.5 planning deficiencies.

The federal Clean Air Act requires that non-attainment air basins have EPA approved attainment plans in place. This requirement includes the federal one-hour ozone standard even though that standard was revoked around eight years ago. There was no approved attainment plan for the one-hour federal standard at the time of revocation. Through a legal quirk, the SCAQMD is now required to develop an AQMP for the long since revoked one-hour federal ozone standard. Because the current SIP for the basin contains a number of control measures for the 8-hour ozone standard that are equally effective for one-hour levels, the 2012 AQMP was believed to satisfy hourly attainment planning requirements.

AQMPs are required to be updated every three years. The 2012 AQMP was adopted in early 2013. An updated AQMP was required for completion in 2016. The 2016 AQMP was adopted by the SCAQMD Board in March, 2017, and has been submitted to the California Air Resources Board for forwarding to the EPA. The 2016 AQMP acknowledges that motor vehicle emissions have been effectively controlled and that reductions in NOx, the continuing ozone problem pollutant, may need to come from major stationary sources (power plants, refineries, landfill flares, etc.) . The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2032
Annual PM-2.5 (12 µg/m ³)	2025

8-hour ozone (75 ppb)	2024 (old standard)
1-hour ozone (120 ppb)	2023 (rescinded standard)
24-hour PM-2.5 (35 $\mu\text{g}/\text{m}^3$)	2019

The key challenge is that NO_x emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional stringent NO_x control measures are adopted and implemented, ozone attainment goals may not be met.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing water improvement projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

AIR QUALITY IMPACT

STANDARDS OF SIGNIFICANCE

Air quality impacts are considered “significant” if they cause clean air standards to be violated where they are currently met, or if they “substantially” contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

- a. Conflicts with or obstructs implementation of the applicable air quality plan.
- b. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.
- c. Results in a cumulatively considerable net increase of any criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- d. Exposes sensitive receptors to substantial pollutant concentrations.
- e. Creates objectionable odors affecting a substantial number of people.

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based

upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Table 5
Daily Emissions Thresholds

Pollutant	Construction	Operations
ROG	75	55
NO _x	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SO _x	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Additional Indicators

In its CEQA Handbook, the SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation
- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.
- Project could generate vehicle trips that cause a CO hot spot.

CONSTRUCTION ACTIVITY IMPACTS

CalEEMod was developed by the SCAQMD to provide a computer model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

Although exhaust emissions will result from on and off-site construction equipment, the exact types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. Estimated construction emissions were modeled using CalEEMod2016.3.1 to identify maximum daily emissions for each pollutant during project construction.

The project involves the construction of a new potable well with associated structures and equipment and connecting pipeline. The approximate ground disturbance area is 1.5 acres. Construction will occur in three phases: well drilling, then equipping and then pipeline installation. The well equipping phases will start after the well is drilled and tested. Project construction activities are estimated to require the following construction fleet and schedule which was modeled in CalEEMod and shown in Table 6.

Table 6
CalEEMod Construction Activity Equipment Fleet and Workdays

Casing and Well Drilling 40 days	1 Drill Rig
	1 Pump
	1 Loader/Backhoe
Equipping 60 days	1 Crane
	1 Welder
	1 Loader/Backhoe
	1 Generator Set
	1 Forklift
Pipeline Installation 40 days	1 Concrete Saw
	1 Trencher
	1 Forklift
	1 Loader/Backhoe

Utilizing this indicated equipment fleet and durations shown in Table 6 the following worst case daily construction emissions are calculated by CalEEMod and are listed in Table 7.

Table 7
Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions	ROG	NO_x	CO	SO₂	PM-10	PM-2.5
Year 2018						
Unmitigated	1.9	15.4	11.5	0.0	5.3	3.0
Mitigated	1.9	15.4	11.5	0.0	2.8	1.7
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated to be below SCAQMD CEQA thresholds without the need for added mitigation. The only model-based mitigation measured applied for this project was:

- Water exposed dirt surfaces two times per day to minimize the generation of fugitive dust generation.

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure.

LOCALIZED SIGNIFICANCE THRESHOLDS

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NO_x), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. LSTs are only applicable to on-site emissions.

LST screening tables are available for 25, 50, 100, 200 and 500 meter source-receptor distances. For this project the most stringent 25 meter distance was used to reflect the nearest adjacent residences (78 feet to the east).

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites for varying distances. For this project the most stringent thresholds for a 1 acre site were used.

The following thresholds and emissions in Table 8 are therefore determined (pounds per day):

Table 8
LST and Project Emissions (pounds/day)

LST 1 acre/25 meters Central San Bernardino Valley	CO	NOx	PM-10	PM-2.5
LST Thresholds	667	118	4	3
Max On-Site Emissions Total				
Unmitigated	12	15	5	3
Mitigated	12	15	3	2

CalEEMod Output in Appendix

LSTs were compared to the maximum daily construction activities. As seen above, emissions will meet the LST for construction thresholds with the application of the following mitigation measure:

- Exposed surfaces will be watered two times per day

LST impacts are less-than-significant with the application of this mitigation measure.

OPERATIONAL IMPACTS

Operational air pollution emissions will be minimal. Electrical generation of power will be used for pumping. Electrical consumption has no single uniquely related air pollution emissions source because power is supplied to and drawn from a regional grid. Electrical power is generated regionally by a combination of non-combustion (nuclear, hydroelectric, solar, wind, geothermal, etc.) and fossil fuel combustion sources. There is no direct nexus between consumption and the type of power source or the air basin where the source is located. Operational air pollution emissions from electrical generation are therefore not attributable on a project-specific basis.

ODOR IMPACTS

Project operations (pumping, treatment and storage) are an essentially closed system with negligible odor potential. Groundwater contains minimal organic matter capable of odor generation. Chlorine storage and dispensing is prevented from being released to the atmosphere by a required containment system.

The site uses low concentrations of chlorine for water disinfection but it will be injected into the water stream and have no airborne pathways. The solution will be stored in tanks and the solution will be pumped to the inline mixer. The dosing is controlled by a metering pump installed close to the storage tank. The quality of the disinfected water coming out of the online mixer will be analyzed by a Chlorine Analyzer. Chemical levels will be diluted to below their odor threshold.

CONSTRUCTION EMISSIONS MINIMIZATION

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, emissions minimization through enhanced dust control measures is recommended for use because of the non-attainment status of the air basin and proximity to residential use. Recommended measures include:

Fugitive Dust Control

- Apply soil stabilizers or moisten inactive areas.
- Prepare a high wind dust control plan.
- Address previously disturbed areas if subsequent construction is delayed.
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).
- Cover all stock piles with tarps at the end of each day or as needed.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone
- Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard
- Sweep streets daily if visible soil material is carried out from the construction site

Similarly, ozone precursor emissions (ROG and NO_x) are calculated to be below SCAQMD CEQA thresholds. However, because of the regional non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Combustion emissions control options include:

Exhaust Emissions Control

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3 or better heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

GREENHOUSE GAS EMISSIONS

“Greenhouse gases” (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as “global warming.” These greenhouse gases contribute to an increase in the temperature of the earth’s atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statutes and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California’s reputation as a “national and international leader on energy conservation and environmental stewardship.” It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate “early action” control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California’s GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been

developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

THRESHOLDS OF SIGNIFICANCE

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,
- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to “select the model or methodology it considers most appropriate.” The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO₂ equivalent/year. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO₂e for all land use projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

Construction Activity GHG Emissions

The project is assumed to be built in one year. During project construction, the CalEEMod2016.3.1 computer model predicts that the construction activities will generate the annual CO₂e emissions identified below.

Construction Emissions (Metric Tons CO₂e)

	CO ₂ e
Year 2018	117.2
Amortized	3.9
Threshold	3,000

CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are less-than-significant. Hence, the project will not result in generation of a significant level of greenhouse gases.

CONSISTENCY WITH GHG PLANS, PROGRAMS AND POLICIES

The City of Colton has not yet developed a Greenhouse Gas Reduction Plan. The applicable GHG planning document is AB-32. As discussed above, the project is not expected to result in a significant increase in GHG emissions. As a result, the project results in GHG emissions below the recommended SCAQMD 3,000 ton threshold. Therefore, the project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions.

CALEEMOD2016.3.1 COMPUTER MODEL OUTPUT

- **DAILY EMISISONS**
- **ANNUAL EMISSIONS**

Highland Water Co Well - South Coast Air Basin, Summer

Highland Water Co Well
South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Disturbed Area

Construction Phase - Drilling: 40 days, Equipping: 60 days, Pipeline: 40 days

Trips and VMT - 20 employee trips, 12 cement trucks, pipeline trucks

Off-road Equipment -

Off-road Equipment - TTB, pump, drill rig

Off-road Equipment - crane, forklift, gen set, ttb, welder

Off-road Equipment - concrete saw, trencher, forklift, ttb

Construction Off-road Equipment Mitigation -

Highland Water Co Well - South Coast Air Basin, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	200.00	60.00
tblConstructionPhase	NumDays	4.00	40.00
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	PhaseEndDate	7/11/2017	5/23/2018
tblConstructionPhase	PhaseEndDate	7/11/2017	2/23/2018
tblConstructionPhase	PhaseEndDate	7/11/2017	7/26/2018
tblConstructionPhase	PhaseStartDate	7/12/2017	3/1/2018
tblConstructionPhase	PhaseStartDate	7/12/2017	1/1/2018
tblConstructionPhase	PhaseStartDate	7/12/2017	6/1/2018
tblGrading	AcresOfGrading	15.00	1.50
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading

Highland Water Co Well - South Coast Air Basin, Summer

tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00

2.0 Emissions Summary

Highland Water Co Well - South Coast Air Basin, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

Highland Water Co Well - South Coast Air Basin, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2018	5/23/2018	5	60	
2	Grading	Grading	1/1/2018	2/23/2018	5	40	
3	Paving	Paving	6/1/2018	7/26/2018	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Highland Water Co Well - South Coast Air Basin, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Bore/Drill Rigs	1	7.00	221	0.50
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Grading	Pumps	1	7.00	84	0.74
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Trenchers	1	7.00	78	0.50
Paving	Pavers	0	6.00	130	0.42
Paving	Rollers	0	7.00	80	0.38
Paving	Concrete/Industrial Saws	1	6.00	81	0.73
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Paving	Forklifts	1	4.00	89	0.20
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	0	6.00	187	0.41
Paving	Paving Equipment	0	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Highland Water Co Well - South Coast Air Basin, Summer

Water Exposed Area

Clean Paved Roads

3.2 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7084	14.0641	10.1586	0.0169		0.8309	0.8309		0.7945	0.7945		1,615.8834	1,615.8834	0.3292		1,624.1144
Total	1.7084	14.0641	10.1586	0.0169		0.8309	0.8309		0.7945	0.7945		1,615.8834	1,615.8834	0.3292		1,624.1144

Highland Water Co Well - South Coast Air Basin, Summer

3.2 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0430	1.2149	0.3084	2.6000e-003	0.0640	8.8800e-003	0.0729	0.0184	8.4900e-003	0.0269		277.0092	277.0092	0.0191		277.4875
Worker	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523
Total	0.1499	1.2920	1.3090	5.0500e-003	0.2875	0.0107	0.2982	0.0777	0.0101	0.0879		520.7532	520.7532	0.0275		521.4398

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7084	14.0641	10.1586	0.0169		0.8309	0.8309		0.7945	0.7945	0.0000	1,615.8834	1,615.8834	0.3292		1,624.1144
Total	1.7084	14.0641	10.1586	0.0169		0.8309	0.8309		0.7945	0.7945	0.0000	1,615.8834	1,615.8834	0.3292		1,624.1144

Highland Water Co Well - South Coast Air Basin, Summer

3.2 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0430	1.2149	0.3084	2.6000e-003	0.0640	8.8800e-003	0.0729	0.0184	8.4900e-003	0.0269		277.0092	277.0092	0.0191		277.4875
Worker	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523
Total	0.1499	1.2920	1.3090	5.0500e-003	0.2875	0.0107	0.2982	0.0777	0.0101	0.0879		520.7532	520.7532	0.0275		521.4398

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5563	0.0000	4.5563	2.4870	0.0000	2.4870			0.0000			0.0000
Off-Road	0.9630	9.6439	7.2137	0.0167		0.5090	0.5090		0.4876	0.4876		1,649.2750	1,649.2750	0.3850		1,658.8994
Total	0.9630	9.6439	7.2137	0.0167	4.5563	0.5090	5.0654	2.4870	0.4876	2.9746		1,649.2750	1,649.2750	0.3850		1,658.8994

Highland Water Co Well - South Coast Air Basin, Summer

3.3 Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523
Total	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0504	0.0000	2.0504	1.1191	0.0000	1.1191			0.0000			0.0000
Off-Road	0.9630	2.3010	7.2137	0.0167		0.5090	0.5090		0.4876	0.4876	0.0000	1,649.2750	1,649.2750	0.3850		1,658.8994
Total	0.9630	2.3010	7.2137	0.0167	2.0504	0.5090	2.5594	1.1191	0.4876	1.6068	0.0000	1,649.2750	1,649.2750	0.3850		1,658.8994

Highland Water Co Well - South Coast Air Basin, Summer

3.3 Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523
Total	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523

3.4 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1432	9.9351	8.0701	0.0115		0.7218	0.7218		0.6801	0.6801		1,133.1867	1,133.1867	0.2488		1,139.4071
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1432	9.9351	8.0701	0.0115		0.7218	0.7218		0.6801	0.6801		1,133.1867	1,133.1867	0.2488		1,139.4071

Highland Water Co Well - South Coast Air Basin, Summer

3.4 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523
Total	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1432	3.4209	8.0701	0.0115		0.7218	0.7218		0.6801	0.6801	0.0000	1,133.1867	1,133.1867	0.2488		1,139.4071
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1432	3.4209	8.0701	0.0115		0.7218	0.7218		0.6801	0.6801	0.0000	1,133.1867	1,133.1867	0.2488		1,139.4071

Highland Water Co Well - South Coast Air Basin, Summer

3.4 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523
Total	0.1069	0.0770	1.0006	2.4500e-003	0.2236	1.7900e-003	0.2254	0.0593	1.6500e-003	0.0609		243.7440	243.7440	8.3300e-003		243.9523

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Highland Water Co Well - South Coast Air Basin, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.548893	0.044275	0.199565	0.124385	0.017503	0.005874	0.020174	0.028962	0.001990	0.002015	0.004673	0.000702	0.000989

5.0 Energy Detail

Historical Energy Use: N

Highland Water Co Well - South Coast Air Basin, Summer

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Highland Water Co Well - South Coast Air Basin, Summer

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

Highland Water Co Well - South Coast Air Basin, Summer

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

7.0 Water Detail

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7.1 Mitigation Measures Water**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Disturbed Area

Construction Phase - Drilling: 40 days, Equipping: 60 days, Pipeline: 40 days

Trips and VMT - 20 employee trips, 12 cement trucks, pipeline trucks

Off-road Equipment -

Off-road Equipment - TTB, pump, drill rig

Off-road Equipment - crane, forklift, gen set, ttb, welder

Off-road Equipment - concrete saw, trencher, forklift, ttb

Construction Off-road Equipment Mitigation -

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Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	200.00	60.00
tblConstructionPhase	NumDays	4.00	40.00
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	PhaseEndDate	7/11/2017	5/23/2018
tblConstructionPhase	PhaseEndDate	7/11/2017	2/23/2018
tblConstructionPhase	PhaseEndDate	7/11/2017	7/26/2018
tblConstructionPhase	PhaseStartDate	7/12/2017	3/1/2018
tblConstructionPhase	PhaseStartDate	7/12/2017	1/1/2018
tblConstructionPhase	PhaseStartDate	7/12/2017	6/1/2018
tblGrading	AcresOfGrading	15.00	1.50
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading

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tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	10-12-2017	1-11-2018	0.0425	0.0136
3	1-12-2018	4-11-2018	0.4245	0.3117
4	4-12-2018	7-11-2018	0.4231	0.3277
5	7-12-2018	9-30-2018	0.0603	0.0254
		Highest	0.4245	0.3277

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	3/1/2018	5/23/2018	5	60	
2	Grading	Grading	1/1/2018	2/23/2018	5	40	
3	Paving	Paving	6/1/2018	7/26/2018	5	40	

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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Bore/Drill Rigs	1	7.00	221	0.50
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Grading	Pumps	1	7.00	84	0.74
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Trenchers	1	7.00	78	0.50
Paving	Pavers	0	6.00	130	0.42
Paving	Rollers	0	7.00	80	0.38
Paving	Concrete/Industrial Saws	1	6.00	81	0.73
Grading	Rubber Tired Dozers	0	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Paving	Forklifts	1	4.00	89	0.20
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	0	6.00	187	0.41
Paving	Paving Equipment	0	8.00	132	0.36
Building Construction	Welders	1	8.00	46	0.45

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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0513	0.4219	0.3048	5.1000e-004		0.0249	0.0249		0.0238	0.0238	0.0000	43.9771	43.9771	8.9600e-003	0.0000	44.2012
Total	0.0513	0.4219	0.3048	5.1000e-004		0.0249	0.0249		0.0238	0.0238	0.0000	43.9771	43.9771	8.9600e-003	0.0000	44.2012

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3.2 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3100e-003	0.0372	9.7500e-003	8.0000e-005	1.8900e-003	2.7000e-004	2.1600e-003	5.5000e-004	2.6000e-004	8.0000e-004	0.0000	7.4547	7.4547	5.4000e-004	0.0000	7.4682
Worker	3.1800e-003	2.6100e-003	0.0281	7.0000e-005	6.5800e-003	5.0000e-005	6.6400e-003	1.7500e-003	5.0000e-005	1.8000e-003	0.0000	6.3209	6.3209	2.2000e-004	0.0000	6.3263
Total	4.4900e-003	0.0398	0.0378	1.5000e-004	8.4700e-003	3.2000e-004	8.8000e-003	2.3000e-003	3.1000e-004	2.6000e-003	0.0000	13.7757	13.7757	7.6000e-004	0.0000	13.7945

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0513	0.4219	0.3048	5.1000e-004		0.0249	0.0249		0.0238	0.0238	0.0000	43.9771	43.9771	8.9600e-003	0.0000	44.2011
Total	0.0513	0.4219	0.3048	5.1000e-004		0.0249	0.0249		0.0238	0.0238	0.0000	43.9771	43.9771	8.9600e-003	0.0000	44.2011

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3.2 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3100e-003	0.0372	9.7500e-003	8.0000e-005	1.8900e-003	2.7000e-004	2.1600e-003	5.5000e-004	2.6000e-004	8.0000e-004	0.0000	7.4547	7.4547	5.4000e-004	0.0000	7.4682
Worker	3.1800e-003	2.6100e-003	0.0281	7.0000e-005	6.5800e-003	5.0000e-005	6.6400e-003	1.7500e-003	5.0000e-005	1.8000e-003	0.0000	6.3209	6.3209	2.2000e-004	0.0000	6.3263
Total	4.4900e-003	0.0398	0.0378	1.5000e-004	8.4700e-003	3.2000e-004	8.8000e-003	2.3000e-003	3.1000e-004	2.6000e-003	0.0000	13.7757	13.7757	7.6000e-004	0.0000	13.7945

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0911	0.0000	0.0911	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0193	0.1929	0.1443	3.3000e-004		0.0102	0.0102		9.7500e-003	9.7500e-003	0.0000	29.9239	29.9239	6.9800e-003	0.0000	30.0986
Total	0.0193	0.1929	0.1443	3.3000e-004	0.0911	0.0102	0.1013	0.0497	9.7500e-003	0.0595	0.0000	29.9239	29.9239	6.9800e-003	0.0000	30.0986

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3.3 Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1200e-003	1.7400e-003	0.0187	5.0000e-005	4.3900e-003	4.0000e-005	4.4200e-003	1.1700e-003	3.0000e-005	1.2000e-003	0.0000	4.2140	4.2140	1.4000e-004	0.0000	4.2176
Total	2.1200e-003	1.7400e-003	0.0187	5.0000e-005	4.3900e-003	4.0000e-005	4.4200e-003	1.1700e-003	3.0000e-005	1.2000e-003	0.0000	4.2140	4.2140	1.4000e-004	0.0000	4.2176

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0410	0.0000	0.0410	0.0224	0.0000	0.0224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0193	0.0460	0.1443	3.3000e-004		0.0102	0.0102		9.7500e-003	9.7500e-003	0.0000	29.9239	29.9239	6.9800e-003	0.0000	30.0985
Total	0.0193	0.0460	0.1443	3.3000e-004	0.0410	0.0102	0.0512	0.0224	9.7500e-003	0.0321	0.0000	29.9239	29.9239	6.9800e-003	0.0000	30.0985

Highland Water Co Well - South Coast Air Basin, Annual

3.3 Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1200e-003	1.7400e-003	0.0187	5.0000e-005	4.3900e-003	4.0000e-005	4.4200e-003	1.1700e-003	3.0000e-005	1.2000e-003	0.0000	4.2140	4.2140	1.4000e-004	0.0000	4.2176
Total	2.1200e-003	1.7400e-003	0.0187	5.0000e-005	4.3900e-003	4.0000e-005	4.4200e-003	1.1700e-003	3.0000e-005	1.2000e-003	0.0000	4.2140	4.2140	1.4000e-004	0.0000	4.2176

3.4 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0229	0.1987	0.1614	2.3000e-004		0.0144	0.0144		0.0136	0.0136	0.0000	20.5602	20.5602	4.5100e-003	0.0000	20.6731
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0229	0.1987	0.1614	2.3000e-004		0.0144	0.0144		0.0136	0.0136	0.0000	20.5602	20.5602	4.5100e-003	0.0000	20.6731

Highland Water Co Well - South Coast Air Basin, Annual

3.4 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1200e-003	1.7400e-003	0.0187	5.0000e-005	4.3900e-003	4.0000e-005	4.4200e-003	1.1700e-003	3.0000e-005	1.2000e-003	0.0000	4.2140	4.2140	1.4000e-004	0.0000	4.2176
Total	2.1200e-003	1.7400e-003	0.0187	5.0000e-005	4.3900e-003	4.0000e-005	4.4200e-003	1.1700e-003	3.0000e-005	1.2000e-003	0.0000	4.2140	4.2140	1.4000e-004	0.0000	4.2176

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0229	0.0684	0.1614	2.3000e-004		0.0144	0.0144		0.0136	0.0136	0.0000	20.5602	20.5602	4.5100e-003	0.0000	20.6730
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0229	0.0684	0.1614	2.3000e-004		0.0144	0.0144		0.0136	0.0136	0.0000	20.5602	20.5602	4.5100e-003	0.0000	20.6730

Highland Water Co Well - South Coast Air Basin, Annual

3.4 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1200e-003	1.7400e-003	0.0187	5.0000e-005	4.3900e-003	4.0000e-005	4.4200e-003	1.1700e-003	3.0000e-005	1.2000e-003	0.0000	4.2140	4.2140	1.4000e-004	0.0000	4.2176
Total	2.1200e-003	1.7400e-003	0.0187	5.0000e-005	4.3900e-003	4.0000e-005	4.4200e-003	1.1700e-003	3.0000e-005	1.2000e-003	0.0000	4.2140	4.2140	1.4000e-004	0.0000	4.2176

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Highland Water Co Well - South Coast Air Basin, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.548893	0.044275	0.199565	0.124385	0.017503	0.005874	0.020174	0.028962	0.001990	0.002015	0.004673	0.000702	0.000989

5.0 Energy Detail

Historical Energy Use: N

Highland Water Co Well - South Coast Air Basin, Annual

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000								

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Highland Water Co Well - South Coast Air Basin, Annual

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

Highland Water Co Well - South Coast Air Basin, Annual

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

7.0 Water Detail

Highland Water Co Well - South Coast Air Basin, Annual

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Highland Water Co Well - South Coast Air Basin, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Highland Water Co Well - South Coast Air Basin, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Highland Water Co Well - South Coast Air Basin, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

APPENDIX 2

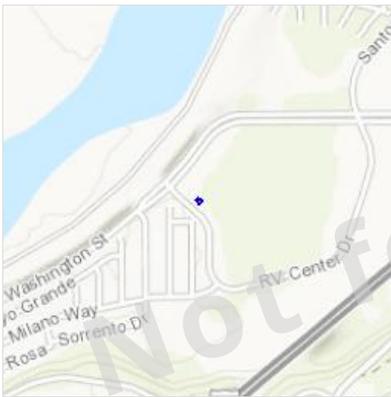
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Bernardino County, California



Local office

Carlsbad Fish And Wildlife Office

☎ (760) 431-9440

📠 (760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

<http://www.fws.gov/carlsbad/>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ are managed by the [Endangered Species Program](#) of the U.S. Fish and Wildlife Service.

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
Coastal California Gnatcatcher <i>Polioptila californica californica</i> There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered

Fishes

NAME	STATUS
Santa Ana Sucker <i>Catostomus santaanae</i> There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/3785	Threatened

Flowering Plants

NAME	STATUS
Gambel's Watercress <i>Rorippa gambellii</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4201	Endangered
San Diego Ambrosia <i>Ambrosia pumila</i> There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/8287	Endangered

Santa Ana River Woolly-star *Eriastrum densifolium* ssp. *sanctorum* Endangered
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/6575>

Slender-horned Spineflower *Dodecahema leptoceras* Endangered
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/4007>

Insects

NAME	STATUS
Delhi Sands Flower-loving Fly <i>Rhaphiomidas terminatus abdominalis</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1540	Endangered

Mammals

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat <i>Dipodomys merriami parvus</i> There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/2060	Endangered
Stephens' Kangaroo Rat <i>Dipodomys stephensi</i> (incl. <i>D. cactus</i>) No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3495	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service³. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Conservation measures for birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Year-round bird occurrence data <http://www.birdscanada.org/birdmon/default/datasummaries.jsp>

The migratory birds species listed below are species of particular conservation concern (e.g. [Birds of Conservation Concern](#)) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the [AKN Histogram Tools](#) and [Other Bird Data Resources](#). To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

NAME	SEASON(S)
Allen's Hummingbird <i>Selasphorus sasin</i> https://ecos.fws.gov/ecp/species/9637	Migrating
Bald Eagle <i>Haliaeetus leucocephalus</i> https://ecos.fws.gov/ecp/species/1626	Wintering
Bell's Vireo <i>Vireo bellii</i> https://ecos.fws.gov/ecp/species/9507	Breeding
Black-chinned Sparrow <i>Spizella atrogularis</i> https://ecos.fws.gov/ecp/species/9447	Breeding
Brewer's Sparrow <i>Spizella breweri</i> https://ecos.fws.gov/ecp/species/9291	Year-round
Burrowing Owl <i>Athene cunicularia</i> https://ecos.fws.gov/ecp/species/9737	Year-round
Cactus Wren <i>Campylorhynchus brunneicapillus</i> https://ecos.fws.gov/ecp/species/8834	Year-round
California Spotted Owl <i>Strix occidentalis occidentalis</i> https://ecos.fws.gov/ecp/species/7266	Year-round
Calliope Hummingbird <i>Stellula calliope</i> https://ecos.fws.gov/ecp/species/9526	Migrating
Costa's Hummingbird <i>Calypte costae</i> https://ecos.fws.gov/ecp/species/9470	Year-round
Flammulated Owl <i>Otus flammeolus</i> https://ecos.fws.gov/ecp/species/7728	Breeding
Fox Sparrow <i>Passerella iliaca</i>	Year-round
Green-tailed Towhee <i>Pipilo chlorurus</i> https://ecos.fws.gov/ecp/species/9444	Breeding
Lawrence's Goldfinch <i>Carduelis lawrencei</i> https://ecos.fws.gov/ecp/species/9464	Year-round
Le Conte's Thrasher <i>toxostoma lecontei</i> https://ecos.fws.gov/ecp/species/8969	Year-round

Least Bittern <i>Ixobrychus exilis</i> https://ecos.fws.gov/ecp/species/6175	Year-round
Lesser Yellowlegs <i>Tringa flavipes</i> https://ecos.fws.gov/ecp/species/9679	Wintering
Lewis's Woodpecker <i>Melanerpes lewis</i> https://ecos.fws.gov/ecp/species/9408	Wintering
Loggerhead Shrike <i>Lanius ludovicianus</i> https://ecos.fws.gov/ecp/species/8833	Year-round
Long-billed Curlew <i>Numenius americanus</i> https://ecos.fws.gov/ecp/species/5511	Wintering
Mountain Plover <i>Charadrius montanus</i> https://ecos.fws.gov/ecp/species/3638	Wintering
Nuttall's Woodpecker <i>Picoides nuttallii</i> https://ecos.fws.gov/ecp/species/9410	Year-round
Oak Titmouse <i>Baeolophus inornatus</i> https://ecos.fws.gov/ecp/species/9656	Year-round
Olive-sided Flycatcher <i>Contopus cooperi</i> https://ecos.fws.gov/ecp/species/3914	Breeding
Peregrine Falcon <i>Falco peregrinus</i> https://ecos.fws.gov/ecp/species/8831	Wintering
Pinyon Jay <i>Gymnorhinus cyanocephalus</i> https://ecos.fws.gov/ecp/species/9420	Year-round
Rufous Hummingbird <i>elasphorus rufus</i> https://ecos.fws.gov/ecp/species/8002	Migrating
Rufous-crowned Sparrow <i>Aimophila ruficeps</i> https://ecos.fws.gov/ecp/species/9718	Year-round
Short-eared Owl <i>Asio flammeus</i> https://ecos.fws.gov/ecp/species/9295	Wintering
Tricolored Blackbird <i>Agelaius tricolor</i> https://ecos.fws.gov/ecp/species/3910	Year-round
Western Grebe <i>aechmophorus occidentalis</i> https://ecos.fws.gov/ecp/species/6743	Wintering
Williamson's Sapsucker <i>Sphyrapicus thyroideus</i> https://ecos.fws.gov/ecp/species/8832	Wintering

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAA/NCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAA/NCCOS models: the models were developed as part of the NOAA/NCCOS project: [Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#). The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the [Northeast Ocean Data Portal](#), which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The [Avian Knowledge Network \(AKN\)](#) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest, survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the [Migratory Bird Programs AKN Histogram Tools](#) webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA/NCCOS [Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project](#) webpage.

Facilities

Wildlife refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

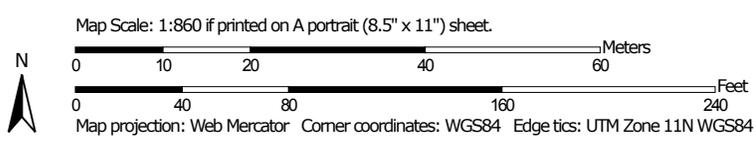
Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

APPENDIX 3

Soil Map—San Bernardino County Southwestern Part, California
(RHWCO Well Development)



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 8, Sep 30, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 5, 2015—Jan 18, 2015

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

San Bernardino County Southwestern Part, California (CA677)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
TvC	Tujunga gravelly loamy sand, 0 to 9 percent slopes	1.3	100.0%
Totals for Area of Interest		1.3	100.0%