

**DRAFT INITIAL STUDY/ MITIGATED
NEGATIVE DECLARATION**

**CALIFORNIA WATER SERVICE COMPANY
DOMINGUEZ (DOM) 300-01 NEW WELL
PROJECT**

**COMPTON, CALIFORNIA
LOS ANGELES COUNTY**

Prepared for:

**STATE WATER RESOURCES CONTROL BOARD
PO Box 944212
Sacramento, CA 94244-2120**

Prepared by:

**CHAMBERS GROUP, INC.
600 West Broadway, Suite 250
Glendale, California 91204
(213) 623-1859**

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SECTION 1.0 – INTRODUCTION

1.1 PROJECT NAME

Dominguez (DOM) 300-01 New Well Project

1.2 LOCATION

The Dominguez 300-01 New Well Project (Project or Proposed Project) is located at 958 West Walnut Street (33.8752088, -118.2392430) within the City of Compton, California (see Figure 1, Project Vicinity Map, and Figure 2, Project Location Map). The Assessor's Parcel Number (APN) for the Proposed Project location is APN 7319-028-904. This location is directly adjacent and east of the Compton Fire Department, Station 4, which has an address of 950 West Walnut St., Compton, CA 90220. However, the Los Angeles County Assessor's office website does not list an address for this APN. All historic documents (provided by the City of Compton and its Successor Agency) reflect an address of 958 West Walnut Street, Compton, CA for this parcel. A site plan has been provided as Figure 3 delineating the Project area and illustrating the staging areas.

1.3 BACKGROUND

The California Water Service Company (Cal Water) Dominguez District has provided services to the City of Compton since 2001. To meet the needs of the customers, Cal Water purchases surface water from Metropolitan Water District of Southern California (MWDSC) through Central Basin Municipal Water District (CBMWD) and operates its existing groundwater wells. The purpose of the Proposed Project is to increase the reliability of supply to the northern portion of the Dominguez service area. The well and treatment system will allow utilization of groundwater (via unused groundwater rights) to offset water purchased from MWDSC, the local wholesale supplier. Completing this Project and utilizing groundwater would have a lower overall life cycle cost compared to purchasing water.

As a lower cost option, development of groundwater capacity also enhances local supply reliability and reduces reliance on purchased water sources that are subject to curtailment or interruption. Water purchased from the MWDSC is imported from Northern California via a canal system. In addition to being subject to cutbacks in response to available snowpack on a year-to-year basis, such a supply may also become completely unavailable should a major disaster compromise the aqueduct system. Maximizing local groundwater supply will ensure a continued supply, reduce supply variability during dry years, and provide water availability for fire and essential services in the event of a major disaster.

1.4 PROPERTY DESCRIPTION

Cal Water is proposing to construct a new water supply well on the vacant property located at 958 West Walnut Street in the City of Compton. The lot size is 0.48 acres in size and is adjacent to a fire station as well as industrial and heavy manufacturing uses.

1.4.1 General Plan Designation/Zoning

The Proposed Project area is designated as Industrial (I) and is zoned Heavy Manufacturing (MH) for which utility pump stations and water wells are specifically permitted uses per Compton Municipal Code Chapter XXX, Section 30-12.2. Therefore, a conditional use permit was deemed unnecessary for either phase of work, which has also been confirmed by email from the Compton Planning Department.

1.4.2 Surrounding Land Uses

The surrounding area is zoned for a variety of uses including Commercial, Heavy Manufacturing, Industrial, and Institutional uses (City of Compton City Plan).

1.5 PROJECT DESCRIPTION

Cal Water is proposing to construct a new water supply well in the Central Coast Basin on existing property at 958 West Walnut Street in the City of Compton, including development of a treatment plant for treatment of the resulting water, which is likely to be of similar quality to other wells in the system given their proximity. The Proposed Project will include drilling, construction, testing, and water treatment of new well DOM 300-01 to be completed in two phases.

1.5.1 Phase I Work

The proposed well will be drilled and constructed to an approximate depth of 800 feet below ground surface with an estimated capacity is 1,500-2,000 gallons per minute (gpm). This phase also includes well performance testing for production and water quality to complete overall site design including treatment, if needed. Refer to the Site Plan (Figure 3) for the well drilling/ construction layout identifying the major equipment, facility access, location of trailers and security lighting.

To support construction and performance testing, Cal Water is also proposing installation of an onsite catch basin and connection to an existing storm drain catch basin located 100 ft. east of the property. This storm drain catch basin connection will be used to discharge the water generated during the well development process. Cal Water is permitted and authorized to discharge water generated during well development per its statewide National Pollutant Discharge Elimination System (NPDES) permit No. CAG140001, see attached. Cal Water intends to provide all necessary documents including, but not limited to drawings and calculations to Public Works for permitting of the new storm drain connection.

To comply with Compton Municipal Code Section Chapter VII, Section 7-12 noise ordinance during well drilling and construction, Cal Water is also proposing to erect a temporary noise wall (16-feet high) along the eastern property border. This noise wall will be utilized to shield Fire Station No. 4 on the adjacent property from Project construction generated noise. Cal Water intends to provide all necessary structural documents to the Building and Safety Department for permitting of the temporary noise wall. The noise wall will be discussed in more detail in the Noise section of the Initial Study, and additional discussion can be found in Appendix B – Noise Impact Assessment Report.

1.5.2 Phase II Work

After the well is installed a slump stone building will be constructed (dimensions 25'x50'x12') to house the electrical and treatment facilities. The building will contain the aeration equipment, booster pumps, and electrical and chemical injection facilities for the treatment system. If required, the treatment vessels would be installed outdoors on a 25'x50' concrete pad. Construction of onsite piping will be followed by installation of chemical feed systems for chloramination disinfection. In parallel, the offsite piping to connect the sources to the potable water system will be completed. To place the well facility online, site development will include fence construction and installation of a security system, paving, and landscaping.

1.5.3 Construction Methods

The well will be constructed by a contractor licensed in the State of California, utilizing the reverse circulation hydraulic rotary drilling method. Prior to well drilling, Underground Services Alert (USA) will be contacted to identify the location of any existing utilities. Equipment used for well construction will include a reverse rotary drill rig with drilling fluid/mud system, temporary water storage tank (Baker Tank), well test pump/development rig, two support trucks, and a forklift.

During borehole drilling, drill fluid (consisting of water and bentonite, if necessary) and cuttings (consisting of native clay, silt, sand, and gravel) will be contained in a settling tank. A staging area will be located on the Proposed Project site to store the drill-fluid settling tank, drill-cuttings, construction equipment and materials. A baker tank will be utilized to accept water discharged during well development and test pumping to allow settling of solids before discharging to the offsite storm drainage system. The drill cuttings will be tested for hazardous waste and will be properly disposed. Disposal will likely be at the Puente Hills Landfill, located at 13130 Crossroads Parkway, South Industry, CA, 91746. Drilling fluids will be released to the storm drain located on West Walnut Street.

1.5.4 Construction Schedule

Construction of the Proposed Project is expected to commence Summer 2019 and have a duration of approximately 6 months for Phase 1. During well construction, there will be intermittent periods of 24-hour construction activity associated with the well drilling. This is due to the need to proceed continuously until well casings can be installed to stabilize the open borehole. Construction of Phase 2 will follow the well construction and will have a duration of approximately 6 - 9 months, which will be dependent on the new well water quality and necessary treatment equipment required.

1.5.5 Operation and Maintenance

The Project is expected to be operational by the first quarter of 2020 assuming water quality is acceptable. Routine maintenance is on a condition basis and is usually conducted for wells on a 5-10-year interval which includes physical cleaning and swabbing or can include a full rehabilitation. Depending on the water quality, the well may need treatment equipment installed. The equipment will not be designed until after the groundwater well is constructed (Phase I is completed).

1.6 REQUIRED PERMITS AND APPROVALS

The State Water Resources Control Board Division of Drinking Water will act as the Lead Agency under CEQA for the Project to approve the Project, adopt the CEQA document, and issue a water supply permit. A public agency, other than the Lead Agency, that has discretionary approval power over a project is referred to under the CEQA Guidelines as a "Responsible Agency." The City of Compton will participate as a Responsible Agency, as discretionary excavation and traffic permits will be required.

Figure 1 - Project Vicinity Map



Figure 2 - Project Location Map



[illegible]

DESCRIPTION OF PROJECT:

DRILL PRODUCTION WELL AT DOMINGUEZ STATION NO. 300. THE PROJECT CONSISTS OF DRILLING A NEW POTABLE WATER SUPPLY WELL (DOM 300-301) THIS IS PRIMARILY UNDEVELOPED WITH THE EXCEPTION OF A SMALL WOODEN SHED WHICH WILL BE DEMOLISHED UPON COMMENCEMENT OF THE PROJECT.

FUTURE TREATMENT FACILITY TO BE DETERMINED AFTER COMPLETION OF DRILLING THE WELL AND TESTING WATER QUALITY. THE TREATMENT FACILITY IS NOT INCLUDED IN THIS PROJECT. HOWEVER, AREAS ARE DESIGNATED ON-SITE TO BE RESERVED FOR THE CONSTRUCTION OF THE POTENTIAL TREATMENT FACILITY.

NOISE MITIGATION MEASURES DURING CONSTRUCTION:

1. NOISE MITIGATION MEASURES ARE TO BE INSTALLED PRIOR TO COMMENCING ANY PHASE 1 WORK.
2. A SEPARATE PLAN WILL BE SUBMITTED BY THE CONSULTANT FOR THE NOISE MITIGATION MEASURES (SOUND WALL, FENCING AND CALCULATIONS, LAYOUT) WHICH WILL BE ACCORDING TO THE CITY OF COMPTON PLAN THAT OUTLINES THE RESULTS OF THE NOISE STUDY, ASSESSMENT AND NECESSARY MITIGATION MEASURES.
3. BECAUSE OF WORK INVOLVED TO DRILL APPROXIMATELY 800 FEET DEEP WELL, OPERATION OF NOISE FOR THE FIRST 3 WEEKS OF THE INITIAL DRILLING ACTIVITIES WILL BE 24 HOURS A DAY. DUE TO THE NATURE OF WELL DRILLING ACTIVITIES IS BASED ON THE ASSUMPTION THAT SITE CONDITIONS ARE PERFECT WITHOUT ANY LIMITATIONS. INCIDENTS THAT COULD RESULT IN POSSIBLE WORK DELAYS OR DELAYS. IF ADDITIONAL TIME NEEDED TO COMPLETE 24 HOUR DRILLING ACTIVITIES, WE WILL INFORM THE CITY AND ADJACENT RESIDENTS. SOUND BARRIERS WILL BE INSTALLED AS NECESSARY DURING THE WELL DRILLING PHASE. THE SOUND BARRIERS WILL BE A MINIMUM OF 8 FEET (AND HIGHER IF REQUIRED) AND WILL BE ERRECTED ALONG THE SOUTH AND EAST OF THE PROJECT SITE TO PREVENT CONSTRUCTION NOISE FROM AFFECTING THE DISPOSITIONS. NO RESIDENTS ARE LOCATED ON THE OTHER 2 SIDES OF THE PROPERTY.
4. REMAINING CONSTRUCTION WILL BE LIMITED TO CONSTRUCTION HOURS FOR THE CITY OF COMPTON WHICH ARE 7:00AM TO 5:00PM MONDAY THROUGH SATURDAY AND 10:00AM TO 5:00PM SUNDAY. HOWEVER, THE OWNER WILL INFORM IT PERSON IMMEDIATE NEIGHBORS ADJACENT TO THE PROPOSED WORK ACTIVITIES AND ADJACENT COUNTRIES LOCAL. ADJACENT PERSONS WILL CONTACT IMMEDIATELY. BASED ON CASE IF JUSTIFIED, OWNER WILL ALSO HAVE THE OPTION TO TEMPORARILY HOUSE PEOPLE AT ANOTHER LOCATION.
5. THE TIMELINE FOR WELL DRILLING AND DEVELOPMENT, FROM START TO FINISH WILL BE APPROXIMATELY 60 DAYS. WELL DRILLING CONTRACTOR WILL NOBOLIZE TO SITE WITHIN 8 WEEKS AFTER A WELL DRILLING PERMIT IS ISSUED IF POSSIBLE. WELL DRILLERS ARE REQUIRED TO SCHEDULE DATE TO THE STATE OF THE CALIFORNIA DROUGHT.

PLANNING NOTES:

1. THE PROPERTY IS ZONED HEAVY INDUSTRIAL.
2. EXISTING 7' HIGH CHAIN LINK FENCE SHALL REMAIN ON 2 SIDES (SOUTH AND WEST) OF PROPERTY. EXISTING 8' HIGH BLOCK WALL ON EAST SIDE OF PROPERTY SHALL REMAIN. NEW BLOCK WALL IS PROPOSED FOR NORTH SIDE OF PROPERTY WITH CITY PLANNING AGENCY REVIEW.
3. EXISTING DRIVEWAY ON NORTH SIDE OF PROPERTY TO REMAIN.
4. SITE IS LARGELY UNDEVELOPED WITH NO STRUCTURES. MAY NATURE TREES EXIST ON THE SITE AND MAY BE REMOVED BASED ON SAFETY CONSIDERATIONS. REMOVAL TO BE DISCUSSED WITH CITY OF COMPTON BUILDING & SAFETY DEPARTMENT.

SURROUNDING LAND USE NOTES:

1. THE SURROUNDING LAND USE IS ZONED AS HEAVY INDUSTRIAL. FIRE STATION NO. 4 NEIGHBORS THE PROPERTY BY ON THE EAST. WALNUT STREET BORDERS THE SOUTH AND WEST SIDES OF THE SITE. WALNUT STREET BORDERS THE NORTH SIDE OF THE SITE.

COMPTON BUILDING CODE REFERENCE:

1. THAT CERTAIN DOCUMENT, THREE (3) COPIES OF WHICH ARE ON FILE IN THE OFFICE OF THE CITY CLERK, BEING MADE AND DESIGNATED AS THE 2001 EDITION OF THE CALIFORNIA BUILDING CODE, VOLUMES 1 & 2, ENFORCEMENT OF THE INTERNATIONAL CONVENTION OF BUILDING CODES AS A CODE OF THE CITY OF COMPTON FOR REGULATING THE ERECTION, CONSTRUCTION, ENLARGEMENTS, ALTERATIONS, REPAIR, REMOVING, REMOVAL, CONSERVATION, CONSERVATION, OCCUPANCY, MAINTENANCE, OCCUPANCY, MAINTENANCE OF ALL BUILDINGS AND/OR STRUCTURE IN THE CITY, AND PROVIDING FOR THE ISSUANCE OF PERMITS AND ENFORCEMENT OF THE CITY OF COMPTON AND PENALTIES FOR VIOLATIONS OF ALL OR ALL OF THE REGULATIONS, PROVISIONS, CONDITIONS AND TERMS OF SUCH BUILDING CODE AND SUPPLIERS THEREOF HERETO FURNISHED ARE REFERRED TO, ADOPTED AS IF FULLY SET OUT IN THE BUILDING CODE, EXCEPT AS THE SAME MAY HEREIN BE MODIFIED OR AMENDED.
2. ASCE STANDARD, ASCE/SEI 7-10; MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
3. AISI/ASCE 360-10; SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, 14TH EDITION, 2010

GENERAL NOTES:

1. PROPERTY LOCATION: SITE IS LOCATED AT 958 W. WALNUT STREET COMPTON, CALIFORNIA 90220. THE API IS 7318-028-904.
2. CONTRACTOR SHALL BECOME FAMILIAR WITH PROJECT SURROUNDINGS, WORKING CONDITIONS, AND SITE LIMITATIONS AND WILL INCLUDE ALLOWANCES IN THEIR BID TO COVER ANY PROJECT CONSTRAINTS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO AND COMPLYING WITH LOCAL GOVERNING AGENCY PERMIT RESTRICTIONS, WHICH MAY AFFECT ALLOWABLE WORKING HOURS AND NOISE LIMITATIONS.
4. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL, AS REQUIRED BY APPLICABLE LOCAL GOVERNING AGENCY. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN PER CALIFORNIA STANDARDS TO OWNER PRIOR TO CONSTRUCTION. IF REQUIRED, WORK REQUIRED TRAFFIC CONTROL SHALL BE CONDUCTED BETWEEN THE HOURS OF 8:00 AM AND 5:30 PM, MONDAY THRU FRIDAY, OR AS OTHERWISE AUTHORIZED BY LOCAL GOVERNING AGENCY REPRESENTATIVE.
5. CONTRACTOR SHALL APPLY CALIFORNIA STORMWATER QUALITY ASSOCIATION (CSQA) BEST MANAGEMENT PRACTICES TO PREVENT RUNOFF AND SEDIMENT FROM ENTERING NEARBY WATERWAYS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND INSTALLING THE APPLICABLE AND APPROPRIATE BMP'S IDENTIFIED IN THE CSQA - STORMWATER BEST MANAGEMENT PRACTICES HANDBOOK PAPER NO. 0018 DRILL AT 958W WALNUT STREET COMPTON. SOME OF THE REQUIRED PRACTICES MAY OR MAY NOT BE SHOWN ON THIS SITE PLAN.
6. CONTRACTOR TO CONTRACT UNDERGROUND SERVICES ALERT 48 HOURS PRIOR TO ANY EXCAVATION.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXACT LOCATION AND DEPTH OF ALL EXISTING UTILITIES.
8. TRENCH TO BE SHORED IN ACCORDANCE WITH CALIFORNIA OSHA REGULATIONS.
9. TRENCH BACKFILL AND PAVING SHALL CONFORM TO TRENCH SECTION DETAILS AND ALL GOVERNING AGENCY REQUIREMENTS.
10. CONTRACTOR SHALL BE RESPONSIBLE TO ABANDON ALL PIPE ENDS BY PLUGGING WITH BROK AND WORTER, REPLACE BASE ROCK AND PERMANENT PAVEMENT AS NECESSARY.
11. CONTRACTOR SHALL RESTORE LAWN, CLITTER, PLANTING, BERM, AND CURBS TO MATCH EXISTING PER GOVERNING AGENCY'S STANDARDS.
12. SPOILS SHALL NOT REMAIN ON-SITE. DISPOSAL OF ALL PROJECT GENERATED SPOILS SHALL BE AT A FACILITY LICENSED AND CLASSIFIED TO ACCEPT THE MATERIALS. CONTRACTOR TO PROVIDE OWNER WITH A FORMAL RECEIPT FROM THE ACCEPTING FACILITY. ALL MATERIALS THAT WILL REQUIRE TESTING PRIOR TO DISPOSAL, SHALL BE SAMPLED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE DISPOSAL FACILITY IN RECORD OF THE NEED FOR DISPOSAL.
13. THE LIST OF MATERIALS FOR THIS PROJECT IS FOR ONE (1) ESTIMATING AND REFERENCE PURPOSE ONLY, AND IS NOT INTENDED AS A FULL TAKE-OUT OF ALL MATERIALS REQUIRED TO COMPLETE THE PROJECT PER DWS DO. STANDARDS SPECIFICATIONS.

SECTION 2.0 – ENVIRONMENTAL CHECKLIST

- 1. Project Title:** Dominguez 300-01 New Well Project
- 2. Lead Agency Name & Address:** State Water Resources Control Board
PO Box 944212
Sacramento, CA 94244-2120
- 3. Contact Person & Phone Number:** Sara Paiva-Lowry
Senior Environmental Scientist
Special Project Review Unit
State Water Resources Control Board
(916) 323-0626
Sara.Paiva-Lowry@waterboards.ca.gov
- 4. Project Location:** City of Compton, Los Angeles County
- 5. Project Sponsor's Name & Address:** **California Water Service Company**

2632 West 237th Street
Torrance, CA 90505

Sponsor's Representative

Clyde Arucan
(310) 257-1447
carucan@calwater.com
- 6. General Plan Designation:** Industrial
- 7. Zoning:** MH – Heavy Manufacturing
- 8. Description of Project:**

Cal Water is proposing to construct a new water supply well in the Central Coast Basin on existing property at 958 West Walnut Street in the City of Compton, including development of a treatment plant for treatment of the resulting water, which is likely to be of similar quality to other wells in the system given their proximity. The Proposed Project will include drilling, construction and testing of new well DOM 300-01 to be completed in two phases.

Phase I Work

The proposed well will be drilled and constructed to an approximate depth of 800 feet below ground surface with an estimated capacity is 1,500-2,000 gallons per minute (gpm). This phase also includes well performance testing for production and water quality to complete overall site design including treatment, if needed. Refer to the Site Plan (Figure 3) for the well drilling/ construction layout identifying the major equipment, facility access, location of trailers and security lighting.

To support construction and performance testing, Cal Water is also proposing installation of an onsite catch basin and connection to an existing storm drain catch basin located 100 ft. east of the property. This storm drain catch basin connection will be used to discharge the water generated during the well development process. Cal Water is permitted and authorized to discharge water generated during well development per its statewide National Pollutant Discharge Elimination System (NPDES) permit No. CAG140001, see attached. Cal Water intends to provide all necessary documents including, but not limited to drawings and calculations to Public Works for permitting of the new storm drain connection.

To comply with Compton Municipal Code Section Chapter VII, Section 7-12 noise ordinance during well drilling and construction, Cal Water is also proposing to erect a temporary noise wall (16-feet high) along the eastern property border. This noise wall will be utilized to shield Fire Station No. 4 on the adjacent property from Project construction generated noise. Cal Water intends to provide all necessary structural documents to the Building and Safety Department for permitting of the temporary noise wall. The noise wall will be discussed in more detail in the Noise section of the Initial Study, and additional discussion can be found in Appendix B – Noise Impact Assessment Report.

Phase II Work

After the well is installed a slump stone building will be constructed (dimensions 25'x50'x12') to house the electrical and treatment facilities. The building will contain the aeration equipment, booster pumps, and electrical and chemical injection facilities for the treatment system. If required, the treatment vessels would be installed outdoors on a 25'x50' concrete pad. Construction of onsite piping will be followed by installation of chemical feed systems for chloramination disinfection. In parallel, the offsite piping to connect the sources to the potable water system will be completed. To place the well facility online, site development will include fence construction and installation of a security system, paving, and landscaping.

9. Surrounding Land Uses and Setting:

The surrounding area is zoned for a variety of uses including Commercial, Heavy Manufacturing, Industrial, and Institutional uses (City of Compton City Plan).

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

- The State Water Resources Control Board Division of Drinking Water will act as the Lead Agency under CEQA for the Project to approve the Project, adopt the CEQA document, and issue a water supply permit.
- The City of Compton will participate as a Responsible Agency, as discretionary excavation and traffic permits will be required.

2.1 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table 1: Summary of Significant Impacts and Mitigation Measures

Potential Impacts	Significance Before Mitigation	Mitigation Measures	Level of significance after mitigation
5.4 Biological Resources			
<i>(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.</i>	Potentially Significant	BIO-1: In order to comply with the MBTA, any vegetation clearing should take place outside the general bird breeding season (February 15 to September 15), to the maximum extent practical. If this is not possible, prior to ground-disturbing activities, a qualified biologist should conduct a nesting bird survey and submit a migratory nesting bird and raptor survey report. The survey should occur no more than three days prior to initiation of Project activities, and any occupied passerine and/or raptor nests occurring within or adjacent to the work area should be delineated. Additional follow-up surveys may be required by the resource agencies. To the maximum extent practicable, a minimum buffer zone around occupied nests should be specified by a qualified biologist and maintained during physical ground-disturbing activities. The buffer zone should be sufficient in size to prevent impacts to the nest. Once nesting has ceased, the buffer may be removed.	Less than Significant
5.5 Cultural Resources			
<i>(a) Cause a substantial adverse change in the significance of a historic or archaeological resource.</i>	Potentially Significant	See TCR-1 through TCR-4, below	Less than Significant
<i>(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</i>	Potentially Significant	See TCR-1 through TCR-4, below	Less than Significant
<i>(c) Disturb any human remains, including those interred outside of dedicated cemeteries.</i>	Potentially Significant	See TCR-1 through TCR-4, below.	Less than Significant
5.7 Geology and Soils			
<i>(f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.</i>	Potentially Significant	GEO-1: Because the project area contains surficial deposits of older Quaternary Alluvium, a qualified paleontologist is required be on site to monitor any significant excavation 5-feet below the surface or deeper in the event that any significant vertebrate fossil remains are discovered.	Less than Significant
5.13 Noise			
<i>(a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.</i>	Potentially Significant	NOI-1: Install 220 linear feet of 16-ft high temporary sound barrier wall with a Sound Transmission Class (STC) rating of at least 25 on the east and partial south sides of the proposed site with no openings or gaps in the wall.	Less than Significant

Potential Impacts	Significance Before Mitigation	Mitigation Measures	Level of significance after mitigation
(b) Generation of excessive groundborne vibration or groundborne noise levels.	Potentially Significant	See NOI-1, above.	Less than Significant

5.18 Tribal Cultural Resources

<p><i>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</i></p>	Potentially Significant	<p>TCR-1: Professional Standards: Archaeological and Native American monitoring and excavation during construction projects will be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects shall be taken. The principal archaeologist must meet the Secretary of the Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist shall ensure that all other personnel are appropriately trained and qualified.</p> <p>TCR-2: Unanticipated Discovery of Tribal Cultural, Historical, and Archaeological Resources: Upon discovery of archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed by a qualified archaeologist. All archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request reburial or preservation for educational purposes. After the assessment is completed, the archaeologist shall submit a report to the State Water Board describing the significance of the discovery with cultural resource management recommendations. Work may continue on other parts of the project while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource", time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery</p>	Less than Significant
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Potential Impacts	Significance Before Mitigation	Mitigation Measures	Level of significance after mitigation
		<p>excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to a local school or historical society in the area for educational purposes.</p> <p>TCR-3: Retain a Native American Monitor: The project Applicant will be required to obtain the services of a tribal monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation and will be present on-site during the construction phases that involve any ground disturbing activities. Ground disturbance is defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, weed abatement, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete monitoring logs on a daily basis that will provide descriptions of the daily activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor have indicated that the site has a low potential for archeological resources.</p> <p>TCR-4: Unanticipated Discovery of Human Remains and Associated Funerary Objects: Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called "associated grave goods" in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission and PRC 5097.98 shall be followed. Upon discovery, the Tribal monitor will immediately divert work at minimum of 50 feet and place an exclusion zone around the burial. The monitor will then notify the qualified archaeologist and the construction manager who will call the coroner. Work will continue to be diverted while</p>	

<i>Potential Impacts</i>	<i>Significance Before Mitigation</i>	<i>Mitigation Measures</i>	<i>Level of significance after mitigation</i>
		<p>the coroner determines whether the remains are Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).</p> <p>If the Gabrieleno Band of Mission Indians – Kizh Nation is designated MLD, the following treatment measures shall be implemented. To the Tribe, the term “human remains” encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. These remains are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.</p> <p>Prior to the start of ground disturbing activities, the land owner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the NAHC. The Tribe does not</p>	

Potential Impacts	Significance Before Mitigation	Mitigation Measures	Level of significance after mitigation
		<p>authorize any scientific study or the utilization of any invasive diagnostics on human remains.</p> <p>Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location mitigated between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.</p>	

5.21 Mandatory Findings of Significance

<i>(a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</i>	Potentially Significant	<p>The Proposed Project involves adding a new water well and treatment system to an undeveloped piece of land in a heavy industrial area and would not have the potential to substantially degrade the quality of the existing environment; reduce habitat of fish or wildlife species; threaten plant or animals communities; or reduce the number or restrict range of rare plants or animals; or eliminate important examples of the major periods of California history or prehistory.</p> <p>The Proposed Project is not expected to have a significant impact on biological or cultural resources. As discussed throughout the checklist, it has been determined that the Proposed Project's biological and cultural impacts would be less than significant through the incorporation of Mitigation Measures BIO-1, GEO-1, TCR-1, TCR-2, TCR-3, and TCR-4</p>	Less than significant
<i>(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?)</i>	Potentially Significant	<p>The potential for cumulative impacts occurs when the independent impacts of the Proposed Project are combined with the impacts of related projects in proximity to the Proposed Project such that impacts occur that are greater than the impacts of the Project alone. As discussed above, it has been determined that the Proposed Project would have no impact, or impacts would be less than significant, with respect to the environmental issues. Mitigation measures previously described would reduce the impacts to a less than significant level.</p>	Less than Significant

SECTION 3.0 – ENVIRONMENTAL DETERMINATION

3.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would potentially be affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklists on the following pages. For each of the potentially affected factors, mitigation measures are recommended that would reduce the impacts to less than significant levels.

<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture and Forestry Resources	<input type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Cultural Resources	<input type="checkbox"/> Energy
<input checked="" type="checkbox"/> Geology /Soils	<input type="checkbox"/> Greenhouse Gas Emissions	<input type="checkbox"/> Hazards & Hazardous Materials
<input 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 type="checkbox"/> Transportation	<input checked="" type="checkbox"/> Tribal Cultural Resources
<input type="checkbox"/> Utilities /Service Systems	<input type="checkbox"/> Wildfire	<input checked="" type="checkbox"/> Mandatory Findings of Significance

3.2 DETERMINATION

On the basis of this initial evaluation:

1. I find that the project **could not** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared. ☐
2. I find that 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. ☒
3. I find the proposed project **may have a significant effect** on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required. ☐
4. I find that the proposed project **may have a "potentially significant impact" or "potentially significant unless mitigated impact"** on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed. ☐
5. I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. ☐

SECTION 4.0 – 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. 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 offsite as well as onsite, 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 substantial evidence exists that an effect may be significant. If one or more “Potentially Significant Impact” entries are marked 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 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. 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 significant.

*Note: Instructions may be omitted from final document.

SECTION 5.0 – CHECKLIST OF ENVIRONMENTAL ISSUES

5.1 AESTHETICS

1.	AESTHETICS. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<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 type="checkbox"/>	<input checked="" type="checkbox"/>

5.1.1 Environmental Setting

Scenic Corridors:

The City of Compton has designated specific roadways as scenic corridors. The following City-designated scenic corridors are Alameda Street, Alondra Boulevard, Artesia Boulevard, Central Avenue, Compton Boulevard, El Segundo Boulevard, Long Beach Boulevard, Rosecrans Avenue, Santa Fe Avenue, Willowbrook Avenue, and Wilmington Avenue (City of Compton 2014).

5.1.2 Impact Analysis

- a) **No Impact.** Based on a review of the City of Compton General Plan, the Proposed Project site is not located in or near any designated scenic vistas, and therefore would not have an impact on a scenic vista (City of Compton 2014).
- b) **No Impact.** The Proposed Project is not located near or within a state scenic highway (California Department of Transportation 2011). There are no scenic resources on the Proposed Project site. Therefore, there would not be an impact to scenic resources near or within a state scenic highway.
- c) **Less than Significant Impact.** The Proposed Project involves adding a new water well and treatment system to an undeveloped piece of land in a heavy industrial area. Installation of the Proposed Project would involve temporary disturbance of the Proposed Project site. These impacts would be temporary and are not anticipated to change the character of the area substantially. The Proposed Project would result in a change in the existing visual character of the site from a vacant, undeveloped parcel to a parcel developed with a water well and treatment facilities. These facilities would be consistent with the nearby industrial development. In addition, there are no existing scenic resources on the Proposed

Project site. Therefore, the Proposed Project would result in a less than significant impact to the existing visual character or quality of the site and its surroundings.

- d) **No Impact.** The Proposed Project would add security lighting to the site. The new light would be consistent with existing lighting in the area. Ambient lighting and glare in the nearby areas would not significantly increase above existing conditions. No impact would occur.

5.2 AGRICULTURE & FORESTRY RESOURCES

2.	AGRICULTURE & FOREST 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 Department 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:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(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 nonagricultural 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 nonagricultural use or the conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) **No Impact.** The Proposed Project site was not surveyed as part of the Farmland Mapping and Monitoring Program due to its location in a highly urbanized region of Los Angeles County (California Department of Conservation 2016). The Proposed Project would not convert Prime Farmland, or

Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. No impact would occur.

- b) **No Impact.** The Proposed Project site is zoned for industrial uses and is not in a Williamson Act contract (City of Compton 2014). No impact would occur.
- c) **No Impact.** The Proposed Project site is zoned for heavy industrial uses and is not zoned for forest land or timberland. The Proposed Project is surrounded by industrial and commercial development, and other highly developed land. The site is not located near any forest land and would not result in the conversion of farmland or forest land to another use. No impact would occur.

5.3 AIR QUALITY

3.	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:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b)	Violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c)	Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d)	Result in substantial emissions (such as odors or dust) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

5.3.1 Environmental Setting

The Proposed Project site is located within the southwestern portion of Los Angeles County in the City of Compton, which is part of the South Coast Air Basin (Air Basin) that includes the non-desert portions of Riverside, San Bernardino, and Los Angeles Counties and all of Orange County. The Air Basin is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the Air Basin is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter.

Regional Climate

The climate of southwestern Los Angeles County is characterized by hot dry summers, mild moist winters with infrequent rainfall, moderate afternoon breezes, and generally fair weather. Occasional periods of strong Santa Ana winds and winter storms interrupt the otherwise mild weather pattern. Although the Air Basin is semi-arid, the air near the surface in southwestern Los Angeles County is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry air is brought into the Air Basin by offshore winds, the ocean effect is dominant. Periods of heavy fog are frequent and low stratus clouds, often referred to as “high fog” are a characteristic feature.

Winds are an important parameter in characterizing the air quality environment of a proposed project site because they both determine the regional pattern of air pollution transport and control the rate of dispersion near a source. Daytime winds in southwestern Los Angeles County are usually light breezes from off the coast as air moves regionally onshore from the cool Pacific Ocean to the warm Mojave Desert interior of Southern California. These winds allow for good local mixing, but as discussed above, these coastal winds carry significant amounts of industrial and automobile air pollutants from the densely urbanized western portion of the Air Basin into the interior valleys which become trapped by the mountains that border the eastern and northern edges of the Air Basin.

In the summer, strong temperature inversions may occur that limit the vertical depth through which air pollution can be dispersed. Air pollutants concentrate because they cannot rise through the inversion layer and disperse. These inversions are more common and persistent during the summer months. Over time, sunlight produces photochemical reactions within this inversion layer that creates ozone, a particularly harmful air pollutant. Occasionally, strong thermal convections occur which allows the air pollutants to rise high enough to pass over the mountains and ultimately dilute the smog cloud.

In the winter, light nocturnal winds result mainly from the drainage of cool air off of the mountains toward the valley floor while the air aloft over the valley remains warm. This forms a type of inversion known as a radiation inversion. Such winds are characterized by stagnation and poor local mixing and trap pollutants such as automobile exhaust near their source. While these inversions may lead to air pollution “hot spots” in heavily developed coastal areas of the Air Basin, there is not enough traffic in inland valleys to cause any winter air pollution problems. Despite light wind conditions, especially at night and in the early morning, winter is generally a period of good air quality in the project vicinity.

The temperature and precipitation levels for the Long Beach Daugherty Field Monitoring Station, which is the nearest weather station to the Proposed Project site with historical data are shown below in Table 2. Table 2 shows that August is typically the warmest month and January is typically the coolest month. Rainfall in the Proposed Project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table 2: Monthly Climate Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Max Temperature	67.1	67.2	68.4	71.7	73.5	76.9	82.2	83.9	82.3	77.9	72.2	67.0
Avg. Min. Temperature	45.6	47.3	49.7	52.4	56.8	60.3	63.7	64.9	62.9	57.9	50.5	45.3
Avg. Total Precipitation (in.)	2.63	2.90	1.83	0.70	0.20	0.06	0.02	0.06	0.19	0.42	1.21	1.80

Source : <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5085>

Monitored Local Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the Air Basin. Estimates of the existing emissions in the Air Basin provided in the 2012 Air Quality Management Plan (AQMP), indicate that collectively, mobile sources account for 59 percent of the volatile organic compounds (VOC), 88 percent of the nitrogen oxide (NO_x) emissions and 40 percent of directly emitted particulate matter less than 2.5 micrometers in diameter (PM_{2.5}), with another 10 percent of PM_{2.5} from road dust. The 2016 AQMP found that since 2012 AQMP projections were made stationary source VOC emissions have decreased by approximately 12 percent, but mobile VOC emissions have increased by 5 percent. The percentage of NO_x emissions remain unchanged between the 2012 and 2016 projections.

South Coast Air Quality Management District (SCAQMD) has divided the Air Basin into 38 air-monitoring areas. The Proposed Project site is located in Air Monitoring Area 12, which covers the South Central Los Angeles County. Since not all air monitoring stations measure all of the tracked pollutants, the data from the following two monitoring stations, listed in the order of proximity to the Proposed Project site have been used; Compton-700 North Bullis Road Monitoring Station (Compton Station) and Long Beach-2425 Webster Street Monitoring Station (Long Beach Station).

The Compton Station is located approximately 2.6 miles northeast of the Proposed Project site at 700 North Bullis Road, Compton and the Long Beach Station is located approximately 5.2 miles southeast of the Proposed Project site at 2425 Webster Street, Long Beach. Ozone, nitrogen dioxide (NO₂), and PM_{2.5} were measured at the Compton Station and particulate matter less than 10 micrometers in diameter (PM₁₀) was measured at the Long Beach Station. However, it should be noted that due to the air monitoring station's distance from the Proposed Project site, recorded air pollution levels at the monitoring stations reflect with varying degrees of accuracy, local air quality.

The monitoring data is presented in Table 3 and shows the most recent three years of monitoring data from California Air Resources Board (CARB). Carbon Monoxide (CO) measurements have not been provided, since CO is currently in attainment in the Air Basin and monitoring of CO within the Air Basin ended on March 31, 2013. Table 3 shows that ozone and particulate matter (PM₁₀ and PM_{2.5}) are the air pollutants of primary concern in the Proposed Project area, which are detailed below:

Ozone

The State 1-hour concentration standard for ozone has been exceeded one day over the past three years at the Compton Station. The State 8-hour ozone standard has been exceeded between one and five days each year over the past three years at the Compton Station. The Federal 8-hour ozone standard has been exceeded between one and five days each year over the past three years at the Compton Station.

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO₂, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of Southern California contribute to the ozone levels experienced at this monitoring station, with the more significant areas being those directly upwind.

Table 3: Local Area Air Quality Monitoring Summary

Pollutant (Standard)	Year		
	2015	2016	2017
Ozone (O₃)¹			
Max 1-Hour Concentration (ppm)	0.091	0.098	0.092
Days > CAAQS (0.09 ppm)	0	1	0
Max 8-Hour Concentration (ppm)	0.072	0.071	0.076
Days > NAAQS (0.070 ppm ¹)	1	1	5
Days > CAAQS (0.070 ppm)	1	1	5
Nitrogen Dioxide (NO₂)¹			
Max 1-Hour Concentration (ppb)	73.6	63.7	99.1
Days > NAAQS (100 ppb)	0	0	0
Inhalable Particulates (PM₁₀)²			
Max 24-Hour California Measurement (µg/m ³)	80.0	75.0	79.3
Days > NAAQS (150 µg/m ³)	0	0	0
Days > CAAQS (50 µg/m ³)	6	ND	ND
Annual Arithmetic Mean (AAM) (µg/m ³)	31.5	31.9	33.7
Annual > NAAQS (50 µg/m ³)	No	No	No
Annual > CAAQS (20 µg/m ³)	Yes	Yes	Yes
Ultra-Fine Particulates (PM_{2.5})¹			
Max 24-Hour National Measurement (µg/m ³)	41.3	36.3	66.7
Days > NAAQS (35 µg/m ³)	3	1	5
Annual Arithmetic Mean (AAM) (µg/m ³)	11.7	11.0	13.2
Annual > NAAQS and CAAQS (12.0 µg/m ³)	No	No	Yes

Notes: Exceedances are listed in **bold**. CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb = parts per billion; ND = no data available.

¹ Data obtained from the Compton Station.

² Data obtained from the Long Beach Station.

Source : <http://www.arb.ca.gov/adam/>

Nitrogen Dioxide

The Compton Station did not record an exceedance of the Federal 1-hour NO₂ standard for the last three years.

Particulate Matter

The State 24-hour concentration standard for PM₁₀ has been exceeded six days in 2015, and no data is available for the years 2016 and 2017 at the Long Beach Station. Over the past three years the Federal 24-hour standard for PM₁₀ has not been exceeded at the Long Beach Station. The annual PM₁₀ concentration at the Long Beach Station has exceeded the State standard for the past three years and has not exceeded the Federal standard for the past three years.

Over the past three years the 24-hour concentration standard for PM_{2.5} has been exceeded between one and five days each year over the past three years at the Compton Station. The annual PM_{2.5} concentration exceeded both the State and Federal standard only one year over the past three years. There does not appear to be a noticeable trend for PM₁₀ or PM_{2.5} in either maximum particulate concentrations or days of exceedances in the area. Particulate levels in the area are due to natural sources, grading operations, and motor vehicles.

According to the EPA, some people are much more sensitive than others to breathing fine particles (PM₁₀ and PM_{2.5}). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM₁₀ and PM_{2.5}. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, because many breathe through their mouths during exercise.

Toxic Air Contaminant Levels in the Air Basin

In order to determine the Air Basin-wide risks associated with major airborne carcinogens, the SCAQMD conducted the Multiple Air Toxics Exposure Study (MATES) studies. According to the SCAQMD's MATES-IV study, the Proposed Project site has an estimated cancer risk of 1441 per million persons chance of cancer. In comparison, the average cancer risk for the Air Basin is 991 per million persons, which is based on the use of age-sensitivity factors detailed in the OEHHA Guidelines (OEHHA, 2015). The increased cancer risk is primarily due to the Proposed Project site's proximity to State Routes 91 and 47, and to Interstate 710 and 110.

In order to provide a perspective of risk, it is often estimated that the incidence in cancer over a lifetime for the U.S. population ranges between 1 in 3 to 4 and 1 in 3, or a risk of about 300,000 per million persons. The MATES-III study referenced a Harvard Report on Cancer Prevention, which estimated that of cancers associated with known risk factors, about 30 percent were related to tobacco, about 30 percent were related to diet and obesity, and about 2 percent were associated with environmental pollution related exposures that includes hazardous air pollutants.

5.3.2 Thresholds of Significance

Regional Air Quality

Many air quality impacts that derive from dispersed mobile sources, which are the dominate pollution generators in the Air Basin, often occurs hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual project is generally very small and difficult to measure. Therefore, SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The SCAQMD CEQA Handbook states that any project in the Air Basin with daily emissions that exceed any of the identified significance thresholds should be considered as having an individually and cumulatively significant air quality impact. For the purposes to this air quality impact analysis, a regional air quality impact would be considered significant if emissions exceed the SCAQMD significance thresholds identified in Table 4.

Table 4 – SCAQMD Regional Criteria Pollutant Emission Thresholds of Significance

	Pollutant Emissions (Pounds/Day)						
	VOC	NOx	CO	SOx	PM ₁₀	PM _{2.5}	Lead
Construction	75	100	550	150	150	55	3
Operation	55	55	550	150	150	55	3

Source : <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>

Local Air Quality

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. SCAQMD has also provided Final Localized Significance Threshold Methodology (LST Methodology), July 2008, which details the methodology to analyze local air emission impacts. The LST Methodology found that the primary emissions of concern are NO₂, CO, PM₁₀, and PM_{2.5}.

The LST Methodology provides Look-Up Tables with different thresholds based on the location and size of the project site and distance to the nearest sensitive receptors. The portion of the Proposed Project site that will be disturbed is approximately 0.48 acre, which is closest to the one-acre project site shown in the Look-Up Tables that has been utilized in this analysis. As detailed above, the Proposed Project site is located in Air Monitoring Area 12, which covers the South-Central Los Angeles County. The nearest offsite sensitive receptors to the project site consist of workers at Fire Station 4, located adjacent to the east side of the Proposed Project site. According to LST Methodology, any receptor located closer than 25 meters (82 feet) shall be based on the 25-meter thresholds. Table 5 below shows the LSTs for NO₂, PM₁₀ and PM_{2.5} for both construction and operational activities.

Table 5– SCAQMD Local Air Quality Thresholds of Significance

Activity	Allowable Emissions (Pounds/Day)			
	NOx	CO	PM ₁₀	PM _{2.5}
Construction	46	231	4	3
Operation	46	231	1	1

Notes:

1 The nearest sensitive receptors are workers at the Fire Station located adjacent to the east side of the project site. According to LST Methodology, all receptors closer than 25 meters are based on the 25 meter threshold.

Source: Calculated from SCAQMD's Mass Rate Look-up Tables for one acre in Air Monitoring Area 12, South Central Los Angeles County.

Toxic Air Contaminants

According to the SCAQMD CEQA Handbook, any project that has the potential to expose the public to toxic air contaminants in excess of the following thresholds would be considered to have a significant air quality impact:

- If the Maximum Incremental Cancer Risk is 10 in one million or greater; or
- Toxic air contaminants from the proposed project would result in a Hazard Index increase of 1 or greater.

In order to determine if the proposed project may have a significant impact related to toxic air contaminants (TACs), the Health Risk Assessment Guidance for analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, (Diesel Analysis) prepared by SCAQMD, August 2003, recommends that if the proposed project is anticipated to create TACs through stationary sources or regular operations of diesel trucks on the project site, then the proximity of the nearest receptors to the source of the TAC and the toxicity of the hazardous air pollutant (HAP) should be analyzed through a comprehensive facility-wide health risk assessment (HRA).

Odor Impacts

The SCAQMD CEQA Handbook states that an odor impact would occur if the proposed project creates an odor nuisance pursuant to SCAQMD Rule 402, which states:

“A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.”

If the proposed project results in a violation of Rule 402 with regards to odor impacts, then the proposed project would create a significant odor impact.

5.3.3 Impact Analysis

a) *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

Less than Significant Impact. The SCAQMD CEQA Handbook states that "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

- (1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP; and
- (2) Whether the project will exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

Criterion 1 - Increase in the Frequency or Severity of Violations?

Based on the air quality modeling analysis contained in the Air Quality and GHG Emissions Impact Analysis (Appendix A), short-term regional construction air emissions would not result in significant impacts based on SCAQMD regional thresholds of significance discussed above in Section 5.3.2. The ongoing operation of the Proposed Project would generate air pollutant emissions that are inconsequential on a regional basis and would not result in significant impacts based on SCAQMD thresholds of significance discussed above in Section 5.3.2. The analysis for long-term local air quality impacts showed that local pollutant concentrations would not be projected to exceed the air quality standards (See Table 6 below in Impact b).

Therefore, based on the information provided above, the Proposed Project would be consistent with the first criterion.

Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of a proposed project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The AQMP is developed through use of the planning forecasts provided in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and the 2015 Federal Transportation Improvement Program (FTIP). The RTP/SCS is a major planning document for the regional transportation and land use network within Southern California. The RTP/SCS is a long-range plan that is required by federal and state requirements placed on Southern California Association of Governments (SCAG) and is updated every four years. The FTIP provides long-range planning for future transportation improvement projects that are constructed with state and/or federal funds within Southern California. Local governments are required to use these plans as the basis of their plans for the purpose of consistency with applicable regional plans under CEQA. For this project, the City of Compton General Plan defines the assumptions that are represented in AQMP.

The Proposed Project is currently designated as Industrial (I) and is zoned Heavy Manufacturing (MH). The Proposed Project is consistent with the current land use designation and would not require a General Plan Amendment or zone change. As such, the Proposed Project is not anticipated to exceed the AQMP assumptions for the Proposed Project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the Proposed Project will not result in an inconsistency with the SCAQMD AQMP. Therefore, this impact is less than significant.

- b) Would the project violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation?

Less than Significant Impact. The Proposed Project site is located in the South Coast Air Basin, which is currently designated by the EPA for federal standards as a non-attainment area for ozone and PM_{2.5} and by CARB for the state standards as a non-attainment area for ozone, PM₁₀, and PM_{2.5}. The SCAQMD has developed both regional and local air emissions thresholds that are detailed respectively above in Sections 4.3.2. In accordance with SCAQMD methodology, projects that do not exceed SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. The following section calculates the potential air emissions associated with the construction and operations of the Proposed Project and compares the emissions to the SCAQMD standards.

Construction Emissions

The Proposed Project would consist of construction of a new water supply well and associated improvements to the Proposed Project site. The CalEEMod model has been utilized to calculate the construction-related regional emissions from the Proposed Project and the input parameters utilized in this analysis are detailed in Appendix A. The worst-case summer or winter daily construction-related criteria pollutant emissions from the Proposed Project for each phase of construction activities are shown below in Table 6 and the CalEEMod daily printouts are shown in Appendix A.

Table 6 – Construction-Related Regional Criteria Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Phase 1 – Temporary Noise Barrier and Site Preparation						
Onsite	3.66	38.50	28.26	0.05	2.13	1.96
Offsite	0.31	0.46	2.71	0.01	0.63	0.17
Total	3.97	38.96	30.97	0.06	2.76	2.13
Phase 2 – Conductor Casing Installation						
Onsite	1.94	16.99	13.15	0.03	0.79	0.75
Offsite	0.02	0.13	0.11	0.00	0.00	0.00
Total	1.96	17.12	13.26	0.03	0.79	0.75
Phase 3 – Well Drilling						
Onsite	4.79	42.71	37.51	0.08	2.32	2.28
Offsite	0.02	0.13	0.12	0.00	0.00	0.00
Total	4.81	42.84	37.63	0.08	2.32	2.28
Phase 4 – Well Casing						
Onsite	5.10	45.36	38.77	0.09	2.34	2.28
Offsite	0.03	0.13	0.12	0.00	0.00	0.00
Total	5.13	45.49	38.89	0.09	2.34	2.28
Phase 5 – Well Development						
Onsite	1.98	11.50	11.34	0.02	0.94	0.91

Activity	Pollutant Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Offsite	0.02	0.13	0.09	0.00	0.00	0.00
Total	2.00	11.63	11.43	0.02	0.94	0.91
Phase 6 – Test Pumping						
Onsite	1.98	19.88	13.17	0.03	0.94	0.91
Offsite	0.02	0.13	0.09	0.00	0.00	0.00
Total	2.00	20.01	13.26	0.03	0.94	0.91
Phase 7 – Site Improvements						
Onsite	1.27	11.66	8.24	0.02	0.58	0.55
Offsite	0.06	0.38	0.53	0.00	0.12	0.04
Total	1.33	12.04	8.77	0.02	0.70	0.59
SCAQMD Regional Threshold	75	100	550	150	150	55
Exceed?	No	No	No	No	No	No

Notes:

1 Onsite emissions from equipment not operated on public roads.

2 Offsite emissions from vehicles operating on public roads.

Source: CalEEMod Version 2016.3.2.

Table 6 shows that none of the analyzed criteria pollutants would exceed the regional emissions thresholds during any of the well construction phases. Therefore, a less than significant regional air quality impact would occur from construction of the Proposed Project.

Operational Emissions

Operation of the Proposed Project would consist of the operation of an electrical water pump, that would not create any onsite air emissions. Implementation of the Proposed Project would result in a net decrease in electricity usage, when compared to the electricity currently utilized to transport water to the Proposed Project vicinity from Northern California. Routine maintenance would be conducted on the well in five to 10-year intervals. Maintenance would include physical cleaning and swabbing or can include a full rehabilitation of the well. A typical well rehabilitation process can be completed in five days.

The CalEEMod model has been utilized to calculate the operational regional emissions from the well rehabilitation activities and the input parameters utilized in this analysis as detailed in Appendix A. The worst-case summer or winter VOC, NO_x, CO, SO₂, PM₁₀, and PM_{2.5} daily emissions created from the Proposed Project's long-term operations have been calculated and are summarized below in Table 7 and the CalEEMod daily emissions printouts are shown in Appendix A.

Table 7 – Construction-Related Regional Criteria Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Well Rehabilitation						
Onsite	1.13	9.56	10.55	0.02	0.40	0.38
Offsite	0.01	0.10	0.05	0.00	0.00	0.00
Total	1.14	9.66	10.60	0.02	0.40	0.38
SCAQMD Regional Threshold	55	55	550	150	150	55
Exceed?	No	No	No	No	No	No

Notes:
1 Onsite emissions from equipment not operated on public roads.
2 Offsite emissions from vehicles operating on public roads.
Source: Calculated from CalEEMod Version 2016.3.2.

The data provided in Table 7 above shows that none of the analyzed criteria pollutants would exceed the regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from operation of the Proposed Project.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. The nearest sensitive receptors to the Proposed Project site are the offsite workers at Compton Fire Department Station 4 that are located adjacent to the east side of the Proposed Project site. The nearest residential uses to the Proposed Project site are single-family homes located on the north side of Greenleaf Boulevard, approximately 0.3 mile north of the Proposed Project site. The nearest school to the Proposed Project site is Walton Middle School, which is located as near as 670 feet north of the Proposed Project site. The construction and operations-related impacts to the nearby sensitive receptors have been analyzed separately below.

Construction-Related Sensitive Receptor Impacts

The Proposed Project would consist of construction of a new water supply well and associated improvements to the Proposed Project site. Construction of the Proposed Project would create onsite air emissions from off-road diesel equipment exhaust as well as from fugitive dust created from the movement of dirt and debris on the Proposed Project site. The construction-related local criteria pollutant impacts and toxic air contaminant impacts have been analyzed separately below.

Construction-Related Local Criteria Pollutant Impacts

Construction-related air emissions may have the potential to exceed localized criteria pollutant thresholds that have been developed by the SCAQMD. The local air quality emissions from construction were analyzed through utilizing the methodology described in Localized Significance Threshold Methodology (LST Methodology), prepared by SCAQMD, revised October 2009. The LST Methodology found the

primary criteria pollutant emissions of concern are NO_x, CO, PM₁₀, and PM_{2.5}. In order to determine if any of these pollutants require a detailed analysis of the local air quality impacts, each phase of construction was screened using the SCAQMD's Mass Rate LST Look-up Tables. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily onsite emissions of CO, NO_x, PM₁₀, and PM_{2.5} from the Proposed Project could result in a significant impact to the local air quality. Table 8 shows the onsite emissions from the CalEEMod model for the different construction phases and the calculated localized emissions thresholds that have been detailed above in Section 5.3.2. Since it is possible that building construction, paving, and architectural coating activities may occur concurrently, Table 8 also shows the combined local criteria pollutant emissions from building construction, paving and architectural coating phases of construction.

Table 8 – Construction-Related Local Criteria Pollutant Emissions

Phase	Pollutant Emissions (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Temporary Noise Barrier and Site Preparation	38.50	28.26	2.13	1.96
Conductor Casing Installation	16.99	13.15	0.79	0.75
Well Drilling	42.71	37.51	2.32	2.28
Well Casing	45.36	38.77	2.34	2.28
Well Development	19.88	13.17	0.94	0.91
Test Pumping	11.50	11.34	0.71	0.71
Site Improvements	11.66	8.24	0.58	0.55
SCAQMD Thresholds for 25 meters (82 feet)	46	231	4	3
Exceeds Thresholds?	No	No	No	No

Notes:

1 The nearest sensitive receptors are workers at the Fire Station located adjacent to the east side of the project site. According to LST Methodology, all receptors closer than 25 meters are based on the 25 meter threshold.

Source: Calculated from SCAQMD's Mass Rate Look-up Tables for one-acre in Air Monitoring Area 12, South Central Los Angeles County.

The data provided in Table 8 shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds during any of the well construction phases. Therefore, a less than significant local air quality impact would occur from construction of the Proposed Project.

Construction-Related Toxic Air Contaminant Impacts

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the Proposed Project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk." "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-

assessment methodology. Given the relatively limited number of heavy-duty construction equipment and the short-term construction schedule, the Proposed Project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the Proposed Project. As such, construction of the Proposed Project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Operations-Related Sensitive Receptor Impacts

Operation of the Proposed Project would consist of the operation of an electrical water pump, that would not create any onsite air emissions. Routine maintenance would be conducted on the well in five to 10-year intervals. Maintenance would include physical cleaning, swabbing, or can include a full rehabilitation of the well. The routine maintenance activities would create onsite air emissions from off-road diesel equipment exhaust as well as from fugitive dust created from the movement of dirt and debris on the Proposed Project site. The operations-related local criteria pollutant impacts and toxic air contaminant impacts have been analyzed separately below.

Operations-Related Local Criteria Pollutant Impacts

Operational air emissions may have the potential to exceed localized criteria pollutant thresholds that have been developed by the SCAQMD. The local air quality emissions from well rehabilitation were analyzed using the SCAQMD's Mass Rate LST Look-up Tables and the methodology described in LST Methodology. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NO_x, PM₁₀, and PM_{2.5} from the Proposed Project could result in a significant impact to the local air quality. Table 9 shows the onsite emissions from the CalEEMod model for the well rehabilitation activities as well as the SCAQMD emissions thresholds.

Table 9 – Operational Well Rehabilitation Local Criteria Pollutant Emissions

Phase	Pollutant Emissions (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Well Rehabilitation	9.56	10.55	0.40	0.38
SCAQMD Thresholds for 25 meters (82 feet)	46	231	1	1
Exceeds Thresholds?	No	No	No	No

Notes:

1 The nearest sensitive receptors are workers at the Fire Station located adjacent to the east side of the project site. According to LST Methodology, all receptors closer than 25 meters are based on the 25 meter threshold.

Source: Calculated from SCAQMD's Mass Rate Look-up Tables for one-acre in Air Monitoring Area 12, South Central Los Angeles County.

The data provided in Table 9 shows that the on-going operations of the Proposed Project would not exceed the local NO_x, CO, PM₁₀ and PM_{2.5} thresholds of significance. Therefore, the on-going operations of the Proposed Project would create a less than significant operations-related impact to local air quality due to on-site emissions and no mitigation would be required.

Operations-Related Toxic Air Contaminant Impacts

The greatest potential for toxic air contaminant emissions would only occur during the well rehabilitation activities that are limited to approximately five days every five to ten years. Given, the infrequent activity schedule, the Proposed Project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. Therefore, no significant long-term toxic air contaminant impacts would occur during operation of the Proposed Project. As such, operation of the Proposed Project would result in a less than significant impact associated with exposure of sensitive receptors to substantial pollutant concentrations.

d) Would the project result in substantial emissions (such as odors or dust) affecting a substantial number of people?

Less than Significant Impact. Individual responses to odors are highly variable and can result in a variety of effects. Generally, the impact of an odor results from a variety of factors such as frequency, duration, offensiveness, location, and sensory perception. The frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works, or visits; the type of activity in which he or she is engaged; and the sensitivity of the impacted receptor.

Sensory perception has four major components: detectability, intensity, character, and hedonic tone. The detection (or threshold) of an odor is based on a panel of responses to the odor. There are two types of thresholds: the odor detection threshold and the recognition threshold. The detection threshold is the lowest concentration of an odor that will elicit a response in a percentage of the people that live and work in the immediate vicinity of the project site and is typically presented as the mean (or 50 percent of the population). The recognition threshold is the minimum concentration that is recognized as having a characteristic odor quality, this is typically represented by recognition by 50 percent of the population. The intensity refers to the perceived strength of the odor. The odor character is what the substance smells like. The hedonic tone is a judgment of the pleasantness or unpleasantness of the odor. The hedonic tone varies in subjective experience, frequency, odor character, odor intensity, and duration. Potential odor impacts have been analyzed separately for construction and operations below.

Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the extraction of drilling mud and from diesel exhaust associated with the operation of construction equipment. The objectionable odors that may be produced during the construction process would be temporary and would not likely be noticeable for extended periods of time beyond the Proposed Project site's boundaries. Due to the

transitory nature of construction odors, a less than significant odor impact would occur from construction of the Proposed Project.

Operations-Related Odor Impacts

Potential sources that may emit odors during operational activities include the operation of diesel-powered maintenance trucks and equipment as well as from use of chemicals such as chlorine, if a treatment facility is determined to be required to be installed onsite. The objectionable odors that may be produced from diesel-powered maintenance trucks and equipment would be temporary and would not likely be noticeable for extended periods of time beyond the Proposed Project site's boundaries. If a treatment facility is required all chemicals such as chlorine would be utilized in closed systems with no exposure to outside air and all stockpiles of chemicals would be kept inside the proposed treatment facility structure within their original packaging until utilized. As such, the odor impacts from the proposed treatment facility would be limited to within the Proposed Project site boundaries and would not affect a substantial number of people. Therefore, a less than significant odor impact would occur from operation of the Proposed Project.

5.4 BIOLOGICAL RESOURCES

4.	BIOLOGICAL RESOURCES. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(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 Game 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 Game 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 state or federally protected wetlands as (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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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"/>

The following section is based on the Biological Technical Report prepared by Chambers Group, Inc. in December 2018 (Appendix B). Prior to performing the field survey, a desktop analysis was performed to review the existing species occurrence documentation relevant to the Proposed Project site using the California Natural Diversity Database (CNDDDB) and the California Native Plant Society's (CNPS) websites. Soil maps for Los Angeles County were referenced online to determine the types of soils found within the Project site. Chambers Group biologist, Christiana Conser, conducted the reconnaissance survey at the Project site on November 30, 2018 to identify the potential for occurrence of vegetation communities or habitats that could support sensitive plant or wildlife species.

5.4.1 Impact Analysis

- (a) *Would the project have a substantial adverse effect, either directly or through habitat modification, on any species identified as candidate, sensitive or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No Impact. The Proposed Project site is located on West Walnut Street between South Andersen Avenue and South Wilmington Avenue in the City of Compton, which is an urban corridor previously disturbed. The Project site is vacant and consists of a small, narrow parcel of undeveloped land with portions of bare ground and portions with non-native weeds and ornamental trees and shrubs. Although the CNDDDB and CNPS searches indicated that listed and/or sensitive plant and wildlife species were documented to occur within 5 miles of the Project site, it was determined that all 41 plant species and 30 wildlife species can be considered absent from the Project site based on the assessment of the various habitat types and specific requirements of those plant and wildlife species. In addition, no sensitive species were identified at the Project site. No impacts are expected.

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

No Impact. The Proposed Project site is currently vacant and located in an urbanized area lacking native biological habitat. No riparian habitats or other sensitive natural communities are present on-site. Furthermore, the surrounding area is developed with commercial and institutional land uses and does not contain riparian habitats or other sensitive natural communities. Consequently, no impact would occur.

- (c) *Would the project have a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact. The Proposed Project site is currently vacant and located within an urbanized setting. The Project site does not include any riparian or sensitive natural communities. No impact is expected to occur.

- (d) *Would the project Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Less than Significant Impact with Mitigation. The Proposed Project site is currently vacant and located within an urbanized area. The Project site does not provide for any substantial movement of wildlife species through a land-based corridor. Since there are several mature trees onsite, a potential exists for avian species covered by the Migratory Bird Treaty Act (MBTA) to nest onsite, particularly within mature trees. No active or old avian nests were observed; however, the survey was conducted outside of the bird breeding season (February 15 to September 15). If vegetation clearing and ground disturbance is to occur during bird breeding season, nesting bird surveys will be required in accordance with the MBTA, as described in Mitigation Measure BIO-1, below.

BIO-1 In order to comply with the MBTA, any vegetation clearing should take place outside the general bird breeding season (February 15 to September 15), to the maximum extent practical. If this is not possible, prior to ground-disturbing activities, a qualified biologist should conduct a nesting bird survey and complete a migratory nesting bird and raptor survey report. The survey should occur no more than three days prior to initiation of Project activities, and any occupied passerine and/or raptor nests occurring within or adjacent to the work area should be delineated. Additional follow-up surveys may be required by the resource agencies. To the maximum extent practicable, a minimum buffer zone around occupied nests should be specified by a qualified biologist and maintained during physical ground-disturbing activities. The buffer zone should be sufficient in size to prevent impacts to the nest. Once nesting has ceased, the buffer may be removed.

- (e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Less than Significant Impact. The Proposed Project would not conflict with any local policies or ordinances protecting biological resources. The existing vegetation would be removed by the Project. The vegetation is protected by local policies or ordinances. As per Section 4801.3, Ordinance 887, a permit is required in order to remove the trees, shrubs, and other plants at the Proposed Project site. There are no sensitive plant species currently on the Proposed Project site. Impacts would, therefore, be less than significant.

- (f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservancy Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

No Impact. The Proposed Project site is not located within an area that is subject to an adopted Habitat Conservation Plan and Natural Community Conservation Plan. The Proposed Project would be compliant with local, regional and State conservation plans. No impacts are expected to occur.

5.5 CULTURAL RESOURCES

5.	CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §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)	Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following section is based on the Archaeological and Paleontological Assessment Report prepared by Chambers Group, Inc. in November 2018 (Appendix C). A records search dated November 2, 2018, was obtained from the South Central Coastal Information Center (SCCIC) at California State University, Fullerton, providing information on all documented cultural resources and previous archaeological investigations within one-mile of the Project area. Based upon the records search conducted by the SCCIC, two previously recorded cultural resources were recorded within the one-mile records search radius. Those two resources are not located within the Project area.

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Less than Significant with Mitigation. The Proposed Project would involve the drilling, construction, and testing of a well and treatment system in a currently vacant lot. Although two historic structures were determined to be within one-mile of the Project site, no known historically or culturally significant resources, structures, buildings, or objects are located on the Project site. However, archaeological sites that meet the definition of historical resources could be encountered during construction. Implementation of mitigation measures TCR-1 through TCR-4 in Section 5.18 Tribal Cultural Resources would reduce potential impacts to a less than significant level.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less than Significant with Mitigation. The Proposed Project site is in an urbanized area on a currently vacant lot. Archival record searches and background studies of the Project area were conducted as part of the cultural and paleontological resource study (Appendix C). The Native American Heritage Commission (NAHC) Sacred Lands File search did not identify any sacred sites or tribal cultural resources within the search radius. The cultural record search did not identify any cultural resource studies or archaeological sites within the Proposed Project area. However, unique archaeological sites could be encountered during construction. Implementation of mitigation measures TCR-1 through TCR-4 in Section 5.18 Tribal Cultural Resources would reduce potential impacts to a less than significant level.

- c) *Would the project disturb any human remains, including those interred outside of dedicated cemeteries?*

Less than Significant with Mitigation. No known human burials have been identified in the Proposed Project vicinity. Although there are no formal cemeteries, other places of human interment, or burial grounds are known to occur in the Proposed Project vicinity, there is a possibility that human remains would be encountered during Project construction. Should unanticipated human remains be discovered during Project construction, compliance with California Health and Safety Code 7050.5 and Public Resources Code Section 5097.98 must be followed. Implementation of mitigation measures TCR-1 through TCR-4 in Section 5.18 Tribal Cultural Resources would reduce potential impacts to a less than significant level.

5.6 ENERGY

6.	ENERGY Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) *Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?*

Less than Significant Impact. The Proposed Project is the construction and operating of a new water supply well with a water treatment system. Construction associated with the Proposed Project would result in a temporary increase in energy consumption due to the energy requirements associated with operating construction equipment; construction activities are anticipated to occur over a six-month period. All construction activities would implement BMPs to reduce construction related emissions, which would minimize the energy needed to implement the Proposed Project. It is anticipated energy required to complete construction activities associated with the Proposed Project would be minimal. Additionally, operation of the Proposed Project would not significantly increase energy use above the existing condition as the only new facilities requiring energy would be the water well and water treatment system. Therefore, the Proposed Project would result in less than significant impacts associated with wasteful or inefficient energy consumption during construction or operation.

- b) *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

Less Than Significant Impact. The City of Carson has developed an Energy Efficiency Climate Action Plan (EECAP) which established goals and policies that incorporate environmental responsibility into its daily management of its community and municipal operations. Measure 5.1 of the EECAP is to Promote or Require Water Efficiency through SB X7-7, also known as The Water Conservation Act of 2009. The West Basin Municipal Water District provides water conservation information, resource materials, education and incentives. In addition, the WBMWD uses its Edward C. Little Water Recycling Facility to provide the region with recycled water (City 2015). The Proposed Project would not conflict with the EECAP, as Cal Water would continue to work with the West Basin Municipal Water District regarding water efficiency strategies and communicating this information to customers. In addition, the City of Compton General Plan has energy policies as part of the Air Quality Plan and the Housing Element; although these more generally relate to energy consumption in commercial or residential structures. The Proposed Project would not conflict with the General Plan and energy efficiency strategies. As mentioned above in Impact (b), the Proposed Project would result in temporary energy consumption due to the energy requirements associated with operating construction equipment; construction activities are anticipated to occur over a six-month period. All construction activities would implement BMPs to reduce construction related emissions, which would minimize the energy needed to implement the Proposed Project. It is anticipated energy required to complete construction activities associated with the Proposed Project would be minimal. Additionally, operation of the Proposed Project would not significantly increase energy use above the existing condition as the only new facilities requiring energy would be the water well and water treatment system. Therefore, the Proposed Project would result in less than significant impacts associated with renewable energy or energy efficiency plans.

5.7 GEOLOGY AND SOILS

7.	GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	iv) 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

7.	GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f)	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"/>

a)i) *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

Less Than Significant Impact. The Proposed Project site is not located within an Alquist-Priolo Earthquake Fault Zone. The fault closest to the Proposed Project site is the Newport-Inglewood Fault, which is approximately one mile southwest of the site. The Newport-Inglewood Fault Zone is the only active fault zone that lies within the City of Compton and runs through the southwest corner of Compton (City of Compton 2014). Because Southern California is a seismically active region, it is highly likely that regional earthquakes would occur that could affect the Proposed Project site. All structures and onsite facilities would be designed in accordance with the California Building Code (CBC) for the peak site ground acceleration. Since the design and construction of the Proposed Project would be required to conform to the specific mandated structural design requirements to protect against strong seismic shaking, the potential impacts due to rupture of a known earthquake fault are less than significant.

a)ii) *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

Less Than Significant Impact. The Proposed Project site is located closest to the Newport-Inglewood Fault, which is approximately one mile southwest of the site. The Newport-Inglewood Fault Zone runs through the southwest corner of Compton and may result in substantial ground shaking with an estimated probable magnitude of between 6.0 and 7.4 (City of Compton 2014). Because Southern California is a seismically active region, it is highly likely that regional earthquakes would occur that could affect the Proposed Project site. All structures and onsite facilities would be designated in accordance with the California Building Code (CBC) for the peak site ground acceleration. Since the design and construction of the Proposed Project would be required to conform to the specific

mandated structural design requirements to protect against strong seismic shaking, the potential impacts due to strong seismic ground shaking are less than significant impact.

a)iii)Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

No Impact. The Proposed Project site is not located within liquefaction zone (City of Compton 2014). Therefore, the Proposed Project would result in a no impact to the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

a)iv)Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

No Impact. The Proposed Project site is not located near or within areas that are susceptible to landslides. Landslide potential in the area of the Proposed Project is considered low. Therefore, the Proposed Project would result in a no impact to the risk of loss, injury, or death involving landslides.

b) Would the project result in substantial soil erosion or the loss of topsoil?

No Impact. The Proposed Project would not result in substantial soil erosion or loss of topsoil. Although short-term impacts would normally occur during construction work, the area involved is less than one acre. Construction activities would result in a minor amount of soil disturbance. If soil is not contained and is directly exposed to rain, soil erosion and sediment could flow off-site. However, this impact is considered less than significant, as erosion and sediment control Best Management Practice (BPMs) would be implemented as part of the Proposed Project. Additionally, the soils found within the area are generally well drained, have low soil permeability, and their inherent fertility is relatively low (City of Compton 2014).

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

No Impact. The Proposed Project site is not located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. The site is not located within liquefaction zone and the landslide potential in the area is considered low. Therefore, a no impact would occur.

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

No Impact. The Proposed Project site would not be located on expansive soil. Given the developed character of the City of Compton, no significant adverse constraints related to expansive soils are anticipated (City of Compton 2014). The Proposed Project would not create substantial direct or indirect risks to life or property.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The Proposed Project area relies on sewers for wastewater disposal. The Proposed Project would not result in new or increased demand for the use of septic tanks or alternative wastewater disposal.

- f) *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Less than Significant Impact with Mitigation. The Project site contains relatively young deposits of alluvial fan sediments of Pleistocene age. Although the young alluvial fan and valley plain deposits are generally too young to yield significant fossils, the older deposits have produced fossils. Due to the possibility of Pleistocene alluvial floodplain deposits underlying the surficial young alluvial fan and valley plain deposits, it is expected to have potential of encountering paleontological resources. Implementation of Mitigation Measure GEO-1 will reduce potentially significant impacts to a less than significant level.

GEO-1 Because the project area contains surficial deposits of older Quaternary Alluvium, a qualified paleontologist is required be on site to monitor any significant excavation 5-feet below the surface or deeper in the event that any significant vertebrate fossil remains are discovered.

5.8 GREENHOUSE GAS EMISSIONS

8.	GREENHOUSE GAS EMISSIONS. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(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"/>

5.8.1 Environmental Setting

The Proposed Project is located within the jurisdiction of the SCAQMD. In order to identify significance criteria under CEQA for development projects, SCAQMD initiated a Working Group, which provided detailed methodology for evaluating significance under CEQA. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual threshold of 3,000 million metric tons of CO₂e (MTCO₂e) for all land use projects. Although the SCAQMD provided substantial evidence supporting the use of the above threshold, as of November 2017, the SCAQMD Board has not yet considered or approved the Working Group's thresholds.

It should be noted that SCAQMD's Working Group's thresholds were prepared prior to the issuance of Executive Order B-30-15 on April 29, 2015 that provided a reduction goal of 40 percent below 1990 levels by 2030. This target was codified into statute through passage of AB 197 and SB 32 in September 2016. However, to date no air district or local agency within California has provided guidance on how to address

AB 197 and SB 32 with relation to land use projects. In addition, the California Supreme Court's ruling on *Cleveland National Forest Foundation v. San Diego Association of Governments (Cleveland v. SANDAG)*, Filed July 13, 2017 stated:

SANDAG did not abuse its discretion in declining to adopt the 2050 goal as a measure of significance in light of the fact that the Executive Order does not specify any plan or implementation measures to achieve its goal. In its response to comments, the EIR said: "It is uncertain what role regional land use and transportation strategies can or should play in achieving the EO's 2050 emissions reduction target. A recent California Energy Commission report concludes, however, that the primary strategies to achieve this target should be major 'decarbonization' of electricity supplies and fuels, and major improvements in energy efficiency.

Although, the above court case was referencing California's GHG emission targets for the year 2050, at this time it is also unclear what role land use strategies can or should play in achieving the AB 197 and SB 32 reduction goal of 40 percent below 1990 levels by 2030. As such this analysis has relied on the SCAQMD Working Group's recommended thresholds. Therefore, the Proposed Project would be considered to create a significant cumulative GHG impact if the Proposed Project would exceed the annual threshold of 3,000 MTCO₂e.

5.8.2 Impact Analysis

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The Proposed Project would result in the construction and operation of the proposed water supply well. Construction activities would include the operation of off-road equipment as well as truck trips and worker trips to the Proposed Project site that would create GHG emissions. Daily operational activities would be limited to the operation of an electrical water pump. Although the electrical pump would utilize electricity, implementation of the Proposed Project would result in a net decrease in electricity usage, when compared to the electricity currently utilized to transport water to the project vicinity from Northern California. As such, the operational GHG emissions is limited to routine maintenance that would be conducted on the well on a five to 10-year intervals, which would include physical cleaning and swabbing, or can include a full rehabilitation of the well.

The CalEEMod model was utilized to calculate the GHG emissions from each phase of construction activities and for the operational well rehabilitation activities. A summary of the GHG emissions is shown below in Table 10 and the CalEEMod model run annual printouts are provided in Appendix A.

Table 10 – Project Related Greenhouse Gas Annual Emissions

Category	On Site Pollutant Emissions in pounds/day			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Construction				
Temporary Noise Barrier and Site Preparation	12.82	0.00	0.00	12.90
Conductor Casing Installation	7.10	0.00	0.00	7.15
Well Drilling	53.35	0.01	0.00	53.57
Well Casing	18.74	0.00	0.00	18.83
Well Development	14.17	0.00	0.00	14.25
Test Pumping	12.72	0.00	0.00	12.74
Site Improvements	54.27	0.00	0.00	54.90
Total Construction Emissions	173.47	0.03	0.00	174.33
Authorized Construction Emissions (30 years)	5.78	0.00	0.00	5.81
Operations				
Well Rehabilitation	5.14	0.00	0.00	5.17
Amortized Operational Emissions (5 years)	1.03	0.00	0.00	1.03
Total Annual Emissions (Construction & Operation)	6.81	0.00	0.00	6.84
SCAQMD Draft Threshold of Significance				3,000
Exceed?				No

Notes:

1 Construction emissions amortized over 30 years as recommended in the SCAQMD GHG Working Group on November 19, 2009.

2 Well Rehabilitation amortized over 5 years as that is the worst-case schedule for well rehabilitation.

Source: CalEEMod Version 2016.3.2.

The data provided in Table 10 shows that the Proposed Project would create 6.84 MTCO₂e per year. According to the SCAQMD draft threshold of significance, a cumulative global climate change impact would occur if the GHG emissions created from the on-going operations would exceed 3,000 MTCO₂e per year. Therefore, a less than significant generation of greenhouse gas emissions would occur from construction and operation of the Proposed Project.

b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The Proposed Project would consist of the construction and operation of a new water supply well in the City of Compton. In general, operation of the water supply well will be passive, as there will be no permanent equipment installed in the well. Routine maintenance would be conducted on the well in five to 10-year intervals. Maintenance would include physical cleaning and swabbing or can include a full rehabilitation of the well. A typical well rehabilitation process can be completed in five days.

As detailed above, the Proposed Project is anticipated to create 6.84 MTCO₂e per year, which is well below the SCAQMD draft threshold of significance of 3,000 MTCO₂e per year. Therefore, the Proposed Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. This impact is less than significant.

5.9 HAZARDS AND HAZARDOUS MATERIALS

9.	HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
(e)	For a project located within an airport land use plan or, where such a plan had not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(h)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Less than Significant Impact. Material that is to be transported, stored, or disposed of during project construction and operation has the potential to contain hazardous materials and could present a hazard to construction workers, the public, or the environment if improperly managed. Vehicles and equipment used for construction would contain or require the temporary, short-term use of potentially hazardous substances, such as fuels, lubricating oils, and hydraulic fluid. Additionally, a chloramination process to be used for water disinfection requires the onsite storage and use of ammonia and sodium hypochlorite. The chloramination process will be a closed process inside a structure and will not result in exposure of ammonia to the outside air. Cal Water would be required to comply with all environmental regulations, and any applicable rules and regulations, including the State of California CCR Title 23 Health and Safety Regulations, as managed by the Los Angeles County Department of Public Health and the Los Angeles County Fire Department. Cal Water shall implement its standard operational procedures and protocols, including BMPs and the site specific Hazardous

Materials Business Plan, to reduce potential impacts relative to hazardous materials to less than significant levels.

- b) *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Less than Significant Impact. No significant risk of accidental upset or the release of hazardous substances is anticipated with the Proposed Project with the implementation of the site specific Hazardous Materials Business Plan. In addition, Cal Water would be required to comply with applicable rules and regulations to reduce potential impacts relative to hazardous materials to less than significant levels.

- c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

No Impact. The nearest school to the Proposed Project site is Walton Middle school 0.28 mile to the north of the Proposed Project site. Other schools in the area include Longfellow Elementary School 0.7 mile to the north, Compton High School 1.2 mile to the north, California State University Dominguez Hills 1.2 mile southwest, Roosevelt Middle School 1.9 mile northeast and Emerson Elementary School 1.7 mile northeast of the Proposed Project site (Google Earth 2018). The Proposed Project is not anticipated to result in a release of hazardous emissions, hazardous or acutely hazardous materials, or substances in the vicinity and protocols, as well as BMPs. Additionally; the closest schools are all over 0.25 mile from the Proposed Project site. No impact is expected.

- d) *Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

No Impact. A review of federal and state standard and supplemental databases indicated that the Proposed Project site is not located within any identified hazardous material site pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or environment (EnviroStor 2018, GeoTracker 2018). No impact is expected

- e) *For a project located within an airport land use plan or, where such a plan had not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

No Impact. The Proposed Project site is located approximately 1.0 mile southeast of Compton/Woodley Airport and 6 miles southeast of Hawthorne Municipal Airport (Google Earth 2018). The Project is a water well and would not involve people residing or working in the project area on a regular basis after construction is complete. Thus, the Project would not result in safety hazard for people residing or working in the Project area.

- f) *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

No Impact. The construction of the Proposed Project would not involve blocking or restricting any access routes. The Proposed Project would not interfere with emergency response plans or operations near the Proposed Project site. No impacts are expected.

- g) *Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

No Impact. The City of Compton is an urban environment with little danger of wildfires (City of Compton, 2014). The Proposed Project site is located in the heavily industrialized area of Compton. Additionally, the Proposed Project site contains limited vegetation and all construction and operation activities would be conducted in compliance with standard safety protocols, which would minimize potential release of flammable materials (including fuel, lubricant, paint, and solvents). In addition, the new well will contribute to providing a reliable water supply to assist in firefighting efforts. No impacts are expected.

5.10 HYDROLOGY AND WATER QUALITY

10.	HYDROLOGY AND WATER QUALITY. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 or through the addition of impervious surfaces, in a manner which would:				
	i) Result in a substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flood on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) *Would the project violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?*

Less than Significant Impact. The Proposed Project would not violate water quality standards or waste discharge requirements. Construction activities would result in a minor amount of soil disturbance. If soil is not contained and is directly exposed to rain, soil erosion and sediment could flow into the storm drain system, resulting in a potential degradation of water quality. However, erosion and sediment control BMPs would be implemented as part of the Proposed Project. No significant impact is expected to occur.

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

Less than Significant Impact. The new well DOM 300-01 is part of Cal Water's effort to upgrade facilities to make sure the water supply is reliable and high quality. The Proposed Project would not affect recharge at the site, since less than 0.25 acre would be covered with new impervious surfaces. In addition, groundwater would be pumped from the Central Basin's Lynwood and Silverado Aquifers. The Central Basin is an adjudicated groundwater basin, meaning that there is a limit to the total allowed pumping allocation. Cal Water's DOM area allowed pumping allocation is 6,480 acre-feet per year (Cal Water 2016). Therefore, Cal Water would not be allowed to pump out more water than they are permitted to pump under the plan, resulting in less than significant impacts to groundwater recharge. Cal Water engineering staff has designed the well taking into consideration the groundwater supply when pulling water from the aquifer. The engineers will design the production of the wells so that nearby production wells will not be affected. No significant impacts are expected.

- c) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*

- i) *result in substantial erosion or siltation on- or off-site;*

Less than Significant Impact. Well drilling would generate drill cuttings, drilling fluids, and mud. A staging area would be located on the Proposed Project site to contain drill cuttings, drilling fluids, and mud (confined to a settling tank), and store construction equipment and materials. A biker tank will be utilized to accept the water discharged during construction, development, and test pumping and allow any solids to settle prior to discharge to the offsite drainage system. Drill cuttings and mud would ultimately be disposed of offsite, in accordance with state laws, at an appropriate disposal facility after being tested for hazardous waste. Drilling fluids would be released to the storm drain located on West Walnut Street and Cal Water is permitted and authorized to discharge water generated during well development per its statewide National Pollutant Discharge Elimination System (NPDES) permit No. CAG140001. No significant impacts are expected.

- ii) *substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;*

Less than Significant Impact. The Proposed Project would involve only minor site grading and only a small portion of the Proposed Project site would be covered with impervious surfaces. The small increase in impervious surfaces would not result in a significant change in drainage patterns or the amount of surface runoff. The Proposed Project construction will involve minor earthwork develop the site for the well but would not change runoff characteristics. No significant impacts are expected.

- iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources or polluted runoff; or*

Less than Significant Impact. Well drilling would generate drill cuttings, drilling fluids, and mud. A staging area would be located on the Proposed Project site to contain drill cuttings, drilling fluids, and mud (confined to a settling tank), and store construction equipment and materials. A baker tank will be utilized to accept the water discharged during construction, development, and test pumping and allow any solids to settle prior to discharge to the offsite drainage system. Drill cuttings and mud would ultimately be disposed of offsite, in accordance with state laws, at an appropriate disposal facility after being tested for hazardous waste. Drilling fluids would be released to the storm drain located on West Walnut Street. No significant impacts are expected.

- iv) impede or redirect flood flows?*

No Impact. The Proposed Project site is located within Zone X, which is outside the flood hazard zone (FEMA 2008). No significant impacts are expected.

- d) Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

No Impact. The Proposed Project site is in an area with no potential for hazard from flood, tsunami or seiche. The Whittier Narrows Dam approximately 11 miles upstream, Hansen Dam 30 miles upstream, and Sepulveda Dam 29 miles upstream from Compton, have the potential to cause flooding within the City of Compton (City of Compton 2014). However, due to the low quantity of water in the dams and the fact that the Proposed Project site is not located within a potential flood zone, there are no significant impacts expected.

- e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

No Impact. The Sustainable Groundwater Management Act (SGMA) requires local public agencies and Groundwater Sustainability Agencies in high- and medium-priority basins to develop and implement Groundwater Sustainability Plans to outline how groundwater basins will reach long-term sustainability. Per the SGMA Dashboard, the City of Compton is located within the Central Plain of Los Angeles – Central, which is designated as Very Low Priority (DWR 2018). The Proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The State Water Board has adopted three statewide water quality control plans that are applicable to the Los Angeles Region. The Water Quality Control Plan includes Ocean Waters of California, Control of Temperature in the Coastal and interstate waters and Enclosed Bays and Estuaries of California, and Enclosed Bays and Estuaries- Part 1 Sediment Quality (U.S. Environmental Protection Agency 2014). The Proposed Project site is not located within areas of

Water Quality Control Plans. The Water Replenishment District of Southern California (WRD) ensures that a reliable supply of high quality groundwater is available through its clean water projects, water supply programs, and effective management principles (California Water Service 2016). Therefore, there are no significant impacts expected.

5.11 LAND USE AND PLANNING

11.	LAND USE/PLANNING Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the project physically divide an established community?

No Impact. The Proposed Project is located on a currently empty lot adjacent to industrial businesses and a fire station; thus, the Proposed Project would not divide an established community. No residential land uses are located in the vicinity of the Project site. The project would be consistent with existing zoning and land use designations and would not divide an existing community. No impact would occur.

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

No Impact. The Proposed Project involves the addition of a water well on a parcel located within an industrial area. The water well will be constructed within the 0.48-acre parcel, and there would be no effects on zoning or general plan land use of the area. The proposed well Project is located in the Heavy Manufacturing (MH) zone for which utility pump stations and water wells are specifically permitted uses per Compton Municipal Code Chapter XXX, Section 30-12.2. Therefore, a conditional use permit was deemed unnecessary for either phase of work. No impact would result.

5.12 MINERAL RESOURCES

12.	MINERAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(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"/>

- a) *Would the project 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?*

No Impact. The Proposed Project site is not identified as being within a significant mineral resource zone in the City's General Plan. In addition, the General Plan notes that the State Division of Mines and Geology has not designated any lands in Compton as a classified mineral resource deposit area (City 2014). No impact would occur.

- b) *Would the project 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?*

No Impact. The Proposed Project would be limited to a small area under an acre in size and would not result in loss of availability of a known or locally important resource. As noted above, no lands within the City of Compton have been designated as a classified mineral resource deposit area (City 2014). In addition, no mineral resource extraction would occur as part of the Proposed Project. No impact would occur.

5.13 NOISE

13.	NOISE Would the project result in:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.13.1 Environmental Setting

A Noise Impact Assessment Report was prepared for the Project and is included as Appendix D. The noise standards that apply to the Proposed Project are formalized in the City of Compton Municipal Code, the City of Compton General Plan Noise Element, and the noise standards in the Noise Mitigation Plan. Each is described in the following sections:

City of Compton Municipal Code

7-12 Noise

Part 2: Special Noise Sources

7-12.11 Machinery, Equipment, Fans, and Air Conditioning

It shall be unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient noise level by more than five (5) decibels.

Part 3: Other Noise Making Devices, or Noise Producing Activities

7-12.17 Exemptions

The provisions of subsection 7-12.18 et seq. shall not apply to construction, operation, maintenance and repairs of equipment, apparatus or facilities of essential public services and facilities, including those public utilities subject to the regulatory jurisdiction of the California Public Utilities Commission.

7-12-20 Exhaust Mufflers



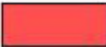

No person shall discharge into the open air the exhaust of any steam engine or stationary internal combustion engine except through a muffler or other device which effectively will reduce such loud or explosive noises.

City of Compton Draft General Plan Noise Element

3.9 Noise Impact

Under Regulatory Setting, which is a subset of 3.9.2 Environmental Setting, the Noise Element includes the following language:

- *City of Compton Noise Control Ordinance.* The City of Compton Municipal Code also regulates noise levels in the City by referencing the Los Angeles County Noise Control Ordinance. The Code makes it unlawful for any person to make or cause any loud, unnecessary, and unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.
- *City of Compton Noise Element.* The Draft General Plan includes a Noise Element that is designed to address noise and land use compatibility. The element includes standards that serve as a guide for considering the ambient noised environment when proposing new development. Figure 4 illustrates the land use and noise compatibility standards included in the City's Noise Element.

Land Use Categories		Community Noise Equivalent Level (in dBA, CNEL)					
		<55	60	65	70	75	80>
Residential	Single-family, Duplex, Multiple-family						
	Mobile Homes, Mixed Use						
Commercial	Hotel, Motel, Other Lodging						
	General Commercial, Retail						
	Office						
Industrial	Business Park, Research & Development						
	Manufacturing, Warehousing						
institutional	Hospitals, Schools, Libraries						
	Churches, Civic Uses						
Recreation and Open Space	Public Parks						
	Golf Course, Natural Habitat						
	Commercial Recreation						
	CLEARLY COMPATIBLE	Ambient noise levels are not significant enough to require special construction and/or noise mitigation.					
	NORMALLY COMPATIBLE	Most land uses will not be affected by ambient noise. Some form of design measures and/or mitigation may be required for noise sensitive land uses.					
	CLEARLY INCOMPATIBLE	Noise sensitive land uses should not be located in these areas unless mitigation is employed to reduce interior noise levels.					
	NORMALLY INCOMPATIBLE	Noise sensitive land uses should not be located in these areas due to excessive and continuous high ambient noise.					

discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. The standard that may be referred to in determining whether a violation exists may include, but not be limited to the following: the level of noise; whether the nature of the noise is usual or unusual; the level and intensity of any background noise; the proximity of the noise to residential sleeping facilities; the nature and zoning of the area where the noise emanates; the time of the day or night the noise occurs; the duration of the noise; and whether the noise is recurrent, intermittent, or constant.

For long-term construction (typically more than 21 days), maximum allowed noise levels from 7 a.m. to 8 p.m., excluding Sundays and holidays, are 60 dB for single-family residential land uses, 65 dB for multifamily residential land uses, and 70 dB for semi-residential/commercial land uses. From 8 p.m. to 7 a.m. daily and all day on Sundays and holidays, maximum allowed noise levels are 50 dB for single family residential land uses, 55 dB for multifamily residential land uses, and 60 dB for semi-family/commercial land uses.

5.13.2 Impact Analysis

- a) *Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

A Noise Impact Assessment Report was prepared for the Proposed Project by Behrens and Associates, Inc (2018). The Proposed Project site and surrounding area are classified as a heavy manufacturing zone by the City of Compton, and the City does not have specific noise limits for the heavy manufacturing zone. It should be noted that ongoing operation of the Proposed Project would not result in the generation of ambient noise levels above the existing condition. A more conservative threshold of 70 dB for semi-residential/commercial land used was used for construction activities in order to minimize the noise level to the adjacent fire station sleeping quarters. Noise levels were modeled for construction activities associated with the Proposed Project at four sites around the Proposed Project site (see Figure 5-2 of Appendix B for location of noise modeling locations). Table 11 presents the results of construction noise at the four modeling locations.

Table 11: Noise Modeling Results (dBA) with Noise Limit

Receptor	Unmitigated	Noise Limit
1	58.0	-
2	71.1	70
3	66.4	-
4	77.0	-

Based on the unmitigated noise modeling, the drilling operation will exceed the noise level limit up to 1.1 dB at Receptor 2. Implementation of mitigation measure NOI-1 would reduce the impact.

NOI-1: Install 220 linear feet of 16-ft high temporary sound barrier wall with a Sound Transmission Class (STC) rating of at least 25 on the east and partial south sides of the Proposed Project site with no openings or gaps in the wall.

Table 12 provides the modeled noise levels following implementation of NOI-1.

Table 12: Noise Modeling Results with Mitigation (dBA) with Noise Limit

Receptor	Unmitigated	Mitigated	Noise Limit
1	58.0	58.4	-
2	71.1	58.2	70
3	66.4	56.5	-
4	77.0	77.2	-

The noise increase at Receptor 1 and Receptor 4 is due to the noise reflection off of the temporary sound wall. Implementation of NOI-1 would reduce noise impacts at Receptor 2 to a level under the threshold; therefore, the Proposed Project would result in less than significant impacts with mitigation incorporated.

b) *Would the project result in generation of excessive groundborne vibration or groundborne noise levels?*

As discussed above, ongoing operation of the Proposed Project would not result in excessive groundborne noise or vibration; however, construction of the Proposed Project would result in noise levels that exceed the adopted noise thresholds. Implementation of NOI-1 would reduce the noise level at the Receptor 2 sensitive receptor below the 70 dBA threshold. Therefore, impacts associated with groundborne noise levels would be less than significant impacts with mitigation incorporated.

5.14 POPULATION AND HOUSING

14.	POPULATION AND HOUSING. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Induce substantial unplanned 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 type="checkbox"/>	<input checked="" type="checkbox"/>
(b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

No Impact. The Proposed Project does not provide housing. The Proposed Project includes the construction of a new water supply well and water treatment system but does not involve the

expansion of service. The Proposed Project will improve existing system reliability by providing a new well and a water treatment system.

- b) *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

No Impact. The Proposed Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. No impact is expected.

5.15 PUBLIC SERVICES

15.	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:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b)	Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>

5.15.1 Impact Analysis

- a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?*

No Impact. The Proposed Project includes the construction of a new water well and water treatment system but does not involve the expansion of service. In addition, the new well and water treatment system will contribute to provide a reliable water supply to assist in firefighting efforts. The Proposed Project would not increase the demand for fire protection. The new well and treatment system is located adjacent to City of Compton Fire Station No. 4. No impacts are expected.

- b) *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 police protection?*

No Impact. The Proposed Project includes the construction of a new water well and water treatment system but does not involve the expansion of service. The Proposed Project site is 1.5 mile southeast of the Compton Sherriff Station. The Proposed Project would not induce growth requiring the extension of existing services or creation of new services. The Proposed Project would not increase the demand for police protection.

- c) *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 schools?*

No Impact. The Proposed Project includes the construction of a new water well and water treatment system but does not involve the expansion of service. The Proposed Project site is 0.28 mile south of Walton Middle School. The Proposed Project would not induce growth requiring the extension of existing services or creation of new services. The Proposed Project would not increase the demand for schools in the City.

- d) *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 parks?*

No Impact. The Proposed Project would not induce growth requiring the extension of existing or creation of new services. The Proposed Project would not increase the demand for parks. No impacts are expected.

- e) *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 other public facilities?*

No Impact. The Proposed Project would not induce growth requiring the extension of existing or creation of new services. The Proposed Project would not increase the demand for other public facilities. No impacts are expected.

5.16 RECREATION

16.	RECREATION. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(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"/>
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a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

No Impact. The Proposed Project does not include features that would contribute to the increase use of existing neighborhood, regional parks or other recreational facilities or would cause substantial deterioration of the facility. No impacts are expected.

b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

No Impact. The Proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. No impacts are expected.

5.17 TRANSPORTATION

17.	TRANSPORTATION. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian paths?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b)	For a land use project, would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c)	For a transportation project, would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(2)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d)	Substantially increase hazards due to a geometric design feature (e. g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e)	Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) *Would the project conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian paths?*

Less than Significant Impact. Implementation of the Proposed Project would not result in a substantial increase that would have an adverse effect on roadways, affect roadway capacity or level of service, or contribute to a cumulative impact. Traffic-generating construction activities include a minor amount of construction and delivery vehicles traveling to the Proposed Project site. During construction, these vehicles would be staged on the Propose Project site. There would be a temporary

increase in traffic during the construction phase due to materials being moved to and from the site. The increase in traffic would result in a less than significant impact because the traffic would be minor and short term.

- b) *For a land use project, would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)?*

Less than Significant Impact. The Proposed Project does not involve the revisions of land use designation or zoning amendments. The Proposed Project site would operate as a water well and treatment facility following implementation of the Proposed Project. The City of Compton does not have established vehicle miles traveled (VMT) thresholds for the purpose of analyzing a project under Senate Bill 743 (SB 743) guidelines. However, the goal of SB 742 is to reduce VMT by increasing access to common goods. The Proposed Project not have a measurable impact on VMT since the Proposed Project involves a water well that will serve the existing community. A less than significant impact would occur.

- c) *For a transportation project, would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(2)?*

No Impact. The Proposed Project is not a transportation project. The Proposed Project site would operate as a water well and treatment facility following implementation of the Proposed Project. The City of Compton does not have established VMT thresholds for the purpose of analyzing a project under SB 743 guidelines. However, the goal of SB 742 is to reduce VMT by increasing access to common goods. The Proposed Project not have a measurable impact on VMT since the Proposed Project involves a water well that will serve the existing community. No impact would occur.

- d) *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?*

No Impact. The Proposed Project would not substantially increase hazards due to a geometric design feature or incompatible uses. The Proposed Project involves the construction of a new water well and a water treatment system within the Proposed Project site. There would be no modification to existing roadways. No impacts are expected.

- e) *Would the project result in inadequate emergency access?*

No Impact. The Proposed Project would not create or alter roadways in a manner that would increase hazards or result in and incompatible use. The Proposed Project would not result in inadequate emergency access. No impacts are expected.

5.18 TRIBAL CULTURAL RESOURCES

18.	TRIBAL CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
	i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource 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"/>

5.18.1 Impact Analysis

- i) *Would the project cause a substantial adverse change in 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)?*

No Impact. A records search of the California Historical Resources Information System dated November 2, 2018, was obtained from the South Central Coastal Information Center (SCCIC) at California State University, Fullerton, providing information on all documented cultural resources and previous archaeological investigations. There were no documented historical resources in the Proposed Project footprint.

- ii) *Would the project cause a substantial adverse change in 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?*

Less Than Significant with Mitigation Incorporated. A NAHC Sacred Lands File search, dated November 13, 2018, did not identify any sacred sites or tribal cultural resources within the search radius.

On December 27, 2018, Project notification letters with invitations to consult on the Project were sent by certified mail to representatives of the two tribes on the State Water Board's Assembly

Bill (AB) 52 list for Los Angeles County: the Gabrieleno Band of Mission Indians- Kizh Nation and the San Gabriel Band of Mission Indians- Gabrieleno Tongva. No response has been received by the State Water Board from the San Gabriel Band of Mission Indians- Gabrieleno Tongva.

The Gabrieleno Band of Mission Indians- Kizh Nation (Tribe) requested consultation in an email on January 3, 2019. The State Water Board contacted the tribal office by email on the same day and a consultation meeting was scheduled for March 13, 2019 between the Tribe and the State Water Resources Control Board. The Tribe stated that the area was within a tribal cultural landscape that featured a prominent village and trade route. They are concerned that there may be tribal cultural resources underlying the disturbed surface layer that could be discovered during construction. They asked that an approved member of the Gabrieleno Band of Mission Indians, Kizh Nation be on site for project excavation to monitor the excavation of the Project and provided mitigation measure language.

Ground-disturbing activities have the potential to result in the discovery of, or inadvertent damage to, archaeological contexts and human remains, and this possibility cannot be eliminated. Consequently, there is a potential for significant impacts on TCRs. Implementation of monitoring and the stop work and treatment procedures to avoid and minimize potential impacts as described in Mitigation Measures TCR-1, TCR-2, TCR-3, and TCR-4 would reduce the potential impacts to less than significant.

TCR-1: Professional Standards: Archaeological and Native American monitoring and excavation during construction projects will be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects shall be taken. The principal archaeologist must meet the Secretary of the Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist shall ensure that all other personnel are appropriately trained and qualified.

TCR-2: Unanticipated Discovery of Tribal Cultural, Historical, and Archaeological Resources: Upon discovery of archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed by a qualified archaeologist. All archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor approved by the Gabrieleno Band of Mission Indians-Kizh Nation. If the resources are Native American in origin, the Gabrieleno Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request reburial or preservation for educational purposes.

After the assessment is completed, the archaeologist shall submit a report to the State Water Board describing the significance of the discovery with cultural resource management recommendations. Work may continue on other parts of the project while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a “historical resource” or “unique archaeological resource”, time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established

for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to a local school or historical society in the area for educational purposes.

TCR-3: Retain a Native American Monitor: The project Applicant will be required to obtain the services of a tribal monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation and will be present on-site during the construction phases that involve any ground disturbing activities. Ground disturbance is defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, weed abatement, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete monitoring logs on a daily basis that will provide descriptions of the daily activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor have indicated that the site has a low potential for archeological resources.

TCR-4: Unanticipated Discovery of Human Remains and Associated Funerary Objects: Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called “associated grave goods” in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission and PRC 5097.98 shall be followed.

Upon discovery, the Tribal monitor will immediately divert work at minimum of 50 feet and place an exclusion zone around the burial. The monitor will then notify the qualified archaeologist and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).

If the Gabrieleno Band of Mission Indians – Kizh Nation is designated MLD, the following treatment measures shall be implemented. To the Tribe, the term “human remains” encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. These remains are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony

of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.

Prior to the start of ground disturbing activities, the land owner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the NAHC. The Tribe does not authorize any scientific study or the utilization of any invasive diagnostics on human remains.

Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location mitigated between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.

5.19 UTILITIES AND SERVICE SYSTEMS

19.	UTILITIES/SERVICE SYSTEMS. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d)	Generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(e)	Negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f)	Comply with federal, state, and local management and reduction statutes and regulations related to solid wastes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or expansion of which could cause significant environmental effects?*

No Impact. The Proposed Project involves the development of a well and treatment system to support the existing potable water system. The Proposed Project would not require or result in the relocation or construction of new or expanded wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities. The Proposed Project site is an undeveloped piece of land in a heavy industrialized area. The nearest wastewater treatment facility is the Clean Water Technology 3.0 miles northwest of the Proposed Project site. The nearest electrical power facility is SCE Jersey Substation 0.5-mile northwest of the Proposed Project site. The SoCalGas natural gas facility is 2.50 miles northwest of the Proposed Project site. No significant impact would occur.

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

No Impact. The Proposed Project would be operated by Cal Water. The Proposed Project would involve the construction of a new well and a water treatment system which would allow utilization of

groundwater. The development of groundwater capacity enhances local supply reliability. No significant impact would occur.

- c) *Would the project 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?*

No Impact. The Proposed Project would involve the installation of a new well to support the existing potable water system. Well drilling would generate drill cuttings, drilling fluids and mud. A staging area would be located on the Proposed Project site to contain drill cuttings, drilling fluids and mud (confined to a settling tank), and store construction equipment and materials. A baker tank will be utilized to accept the water discharged during construction, development and test pumping and allow any solids to settle prior to discharge to the offsite drainage system. Drill cuttings and mud would ultimately be disposed of offsite, in accordance with state laws, at an appropriate disposal facility after being tested for hazardous waste. Drilling fluids would be released to the storm drain located on Jacmar Drive. Post construction, the generation of wastewater on the Proposed Project site would not differ substantially from existing conditions. The Proposed Project would have no significant impact on wastewater and water treatment facilities. No significant impacts are expected.

- d) *Would the project generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure?*

Less than Significant Impact. All solid waste generated during construction would be disposed of properly according to the Los Angeles County standard construction practices by the construction contractor. Minimal solid waste would be generated during operation. The Proposed Project would comply with AB939/SB1066 requirements for the diversion of solid waste from landfills. A less than significant impact would occur.

- e) *Would the project negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals?*

No Impact. The Proposed Project would not negatively impact the provision of solid waste services, as development will occur on an undeveloped piece of land. The Proposed Project would comply with AB939/SB1066 requirements for the diversion of solid waste from landfills. No significant impact would occur.

- f) *Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

No Impact. The Proposed Project would comply with all relevant federal, state, and local statutes and regulations related to solid waste. No significant impact would occur.

5.20 WILDFIRE

20.	WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) *Would the project impair an adopted emergency response plan or emergency evacuation plan?*

No Impact. The Project site is not located within a very high fire hazard severity zone of state responsibility (CAL FIRE 2007). No impact would occur.

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

No Impact. The Project site is not located within an area identified as a very high fire hazard severity zone (CAL FIRE 2007). Additionally, the Project site is not located within or adjacent to any open spaces identified as a very high fire hazard severity zone. The lack of wildland-urban interface in or near the Proposed Project site reduce any risk associated with exacerbation of wildfire risks. No impact would occur.

c) *Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

No Impact. As described above, the Project site is not in an area at risk of wildfire. The Proposed Project would not require infrastructure that would exacerbate fire risk. No impact would occur.

d) *Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability or drainage changes?*

No impact. The Project site is not in an area prone to wildfire. Additionally, the Project site is relatively flat and not located near a stream. No impact would occur.

5.21 MANDATORY FINDINGS OF SIGNIFICANCE

21.	MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

Less than Significant with Mitigation. The Proposed Project involves adding a new water well and treatment system to an undeveloped piece of land in a heavy industrial area and would not have the potential to substantially degrade the quality of the existing environment; reduce habitat of fish or wildlife species; threaten plant or animals communities; or reduce the number or restrict range of rare plants or animals; or eliminate important examples of the major periods of California history or prehistory.

The Proposed Project is not expected to have a significant impact on biological or cultural resources. As discussed throughout the checklist, it has been determined that the Proposed Project's biological and cultural impacts would be less than significant through the incorporation of Mitigation Measures BIO-1, TCR-1, TCR-2, TCR-3, and TCR-4

b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when*

viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects?)

Less than Significant with Mitigation. The potential for cumulative impacts occurs when the independent impacts of the Proposed Project are combined with the impacts of related projects in proximity to the Proposed Project such that impacts occur that are greater than the impacts of the Project alone. As discussed above, it has been determined that the Proposed Project would have no impact, or impacts would be less than significant, with respect to the environmental issues. Mitigation measures previously described would reduce the impacts to a less than significant level.

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

Less than Significant Impact. Construction and operation of the Proposed Project would not result in environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly. Impacts to humans would be less than significant.

SECTION 6.0 – REFERENCES

The following is a list of references used in the preparation of this document.

California Department of Conservation

2010 Fault Activity Map of California. Accessed online October 2018 at <http://maps.conservation.ca.gov/cgs/fam/>

2016 Farmland Mapping & Monitoring Program, Los Angeles Important farmland

Cal Fire

2007 Los Angeles County Fire Hazard Severity Zones map

California Water Service

2016 2015 Urban Water Management Plan

City of Compton

2014 City of Compton 2030 Comprehensive General Plan Update

2015 Energy Efficiency Climate Action Plan.

2018 Compton Municipal Code Section Chapter VII, Section 7-12 Noise

Department of Toxic Substance Control

2018 EnviroStor. Accessed online October 2018 at <https://www.envirostor.dtsc.ca.gov/public/>

Department of Water Resources (DWR)

2018 Sustainable Groundwater Management Act (SGMA) Basin Prioritized Dashboard.
Accessed online November 2018 at <https://gis.water.ca.gov/app/bp2018-dashboard/>

Federal Emergency Management Agency

2008 FEMA. Accessed online November 2018 at <https://msc.fema.gov/portal/home>

Google Earth

2018 Google Earth mapping program

State Water Resources Control Board

2015 GeoTracker. Accessed online October 2018 at <https://geotracker.waterboards.ca.gov/>

U.S. Environmental Protection Agency

2014 Water Quality Control Plan for the Los Angeles Region

APPENDIX A – Air Quality & Greenhouse Gas Data



**AIR QUALITY AND GREENHOUSE GAS
EMISSIONS IMPACT ANALYSIS**

**CALIFORNIA WATER SERVICE COMPANY
DOMINGUEZ WELL STATION 300 PROJECT**

CITY OF COMPTON

LEAD AGENCY:
CITY OF COMPTON

PREPARED BY:
VISTA ENVIRONMENTAL
1021 DIDRIKSON WAY
LAGUNA BEACH, CALIFORNIA 92651
MARISA JUE
GREG TONKOVICH, AICP
TELEPHONE (949) 510-5355
FACSIMILE (949) 494-3150

PROJECT NO. 18104

NOVEMBER 12, 2018

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
Air Basin	South Coast Air Basin
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAT	Climate Action Team
CCAA	California Clean Air Act
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFCs	chlorofluorocarbons
Cf ₄	tetrafluoromethane
C ₂ F ₆	hexafluoroethane
C ₂ H ₆	ethane
CH ₄	Methane
City	City of Compton
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CPUC	California Public Utilities Commission
DPM	Diesel particulate matter
EPA	Environmental Protection Agency
°F	Fahrenheit
FTIP	Federal Transportation Improvement Program
GHG	Greenhouse gas
GWP	Global warming potential
HAP	Hazardous Air Pollutants
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change

LCFS	Low Carbon Fuel Standard
LST	Localized Significant Thresholds
MATES	Multiple Air Toxics Exposure Study
MMTCO _{2e}	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxics
MWh	Megawatt-hour
NAAQS	National Ambient Air Quality Standards
NO _x	Nitrogen oxides
NO ₂	Nitrogen dioxide
O ₃	Ozone
OPR	Office of Planning and Research
Pb	Lead
Pfc	Perfluorocarbons
PM	Particle matter
PM ₁₀	Particles that are less than 10 micrometers in diameter
PM _{2.5}	Particles that are less than 2.5 micrometers in diameter
PPM	Parts per million
PPB	Parts per billion
PPT	Parts per trillion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SAR	Second Assessment Report
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
SCS	Sustainable communities strategy
SF ₆	Sulfur Hexafluoride
SIP	State Implementation Plan
SO _x	Sulfur oxides
TAC	Toxic air contaminants
UNFCCC	United Nations' Framework Convention on Climate Change
VOC	Volatile organic compounds

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Air Quality and Greenhouse Gas Emissions Impact Analysis has been completed to determine the air quality and greenhouse gas (GHG) emissions impacts associated with the proposed California Water Service Company (CWSC) Central Coast Basin Dominguez District Well Station 300 project (proposed project). The following is provided in this report:

- A description of the proposed project;
- A description of the atmospheric setting;
- A description of the criteria pollutants and GHGs;
- A description of the air quality regulatory framework;
- A description of the air quality and GHG emissions thresholds including the California Environmental Quality Act (CEQA) significance thresholds;
- An analysis of the short-term construction related and long-term operational air quality and GHG emissions impacts;
- An analysis of the conformity of the proposed project with the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP); and
- An analysis of the conformity of the proposed project with all applicable GHG emissions reduction plans and policies.

1.2 Site Location and Study Area

The project site is located in the southern portion of the City of Compton (City) at 958 West Walnut Street. The approximately 0.77-acre project site is currently vacant and is bounded by Walnut Street and industrial uses to the north, Compton Fire Department Station 4 (Fire Station 4) to the east, a railroad spur line and industrial uses to the south, and industrial uses to the west. The project local study area is shown in Figure 1.

Sensitive Receptors in Project Vicinity

The nearest sensitive receptors to the project site are the offsite workers at Compton Fire Department Station 4 that are located adjacent to the east side of the project site. The nearest residential use to the project site are single-family homes located on the north side of Greenleaf Boulevard, approximately 0.3 mile north of the project site. The nearest school to the project site is Walton Middle School, which is located as near as 670 feet north of the project site.

1.3 Proposed Project Description

The proposed project would consist of the development of a new water supply well that will be called Dominguez (DOM) 300-01. The proposed project would be located on the western 0.48-acre portion of the 0.77-acre project site. The proposed project would also include installation of an onsite catch basin and installation of a pipeline from DOM 300-01 to the existing distribution line that is located approximately in the center of Walnut Street.

Construction of the proposed well is anticipated to commence Summer 2019 and is anticipated to have a duration of approximately six months. After the proposed well is completed the site would be developed

with a treatment system (if determined to be needed during water quality testing) as well as buildings, piping, electrical facilities, fencing, security, paving, and landscaping. The site development work is anticipated to have a duration of approximately three months, which would result in a total construction time period of approximately nine months. The proposed site plan is shown in Figure 2.

Construction Phases

The proposed construction activities of the proposed project would occur in seven construction phases. Phase 1 involves the installation of the temporary noise barrier and site improvements. Phase 2 involves the installation of conductor casing. Phase 3 involves drilling of the well. Phase 4 involves construction of the proposed well and Phase 5 involves installation of the well casing. Phase 6 involves test pumping the completed well. Phase 7, which is also described as Phase II in the Initial Study, involves construction of the treatment system (if needed), buildings, piping, electrical facilities, fencing, security, paving, and landscaping.

Well Construction Equipment Assumptions

The following provides the anticipated construction equipment to be utilized for each phase of construction. Since detailed construction equipment assumptions are not yet available for this project, the equipment assumptions from a similar water well project prepared by Orange County Water District (OCWD) were utilized.

Phase 1: Temporary Noise Barrier and Site Preparation

Phase 1 of construction involves the installation of a temporary noise barrier on the east side of the project site and site preparation that include site clearing activities and installation of an onsite catch basin. Phase 1 is anticipated to take approximately one week and all activities are anticipated to occur during the City of Compton's allowed construction hours of 7:00 a.m. to 5:00 p.m. Monday through Saturday and 10:00 a.m. to 6:00 p.m. on Sundays. The equipment mix for construction of the temporary noise barrier wall and site improvements is shown in Table A.

Table A – Temporary Noise Barrier and Site Improvements Equipment Mix

Equipment	Pieces of Equipment	Hours Per Day	Days of Operation	Total Hours	Horsepower	Total Task Duration
Back-hoe with Auger Attachment	1	6	7	56	97	1 week
Man-Lift	1	8	7	56	63	
Forklift	1	8	7	56	89	
Rubber Tired Loader	1	6	7	56	203	

Source: CWSC & OCWD.

Phase 2: Conductor Casing Installation

Phase 2 of construction involves installation of conductor casing. The conductor casing borehole would be drilled by the bucket auger drilling method. The conductor construction would consist of installing a 36-inch diameter conductor casing to a depth of 100 feet below ground surface (BGS). Phase 2 is anticipated to take a week to complete and would occur during the City of Compton's allowed construction hours. The equipment mix for conductor casing installation is shown in Table B.

Table B – Conductor Casing Installation Equipment Mix

Equipment	Pieces of Equipment	Hours Per Day	Days of Operation	Total Hours	Horsepower	Total Task Duration
Bucket Auger Rig	1	12	1	12	221	1 week
Back-hoe	1	12	8	96	97	
Welder	1	12	8	96	46	
Cement Truck	1	4	4	16	402	
Cement Pumper	1	4	4	16	84	

Source: CWSC & OCWD.

Phase 3: Well Drilling

Phase 3 of construction involves the mobilization of the well drilling equipment and well drilling. The proposed well would be drilled approximately 800 feet deep. The mobilization activities would occur during the City of Compton's allowed construction hours, however the well drilling activities would require 24-hour operation of the drilling equipment for approximately two weeks. The equipment mix for well drilling and is shown in Table C.

Table C – Well Drilling Equipment Mix

Equipment	Pieces of Equipment	Hours Per Day	Days of Operation	Total Hours	Horsepower	Total Task Duration
Reverse Circulation Drilling Rig	1	24	14	336	221	3 weeks
Air Compressor	1	24	14	336	78	
Mud System	1	24	14	336	84	
Back-hoe	1	5	14	70	97	
Light Tower	1	12	14	168	84	
Generator	1	12	14	168	84	

Source: CWSC & OCWD.

Phase 4: Well Casing

Phase 4 of construction involves installation of the well casing and gravel pack that would be constructed using drilling equipment. The installation of the well casing and gravel pack is anticipated to approximately 7 days to complete, operating 24 hours per day. The equipment mix for well casing is shown in Table D.

Table D – Well Casing Equipment Mix

Equipment	Pieces of Equipment	Hours Per Day	Days of Operation	Total Hours	Horsepower	Total Task Duration
Drill Rig	1	24	7	168	221	1 week
Gravel/Seal Pump	1	24	7	168	84	
Light Tower	1	12	7	84	84	
Generator	1	12	7	84	84	
Cement Truck	1	4	1	5	402	
Cement Pumper	1	4	1	5	84	
Back-hoe	1	12	7	168	97	
Welder	1	12	2	48	46	

Source: CWSC & OCWD.

Phase 5: Well Development

Phase 5 of construction involves the mechanical well development of the proposed well. The well development construction activities would occur during the City of Compton's allowed construction hours and would take approximately two weeks to complete. The equipment mix for well development is shown in Table E.

Table E – Well Development Equipment Mix

Equipment	Pieces of Equipment	Hours Per Day	Days of Operation	Total Hours	Horsepower	Total Task Duration
Drill Rig	1	10	4	40	221	2 weeks
Air Compressor	1	10	4	40	78	
Pump Installation Rig	1	10	4	40	231	
Generator	1	10	2	20	84	

Source: CWSC & OCWD.

Phase 6: Test Pumping

Phase 6 of construction involves the mobilization of the test pump and test pumping of the proposed well. The mobilization activities would occur during the City of Compton's allowed construction hours, however the test pumping activities would require 24-hour operation of the diesel pump for approximately two weeks. The equipment mix for test pumping is shown in Table F.

Table F – Test Pumping Equipment Mix

Equipment	Pieces of Equipment	Hours Per Day	Days of Operation	Total Hours	Horsepower	Total Task Duration
Diesel Water Pump	1	24	14	40	84	3 weeks

Source: CWSC & OCWD.

Phase 7: Site Improvements

Phase 7, which is also described as Phase II in the Initial Study, involves construction of the treatment system (if needed), buildings, piping, electrical facilities, fencing, security, paving, and landscaping. All site improvement activities would occur during the City of Compton's allowed construction hours and are anticipated to be completed over three months. The equipment mix for the site improvements is shown in Table G.

Table G – Site Improvements Equipment Mix

Equipment	Pieces of Equipment	Hours Per Day	Days of Operation	Total Hours	Horsepower	Total Task Duration
Back-hoe	1	8	60	480	97	3 Months
Welder	1	4	30	120	46	
Cement Truck	1	4	10	40	402	
Cement Pumper	1	4	10	40	84	
Crane	1	4	10	40	231	

Source: CWSC & OCWD.

Long-Term Operation and Maintenance Activities

The proposed project is anticipated to be operational by the first quarter of 2020, assuming water quality is acceptable. Routine maintenance would be conducted on the well on a five to 10 year intervals, which would include physical cleaning, swabbing, or can include a full rehabilitation of the well. Table H below identifies the equipment required for a full rehabilitation of the well. A typical well rehabilitation process can be completed in five days.

Table H – Long-Term Operations Well Rehabilitation Equipment Mix

Equipment	Pieces of Equipment	Hours Per Day	Days of Operation	Horsepower
Pump Rig	1	10	5	231
Pickup Truck	1	2	5	402
Air Compressor	1	10	4	78
Generator	1	10	5	84

Source: CWSC & OCWD.

1.4 Executive Summary

Standard Air Quality and GHG Regulatory Conditions

The proposed project will be required to comply with the following regulatory conditions from the SCAQMD and State of California (State).

South Coast Air Quality Management District Rules

The following lists the SCAQMD rules that are applicable, but not limited to the proposed project.

- Rule 402 Nuisance – Controls the emissions of odors and other air contaminants;
- Rule 403 Fugitive Dust – Controls the emissions of fugitive dust;
- Rules 1108 and 1108.1 Cutback and Emulsified Asphalt – Controls the VOC content in asphalt;
- Rule 1113 Architectural Coatings – Controls the VOC content in paints and solvents; and
- Rule 1143 Paint Thinners – Controls the VOC content in paint thinners.

State of California Rules

The following lists the State of California Code of Regulations (CCR) air quality emission rules that are applicable, but not limited to the proposed project.

- CCR Title 13, Article 4.8, Chapter 9, Section 2449 – In use Off-Road Diesel Vehicles;
- CCR Title 13, Section 2025 – On-Road Diesel Truck Fleets; and
- CCR Title 24 Part 11 – California Green Building Standards.

Summary of Analysis Results

The following is a summary of the proposed project's impacts with regard to the State CEQA Guidelines air quality and GHG emissions checklist questions.

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

Less than significant impact.

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

Less than significant impact.

Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact.

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

Less than significant impact.

Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than significant impact.

Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs?

Less than significant impact.

1.5 Mitigation Measures Required for the Proposed Project

This analysis found that implementation of the State and SCAQMD air quality and GHG emissions reductions regulations were adequate to limit criteria pollutants, toxic air contaminants, odors, and GHG emissions from the proposed project to less than significant levels. No mitigation measures are required for the proposed project with respect to air quality and GHG emissions.



Legend

 Project Location



SOURCE: Chambers Group, Inc.



VISTA ENVIRONMENTAL

Figure 1
Project Local Study Area



Figure 2
Proposed Site Plan

2.0 AIR POLLUTANTS

Air pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

2.1 Criteria Pollutants and Ozone Precursors

The criteria pollutants consist of: ozone, NO_x, CO, SO_x, lead (Pb), and particulate matter (PM). The ozone precursors consist of NO_x and VOC. These pollutants can harm your health and the environment, and cause property damage. The Environmental Protection Agency (EPA) calls these pollutants “criteria” air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria for setting permissible levels. The following provides descriptions of each of the criteria pollutants and ozone precursors.

Nitrogen Oxides

Nitrogen Oxides (NO_x) is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NO_x are colorless and odorless, concentrations of NO₂ can often be seen as a reddish-brown layer over many urban areas. NO_x form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NO_x are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NO_x reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO₂, which cause respiratory problems. NO_x and the pollutants formed from NO_x can be transported over long distances, following the patterns of prevailing winds. Therefore, controlling NO_x is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

Ozone

Ozone is not usually emitted directly into the air but in the vicinity of ground-level is created by a chemical reaction between NO_x and volatile organic compounds (VOC) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents as well as natural sources emit NO_x and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NO_x and VOC are ozone precursors, the health effects associated with ozone are also indirect health effects associated with significant levels of NO_x and VOC emissions.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes approximately 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are indoor sources of CO. The highest levels of CO in the outside air typically occur during the colder months of the year

when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

Sulfur Oxides

Sulfur Oxide (SOx) gases are formed when fuel containing sulfur, such as coal and oil is burned, as well as from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

Lead

Lead is a metal found naturally in the environment as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers. Exposure of fetuses, infants and children to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

Particulate Matter

Particle matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. PM is made up of a number of components including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM10) are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter (PM2.5) have been designated as a subset of PM10 due to their increased negative health impacts and its ability to remain suspended in the air longer and travel further.

Volatile Organic Compounds

Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O₃ are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

VOC is not classified as a criteria pollutant, since VOCs by themselves are not a known source of adverse health effects. The primary health effects of VOCs result from the formation of O₃ and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered toxic air contaminants (TACs). There are no separate health standards for VOCs as a group.

2.2 Other Pollutants of Concern

Toxic Air Contaminants

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. TACs is a term that is defined under the California Clean Air Act and consists of the same substances that are defined as Hazardous Air Pollutants (HAPs) in the Federal Clean Air Act. There are over 700 hundred different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different toxic air contaminants. The most important of these TACs, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to TACs can result from emissions from normal operations as well as from accidental releases. Health effects of TACs include cancer, birth defects, neurological damage, and death.

TACs are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to *The California Almanac of Emissions and Air Quality 2013 Edition*, the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important of which is DPM. DPM is a subset of PM_{2.5} because the size of diesel particles are typically 2.5 microns and smaller. The identification of DPM as a TAC in 1998 led the CARB to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in DPM by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of DPM as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to DPM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

Asbestos

Asbestos is listed as a TAC by CARB and as a HAP by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestiform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. The nearest likely locations of naturally occurring asbestos, as identified in the *General Location Guide for Ultramafic Rocks in California*, prepared by the California Division of Mines and Geology, is located in Santa Barbara County. The nearest historic asbestos mine to the project site, as identified in the *Reported*

Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California, prepared by U.S. Geological Survey, is located at Asbestos Mountain, which is approximately 100 miles southeast of the project site in the San Jacinto Mountains. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos.

3.0 GREENHOUSE GASES

3.1 Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHGs), play a critical role in the Earth's radiation amount by trapping infrared radiation from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO₂), methane (CH₄), ozone (O₃), water vapor, nitrous oxide (N₂O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO₂ and N₂O are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO₂, where CO₂ is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the greenhouse gases and their global warming potential.

Water Vapor

Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to "hold" more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there is also dynamics that put the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the Earth's surface and heat it up).

Carbon Dioxide

The natural production and absorption of CO₂ is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid 1700s, each of these activities has increased in scale and distribution. CO₂ was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20th century. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC) indicates that concentrations were 379 ppm in 2005, an increase of more than 30 percent. Left unchecked, the IPCC projects that concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources. This could result in an average global temperature rise of at least two degrees Celsius or 3.6 degrees Fahrenheit.

Methane

CH₄ is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO₂. Its lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO₂, N₂O, and Chlorofluorocarbons (CFCs)). CH₄ has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropogenic sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide

Concentrations of N₂O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration of this GHG was documented at 314 parts per billion (ppb). N₂O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. N₂O is also commonly used as an aerosol spray propellant (i.e., in whipped cream bottles, in potato chip bags to keep chips fresh, and in rocket engines and race cars).

Chlorofluorocarbons

CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C₂H₆) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. They were used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and in 1989 the European Community agreed to ban CFCs by 2000 and subsequent treaties banned CFCs worldwide by 2010. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons

HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF₃), HFC-134a (CF₃CH₂F), and HFC-152a (CH₃CHF₂). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a refrigerant. Concentrations of HFC-23 and HFC-134a in the atmosphere are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF₄) and hexafluoroethane (C₂F₆). Concentrations of CF₄ in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

Sulfur Hexafluoride

Sulfur Hexafluoride (SF₆) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF₆ has the highest global warming potential of any gas evaluated; 23,900 times that of CO₂. Concentrations in the

1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Aerosols

Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning due to the incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

3.2 Global Warming Potential

GHGs have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to the reference gas, CO₂. The GHGs listed by the IPCC and the CEQA Guidelines are discussed in this section in order of abundance in the atmosphere. Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic (human-made) sources. To simplify reporting and analysis, GHGs are commonly defined in terms of their GWP. The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO₂e. As such, the GWP of CO₂ is equal to 1. The GWP values used in this analysis are based on the IPCC Second Assessment Report (SAR) and United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines, and are detailed in Table I. The SAR GWPs are used in CARB's California inventory and Assembly Bill (AB) 32 Scoping Plan estimates.

Table I – Global Warming Potentials, Atmospheric Lifetimes and Abundances of GHGs

Gas	Atmospheric Lifetime (years) ¹	Global Warming Potential (100 Year Horizon) ²	Atmospheric Abundance
Carbon Dioxide (CO ₂)	50-200	1	379 ppm
Methane (CH ₄)	9-15	25	1,774 ppb
Nitrous Oxide (N ₂ O)	114	298	319 ppb
HFC-23	270	14,800	18 ppt
HFC-134a	14	1,430	35 ppt
HFC-152a	1.4	124	3.9 ppt
PFC: Tetrafluoromethane (CF ₄)	50,000	7,390	74 ppt
PFC: Hexafluoroethane (C ₂ F ₆)	10,000	12,200	2.9 ppt
Sulfur Hexafluoride (SF ₆)	3,200	22,800	5.6 ppt

Notes:

¹ Defined as the half-life of the gas.

² Compared to the same quantity of CO₂ emissions and is based on the Intergovernmental Panel On Climate Change (IPCC) 2007 standard, which is utilized in CalEEMod (Version 2016.3.2), that is used in this report (CalEEMod user guide: Appendix A).

Definitions: ppm = parts per million; ppb = parts per billion; ppt = parts per trillion

Source: IPCC 2007, EPA 2015

4.0 AIR QUALITY MANAGEMENT

The air quality at the project site is addressed through the efforts of various international, federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality are discussed below.

4.1 Federal – United States Environmental Protection Agency

The Clean Air Act, first passed in 1963 with major amendments in 1970, 1977 and 1990, is the overarching legislation covering regulation of air pollution in the United States. The Clean Air Act has established the mandate for requiring regulation of both mobile and stationary sources of air pollution at the state and federal level. The Environmental Protection Agency (EPA) was created in 1970 in order to consolidate research, monitoring, standard-setting and enforcement authority into a single agency.

The EPA is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. NAAQS pollutants were identified using medical evidence and are shown below in Table J on page 14.

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The SIP must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP. The CARB defines attainment as the category given to an area with no violations in the past three years. As indicated below in Table K on page 15, the Air Basin has been designated by EPA for the national standards as a non-attainment area for ozone (O₃) and suspended particulates (PM₁₀ and PM_{2.5}) and partial non-attainment for lead. Currently, the Air Basin is in attainment with the national ambient air quality standards for carbon monoxide (CO), sulfur dioxide (SO₂), and nitrogen dioxide (NO₂).

Table J – State and Federal Criteria Pollutant Standards

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Ozone (O ₃)	0.09 ppm / 1-hour 0.07 ppm / 8-hour	0.070 ppm, / 8-hour	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm / 1-hour 9.0 ppm / 8-hour	35.0 ppm / 1-hour 9.0 ppm / 8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO ₂)	0.18 ppm / 1-hour 0.030 ppm / annual	100 ppb / 1-hour 0.053 ppm / annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO ₂)	0.25 ppm / 1-hour 0.04 ppm / 24-hour	75 ppb / 1-hour 0.14 ppm/annual	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM ₁₀)	50 µg/m ³ / 24-hour 20 µg/m ³ / annual	150 µg/m ³ / 24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death from heart or lung diseases in elderly.
Suspended Particulate Matter (PM _{2.5})	12 µg/m ³ / annual	35 µg/m ³ / 24-hour 12 µg/m ³ / annual	
Sulfates	25 µg/m ³ / 24-hour	No Federal Standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; and (f) Property damage.
Lead	1.5 µg/m ³ / 30-day	0.15 µg/m ³ /3-month rolling	(a) Learning disabilities; and (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

Source: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.

Table K – South Coast Air Basin Attainment Status

Criteria Pollutant	Standard	Averaging Time	Designation ^{a)}	Attainment Date ^{b)}
1-Hour Ozone ^{c)}	NAAQS	1979 1-Hour (0.12 ppm)	Nonattainment (Extreme)	2/6/2023 (revised deadline)
	CAAQS	1-Hour (0.09 ppm)	Nonattainment	N/A
8-Hour Ozone ^{d)}	NAAQS	1997 8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024
	NAAQS	2008 8-Hour (0.075 ppm)	Nonattainment (Extreme)	7/20/2032
	NAAQS	2015 8-Hour (0.070 ppm)	Pending – Expect Nonattainment (Extreme)	Pending (beyond 2032)
	CAAQS	8-Hour (0.070 ppm)	Nonattainment	Beyond 2032
CO	NAAQS	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (attained)
	CAAQS	1-Hour (20 ppm) 8-Hour (9 ppm)	Attainment	6/11/2007 (attained)
NO ₂ ^{e)}	NAAQS	2010 1-Hour (0.10 ppm)	Unclassifiable/ Attainment	N/A (attained)
	NAAQS	1971 Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (attained)
	CAAQS	1-Hour (0.18 ppm) Annual (0.030 ppm)	Attainment	---
SO ₂ ^{f)}	NAAQS	2010 1-Hour (75 ppb)	Designations Pending (expect Unclassifiable/ Attainment)	N/A (attained)
	NAAQS	1971 24-Hour (0.14 ppm) 1971 Annual (0.03 ppm)	Unclassifiable/ Attainment	3/19/1979 (attained)
PM ₁₀	NAAQS	1987 24-hour (150 µg/m ³)	Attainment (Maintenance) ^{g)}	7/26/2013 (attained)
	CAAQS	24-hour (50 µg/m ³) Annual (20 µg/m ³)	Nonattainment	N/A
PM _{2.5} ^{h)}	NAAQS	2006 24-Hour (35 µg/m ³)	Nonattainment (Serious)	12/31/2019
	NAAQS	1997 Annual (15.0 µg/m ³)	Attainment (final determination pending)	4/5/2015 (attained 2013)
	NAAQS	2012 Annual (12.0 µg/m ³)	Nonattainment (Moderate)	12/31/2021
	CAAQS	Annual (12.0 µg/m ³)	Nonattainment	N/A
Lead ⁱ⁾	NAAQS	2008 3-Months Rolling (0.15 µg/m ³)	Nonattainment (Partial) (Attainment determination requested)	12/31/2015

Source: SCAQMD, February 2016

Notes:

a) U.S. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassifiable/Attainment or Unclassifiable

b) A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration

c) The 1979 1-hour O₃ standard (0.12 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard and therefore has some continuing obligations with respect to the revoked standard

d) The 2008 8-hour ozone NAAQS (0.075 ppm) was revised to 0.070 ppm. Effective 12/28/15 with classifications and implementation goals to be finalized by 10/1/17; the 1997 8-hour O₃ NAAQS (0.08 ppm) was revoked in the 2008 O₃ implementation rule, effective 4/6/15; there are continuing obligations under the revoked 1997 and revised 2008 O₃ until they are attained.

e) New NO₂ 1-hour standard, effective August 2, 2010; attainment designations January 20, 2012; annual NO₂ standard retained

f) The 1971 annual and 24-hour SO₂ standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO₂ 1-hour standard. Area designations are still pending, with Basin expected to be designated Unclassifiable /Attainment.

g) Annual PM₁₀ standard was revoked, effective December 18, 2006; 24-hour PM₁₀ NAAQS deadline was 12/31/2006; SCAQMD request for attainment redesignation and PM₁₀ maintenance plan was approved by U.S. EPA on June 26, 2013, effective July 26, 2013.

h) The attainment deadline for the 2006 24-Hour PM_{2.5} NAAQS was 12/31/15 for the former “moderate” classification; EPA approved

reclassification to “serious”, effective 2/12/16 with an attainment deadline of 12/31/19; the 2012 (proposal year) annual PM_{2.5} NAAQS was revised on 1/15/13, effective 3/18/13, from 15 to 12 µg/m³; new annual designations were final 1/15/15, effective 4/15/15; on July 25, 2016 EPA finalized a determination that the Basin attained the 1997 annual (15.0 µg/m³) and 24-hour PM_{2.5} (65 µg/m³) NAAQS, effective August 24, 2016 i) Partial Nonattainment designation – Los Angeles County portion of Basin only for near-source monitors. Expect to remain in attainment based on current monitoring data; attainment re-designation request pending.

In 2015, one or more stations in the Air Basin exceeded the most current federal standards on a total of 146 days (40 percent of the year), including: 8-hour ozone (113 days over 2015 ozone NAAQS), 24-hour PM_{2.5} (30 days, including near-road sites; 25 days for ambient sites only), PM₁₀ (2 days), and NO₂ (1 day). Despite substantial improvement in air quality over the past few decades, some air monitoring stations in the Air Basin still exceed the NAAQS for ozone more frequently than any other area in the United States. Seven of the top 10 stations in the nation most frequently exceeding the 2015 8-hour ozone NAAQS in 2015 were located within the Air Basin, including stations in San Bernardino, Riverside, and Los Angeles Counties.

PM_{2.5} levels in the Air Basin have improved significantly in recent years. By 2013 and again in 2014 and 2015, there were no stations measuring PM_{2.5} in the Air Basin that violated the former 1997 annual PM_{2.5} NAAQS (15.0 µg/m³) for the 3-year design value period. On July 25, 2016 the EPA finalized a determination that the Basin attained the 1997 annual (15.0 µg/m³) and 24-hour PM_{2.5} (65 µg/m³) NAAQS, effective August 24, 2016. Of the 17 federal PM_{2.5} monitors at ambient stations in the Air Basin for the 2013-2015 period, five stations had design values over the current 2012 annual PM_{2.5} NAAQS (12.0 µg/m³), including: Mira Loma (Air Basin maximum at 14.1 µg/m³), Rubidoux, Fontana, Ontario, Central Los Angeles, and Compton. For the 24-hour PM_{2.5} NAAQS (35.0 µg/m³) there were 14 stations in the Air Basin in 2015 that had one or more daily exceedances of the standard, with a combined total of 25 days over that standard in the Air Basin. While it was previously anticipated that the Air Basin’s 24-hour PM_{2.5} NAAQS would be attained by 2015, this did not occur based on the data for 2013 through 2015. The higher number of days exceeding the 24-hour PM_{2.5} NAAQS over what was expected is largely attributed to the severe drought conditions over this period that allowed for more stagnant conditions in the Air Basin with multi-day buildups of higher PM_{2.5} concentrations. This was caused by the lack of storm-related dispersion and rain-out of PM and its precursors.

The Air Basin is currently in attainment for the federal standards for SO₂, CO, and NO₂. While the concentration level of the 1-hour NO₂ federal standard (100 ppb) was exceeded in the Air Basin for one day in 2015 (Long Beach- Hudson Station), the NAAQS NO₂ design value has not been exceeded. Therefore, the Basin remains in attainment of the NO₂ NAAQS.

The Los Angeles County portion of the Air Basin has been designated as nonattainment for the revised (2008) federal lead standard (0.15 µg/m³, rolling 3-month average). This was due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in Vernon and the City of Industry exceeding the revised standard in the 2007-2009 period of data used. As of the 2009-2011 data period, only one of these stations (Vernon) still exceeded the lead standard. The *2012 Lead State Implementation Plan Los Angeles County*, prepared by SCAQMD and adopted on May 4, 2012, provided measures to meet attainment of lead by December 31, 2015. Current monitoring data shows that lead has been below the standards at all monitoring stations since 2015, and based on this data a re-designation request is pending with the EPA.

4.2 State – California Air Resources Board

The California Air Resources Board (CARB), which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control

measures, provides oversight of local programs, and prepares the SIP. The CAAQS for criteria pollutants are shown above in Table J. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g. hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

The Air Basin has been designated by the CARB as a non-attainment area for ozone, PM10, PM2.5 and lead. Currently, the Air Basin is in attainment with the ambient air quality standards for CO, NO₂, SO₂, and sulfates and is unclassified for visibility reducing particles and Hydrogen Sulfide.

The following lists the State of California Code of Regulations (CCR) air quality emission rules that are applicable, but not limited to all warehouse projects in the State.

Assembly Bill 2588

The Air Toxics “Hot Spots” Information and Assessment Act (Assembly Bill [AB] 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release in California. The data is ranked by high, intermediate, and low categories, which are determined by: the potency, toxicity, quantity, volume, and proximity of the facility to nearby receptors.

CARB Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the California Air Resources Board (CARB) adopted California Code of Regulations Title 13, Article 4.8, Chapter 9, Section 2449 to reduce diesel particulate matter (DPM) and NO_x emissions from in-use off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. Performance requirements of the rule are based on a fleet’s average NO_x emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirement making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less). Currently, no commercial operation in California may add any equipment to their fleet that has a Tier 0 or Tier 1 engine. By January 1, 2018 medium and large fleets will be restricted from adding Tier 2 engines to their fleets and by January 2023, no commercial operation will be allowed to add Tier 2 engines to their fleets. It should be noted that commercial fleets may continue to use their existing Tier 0 and 1 equipment, if they can demonstrate that the average emissions from their entire fleet emissions meet the NO_x emissions targets.

CARB Resolution 08-43 for On-Road Diesel Truck Fleets

On December 12, 2008 the CARB adopted Resolution 08-43, which limits NO_x, PM10 and PM2.5 emissions from on-road diesel truck fleets that operate in California. On October 12, 2009 Executive Order R-09-010 was adopted that codified Resolution 08-43 into Section 2025, title 13 of the California Code of Regulations. This regulation requires that by the year 2023 all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4 Final) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. By January 1, 2014, 50 percent of a truck fleet is required to have installed Best Available Control Technology (BACT) for NO_x emissions and 100 percent of a truck fleet installed BACT for PM10 emissions. This regulation also provides a few exemptions including a onetime per year 3-day pass for trucks registered outside of

California. All on-road diesel trucks utilized during construction of the proposed project will be required to comply with Resolution 08-43.

4.3 Regional – Southern California

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

South Coast Air Quality Management District

SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. The *Final 2016 Air Quality Management Plan* (2016 AQMP) was adopted by the SCAQMD Board on March 3, 2016 and was adopted by CARB on March 23, 2017 for inclusion into the California State Implementation Plan (SIP). The 2016 AQMP was prepared in order to meet the following standards:

- 8-hour Ozone (75 ppb) by 2032
- Annual PM_{2.5} (12 µg/m³) by 2021-2025
- 8-hour Ozone (80 ppb) by 2024 (updated from the 2007 and 2012 AQMPs)
- 1-hour Ozone (120 ppb) by 2023 (updated from the 2012 AQMP)
- 24-hour PM_{2.5} (35 µg/m³) by 2019 (updated from the 2012 AQMP)

In addition to meeting the above standards, the 2016 AQMP also includes revisions to the attainment demonstrations for the 1997 8-hour ozone NAAQS and the 1979 1-hour ozone NAAQS. The prior 2012 AQMP was prepared in order to demonstrate attainment with the 24-hour PM_{2.5} standard by 2014 through adoption of all feasible measures. The prior 2007 AQMP demonstrated attainment with the 1997 8-hour ozone (80 ppb) standard by 2023, through implementation of future improvements in control techniques and technologies. These “black box” emissions reductions represent 65 percent of the remaining NO_x emission reductions by 2023 in order to show attainment with the 1997 8-hour ozone NAAQS. Given the magnitude of these needed emissions reductions, additional NO_x control measures have been provided in the 2012 AQMP even though the primary purpose was to show compliance with 24-hour PM_{2.5} emissions standards.

The 2016 AQMP provides a new approach that focuses on available, proven and cost effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities to promote reductions in GHG emissions and TAC emissions as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP recognizes the critical importance of working with other agencies to develop funding and other incentives that encourage the accelerated transition of vehicles, buildings and industrial facilities to cleaner technologies in a manner that benefits not only air quality, but also local businesses and the regional economy.

Although SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with plans and new development projects throughout the Air Basin. Instead, this is controlled through local jurisdictions in accordance to the California Environmental Quality Act (CEQA). In order to assist local jurisdictions with air quality compliance issues the *CEQA Air Quality Handbook* (SCAQMD CEQA Handbook), prepared by SCAQMD, 1993,

with the most current updates found at <http://www.aqmd.gov/ceqa/hdbk.html>, was developed in accordance with the projections and programs detailed in the AQMPs. The purpose of the SCAQMD CEQA Handbook is to assist Lead Agencies, as well as consultants, project proponents, and other interested parties in evaluating a proposed project's potential air quality impacts. Specifically, the SCAQMD CEQA Handbook explains the procedures that SCAQMD recommends be followed for the environmental review process required by CEQA. The SCAQMD CEQA Handbook provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The SCAQMD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the Air Basin, and adverse impacts will be minimized.

The following lists the SCAQMD rules that are applicable but not limited to all industrial projects in the Air Basin.

Rule 402 - Nuisance

Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. Compliance with Rule 402 will reduce local air quality and odor impacts to nearby sensitive receptors.

Rule 403- Fugitive Dust

Rule 403 governs emissions of fugitive dust during construction activities and requires that no person shall cause or allow the emissions of fugitive dust such that dust remains visible in the atmosphere beyond the property line or the dust emission exceeds 20 percent opacity, if the dust is from the operation of a motorized vehicle. Compliance with this rule is achieved through application of standard Best Available Control Measures, which include but are not limited to the measures below. Compliance with these rules would reduce local air quality impacts to nearby sensitive receptors.

- Utilize either a pad of washed gravel 50 feet long, 100 feet of paved surface, a wheel shaker, or a wheel washing device to remove material from vehicle tires and undercarriages before leaving project site.
- Do not allow any track out of material to extend more than 25 feet onto a public roadway and remove all track out at the end of each workday.
- Water all exposed areas on active sites at least three times per day and pre-water all areas prior to clearing and soil moving activities.
- Apply nontoxic chemical stabilizers according to manufacturer specifications to all construction areas that will remain inactive for 10 days or longer.
- Pre-water all material to be exported prior to loading, and either cover all loads or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code Section 23114.
- Replant all disturbed area as soon as practical.
- Suspend all grading activities when wind speeds (including wind gusts) exceed 25 miles per hour.
- Restrict traffic speeds on all unpaved roads to 15 miles per hour or less.

Rules 1108 and 1108.1 – Cutback and Emulsified Asphalt

Rules 1108 and 1108.1 govern the sale, use, and manufacturing of asphalt and limits the VOC content in asphalt. This rule regulates the VOC contents of asphalt used during construction as well as any on-going maintenance during operations. Therefore, all asphalt used during construction and operation of the proposed project must comply with SCAQMD Rules 1108 and 1108.1.

Rule 1113 – Architectural Coatings

Rule 1113 governs the sale, use, and manufacturing of architectural coatings and limits the VOC content in sealers, coatings, paints and solvents. This rule regulates the VOC contents of paints available during construction. Therefore, all paints and solvents used during construction and operation of the proposed project must comply with SCAQMD Rule 1113.

Rule 1143 – Paint Thinners

Rule 1143 governs the sale, use, and manufacturing of paint thinners and multi-purpose solvents that are used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations. This rule regulates the VOC content of solvents used during construction. Solvents used during construction and operation of the proposed project must comply with SCAQMD Rule 1143.

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), adopted April, 2016 and the *2015 Federal Transportation Improvement Program* (FTIP), adopted October 2013, which addresses regional development and growth forecasts. Although the RTP/SCS and FTIP are primarily planning documents for future transportation projects a key component of these plans are to integrate land use planning with transportation planning that promotes higher density infill development in close proximity to existing transit service. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The RTP/SCS, FTIP, and AQMP are based on projections originating within the City and County General Plans.

4.4 Local – City of Compton

Local jurisdictions, such as the City of Compton, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City is also responsible for the implementation of transportation control measures as outlined in the AQMPs. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

In accordance with the CEQA requirements, the City does not, however, have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the County and region will meet federal and state standards. Instead, the City relies on the expertise of the SCAQMD and

utilizes the SCAQMD CEQA Handbook as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

City of Compton General Plan

The City of Compton General Plan contains the following air quality-related objectives and policies that are applicable to the proposed project.

Air Quality Element Goal 5

Reduce air pollution emissions and impacts through site planning and building design.

Policies

5.2 The City of Compton will support the use of low polluting construction materials and coatings.

5.5 The City of Compton will reduce the exposure of sensitive receptors to dust and odors to the extent feasible.

5.0 GLOBAL CLIMATE CHANGE MANAGEMENT

The regulatory setting related to global climate change is addressed through the efforts of various international, federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to reduce GHG emissions through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for global climate change regulations are discussed below.

5.1 International

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global climate change and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. The parties of the UNFCCC adopted the Kyoto Protocol, which set binding GHG reduction targets for 37 industrialized countries, the objective of reducing their collective GHG emissions by five percent below 1990 levels by 2012. The Kyoto Protocol has been ratified by 182 countries, but has not been ratified by the United States. It should be noted that Japan and Canada opted out of the Kyoto Protocol and the remaining developed countries that ratified the Kyoto Protocol have not met their Kyoto targets. The Kyoto Protocol expired in 2012 and the amendment for the second commitment period from 2013 to 2020 has not yet entered into legal force. The Parties to the Kyoto Protocol negotiated the Paris Agreement in December 2015, agreeing to set a goal of limiting global warming to less than 2 degrees Celsius compared with pre-industrial levels. The Paris Agreement has been adopted by 195 nations with 147 ratifying it, including the United States by President Obama, who ratified it by Executive Order on September 3, 2016. On June 1, 2017, President Trump announced that the United States is withdrawing from the Paris Agreement, however the Paris Agreement is still legally binding by the other remaining nations.

Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere—CFCs, halons, carbon tetrachloride, and methyl chloroform—were to be phased out, with the first three by the year 2000 and methyl chloroform by 2005.

5.2 Federal – United States Environmental Protection Agency

The United States Environmental Protection Agency (EPA) is responsible for implementing federal policy to address global climate change. The Federal government administers a wide array of public-private partnerships to reduce U.S. GHG intensity. These programs focus on energy efficiency, renewable energy, methane, and other non-CO₂ gases, agricultural practices and implementation of technologies to achieve GHG reductions. EPA implements several voluntary programs that substantially contribute to the reduction of GHG emissions.

In *Massachusetts v. Environmental Protection Agency* (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that not only did the EPA have authority to regulate greenhouse gases, but the EPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme Court ruled that the EPA should be required to regulate CO₂ and other greenhouse gases as pollutants under the federal Clean Air Act (CAA).

In response to the FY2008 Consolidations Appropriations Act (H.R. 2764; Public Law 110-161), EPA proposed a rule on March 10, 2009 that requires mandatory reporting of GHG emissions from large sources in the United States. On September 22, 2009, the Final Mandatory Reporting of GHG Rule was

signed and published in the Federal Register on October 30, 2009. The rule became effective on December 29, 2009. This rule requires suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions to submit annual reports to EPA.

On December 7, 2009, the EPA Administrator signed two distinct findings under section 202(a) of the Clean Air Act. One is an endangerment finding that finds concentrations of the six GHGs in the atmosphere threaten the public health and welfare of current and future generations. The other is a cause or contribute finding, that finds emissions from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare. These actions did not impose any requirements on industry or other entities, however, since 2009 the EPA has been providing GHG emission standards for vehicles and other stationary sources of GHG emissions that are regulated by the EPA. On September 13, 2013 the EPA Administrator signed 40 CFR Part 60, that limits emissions from new sources to 1,100 pounds of CO₂ per MWh for fossil fuel-fired utility boilers and 1,000 pounds of CO₂ per MWh for large natural gas-fired combustion units.

On August 3, 2015, the EPA announced the Clean Power Plan, emissions guidelines for U.S. states to follow in developing plans to reduce GHG emissions from existing fossil fuel-fired power plants (Federal Register Vol. 80, No. 205, October 23 2015). On February 9, 2016 the Supreme Court stayed implementation of the Clean Power Plan due to a legal challenge from 29 states and in April 2017, the Supreme Court put the case on a 60 day hold and directed both sides to make arguments for whether it should keep the case on hold indefinitely or close it and remand the issue to the EPA. On October 11, 2017, the EPA issued a formal proposal to repeal the Clean Power Plan and on August 21, 2018 the EPA released the Affordable Clean Energy Rule, which usurps the Clean Power plan and returns most of the decision making authority for power plant emissions back to the States.

5.3 State

The California Air Resources Board (CARB) has the primary responsible for implementing state policy to address global climate change, however there are State regulations related to global climate change that affect a variety of State agencies. CARB, which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both the federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g. hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

In 2008, CARB approved a Climate Change Scoping Plan that proposes a “comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health” (CARB 2008). The Climate Change Scoping Plan has a range of GHG reduction actions which include direct regulations; alternative compliance mechanisms; monetary and non-monetary incentives; voluntary actions; market-based mechanisms such as a cap-and-trade system. In 2014, CARB approved the First Update to the Climate Change Scoping Plan (CARB, 2014) that identifies additional strategies moving beyond the 2020 targets to the year 2050. On December 14, 2017 CARB adopted the California’s 2017 Climate Change Scoping Plan, November 2017 (CARB, 2017) that provides specific statewide policies and measures to achieve the 2030 GHG reduction target of 40 percent below 1990 levels by 2030 and the aspirational 2050 GHG reduction target of 80 percent below 1990 levels by 2050. In addition, the State

has passed the following laws directing CARB to develop actions to reduce GHG emissions, which are listed below in chronological order, with the most current first.

California Code of Regulations (CCR) Title 24, Part 6

CCR Title 24, Part 6: *California's Energy Efficiency Standards for Residential and Nonresidential Buildings* (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

Title 24 standards are updated on a three-year schedule and the most current 2016 standards went into effect on January 1, 2017. The Title 24 standards require the installation of insulated hot water pipes, improved window performance, improved wall insulation, and mandatory duct sealing. Title 24 also requires roofs to be constructed to be solar ready, with cool roofing shingles, a minimum 1-inch air space between roof material and roof deck, and a minimum of R-22 roof/ceiling insulation. All lighting is required to be high efficiency and daylight sensors and motion sensors are required for outdoor lighting, bathrooms, utility rooms and other spaces. The forced air systems are required to limit leakage to 5 percent or less and requires all heat pump systems to be equipped with liquid line filter driers. The 2016 Title 24 Part 6 standards are anticipated to reduce electricity consumption by 281 gigawatt-hours per year and natural gas consumption by 16 million therms per year (<http://www.energy.ca.gov/2015publications/CEC-400-2015-037/CEC-400-2015-037-CMF.pdf>).

California Code of Regulations (CCR) Title 24, Part 11

CCR Title 24, Part 11: *California Green Building Standards* (Title 24) was developed in response to continued efforts to reduce GHG emissions associated with energy consumption. The most current version is the 2016 California Green Building Standards Code (CalGreen), which became effective on January 1, 2017 and replaced the 2013 CalGreen.

The CALGreen Code contains requirements for construction site selection; storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency.

The CALGreen Code provides standards for bicycle parking, carpool/vanpool/electric vehicle spaces, light and glare reduction, grading and paving, energy efficient appliances, renewable energy, graywater systems, water efficient plumbing fixtures, recycling and recycled materials, pollutant controls (including moisture control and indoor air quality), acoustical controls, storm water management, building design, insulation, flooring, and framing, among others. Implementation of the CALGreen Code measures reduces energy consumption and vehicle trips and encourages the use of alternative-fuel vehicles, which reduces pollutant emissions.

Some of the notable changes in the 2016 CALGreen Code over the prior 2013 CALGreen Code include: an increase in amount of bicycle parking requirements; an increase in number of EV charging stations and clean air vehicle parking at non-residential buildings; a reduction in water usage in urinals to 0.125 gallons per flush; an increased rate of diversion for construction and operational waste to 65 percent as

well as adding organic waste as waste to be diverted; and a requirement for fireplaces to meet new EPA standards.

Executive Order B-30-15, Senate Bill 32 and Assembly Bill 197

The California Governor issued Executive Order B-30-15 on April 29, 2015 that aims to reduce California's GHG emissions 40 percent below 1990 levels by 2030. This executive order aligns California's GHG reduction targets with those of other international governments, such as the European Union that set the same target for 2030 in October, 2014. This target will make it possible to reach the ultimate goal of reducing GHG emissions 80 percent under 1990 levels by 2050 that is based on scientifically established levels needed in the U.S.A to limit global warming below 2 degrees Celsius – the warming threshold at which scientists say there will likely be major climate disruptions such as super droughts and rising sea levels. Assembly Bill 197 (AB 197) (September 8, 2016) and Senate Bill 32 (SB 32) (September 8, 2016) codified into statute the GHG emissions reduction targets of at least 40 percent below 1990 levels by 2030 as detailed in Executive Order B-30-15. AB 197 also requires additional GHG emissions reporting that is broken down to sub-county levels and requires CARB to consider the social costs of emissions impacting disadvantaged communities.

Senate Bill 350

Senate Bill 350 (SB 350) was adopted October 2015 in order to implement the goals of Executive Order B-30-15. SB 350 increases the State's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. In addition SB 350 requires the State to double statewide energy efficiency savings for both electricity and natural gas uses by 2030. SB 350 is being implemented by requiring all large utilities to develop and submit Integrated Resource Plans that detail how they will meet their customers energy needs, reduce GHG emissions and deploy clean energy resources. SB 350 superseded the renewable energy requirements set by SB 1078, SB 107, and SB X1-2.

Executive Order B-29-15

The California Governor issued Executive Order B-29-15 on April 1, 2015 and directed the State Water Resources Control Board to impose restrictions to achieve a statewide 25% reduction in urban water usage and directed the Department of Water Resources to replace 50 million square feet of lawn with drought tolerant landscaping through an update to the State's Model Water Efficient Landscape Ordinance. The Ordinance also requires installation of more efficient irrigation systems, promotion of greywater usage and onsite stormwater capture, and limits the turf planted in new residential landscapes to 25 percent of the total area and restricts turf from being planted in median strips or in parkways unless the parkway is next to a parking strip and a flat surface is required to enter and exit vehicles. Executive Order B-29-15 would reduce GHG emissions associated with the energy used to transport and filter water.

Assembly Bill 341 and Senate Bills 939 and 1374

Senate Bill 939 (SB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills. Assembly Bill 341 (AB 341) was adopted in 2011 and builds upon the waste reduction measures of SB 939 and 1374, and sets a new target of a 75 percent reduction in solid waste generated by the year 2020.

Senate Bill 375

Senate Bill 375 (SB 375) was adopted September 2008 in order to support the State's climate action goals to reduce GHG emissions through coordinated regional transportation planning efforts, regional GHG

emission reduction targets, and land use and housing allocation. SB 375 requires CARB to set regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established targets for 2020 and 2035 for each Metropolitan Planning Organizations (MPO) within the State. It was up to each MPO to adopt a sustainable communities strategy (SCS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP) to meet CARB's 2020 and 2035 GHG emission reduction targets. These reduction targets are required to be updated every eight years and in June 2017 CARB released *Staff Report Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Target*, which provides recommended GHG emissions reduction targets for SCAG of 8 percent by 2020 and 21 percent by 2035.

The 2016-2040 *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), adopted by SCAG April, 2016 provides a 2020 GHG emission reduction target of 8 percent and a 2035 GHG emission reduction target of 18 percent. SCAG will need to develop additional strategies in its next revision of the RTP/SCS in order to meet CARB's new 21 percent GHG emission reduction target for 2035. CARB is also charged with reviewing SCAG's RTP/SCS for consistency with its assigned targets.

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS. However, new provisions of CEQA incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS and categorized as "transit priority projects."

Assembly Bill 1109

California Assembly Bill 1109 (AB 1109) was adopted October 2007, also known as the Lighting Efficiency and Toxics Reduction Act, prohibits the manufacturing of lights after January 1, 2010 that contain levels of hazardous substances prohibited by the European Union pursuant to the RoHS Directive. AB 1109 also requires reductions in energy usage for lighting and is structured to reduce lighting electrical consumption by: (1) At least 50 percent reduction from 2007 levels for indoor residential lighting; and (2) At least 25 percent reduction from 2007 levels for indoor commercial and all outdoor lighting by 2018. AB 1109 would reduce GHG emissions through reducing the amount of electricity required to be generated by fossil fuels in California.

Executive Order S-1-07

Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Executive Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

In 2009 CARB approved the proposed regulation to implement the LCFS. The standard was challenged in the courts, but has been in effect since 2011 and was re-approved by the CARB in 2015. The LCFS is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. The LCFS is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet annually. Reformulated gasoline mixed with corn-derived ethanol and low-sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel. Compressed natural gas and liquefied natural gas also may be low-carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles, are also considered as low-carbon fuels.

Senate Bill 97

Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Natural Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the State CEQA guidelines that addresses GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporated GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance were provided and no specific mitigation measures were identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate Action Plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the GHG emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of GHG emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports must specifically consider a project's energy use and energy efficiency potential.

Assembly Bill 32

In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which will be phased in starting in 2012. Emission reductions shall include carbon sequestration projects that would remove carbon from the atmosphere and utilize best management practices that are technologically feasible and cost effective.

In 2007 CARB released the calculated Year 1990 GHG emissions of 431 million metric tons of CO₂e (MMTCO₂e). The 2020 target of 431 MMTCO₂e requires the reduction of 78 MMTCO₂e, or approximately 16 percent from the State's projected 2020 business as usual emissions of 509 MMTCO₂e (CARB, 2014). Under AB 32, CARB was required to adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 cap by 2020. Early measures CARB took to lower GHG emissions included requiring operators of the largest industrial facilities that emit 25,000 metric tons of CO₂ in a calendar year to submit verification of GHG emissions by December 1, 2010. The CARB Board also approved nine discrete early action measures that include regulations affecting landfills, motor vehicle fuels, refrigerants in cars, port operations and other sources, all of which became enforceable on or before January 1, 2010.

CARB's Scoping Plan that was adopted in 2009, proposes a variety of measures including: strengthening energy efficiency and building standards; targeted fees on water and energy use; a market-based cap-and-trade system; achieving a 33 percent renewable energy mix; and a fee regulation to fund the program. The 2014 update to the Scoping Plan identifies strategies moving beyond the 2020 targets to the year 2050. The California's 2017 Climate Change Scoping Plan that was adopted in November 2017, is the second update to the Scoping Plan and provides specific statewide policies and measures to achieve the 2030 GHG reduction targets adopted in AB 197 and SB 32 as well as the aspirational 2050 reduction target provided in Executive Order B-30-15.

The Cap and Trade Program established under the Scoping Plan sets a statewide limit on sources responsible for 85 percent of California's GHG emissions, and has established a market for long-term investment in energy efficiency and cleaner fuels since 2012.

Executive Order S-3-05

In 2005 the California Governor issued Executive Order S 3-05, GHG Emission, which established the following reduction targets:

- 2010: Reduce greenhouse gas emissions to 2000 levels;
- 2020: Reduce greenhouse gas emissions to 1990 levels;
- 2050: Reduce greenhouse gas emissions to 80 percent below 1990 levels.

The Executive Order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs. The State achieved its first goal of reducing GHG emissions to 2000 levels by 2010.

Assembly Bill 1493

California Assembly Bill 1493 (also known as the Pavley Bill, in reference to its author Fran Pavley) was enacted on July 22, 2002 and required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2004, CARB approved the "Pavley I" regulations limiting the amount of GHGs that may be released from new passenger automobiles that are being phased in between model years 2009 through 2016. These regulations will reduce GHG emissions by 30 percent from 2002 levels by 2016. The second set of regulations "Pavley II" is currently in development and will be phased in between model years 2017 through 2025 and will reduce emissions by 45 percent by the year 2020 as compared to the 2002 fleet. The Pavley II standards are being developed by linking the GHG emissions and formerly separate toxic tailpipe emissions standards previously known as the "LEV III"

(third stage of the Low Emission Vehicle standards) into a single regulatory framework. The new rules reduce emissions from gasoline-powered cars as well as promote zero-emissions auto technologies such as electricity and hydrogen, and through increasing the infrastructure for fueling hydrogen vehicles. In 2009, the U.S. EPA granted California the authority to implement the GHG standards for passenger cars, pickup trucks and sport utility vehicles. In September 2009, the Pavley I regulations were adopted by CARB.

5.4 Regional – Southern California

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

South Coast Air Quality Management District

SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. The SCAQMD is also responsible for GHG emissions for projects where it is the lead agency. However, for other projects in the SCAB where it is not the lead agency, it is limited to providing resources to other lead agencies in order to assist them in determining GHG emission thresholds and GHG reduction measures. In order to assist local agencies with direction on GHG emissions, the SCAQMD organized a working group and adopted Rules 2700, 2701, and 2702, which are described below.

SCAQMD Working Group

Since neither CARB nor the OPR has developed GHG emissions threshold, the SCAQMD formed a Working Group to develop significance thresholds related to GHG emissions. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that either provides a quantitative annual thresholds of 3,500 MTCO₂e for residential uses, 1,400 MTCO₂e for commercial uses, and 3,000 MTCO₂e for mixed uses. An alternative annual threshold of 3,000 MTCO₂e for all land use types is also proposed.

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), adopted April, 2016 and the *2015 Federal Transportation Improvement Program* (FTIP), adopted October 2013, which addresses regional development and growth forecasts. Although the RTP/SCS and FTIP are primarily planning documents for future transportation projects a key component of these plans are to integrate land use planning with transportation planning that promotes higher density infill development in close proximity to existing transit service. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The RTP/SCS, FTIP, and AQMP are based on projections originating within the City and County General Plans.

5.5 Local – City of Compton

City of Compton General Plan

The *Draft Compton General Plan*, prepared January 2011, provides the following GHG emissions-related goals and policies that are applicable to the proposed project.

Air Quality Element Goal 4

Reduce emissions associated with energy consumption.

Policies

- 4.1** The City of Compton will support the use of energy-efficient equipment and design in City facilities and infrastructure.

Air Quality Element Goal 5

Reduce air pollution emissions and impacts through site planning and building design.

Policies

- 5.2** The City of Compton will support the use of low polluting construction materials and coatings.

Health Goal 12

Provide for a reduction in localized air pollution and Greenhouse Gas emissions in the City of Compton to promote healthier lifestyles.

Policies

- 12.1** The City will partner with the South Coast Air Quality Management District to identify programs that improve air quality, including reducing vehicle trips from automobiles and trucks to and through the city.

6.0 ATMOSPHERIC SETTING

6.1 South Coast Air Basin

The project site is located within the southwestern portion of Los Angeles County in the City of Compton, which is part of the South Coast Air Basin (Air Basin) that includes the non-desert portions of Riverside, San Bernardino, and Los Angeles Counties and all of Orange County. The Air Basin is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the Air Basin is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter.

6.2 Regional Climate

The climate of southwestern Los Angeles County is characterized by hot dry summers, mild moist winters with infrequent rainfall, moderate afternoon breezes, and generally fair weather. Occasional periods of strong Santa Ana winds and winter storms interrupt the otherwise mild weather pattern. Although the Air Basin is semi-arid, the air near the surface in southwestern Los Angeles County is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry air is brought into the Air Basin by offshore winds, the ocean effect is dominant. Periods of heavy fog are frequent and low stratus clouds, often referred to as “high fog” are a characteristic feature.

Winds are an important parameter in characterizing the air quality environment of a project site because they both determine the regional pattern of air pollution transport and control the rate of dispersion near a source. Daytime winds in southwestern Los Angeles County are usually light breezes from off the coast as air moves regionally onshore from the cool Pacific Ocean to the warm Mojave Desert interior of Southern California. These winds allow for good local mixing, but as discussed above, these coastal winds carry significant amounts of industrial and automobile air pollutants from the densely urbanized western portion of the Air Basin into the interior valleys which become trapped by the mountains that border the eastern and northern edges of the Air Basin.

In the summer, strong temperature inversions may occur that limit the vertical depth through which air pollution can be dispersed. Air pollutants concentrate because they cannot rise through the inversion layer and disperse. These inversions are more common and persistent during the summer months. Over time, sunlight produces photochemical reactions within this inversion layer that creates ozone, a particularly harmful air pollutant. Occasionally, strong thermal convections occur which allows the air pollutants to rise high enough to pass over the mountains and ultimately dilute the smog cloud.

In the winter, light nocturnal winds result mainly from the drainage of cool air off of the mountains toward the valley floor while the air aloft over the valley remains warm. This forms a type of inversion known as a radiation inversion. Such winds are characterized by stagnation and poor local mixing and trap pollutants such as automobile exhaust near their source. While these inversions may lead to air pollution “hot spots” in heavily developed coastal areas of the Air Basin, there is not enough traffic in inland valleys to cause any winter air pollution problems. Despite light wind conditions, especially at night and in the early morning, winter is generally a period of good air quality in the project vicinity.

The temperature and precipitation levels for the Long Beach Daugherty Field Monitoring Station, which is the nearest weather station to the project site with historical data are shown below in Table L. Table L shows that August is typically the warmest month and January is typically the coolest month. Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table L – Monthly Climate Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Max. Temperature	67.1	67.2	68.4	71.7	73.5	76.9	82.2	83.9	82.3	77.9	72.2	67.0
Avg. Min. Temperature	45.6	47.3	49.7	52.4	56.8	60.3	63.7	64.9	62.9	57.9	50.5	45.3
Avg. Total Precipitation (in.)	2.63	2.90	1.83	0.70	0.20	0.06	0.02	0.06	0.19	0.42	1.21	1.80

Source: Source: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5085>

6.3 Monitored Local Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the Air Basin. Estimates of the existing emissions in the Air Basin provided in the 2012 AQMP, indicate that collectively, mobile sources account for 59 percent of the VOC, 88 percent of the NO_x emissions and 40 percent of directly emitted PM_{2.5}, with another 10 percent of PM_{2.5} from road dust. The 2016 AQMP found that since 2012 AQMP projections were made stationary source VOC emissions have decreased by approximately 12 percent, but mobile VOC emissions have increased by 5 percent. The percentage of NO_x emissions remain unchanged between the 2012 and 2016 projections.

SCAQMD has divided the Air Basin into 38 air-monitoring areas. The project site is located in Air Monitoring Area 12, which covers the South Central Los Angeles County. Since not all air monitoring stations measure all of the tracked pollutants, the data from the following two monitoring stations, listed in the order of proximity to the project site have been used; Compton-700 North Bullis Road Monitoring Station (Compton Station) and Long Beach-2425 Webster Street Monitoring Station (Long Beach Station).

The Compton Station is located approximately 2.6 miles northeast of the project site at 700 North Bullis Road, Compton and the Long Beach Station is located approximately 5.2 miles southeast of the project site at 2425 Webster Street, Long Beach. Ozone, NO₂, and PM_{2.5} were measured at the Compton Station and PM₁₀ was measured at the Long Beach Station. However, it should be noted that due to the air monitoring station's distance from the project site, recorded air pollution levels at the monitoring stations reflect with varying degrees of accuracy, local air quality.

The monitoring data is presented in Table M and shows the most recent three years of monitoring data from CARB. CO measurements have not been provided, since CO is currently in attainment in the Air Basin and monitoring of CO within the Air Basin ended on March 31, 2013. Table M shows that ozone and particulate matter (PM₁₀ and PM_{2.5}) are the air pollutants of primary concern in the project area, which are detailed below:

Ozone

The State 1-hour concentration standard for ozone has been exceeded one day over the past three years at the Compton Station. The State 8-hour ozone standard has been exceeded between one and five days each year over the past three years at the Compton Station. The Federal 8-hour ozone standard has been exceeded between one and five days each year over the past three years at the Compton Station.

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO₂, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the

oxidant concentrations experienced in the area. Many areas of Southern California contribute to the ozone levels experienced at this monitoring station, with the more significant areas being those directly upwind.

Table M – Local Area Air Quality Monitoring Summary

Pollutant (Standard)	Year		
	2015	2016	2017
Ozone¹:			
Maximum 1-Hour Concentration (ppm)	0.091	0.098	0.092
Days > CAAQS (0.09 ppm)	0	1	0
Maximum 8-Hour Concentration (ppm)	0.072	0.071	0.076
Days > NAAQS (0.070 ppm)	1	1	5
Days > CAAQs (0.070 ppm)	1	1	5
Nitrogen Dioxide¹:			
Maximum 1-Hour Concentration (ppb)	73.6	63.7	99.1
Days > NAAQS (100 ppb)	0	0	0
Inhalable Particulates (PM10)²:			
Maximum 24-Hour California Measurement (ug/m ³)	80.0	75.0	79.3
Days > NAAQS (150 ug/m ³)	0	0	0
Days > CAAQS (50 ug/m ³)	6	ND	ND
Annual Arithmetic Mean (AAM) (ug/m ³)	31.5	31.9	33.7
Annual > NAAQS (50 ug/m ³)	No	No	No
Annual > CAAQS (20 ug/m ³)	Yes	Yes	Yes
Ultra-Fine Particulates (PM2.5)¹:			
Maximum 24-Hour National Measurement (ug/m ³)	41.3	36.3	66.7
Days > NAAQS (35 ug/m ³)	3	1	5
Annual Arithmetic Mean (AAM) (ug/m ³)	11.7	11.0	13.2
Annual > NAAQS and CAAQS (12 ug/m ³)	No	No	Yes

Notes: Exceedances are listed in **bold**. CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; ppb = parts per billion; ND = no data available.

¹ Data obtained from the Compton Station.

² Data obtained from the Long Beach Station.

Source: <http://www.arb.ca.gov/adam/>

Nitrogen Dioxide

The Compton Station did not record an exceedance of the Federal 1-hour NO₂ standard for the last three years.

Particulate Matter

The State 24-hour concentration standard for PM10 has been exceeded six days in 2015 no data is available for the years 2016 and 2017 at the Long Beach Station. Over the past three years the Federal 24-hour standard for PM10 has not been exceeded at the Long Beach Station. The annual PM10

concentration at the Long Beach Station has exceeded the State standard for the past three years and has not exceeded the Federal standard for the past three years.

Over the past three years the 24-hour concentration standard for PM_{2.5} has been exceeded between one and five days each year over the past three years at the Compton Station. The annual PM_{2.5} concentration exceeded both the State and Federal standard only one year over the past three years. There does not appear to be a noticeable trend for PM₁₀ or PM_{2.5} in either maximum particulate concentrations or days of exceedances in the area. Particulate levels in the area are due to natural sources, grading operations, and motor vehicles.

According to the EPA, some people are much more sensitive than others to breathing fine particles (PM₁₀ and PM_{2.5}). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM₁₀ and PM_{2.5}. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, because many breathe through their mouths during exercise.

6.4 Toxic Air Contaminant Levels in the Air Basin

In order to determine the Air Basin-wide risks associated with major airborne carcinogens, the SCAQMD conducted the Multiple Air Toxics Exposure Study (MATES) studies. According to the SCAQMD's MATES-IV study, the project site has an estimated cancer risk of 1441 per million persons chance of cancer. In comparison, the average cancer risk for the Air Basin is 991 per million persons, which is based on the use of age-sensitivity factors detailed in the OEHHA Guidelines (OEHHA, 2015). The increased cancer risk is primarily due to the project site's proximity to State Routes 91 and 47, and to Interstate 710 and 110.

In order to provide a perspective of risk, it is often estimated that the incidence in cancer over a lifetime for the U.S. population ranges between 1 in 3 to 4 and 1 in 3, or a risk of about 300,000 per million persons. The MATES-III study referenced a Harvard Report on Cancer Prevention, which estimated that of cancers associated with known risk factors, about 30 percent were related to tobacco, about 30 percent were related to diet and obesity, and about 2 percent were associated with environmental pollution related exposures that includes hazardous air pollutants.

7.0 MODELING PARAMETERS AND ASSUMPTIONS

7.1 CalEEMod Model Input Parameters

The criteria air pollution and GHG emissions impacts created by the proposed project have been analyzed through use of CalEEMod Version 2016.3.2. CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2014 computer program to calculate the emission rates specific for South Coast Air Basin portion of San Bernardino County for employee, vendor and haul truck vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy equipment operations. EMFAC2014 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour.

The project characteristics in the CalEEMod were set to a project location of the South Coast Air Basin portion of Los Angeles County, a Climate Zone of 8, and utility company of Southern California Edison.

Land Use Parameters

The proposed project would consist of the development of a new water supply well on 0.48-acres. Construction activities were modeled based on the phases, timing, and construction equipment detailed in Section 1.3. The proposed project's land use parameters that were entered into the CalEEMod model are shown in Table N.

Table N – CalEEMod Land Use Parameters

Proposed Land Use	Land Use Subtype in CalEEMod	Land Use Size ¹	Lot Acreage	Building/Paving ² (square feet)
Water Supply Well	Other Non-Asphalt Surfaces	0.48 AC	0.48	20,909

Notes:

¹ AC = Acres

² Building/Paving square feet represent area where architectural coatings will be applied.

The construction activities were modeled based on the phases, timing and construction equipment detailed above in Section 1.3. All off-road construction equipment was modeled based on the CalEEMod model's default Tier level emission rates.

Operational Emissions Modeling

In general, operation of the water supply well would consist of the operation of an electrical water pump, that would not create any onsite air emissions, and implementation of the proposed project would result in a net decrease in electricity usage, when compared to the electricity currently utilized to transport water to the project vicinity from Northern California. Routine maintenance would be conducted on the well in five to 10 year intervals. Maintenance would include physical cleaning, swabbing, or can include a full rehabilitation of the well. The anticipated timing and construction equipment utilized during well rehabilitation have been discussed above in Section 1.3. The worst-case operational emissions created by the proposed project have been analyzed through use of the CalEEMod model and the parameters detailed in Section 1.3 for the well rehabilitation activities.

8.0 THRESHOLDS OF SIGNIFICANCE

8.1 Regional Air Quality

Many air quality impacts that derive from dispersed mobile sources, which are the dominate pollution generators in the Air Basin, often occurs hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual project is generally very small and difficult to measure. Therefore, SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The SCAQMD CEQA Handbook states that any project in the Air Basin with daily emissions that exceed any of the identified significance thresholds should be considered as having an individually and cumulatively significant air quality impact. For the purposes to this air quality impact analysis, a regional air quality impact would be considered significant if emissions exceed the SCAQMD significance thresholds identified in Table O.

Table O – SCAQMD Regional Criteria Pollutant Emission Thresholds of Significance

	Pollutant Emissions (pounds/day)						
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	Lead
Construction	75	100	550	150	150	55	3
Operation	55	55	550	150	150	55	3

Source: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>

The regional criteria pollutants analysis for both construction and operation of the proposed project can be found below in Section 9.3.

8.2 Local Air Quality

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. SCAQMD has also provided *Final Localized Significance Threshold Methodology* (LST Methodology), July 2008, which details the methodology to analyze local air emission impacts. The LST Methodology found that the primary emissions of concern are NO₂, CO, PM₁₀, and PM_{2.5}.

The LST Methodology provides Look-Up Tables with different thresholds based on the location and size of the project site and distance to the nearest sensitive receptors. The portion of the project site that will be disturbed is approximately 0.48 acres, which is closest to the one-acre project site shown in the Look-Up Tables that has been utilized in this analysis. As detailed above in Section 4.1, the project site is located in Air Monitoring Area 12, which covers the South Central Los Angeles County. The nearest offsite sensitive receptors to the project site consist of workers at Fire Station 4, located adjacent to the east side of the project site. According to LST Methodology, any receptor located closer than 25 meters (82 feet) shall be based on the 25 meter thresholds. Table P below shows the LSTs for NO₂, PM₁₀ and PM_{2.5} for both construction and operational activities.

Table P – SCAQMD Local Air Quality Thresholds of Significance

Activity	Allowable Emissions (pounds/day) ¹			
	NOx	CO	PM10	PM2.5
Construction	46	231	4	3
Operation	46	231	1	1

Notes:

¹ The nearest sensitive receptors are workers at the Fire Station located adjacent to the east side of the project site. According to LST Methodology, all receptors closer than 25 meters are based on the 25 meter threshold.

Source: Calculated from SCAQMD's Mass Rate Look-up Tables for one acre in Air Monitoring Area 12, South Central Los Angeles County.

8.3 Toxic Air Contaminants

According to the SCAQMD CEQA Handbook, any project that has the potential to expose the public to toxic air contaminants in excess of the following thresholds would be considered to have a significant air quality impact:

- If the Maximum Incremental Cancer Risk is 10 in one million or greater; or
- Toxic air contaminants from the proposed project would result in a Hazard Index increase of 1 or greater.

In order to determine if the proposed project may have a significant impact related to toxic air contaminants (TACs), the *Health Risk Assessment Guidance for analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*, (Diesel Analysis) prepared by SCAQMD, August 2003, recommends that if the proposed project is anticipated to create TACs through stationary sources or regular operations of diesel trucks on the project site, then the proximity of the nearest receptors to the source of the TAC and the toxicity of the hazardous air pollutant (HAP) should be analyzed through a comprehensive facility-wide health risk assessment (HRA).

The TAC analysis for both construction and operation of the proposed project can be found below in Section 9.4.

8.4 Odor Impacts

The SCAQMD CEQA Handbook states that an odor impact would occur if the proposed project creates an odor nuisance pursuant to SCAQMD Rule 402, which states:

“A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.”

If the proposed project results in a violation of Rule 402 with regards to odor impacts, then the proposed project would create a significant odor impact.

The odor analysis for both construction and operation of the proposed project can be found below in Section 9.5.

8.5 Greenhouse Gas Emissions

The proposed project is located within the jurisdiction of the SCAQMD. In order to identify significance criteria under CEQA for development projects, SCAQMD initiated a Working Group, which provided detailed methodology for evaluating significance under CEQA. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual threshold of 3,000 MTCO₂e for all land use projects. Although the SCAQMD provided substantial evidence supporting the use of the above threshold, as of November 2017, the SCAQMD Board has not yet considered or approved the Working Group's thresholds.

It should be noted that SCAQMD's Working Group's thresholds were prepared prior to the issuance of Executive Order B-30-15 on April 29, 2015 that provided a reduction goal of 40 percent below 1990 levels by 2030. This target was codified into statute through passage of AB 197 and SB 32 in September 2016. However, to date no air district or local agency within California has provided guidance on how to address AB 197 and SB 32 with relation to land use projects. In addition, the California Supreme Court's ruling on *Cleveland National Forest Foundation v. San Diego Association of Governments* (Cleveland v. SANDAG), Filed July 13, 2017 stated:

SANDAG did not abuse its discretion in declining to adopt the 2050 goal as a measure of significance in light of the fact that the Executive Order does not specify any plan or implementation measures to achieve its goal. In its response to comments, the EIR said: "It is uncertain what role regional land use and transportation strategies can or should play in achieving the EO's 2050 emissions reduction target. A recent California Energy Commission report concludes, however, that the primary strategies to achieve this target should be major 'decarbonization' of electricity supplies and fuels, and major improvements in energy efficiency [citation]."

Although, the above court case was referencing California's GHG emission targets for the year 2050, at this time it is also unclear what role land use strategies can or should play in achieving the AB 197 and SB 32 reduction goal of 40 percent below 1990 levels by 2030. As such this analysis has relied on the SCAQMD Working Group's recommended thresholds. Therefore, the proposed project would be considered to create a significant cumulative GHG impact if the proposed project would exceed the annual threshold of 3,000 MTCO₂e.

The GHG emissions analysis for both construction and operation of the proposed project can be found below in Sections 9.6 and 9.7.

9.0 IMPACT ANALYSIS

9.1 CEQA Thresholds of Significance

Consistent with CEQA and the State Draft CEQA Guidelines, prepared on July 2, 2018, a significant impact related to air quality and global climate change would occur if the proposed project is determined to result in:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations;
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

9.2 Air Quality Compliance

The proposed project would not conflict with or obstruct implementation of the SCAQMD Air Quality Management Plan (AQMP). The following section discusses the proposed project's consistency with the SCAQMD AQMP.

SCAQMD Air Quality Management Plan

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and regional plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD AQMP. Therefore, this section discusses any potential inconsistencies of the proposed project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

- (1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- (2) Whether the project will exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

Criterion 1 - Increase in the Frequency or Severity of Violations?

Based on the air quality modeling analysis contained in this report, short-term regional construction air emissions would not result in significant impacts based on SCAQMD regional thresholds of significance discussed above in Section 8.1 or local thresholds of significance discussed above in Section 8.2. The ongoing operation of the proposed project would generate air pollutant emissions that are inconsequential on a regional basis and would not result in significant impacts based on SCAQMD thresholds of significance discussed above in Section 8.1. The analysis for long-term local air quality impacts showed that local pollutant concentrations would not be projected to exceed the air quality standards. Therefore, a less than significant long-term impact would occur and no mitigation would be required.

Therefore, based on the information provided above, the proposed project would be consistent with the first criterion.

Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to insure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The AQMP is developed through use of the planning forecasts provided in the RTP/SCS and FTIP. The RTP/SCS is a major planning document for the regional transportation and land use network within Southern California. The RTP/SCS is a long-range plan that is required by federal and state requirements placed on SCAG and is updated every four years. The FTIP provides long-range planning for future transportation improvement projects that are constructed with state and/or federal funds within Southern California. Local governments are required to use these plans as the basis of their plans for the purpose of consistency with applicable regional plans under CEQA. For this project, the City of Compton General Plan defines the assumptions that are represented in AQMP.

The proposed project is currently designated as Industrial (I) and is zoned Heavy Manufacturing (MH). The proposed project is consistent with the current land use designation and would not require a General Plan Amendment or zone change. As such, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur in relation to implementation of the AQMP.

Level of Significance

Less than significant impact.

9.3 Cumulative Net Increase in Non-Attainment Pollution

The proposed project would not 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. The project site is located in the South Coast Air Basin, which is currently designated by the EPA for federal standards as a non-attainment area for ozone and PM_{2.5} and by CARB for the state standards as a non-attainment area for ozone, PM₁₀, and PM_{2.5}. The SCAQMD has developed both regional and local air emissions thresholds that are detailed respectively above in Sections 8.1 and 8.2. In accordance with SCAQMD methodology, projects that do not exceed SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact.

The following section calculates the potential air emissions associated with the construction and operations of the proposed project and compares the emissions to the SCAQMD standards.

Construction Emissions

The proposed project would consist of construction of a new water supply well and associated improvements to the project site. The CalEEMod model has been utilized to calculate the construction-related regional emissions from the proposed project and the input parameters utilized in this analysis have been detailed in Section 7.1. The worst-case summer or winter daily construction-related criteria pollutant emissions from the proposed project for each phase of construction activities are shown below in Table Q and the CalEEMod daily printouts are shown in Appendix A.

Table Q – Construction-Related Regional Criteria Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO ₂	PM10	PM2.5
Phase 1 – Temporary Noise Barrier and Site Preparation						
Onsite ¹	3.66	38.50	28.26	0.05	2.13	1.96
Offsite ²	0.31	0.46	2.71	0.01	0.63	0.17
Total	3.97	38.96	30.97	0.06	2.76	2.13
Phase 2 – Conductor Casing Installation						
Onsite	1.94	16.99	13.15	0.03	0.79	0.75
Offsite	0.02	0.13	0.11	0.00	0.00	0.00
Total	1.96	17.12	13.26	0.03	0.79	0.75
Phase 3 – Well Drilling						
Onsite	4.79	42.71	37.51	0.08	2.32	2.28
Offsite	0.02	0.13	0.12	0.00	0.00	0.00
Total	4.81	42.84	37.63	0.08	2.32	2.28
Phase 4 – Well Casing						
Onsite	5.10	45.36	38.77	0.09	2.34	2.28
Offsite	0.03	0.13	0.12	0.00	0.00	0.00
Total	5.13	45.49	38.89	0.09	2.34	2.28
Phase 5 – Well Development						
Onsite	1.98	11.50	11.34	0.02	0.94	0.91
Offsite	0.02	0.13	0.09	0.00	0.00	0.00
Total	2.00	20.01	13.26	0.03	0.94	0.91
Phase 6 – Test Pumping						
Onsite	1.98	19.88	13.17	0.03	0.94	0.91
Offsite	0.02	0.13	0.09	0.00	0.00	0.00
Total	2.00	20.01	13.26	0.03	0.94	0.91
Phase 7 – Site Improvements						
Onsite	1.27	11.66	8.24	0.02	0.58	0.55
Offsite	0.06	0.38	0.53	0.00	0.12	0.04
Total	1.33	12.04	8.77	0.02	0.70	0.59
SCQAMD Thresholds	75	100	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Notes:

¹ Onsite emissions from equipment not operated on public roads.

² Offsite emissions from vehicles operating on public roads.

Source: CalEEMod Version 2016.3.2.

Table Q shows that none of the analyzed criteria pollutants would exceed the regional emissions thresholds during any of the well construction phases. Therefore, a less than significant regional air quality impact would occur from construction of the proposed project.

Operational Emissions

Operation of the proposed water supply well would consist of the operation of an electrical water pump, that would not create any onsite air emissions. Implementation of the proposed project would result in a net decrease in electricity usage, when compared to the electricity currently utilized to transport water to the project vicinity from Northern California. Routine maintenance would be conducted on the well in five to 10 year intervals. Maintenance would include physical cleaning, swabbing, or can include a full rehabilitation of the well. A typical well rehabilitation process can be completed in five days.

The CalEEMod model has been utilized to calculate the operational regional emissions from the well rehabilitation activities and the input parameters utilized in this analysis as detailed above in Section 1.3. The worst-case summer or winter VOC, NO_x, CO, SO₂, PM₁₀, and PM_{2.5} daily emissions created from the proposed project's long-term operations have been calculated and are summarized below in Table R and the CalEEMod daily emissions printouts are shown in Appendix A.

Table R – Operational Well Rehabilitation Regional Criteria Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Well Rehabilitation						
Onsite ¹	1.13	9.56	10.55	0.02	0.40	0.38
Offsite ²	0.01	0.10	0.05	0.00	0.00	0.00
Total Emissions	1.14	9.66	10.60	0.02	0.40	0.38
SCQAMD Operational Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Notes:

¹ Onsite emissions from equipment not operated on public roads.

² Offsite emissions from vehicles operating on public roads.

Source: Calculated from CalEEMod Version 2016.3.2.

The data provided in Table R above shows that none of the analyzed criteria pollutants would exceed the regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from operation of the proposed project.

Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant.

Level of Significance

Less than significant impact.

9.4 Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

The proposed project would not expose sensitive receptors to substantial pollutant concentrations. The nearest sensitive receptors to the project site are the offsite workers at Compton Fire Department Station 4 that are located adjacent to the east side of the project site. The nearest residential use to the project site are single-family homes located on the north side of Greenleaf Boulevard, approximately 0.3 mile north of the project site. The nearest school to the project site is Walton Middle School, which is located as near as 670 feet north of the project site. The construction and operations-related impacts to the nearby sensitive receptors have been analyzed separately below.

Construction-Related Sensitive Receptor Impacts

The proposed project would consist of construction of a new water supply well and associated improvements to the project site. Construction of the proposed project would create onsite air emissions from off-road diesel equipment exhaust as well as from fugitive dust created from the movement of dirt and debris on the project site. The construction-related local criteria pollutant impacts and toxic air contaminant impacts have been analyzed separately below.

Construction-Related Local Criteria Pollutant Impacts

Construction-related air emissions may have the potential to exceed localized criteria pollutant thresholds that have been developed by the SCAQMD. The local air quality emissions from construction were analyzed through utilizing the methodology described in *Localized Significance Threshold Methodology* (LST Methodology), prepared by SCAQMD, revised October 2009. The LST Methodology found the primary criteria pollutant emissions of concern are NO_x, CO, PM₁₀, and PM_{2.5}. In order to determine if any of these pollutants require a detailed analysis of the local air quality impacts, each phase of construction was screened using the SCAQMD's Mass Rate LST Look-up Tables. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily onsite emissions of CO, NO_x, PM₁₀, and PM_{2.5} from the proposed project could result in a significant impact to the local air quality. Table S shows the onsite emissions from the CalEEMod model for the different construction phases and the calculated localized emissions thresholds that have been detailed above in Section 8.2. Since it is possible that building construction, paving, and architectural coating activities may occur concurrently, Table S also shows the combined local criteria pollutant emissions from building construction, paving and architectural coating phases of construction.

Table S – Construction-Related Local Criteria Pollutant Emissions

Phase	Pollutant Emissions (pounds/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Temporary Noise Barrier and Site Preparation	38.50	28.26	2.13	1.96
Conductor Casing Installation	16.99	13.15	0.79	0.75
Well Drilling	42.71	37.51	2.32	2.28
Well Casing	45.36	38.77	2.34	2.28
Well Development	19.88	13.17	0.94	0.91
Test Pumping	11.50	11.34	0.71	0.71
Site Improvements	11.66	8.24	0.58	0.55
SCAQMD Thresholds for 25 meters (82 feet)¹	46	231	4	3
Exceeds Threshold?	No	No	No	No

Notes:

¹ The nearest sensitive receptors are workers at the Fire Station located adjacent to the east side of the project site. According to LST Methodology, all receptors closer than 25 meters are based on the 25 meter threshold.

Source: Calculated from SCAQMD's Mass Rate Look-up Tables for one-acre in Air Monitoring Area 12, South Central Los Angeles County.

The data provided in Table S shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds during any of the well construction phases. Therefore, a less than significant local air quality impact would occur from construction of the proposed project.

Construction-Related Toxic Air Contaminant Impacts

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of

standard risk-assessment methodology. Given the relatively limited number of heavy-duty construction equipment and the short-term construction schedule, the proposed project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project. As such, construction of the proposed project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Operations-Related Sensitive Receptor Impacts

Operation of the proposed water supply well would consist of the operation of an electrical water pump, that would not create any onsite air emissions. Routine maintenance would be conducted on the well in five to 10 year intervals. Maintenance would include physical cleaning, swabbing, or can include a full rehabilitation of the well. The routine maintenance activities would create onsite air emissions from off-road diesel equipment exhaust as well as from fugitive dust created from the movement of dirt and debris on the project site. The operations-related local criteria pollutant impacts and toxic air contaminant impacts have been analyzed separately below.

Operations-Related Local Criteria Pollutant Impacts

Operational air emissions may have the potential to exceed localized criteria pollutant thresholds that have been developed by the SCAQMD. The local air quality emissions from well rehabilitation were analyzed using the SCAQMD's Mass Rate LST Look-up Tables and the methodology described in LST Methodology. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM10, and PM2.5 from the proposed project could result in a significant impact to the local air quality. Table T shows the onsite emissions from the CalEEMod model for the well rehabilitation activities as well as the SCAQMD emissions thresholds.

Table T – Operational Well Rehabilitation Local Criteria Pollutant Emissions

Onsite Emission Source	Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Well Rehabilitation	9.56	10.55	0.40	0.38
SCAQMD Thresholds for 25 meters (82 feet)¹	46	231	1	1
Exceeds Threshold?	No	No	No	No

Notes:

¹ The nearest sensitive receptors are workers at the Fire Station located adjacent to the east side of the project site. According to LST Methodology, all receptors closer than 25 meters are based on the 25 meter threshold.

Source: Calculated from SCAQMD's Mass Rate Look-up Tables for one-acre in Air Monitoring Area 12, South Central Los Angeles County.

The data provided in Table T shows that the on-going operations of the proposed project would not exceed the local NOx, CO, PM10 and PM2.5 thresholds of significance discussed above in Section 9.2. Therefore, the on-going operations of the proposed project would create a less than significant operations-related impact to local air quality due to on-site emissions and no mitigation would be required.

Operations-Related Toxic Air Contaminant Impacts

The greatest potential for toxic air contaminant emissions would only occur during the well rehabilitation activities that are limited to approximately five days every five to ten years. Given, the infrequent activity schedule, the proposed project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. Therefore, no significant long-term toxic air contaminant impacts would occur during operation of the proposed project. As such, operation of the proposed project would result in a less than significant exposure of sensitive receptors to substantial pollutant concentrations.

Level of Significance

Less than significant impact.

9.5 Odor Emissions Adversely Affecting a Substantial Number of People

The proposed project would not create objectionable odors affecting a substantial number of people. Individual responses to odors are highly variable and can result in a variety of effects. Generally, the impact of an odor results from a variety of factors such as frequency, duration, offensiveness, location, and sensory perception. The frequency is a measure of how often an individual is exposed to an odor in the ambient environment. The intensity refers to an individual's or group's perception of the odor strength or concentration. The duration of an odor refers to the elapsed time over which an odor is experienced. The offensiveness of the odor is the subjective rating of the pleasantness or unpleasantness of an odor. The location accounts for the type of area in which a potentially affected person lives, works, or visits; the type of activity in which he or she is engaged; and the sensitivity of the impacted receptor.

Sensory perception has four major components: detectability, intensity, character, and hedonic tone. The detection (or threshold) of an odor is based on a panel of responses to the odor. There are two types of thresholds: the odor detection threshold and the recognition threshold. The detection threshold is the lowest concentration of an odor that will elicit a response in a percentage of the people that live and work in the immediate vicinity of the project site and is typically presented as the mean (or 50 percent of the population). The recognition threshold is the minimum concentration that is recognized as having a characteristic odor quality, this is typically represented by recognition by 50 percent of the population. The intensity refers to the perceived strength of the odor. The odor character is what the substance smells like. The hedonic tone is a judgment of the pleasantness or unpleasantness of the odor. The hedonic tone varies in subjective experience, frequency, odor character, odor intensity, and duration. Potential odor impacts have been analyzed separately for construction and operations below.

Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the extraction of drilling mud and from diesel exhaust associated with the operation of construction equipment. The objectionable odors that may be produced during the construction process would be temporary and would not likely be noticeable for extended periods of time beyond the project site's boundaries. Due to the transitory nature of construction odors, a less than significant odor impact would occur and no mitigation would be required.

Operations-Related Odor Impacts

Potential sources that may emit odors during operational activities include the operation of diesel-powered maintenance trucks and equipment as well as from use of chemicals such as chlorine, if a treatment facility is determined to be required to be installed onsite. The objectionable odors that may be produced from diesel-powered maintenance trucks and equipment would be temporary and would not likely be noticeable for extended periods of time beyond the project site's boundaries. If a treatment facility is required all chemicals such as chlorine would be utilized in closed systems with no exposure to outside air and all stockpiles of chemicals would be kept inside the proposed treatment facility structure within their original packaging until utilized. As such the odor impacts from the proposed treatment facility would be limited to within the project site boundaries and would not affect a substantial number of people. Therefore, a less than significant odor impact would occur from operation of the proposed project.

Level of Significance

Less than significant impact.

9.6 Generation of Greenhouse Gas Emissions

The proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. The proposed project would result in the construction and operation of the proposed water supply well. Construction activities would include the operation of off-road equipment as well as truck trips and worker trips to the project site that would create GHG emissions. Daily operational activities would be limited to the operation of an electrical water pump. Although the electrical pump would utilize electricity, implementation of the proposed project would result in a net decrease in electricity usage, when compared to the electricity currently utilized to transport water to the project vicinity from Northern California. As such, the operational GHG emissions is limited to routine maintenance that would be conducted on the well on a five to 10 year intervals, which would include physical cleaning, swabbing, or can include a full rehabilitation of the well.

The CalEEMod model was utilized to calculate the GHG emissions from each phase of construction activities and for the operational well rehabilitation activities utilizing the input parameters detailed above in Section 1.3. A summary of the GHG emissions is shown below in Table U and the CalEEMod model run annual printouts are provided in Appendix B.

Table U – Project Related Greenhouse Gas Annual Emissions

Category	Greenhouse Gas Emissions (Metric Tons per Year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Construction				
Temporary Noise Barrier and Site Preparation	12.82	0.00	0.00	12.90
Conductor Casing Installation	7.10	0.00	0.00	7.15
Well Drilling	53.35	0.01	0.00	53.57
Well Casing	18.74	0.00	0.00	18.83
Well Development	14.17	0.00	0.00	14.25
Test Pumping	12.72	0.00	0.00	12.74
Site Improvements	54.27	0.00	0.00	54.90
Total Construction Emissions	173.47	0.03	0.00	174.33
Amortized Construction Emissions (30 Years) ¹	5.78	0.00	0.00	5.81
Operations				
Well Rehabilitation	5.14	0.00	0.00	5.17
Amortized Operational Emissions (5 Years) ²	1.03	0.00	0.00	1.03
Total Annual Emissions (Construction & Operations)	6.81	0.00	0.00	6.84
SCAQMD Draft Threshold of Significance				3,000
Exceed Threshold?				No

Notes:

¹ Construction emissions amortized over 30 years as recommended in the SCAQMD GHG Working Group on November 19, 2009.

² Well Rehabilitation amortized over 5 years as that is the worst-case schedule for well rehabilitation.

Source: CalEEMod Version 2016.3.2.

The data provided in Table U shows that the proposed project would create 6.84 MTCO₂e per year. According to the SCAQMD draft threshold of significance detailed above in Section 8.5, a cumulative global climate change impact would occur if the GHG emissions created from the on-going operations would exceed 3,000 MTCO₂e per year. Therefore, a less than significant generation of greenhouse gas emissions would occur from construction and operation of the proposed project.

Level of Significance

Less than significant impact.

9.7 Greenhouse Gas Plan Consistency

The proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing GHG emissions. The proposed project would consist of the construction and operation of a new water supply well in the City of Compton. In general, operation of the water supply well will be passive as there will be no permanent equipment installed in the well. Routine maintenance would be conducted on the well in five to 10 year intervals. Maintenance would include physical cleaning, swabbing, or can include a full rehabilitation of the well. A typical well rehabilitation process can be completed in five days.

As detailed above in Section 9.7, the proposed project is anticipated to create 6.84 MTCO₂e per year, which is well below the SCAQMD draft threshold of significance of 3,000 MTCO₂e per year. The SCAQMD developed this threshold through a Working Group, which also developed detailed methodology for evaluating significance under CEQA. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual threshold of 3,000 MTCO₂e for all land use type projects, which was based on substantial evidence supporting the use of the recommended thresholds. Therefore, the proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Level of Significance

Less than significant impact.

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APPENDIX A

CalEEMod Model Daily Printouts

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

West Coast Basin Dominguez Well Station 300 Project
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.48	Acre	0.48	20,908.80	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2020
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

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

Project Characteristics - Operational Year 2020

Land Use - 0.48 AC of Other Non-Asphalt Surfaces

Construction Phase - 5 days Noise Barrier; 5 days Conductor Casing; 15 days Well Drilling; 5 days Well Casing; 10 days Well Development; 15 days Test Pumping; 65 days Site Improvements; and 5 days Well Rehab

Off-road Equipment - Equipment and hours of operation provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Operational equipment and schedule provided by applicant.

Trips and VMT - To account for transportation of equipment; 2 vendor trips added to all phases.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	5.00
tblConstructionPhase	NumDays	100.00	65.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	7/15/2019	7/6/2019
tblConstructionPhase	PhaseStartDate	7/13/2019	7/1/2019
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.29	0.29

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

tbIOffRoadEquipment	OffRoadEquipmentType			Cranes
tbIOffRoadEquipment	OffRoadEquipmentType			Off-Highway Trucks
tbIOffRoadEquipment	OffRoadEquipmentType			Aerial Lifts
tbIOffRoadEquipment	OffRoadEquipmentType			Forklifts
tbIOffRoadEquipment	OffRoadEquipmentType			Rubber Tired Loaders
tbIOffRoadEquipment	OffRoadEquipmentType			Bore/Drill Rigs
tbIOffRoadEquipment	OffRoadEquipmentType			Tractors/Loaders/Backhoes
tbIOffRoadEquipment	OffRoadEquipmentType			Welders
tbIOffRoadEquipment	OffRoadEquipmentType			Off-Highway Trucks
tbIOffRoadEquipment	OffRoadEquipmentType			Pumps
tbIOffRoadEquipment	OffRoadEquipmentType			Bore/Drill Rigs
tbIOffRoadEquipment	OffRoadEquipmentType			Air Compressors
tbIOffRoadEquipment	OffRoadEquipmentType			Pumps
tbIOffRoadEquipment	OffRoadEquipmentType			Tractors/Loaders/Backhoes
tbIOffRoadEquipment	OffRoadEquipmentType			Generator Sets
tbIOffRoadEquipment	OffRoadEquipmentType			Generator Sets
tbIOffRoadEquipment	OffRoadEquipmentType			Bore/Drill Rigs
tbIOffRoadEquipment	OffRoadEquipmentType			Pumps
tbIOffRoadEquipment	OffRoadEquipmentType			Generator Sets
tbIOffRoadEquipment	OffRoadEquipmentType			Generator Sets
tbIOffRoadEquipment	OffRoadEquipmentType			Off-Highway Trucks
tbIOffRoadEquipment	OffRoadEquipmentType			Pumps
tbIOffRoadEquipment	OffRoadEquipmentType			Tractors/Loaders/Backhoes
tbIOffRoadEquipment	OffRoadEquipmentType			Welders
tbIOffRoadEquipment	OffRoadEquipmentType			Bore/Drill Rigs
tbIOffRoadEquipment	OffRoadEquipmentType			Air Compressors
tbIOffRoadEquipment	OffRoadEquipmentType			Cranes

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Operations - Well Rehabilitation
tblOffRoadEquipment	PhaseName		Operations - Well Rehabilitation
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	PhaseName		Conductor Casing
tblTripsAndVMT	PhaseName		Well Drilling
tblTripsAndVMT	PhaseName		Well Casing
tblTripsAndVMT	PhaseName		Well Development
tblTripsAndVMT	PhaseName		Test Pumping
tblTripsAndVMT	PhaseName		Operations - Well Rehabilitation
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

Unmitigated Construction

[illegible]

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, 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	9.0000e-003	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-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	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
Total	9.0000e-003	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-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	9.0000e-003	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-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	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
Total	9.0000e-003	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, 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	Noise Barrier and Site Improvements	Site Preparation	7/1/2019	7/6/2019	5	5	
2	Conductor Casing	Trenching	7/7/2019	7/12/2019	5	5	
3	Well Drilling	Trenching	7/13/2019	7/27/2019	7	15	
4	Well Casing	Trenching	7/28/2019	8/1/2019	7	5	
5	Well Development	Trenching	8/2/2019	8/15/2019	5	10	
6	Test Pumping	Trenching	8/16/2019	8/30/2019	7	15	
7	Site Improvements	Building Construction	8/31/2019	11/29/2019	5	65	
8	Operations - Well Rehabilitation	Trenching	1/1/2025	1/7/2025	5	5	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0.48****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
Operations - Well Rehabilitation	Cranes	1	10.00	231	0.29
Operations - Well Rehabilitation	Off-Highway Trucks	1	2.00	402	0.38

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

Site Improvements	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Noise Barrier and Site Improvements	Aerial Lifts	4	8.00	63	0.31
Noise Barrier and Site Improvements	Forklifts	10	8.00	89	0.20
Noise Barrier and Site Improvements	Rubber Tired Loaders	4	6.00	203	0.36
Conductor Casing	Bore/Drill Rigs	1	12.00	221	0.50
Conductor Casing	Tractors/Loaders/Backhoes	1	12.00	97	0.37
Conductor Casing	Welders	1	12.00	46	0.45
Conductor Casing	Off-Highway Trucks	1	4.00	402	0.38
Conductor Casing	Pumps	1	4.00	84	0.74
Well Drilling	Bore/Drill Rigs	1	24.00	221	0.50
Well Drilling	Air Compressors	1	24.00	78	0.48
Well Drilling	Pumps	1	24.00	84	0.74
Well Drilling	Tractors/Loaders/Backhoes	1	5.00	97	0.37
Noise Barrier and Site Improvements	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Well Drilling	Generator Sets	1	12.00	84	0.74
Well Drilling	Generator Sets	1	12.00	84	0.74
Well Casing	Bore/Drill Rigs	1	24.00	221	0.50
Well Casing	Pumps	1	24.00	84	0.74
Well Casing	Generator Sets	1	12.00	84	0.74
Well Casing	Generator Sets	1	12.00	84	0.74
Well Casing	Off-Highway Trucks	1	4.00	402	0.38
Well Casing	Pumps	1	4.00	84	0.74
Well Casing	Tractors/Loaders/Backhoes	1	12.00	97	0.37
Well Casing	Welders	1	12.00	46	0.45
Well Development	Bore/Drill Rigs	1	10.00	221	0.50
Well Development	Air Compressors	1	10.00	78	0.48
Well Development	Cranes	1	10.00	231	0.29

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

Well Development	Generator Sets	1	10.00	84	0.74
Test Pumping	Pumps	1	24.00	84	0.74
Site Improvements	Welders	1	4.00	46	0.45
Site Improvements	Off-Highway Trucks	1	4.00	402	0.38
Site Improvements	Pumps	1	4.00	84	0.74
Site Improvements	Cranes	1	4.00	231	0.29
Operations - Well Rehabilitation	Air Compressors	1	10.00	78	0.48
Operations - Well Rehabilitation	Generator Sets	1	10.00	84	0.74

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
Site Improvements	5	9.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Noise Barrier and Site Improvements	22	55.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Conductor Casing	5	13.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Well Drilling	6	15.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Well Casing	8	20.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Well Development	4	10.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Test Pumping	1	3.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Operations - Well Rehabilitation	4	10.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.2 Noise Barrier and Site Improvements - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	3.6571	38.4976	28.2574	0.0501		2.1269	2.1269		1.9568	1.9568		4,957.180 ₈	4,957.180 ₈	1.5684		4,996.390 ₈
Total	3.6571	38.4976	28.2574	0.0501		2.1269	2.1269		1.9568	1.9568		4,957.180₈	4,957.180₈	1.5684		4,996.390₈

Unmitigated Construction Off-Site

Category	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
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	8.3100e-003	0.2315	0.0614	5.2000e-004	0.0128	1.4800e-003	0.0143	3.6900e-003	1.4100e-003	5.1000e-003		55.7629	55.7629	3.5700e-003		55.8523
Worker	0.2748	0.2019	2.6519	6.7000e-003	0.6148	5.3000e-003	0.6201	0.1630	4.8800e-003	0.1679		667.1241	667.1241	0.0229		667.6970
Total	0.2831	0.4334	2.7133	7.2200e-003	0.6276	6.7800e-003	0.6344	0.1667	6.2900e-003	0.1730		722.8870	722.8870	0.0265		723.5492

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.2 Noise Barrier and Site Improvements - 2019**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															
Off-Road	3.6571	38.4976	28.2574	0.0501		2.1269	2.1269		1.9568	1.9568	0.0000	4,957.180 ₈	4,957.180 ₈	1.5684		4,996.390 ₈
Total	3.6571	38.4976	28.2574	0.0501		2.1269	2.1269		1.9568	1.9568	0.0000	4,957.180₈	4,957.180₈	1.5684		4,996.390₈

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															
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	8.3100e-003	0.2315	0.0614	5.2000e-004	0.0128	1.4800e-003	0.0143	3.6900e-003	1.4100e-003	5.1000e-003		55.7629	55.7629	3.5700e-003		55.8523
Worker	0.2748	0.2019	2.6519	6.7000e-003	0.6148	5.3000e-003	0.6201	0.1630	4.8800e-003	0.1679		667.1241	667.1241	0.0229		667.6970
Total	0.2831	0.4334	2.7133	7.2200e-003	0.6276	6.7800e-003	0.6344	0.1667	6.2900e-003	0.1730		722.8870	722.8870	0.0265		723.5492

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.3 Conductor Casing - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.9362	16.9918	13.1542	0.0325		0.7903	0.7903		0.7485	0.7485		3,128.802 3	3,128.802 3	0.8658		3,150.446 1
Total	1.9362	16.9918	13.1542	0.0325		0.7903	0.7903		0.7485	0.7485		3,128.802 3	3,128.802 3	0.8658		3,150.446 1

Unmitigated Construction Off-Site

Category	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
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	3.2000e-003	0.1239	0.0310	1.1000e-004	5.0000e-005	9.0000e-005	1.4000e-004	2.0000e-005	8.0000e-005	1.0000e-004		12.2261	12.2261	1.9500e-003		12.2750
Worker	0.0159	4.3000e-003	0.0582	3.0000e-005	1.3000e-004	9.0000e-005	2.2000e-004	5.0000e-005	8.0000e-005	1.3000e-004		3.1046	3.1046	3.3000e-004		3.1128
Total	0.0191	0.1282	0.0892	1.4000e-004	1.8000e-004	1.8000e-004	3.6000e-004	7.0000e-005	1.6000e-004	2.3000e-004		15.3307	15.3307	2.2800e-003		15.3878

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.3 Conductor Casing - 2019**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															
Off-Road	1.9362	16.9918	13.1542	0.0325		0.7903	0.7903		0.7485	0.7485	0.0000	3,128.802 3	3,128.802 3	0.8658		3,150.446 0
Total	1.9362	16.9918	13.1542	0.0325		0.7903	0.7903		0.7485	0.7485	0.0000	3,128.802 3	3,128.802 3	0.8658		3,150.446 0

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															
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	3.2000e-003	0.1239	0.0310	1.1000e-004	5.0000e-005	9.0000e-005	1.4000e-004	2.0000e-005	8.0000e-005	1.0000e-004		12.2261	12.2261	1.9500e-003		12.2750
Worker	0.0159	4.3000e-003	0.0582	3.0000e-005	1.3000e-004	9.0000e-005	2.2000e-004	5.0000e-005	8.0000e-005	1.3000e-004		3.1046	3.1046	3.3000e-004		3.1128
Total	0.0191	0.1282	0.0892	1.4000e-004	1.8000e-004	1.8000e-004	3.6000e-004	7.0000e-005	1.6000e-004	2.3000e-004		15.3307	15.3307	2.2800e-003		15.3878

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.4 Well Drilling - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	4.7919	42.7070	37.5123	0.0814		2.3175	2.3175		2.2846	2.2846		7,837.213 ₉	7,837.213 ₉	1.2792		7,869.192 ₉
Total	4.7919	42.7070	37.5123	0.0814		2.3175	2.3175		2.2846	2.2846		7,837.213 ₉	7,837.213 ₉	1.2792		7,869.192 ₉

Unmitigated Construction Off-Site

Category	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
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	3.2000e-003	0.1239	0.0310	1.1000e-004	5.0000e-005	9.0000e-005	1.4000e-004	2.0000e-005	8.0000e-005	1.0000e-004		12.2261	12.2261	1.9500e-003		12.2750
Worker	0.0184	4.9600e-003	0.0671	4.0000e-005	1.5000e-004	1.0000e-004	2.5000e-004	6.0000e-005	9.0000e-005	1.5000e-004		3.5822	3.5822	3.8000e-004		3.5917
Total	0.0216	0.1289	0.0981	1.5000e-004	2.0000e-004	1.9000e-004	3.9000e-004	8.0000e-005	1.7000e-004	2.5000e-004		15.8084	15.8084	2.3300e-003		15.8667

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.4 Well Drilling - 2019**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	4.7919	42.7070	37.5123	0.0814		2.3175	2.3175		2.2846	2.2846	0.0000	7,837.213 ₉	7,837.213 ₉	1.2792		7,869.192 ₉
Total	4.7919	42.7070	37.5123	0.0814		2.3175	2.3175		2.2846	2.2846	0.0000	7,837.213₉	7,837.213₉	1.2792		7,869.192₉

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	3.2000e-003	0.1239	0.0310	1.1000e-004	5.0000e-005	9.0000e-005	1.4000e-004	2.0000e-005	8.0000e-005	1.0000e-004		12.2261	12.2261	1.9500e-003		12.2750
Worker	0.0184	4.9600e-003	0.0671	4.0000e-005	1.5000e-004	1.0000e-004	2.5000e-004	6.0000e-005	9.0000e-005	1.5000e-004		3.5822	3.5822	3.8000e-004		3.5917
Total	0.0216	0.1289	0.0981	1.5000e-004	2.0000e-004	1.9000e-004	3.9000e-004	8.0000e-005	1.7000e-004	2.5000e-004		15.8084	15.8084	2.3300e-003		15.8667

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.5 Well Casing - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	5.0982	45.3646	38.7674	0.0860		2.3386	2.3386		2.2843	2.2843		8,257.899 ₇	8,257.899 ₇	1.5492		8,296.629 ₅
Total	5.0982	45.3646	38.7674	0.0860		2.3386	2.3386		2.2843	2.2843		8,257.899₇	8,257.899₇	1.5492		8,296.629₅

Unmitigated Construction Off-Site

Category	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
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	3.2000e-003	0.1239	0.0310	1.1000e-004	5.0000e-005	9.0000e-005	1.4000e-004	2.0000e-005	8.0000e-005	1.0000e-004		12.2261	12.2261	1.9500e-003		12.2750
Worker	0.0245	6.6200e-003	0.0895	5.0000e-005	2.0000e-004	1.3000e-004	3.3000e-004	8.0000e-005	1.2000e-004	2.0000e-004		4.7763	4.7763	5.1000e-004		4.7890
Total	0.0277	0.1305	0.1205	1.6000e-004	2.5000e-004	2.2000e-004	4.7000e-004	1.0000e-004	2.0000e-004	3.0000e-004		17.0024	17.0024	2.4600e-003		17.0639

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.5 Well Casing - 2019**Mitigated Construction On-Site**

Category	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
lb/day																
Off-Road	5.0982	45.3646	38.7674	0.0860		2.3386	2.3386		2.2843	2.2843	0.0000	8,257.899 ₇	8,257.899 ₇	1.5492		8,296.629 ₅
Total	5.0982	45.3646	38.7674	0.0860		2.3386	2.3386		2.2843	2.2843	0.0000	8,257.899₇	8,257.899₇	1.5492		8,296.629₅

Mitigated Construction Off-Site

Category	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
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	3.2000e-003	0.1239	0.0310	1.1000e-004	5.0000e-005	9.0000e-005	1.4000e-004	2.0000e-005	8.0000e-005	1.0000e-004		12.2261	12.2261	1.9500e-003		12.2750
Worker	0.0245	6.6200e-003	0.0895	5.0000e-005	2.0000e-004	1.3000e-004	3.3000e-004	8.0000e-005	1.2000e-004	2.0000e-004		4.7763	4.7763	5.1000e-004		4.7890
Total	0.0277	0.1305	0.1205	1.6000e-004	2.5000e-004	2.2000e-004	4.7000e-004	1.0000e-004	2.0000e-004	3.0000e-004		17.0024	17.0024	2.4600e-003		17.0639

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.6 Well Development - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.9760	19.8787	13.1669	0.0321		0.9446	0.9446		0.9088	0.9088		3,122.0788	3,122.0788	0.6819		3,139,1271
Total	1.9760	19.8787	13.1669	0.0321		0.9446	0.9446		0.9088	0.9088		3,122.0788	3,122.0788	0.6819		3,139,1271

Unmitigated Construction Off-Site

Category	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
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	3.2000e-003	0.1239	0.0310	1.1000e-004	5.0000e-005	9.0000e-005	1.4000e-004	2.0000e-005	8.0000e-005	1.0000e-004		12.2261	12.2261	1.9500e-003		12.2750
Worker	0.0123	3.3100e-003	0.0448	2.0000e-005	1.0000e-004	7.0000e-005	1.7000e-004	4.0000e-005	6.0000e-005	1.0000e-004		2.3882	2.3882	2.5000e-004		2.3945
Total	0.0155	0.1272	0.0758	1.3000e-004	1.5000e-004	1.6000e-004	3.1000e-004	6.0000e-005	1.4000e-004	2.0000e-004		14.6143	14.6143	2.2000e-003		14.6694

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.6 Well Development - 2019**Mitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.9760	19.8787	13.1669	0.0321		0.9446	0.9446		0.9088	0.9088	0.0000	3,122.0788	3,122.0788	0.6819		3,139,1271
Total	1.9760	19.8787	13.1669	0.0321		0.9446	0.9446		0.9088	0.9088	0.0000	3,122.0788	3,122.0788	0.6819		3,139,1271

Mitigated Construction Off-Site

Category	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
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	3.2000e-003	0.1239	0.0310	1.1000e-004	5.0000e-005	9.0000e-005	1.4000e-004	2.0000e-005	8.0000e-005	1.0000e-004		12.2261	12.2261	1.9500e-003		12.2750
Worker	0.0123	3.3100e-003	0.0448	2.0000e-005	1.0000e-004	7.0000e-005	1.7000e-004	4.0000e-005	6.0000e-005	1.0000e-004		2.3882	2.3882	2.5000e-004		2.3945
Total	0.0155	0.1272	0.0758	1.3000e-004	1.5000e-004	1.6000e-004	3.1000e-004	6.0000e-005	1.4000e-004	2.0000e-004		14.6143	14.6143	2.2000e-003		14.6694

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.7 Test Pumping - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.4110	11.5014	11.3436	0.0197		0.7137	0.7137		0.7137	0.7137		1,869.103 7	1,869.103 7	0.1250		1,872.228 2
Total	1.4110	11.5014	11.3436	0.0197		0.7137	0.7137		0.7137	0.7137		1,869.103 7	1,869.103 7	0.1250		1,872.228 2

Unmitigated Construction Off-Site

Category	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
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	3.2000e-003	0.1239	0.0310	1.1000e-004	5.0000e-005	9.0000e-005	1.4000e-004	2.0000e-005	8.0000e-005	1.0000e-004		12.2261	12.2261	1.9500e-003		12.2750
Worker	3.6800e-003	9.9000e-004	0.0134	1.0000e-005	3.0000e-005	2.0000e-005	5.0000e-005	1.0000e-005	2.0000e-005	3.0000e-005		0.7164	0.7164	8.0000e-005		0.7184
Total	6.8800e-003	0.1249	0.0444	1.2000e-004	8.0000e-005	1.1000e-004	1.9000e-004	3.0000e-005	1.0000e-004	1.3000e-004		12.9426	12.9426	2.0300e-003		12.9933

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.7 Test Pumping - 2019**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															
Off-Road	1.4110	11.5014	11.3436	0.0197		0.7137	0.7137		0.7137	0.7137	0.0000	1,869.103 7	1,869.103 7	0.1250		1,872.228 2
Total	1.4110	11.5014	11.3436	0.0197		0.7137	0.7137		0.7137	0.7137	0.0000	1,869.103 7	1,869.103 7	0.1250		1,872.228 2

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															
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	3.2000e-003	0.1239	0.0310	1.1000e-004	5.0000e-005	9.0000e-005	1.4000e-004	2.0000e-005	8.0000e-005	1.0000e-004		12.2261	12.2261	1.9500e-003		12.2750
Worker	3.6800e-003	9.9000e-004	0.0134	1.0000e-005	3.0000e-005	2.0000e-005	5.0000e-005	1.0000e-005	2.0000e-005	3.0000e-005		0.7164	0.7164	8.0000e-005		0.7184
Total	6.8800e-003	0.1249	0.0444	1.2000e-004	8.0000e-005	1.1000e-004	1.9000e-004	3.0000e-005	1.0000e-004	1.3000e-004		12.9426	12.9426	2.0300e-003		12.9933

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.8 Site Improvements - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.2676	11.6630	8.2443	0.0172		0.5827	0.5827		0.5496	0.5496		1,663.667 2	1,663.667 2	0.4332		1,674.496 1
Total	1.2676	11.6630	8.2443	0.0172		0.5827	0.5827		0.5496	0.5496		1,663.667 2	1,663.667 2	0.4332		1,674.496 1

Unmitigated Construction Off-Site

Category	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
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	0.0125	0.3472	0.0921	7.8000e-004	0.0192	2.2100e-003	0.0214	5.5300e-003	2.1200e-003	7.6500e-003		83.6444	83.6444	5.3600e-003		83.7784
Worker	0.0450	0.0330	0.4340	1.1000e-003	0.1006	8.7000e-004	0.1015	0.0267	8.0000e-004	0.0275		109.1658	109.1658	3.7500e-003		109.2595
Total	0.0574	0.3802	0.5261	1.8800e-003	0.1198	3.0800e-003	0.1229	0.0322	2.9200e-003	0.0351		192.8102	192.8102	9.1100e-003		193.0379

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.8 Site Improvements - 2019**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	1.2676	11.6630	8.2443	0.0172		0.5827	0.5827		0.5496	0.5496	0.0000	1,663.667 2	1,663.667 2	0.4332		1,674.496 1
Total	1.2676	11.6630	8.2443	0.0172		0.5827	0.5827		0.5496	0.5496	0.0000	1,663.667 2	1,663.667 2	0.4332		1,674.496 1

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	0.0125	0.3472	0.0921	7.8000e-004	0.0192	2.2100e-003	0.0214	5.5300e-003	2.1200e-003	7.6500e-003		83.6444	83.6444	5.3600e-003		83.7784
Worker	0.0450	0.0330	0.4340	1.1000e-003	0.1006	8.7000e-004	0.1015	0.0267	8.0000e-004	0.0275		109.1658	109.1658	3.7500e-003		109.2595
Total	0.0574	0.3802	0.5261	1.8800e-003	0.1198	3.0800e-003	0.1229	0.0322	2.9200e-003	0.0351		192.8102	192.8102	9.1100e-003		193.0379

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.9 Operations - Well Rehabilitation - 2025**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.1282	9.5799	10.5565	0.0237		0.3990	0.3990		0.3835	0.3835		2,266.3250	2,266.3250	0.3838		2,275.9188
Total	1.1282	9.5799	10.5565	0.0237		0.3990	0.3990		0.3835	0.3835		2,266.3250	2,266.3250	0.3838		2,275.9188

Unmitigated Construction Off-Site

Category	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
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	1.7800e-003	0.0979	0.0202	1.0000e-004	5.0000e-005	2.0000e-005	7.0000e-005	2.0000e-005	2.0000e-005	4.0000e-005		11.2583	11.2583	1.2000e-003		11.2884
Worker	7.5400e-003	1.5900e-003	0.0246	2.0000e-005	1.0000e-004	6.0000e-005	1.6000e-004	4.0000e-005	5.0000e-005	9.0000e-005		1.9521	1.9521	1.2000e-004		1.9552
Total	9.3200e-003	0.0995	0.0448	1.2000e-004	1.5000e-004	8.0000e-005	2.3000e-004	6.0000e-005	7.0000e-005	1.3000e-004		13.2104	13.2104	1.3200e-003		13.2436

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

3.9 Operations - Well Rehabilitation - 2025**Mitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.1282	9.5799	10.5565	0.0237		0.3990	0.3990		0.3835	0.3835	0.0000	2,266.324 ₉	2,266.324 ₉	0.3838		2,275.918 ₈
Total	1.1282	9.5799	10.5565	0.0237		0.3990	0.3990		0.3835	0.3835	0.0000	2,266.324 ₉	2,266.324 ₉	0.3838		2,275.918 ₈

Mitigated Construction Off-Site

Category	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
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	1.7800e-003	0.0979	0.0202	1.0000e-004	5.0000e-005	2.0000e-005	7.0000e-005	2.0000e-005	2.0000e-005	4.0000e-005		11.2583	11.2583	1.2000e-003		11.2884
Worker	7.5400e-003	1.5900e-003	0.0246	2.0000e-005	1.0000e-004	6.0000e-005	1.6000e-004	4.0000e-005	5.0000e-005	9.0000e-005		1.9521	1.9521	1.2000e-004		1.9552
Total	9.3200e-003	0.0995	0.0448	1.2000e-004	1.5000e-004	8.0000e-005	2.3000e-004	6.0000e-005	7.0000e-005	1.3000e-004		13.2104	13.2104	1.3200e-003		13.2436

4.0 Operational Detail - Mobile

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	
Other Non-Asphalt Surfaces	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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

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

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

Category	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
lb/day																
Mitigated	9.0000e-003	0.0000	5.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-004
Unmitigated	9.0000e-003	0.0000	5.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-004

6.2 Area by SubCategory

Unmitigated

SubCategory	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
lb/day																
Architectural Coating	1.5900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.4100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-004
Total	9.0000e-003	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-004

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.5900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.4100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-004
Total	9.0000e-003	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-004

7.0 Water Detail**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**

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Summer

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

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

West Coast Basin Dominguez Well Station 300 Project
Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.48	Acre	0.48	20,908.80	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2020
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

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

Project Characteristics - Operational Year 2020

Land Use - 0.48 AC of Other Non-Asphalt Surfaces

Construction Phase - 5 days Noise Barrier; 5 days Conductor Casing; 15 days Well Drilling; 5 days Well Casing; 10 days Well Development; 15 days Test Pumping; 65 days Site Improvements; and 5 days Well Rehab

Off-road Equipment - Equipment and hours of operation provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Operational equipment and schedule provided by applicant.

Trips and VMT - To account for transportation of equipment; 2 vendor trips added to all phases.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	5.00
tblConstructionPhase	NumDays	100.00	65.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	7/15/2019	7/6/2019
tblConstructionPhase	PhaseStartDate	7/13/2019	7/1/2019
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.29	0.29

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

tbOffRoadEquipment	OffRoadEquipmentType			Cranes
tbOffRoadEquipment	OffRoadEquipmentType			Off-Highway Trucks
tbOffRoadEquipment	OffRoadEquipmentType			Aerial Lifts
tbOffRoadEquipment	OffRoadEquipmentType			Forklifts
tbOffRoadEquipment	OffRoadEquipmentType			Rubber Tired Loaders
tbOffRoadEquipment	OffRoadEquipmentType			Bore/Drill Rigs
tbOffRoadEquipment	OffRoadEquipmentType			Tractors/Loaders/Backhoes
tbOffRoadEquipment	OffRoadEquipmentType			Welders
tbOffRoadEquipment	OffRoadEquipmentType			Off-Highway Trucks
tbOffRoadEquipment	OffRoadEquipmentType			Pumps
tbOffRoadEquipment	OffRoadEquipmentType			Bore/Drill Rigs
tbOffRoadEquipment	OffRoadEquipmentType			Air Compressors
tbOffRoadEquipment	OffRoadEquipmentType			Pumps
tbOffRoadEquipment	OffRoadEquipmentType			Tractors/Loaders/Backhoes
tbOffRoadEquipment	OffRoadEquipmentType			Generator Sets
tbOffRoadEquipment	OffRoadEquipmentType			Generator Sets
tbOffRoadEquipment	OffRoadEquipmentType			Bore/Drill Rigs
tbOffRoadEquipment	OffRoadEquipmentType			Pumps
tbOffRoadEquipment	OffRoadEquipmentType			Generator Sets
tbOffRoadEquipment	OffRoadEquipmentType			Generator Sets
tbOffRoadEquipment	OffRoadEquipmentType			Off-Highway Trucks
tbOffRoadEquipment	OffRoadEquipmentType			Pumps
tbOffRoadEquipment	OffRoadEquipmentType			Tractors/Loaders/Backhoes
tbOffRoadEquipment	OffRoadEquipmentType			Welders
tbOffRoadEquipment	OffRoadEquipmentType			Bore/Drill Rigs
tbOffRoadEquipment	OffRoadEquipmentType			Air Compressors
tbOffRoadEquipment	OffRoadEquipmentType			Cranes

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Operations - Well Rehabilitation
tblOffRoadEquipment	PhaseName		Operations - Well Rehabilitation
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	PhaseName		Conductor Casing
tblTripsAndVMT	PhaseName		Well Drilling
tblTripsAndVMT	PhaseName		Well Casing
tblTripsAndVMT	PhaseName		Well Development
tblTripsAndVMT	PhaseName		Test Pumping
tblTripsAndVMT	PhaseName		Operations - Well Rehabilitation
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

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	9.0000e-003	0.0000	5.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-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	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	9.0000e-003	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-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	9.0000e-003	0.0000	5.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-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	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	9.0000e-003	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

	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	Noise Barrier and Site Improvements	Site Preparation	7/1/2019	7/6/2019	5	5	
2	Conductor Casing	Trenching	7/7/2019	7/12/2019	5	5	
3	Well Drilling	Trenching	7/13/2019	7/27/2019	7	15	
4	Well Casing	Trenching	7/28/2019	8/1/2019	7	5	
5	Well Development	Trenching	8/2/2019	8/15/2019	5	10	
6	Test Pumping	Trenching	8/16/2019	8/30/2019	7	15	
7	Site Improvements	Building Construction	8/31/2019	11/29/2019	5	65	
8	Operations - Well Rehabilitation	Trenching	1/1/2025	1/7/2025	5	5	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0.48****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
Operations - Well Rehabilitation	Cranes	1	10.00	231	0.29
Operations - Well Rehabilitation	Off-Highway Trucks	1	2.00	402	0.38

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

Site Improvements	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Noise Barrier and Site Improvements	Aerial Lifts	4	8.00	63	0.31
Noise Barrier and Site Improvements	Forklifts	10	8.00	89	0.20
Noise Barrier and Site Improvements	Rubber Tired Loaders	4	6.00	203	0.36
Conductor Casing	Bore/Drill Rigs	1	12.00	221	0.50
Conductor Casing	Tractors/Loaders/Backhoes	1	12.00	97	0.37
Conductor Casing	Welders	1	12.00	46	0.45
Conductor Casing	Off-Highway Trucks	1	4.00	402	0.38
Conductor Casing	Pumps	1	4.00	84	0.74
Well Drilling	Bore/Drill Rigs	1	24.00	221	0.50
Well Drilling	Air Compressors	1	24.00	78	0.48
Well Drilling	Pumps	1	24.00	84	0.74
Well Drilling	Tractors/Loaders/Backhoes	1	5.00	97	0.37
Noise Barrier and Site Improvements	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Well Drilling	Generator Sets	1	12.00	84	0.74
Well Drilling	Generator Sets	1	12.00	84	0.74
Well Casing	Bore/Drill Rigs	1	24.00	221	0.50
Well Casing	Pumps	1	24.00	84	0.74
Well Casing	Generator Sets	1	12.00	84	0.74
Well Casing	Generator Sets	1	12.00	84	0.74
Well Casing	Off-Highway Trucks	1	4.00	402	0.38
Well Casing	Pumps	1	4.00	84	0.74
Well Casing	Tractors/Loaders/Backhoes	1	12.00	97	0.37
Well Casing	Welders	1	12.00	46	0.45
Well Development	Bore/Drill Rigs	1	10.00	221	0.50
Well Development	Air Compressors	1	10.00	78	0.48
Well Development	Cranes	1	10.00	231	0.29

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

Well Development	Generator Sets	1	10.00	84	0.74
Test Pumping	Pumps	1	24.00	84	0.74
Site Improvements	Welders	1	4.00	46	0.45
Site Improvements	Off-Highway Trucks	1	4.00	402	0.38
Site Improvements	Pumps	1	4.00	84	0.74
Site Improvements	Cranes	1	4.00	231	0.29
Operations - Well Rehabilitation	Air Compressors	1	10.00	78	0.48
Operations - Well Rehabilitation	Generator Sets	1	10.00	84	0.74

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
Site Improvements	5	9.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Noise Barrier and Site Improvements	22	55.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Conductor Casing	5	13.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Well Drilling	6	15.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Well Casing	8	20.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Well Development	4	10.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Test Pumping	1	3.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Operations - Well Rehabilitation	4	10.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.2 Noise Barrier and Site Improvements - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	3.6571	38.4976	28.2574	0.0501		2.1269	2.1269		1.9568	1.9568		4,957.1808	4,957.1808	1.5684		4,996.3908
Total	3.6571	38.4976	28.2574	0.0501		2.1269	2.1269		1.9568	1.9568		4,957.1808	4,957.1808	1.5684		4,996.3908

Unmitigated Construction Off-Site

Category	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
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	8.6700e-003	0.2318	0.0677	5.1000e-004	0.0128	1.5000e-003	0.0143	3.6900e-003	1.4300e-003	5.1200e-003		54.2554	54.2554	3.8100e-003		54.3507
Worker	0.3046	0.2236	2.4336	6.3100e-003	0.6148	5.3000e-003	0.6201	0.1630	4.8800e-003	0.1679		628.1720	628.1720	0.0216		628.7122
Total	0.3132	0.4554	2.5013	6.8200e-003	0.6276	6.8000e-003	0.6344	0.1667	6.3100e-003	0.1730		682.4274	682.4274	0.0254		683.0629

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.2 Noise Barrier and Site Improvements - 2019**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															
Off-Road	3.6571	38.4976	28.2574	0.0501		2.1269	2.1269		1.9568	1.9568	0.0000	4,957.180 ₈	4,957.180 ₈	1.5684		4,996.390 ₈
Total	3.6571	38.4976	28.2574	0.0501		2.1269	2.1269		1.9568	1.9568	0.0000	4,957.180₈	4,957.180₈	1.5684		4,996.390₈

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															
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	8.6700e-003	0.2318	0.0677	5.1000e-004	0.0128	1.5000e-003	0.0143	3.6900e-003	1.4300e-003	5.1200e-003		54.2554	54.2554	3.8100e-003		54.3507
Worker	0.3046	0.2236	2.4336	6.3100e-003	0.6148	5.3000e-003	0.6201	0.1630	4.8800e-003	0.1679		628.1720	628.1720	0.0216		628.7122
Total	0.3132	0.4554	2.5013	6.8200e-003	0.6276	6.8000e-003	0.6344	0.1667	6.3100e-003	0.1730		682.4274	682.4274	0.0254		683.0629

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.3 Conductor Casing - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.9362	16.9918	13.1542	0.0325		0.7903	0.7903		0.7485	0.7485		3,128.802 3	3,128.802 3	0.8658		3,150.446 1
Total	1.9362	16.9918	13.1542	0.0325		0.7903	0.7903		0.7485	0.7485		3,128.802 3	3,128.802 3	0.8658		3,150.446 1

Unmitigated Construction Off-Site

Category	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
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	3.5100e-003	0.1199	0.0376	1.0000e-004	5.0000e-005	1.1000e-004	1.6000e-004	2.0000e-005	1.1000e-004	1.3000e-004		10.7186	10.7186	2.1900e-003		10.7735
Worker	0.0148	4.7200e-003	0.0693	3.0000e-005	1.3000e-004	9.0000e-005	2.2000e-004	5.0000e-005	8.0000e-005	1.3000e-004		3.0424	3.0424	3.7000e-004		3.0517
Total	0.0183	0.1247	0.1069	1.3000e-004	1.8000e-004	2.0000e-004	3.8000e-004	7.0000e-005	1.9000e-004	2.6000e-004		13.7610	13.7610	2.5600e-003		13.8252

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.3 Conductor Casing - 2019**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															
Off-Road	1.9362	16.9918	13.1542	0.0325		0.7903	0.7903		0.7485	0.7485	0.0000	3,128.802 3	3,128.802 3	0.8658		3,150.446 0
Total	1.9362	16.9918	13.1542	0.0325		0.7903	0.7903		0.7485	0.7485	0.0000	3,128.802 3	3,128.802 3	0.8658		3,150.446 0

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															
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	3.5100e-003	0.1199	0.0376	1.0000e-004	5.0000e-005	1.1000e-004	1.6000e-004	2.0000e-005	1.1000e-004	1.3000e-004		10.7186	10.7186	2.1900e-003		10.7735
Worker	0.0148	4.7200e-003	0.0693	3.0000e-005	1.3000e-004	9.0000e-005	2.2000e-004	5.0000e-005	8.0000e-005	1.3000e-004		3.0424	3.0424	3.7000e-004		3.0517
Total	0.0183	0.1247	0.1069	1.3000e-004	1.8000e-004	2.0000e-004	3.8000e-004	7.0000e-005	1.9000e-004	2.6000e-004		13.7610	13.7610	2.5600e-003		13.8252

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.4 Well Drilling - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	4.7919	42.7070	37.5123	0.0814		2.3175	2.3175		2.2846	2.2846		7,837.213 ₉	7,837.213 ₉	1.2792		7,869.192 ₉
Total	4.7919	42.7070	37.5123	0.0814		2.3175	2.3175		2.2846	2.2846		7,837.213₉	7,837.213₉	1.2792		7,869.192₉

Unmitigated Construction Off-Site

Category	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
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	3.5100e-003	0.1199	0.0376	1.0000e-004	5.0000e-005	1.1000e-004	1.6000e-004	2.0000e-005	1.1000e-004	1.3000e-004		10.7186	10.7186	2.1900e-003		10.7735
Worker	0.0171	5.4500e-003	0.0800	4.0000e-005	1.5000e-004	1.0000e-004	2.5000e-004	6.0000e-005	9.0000e-005	1.5000e-004		3.5104	3.5104	4.3000e-004		3.5212
Total	0.0206	0.1254	0.1176	1.4000e-004	2.0000e-004	2.1000e-004	4.1000e-004	8.0000e-005	2.0000e-004	2.8000e-004		14.2291	14.2291	2.6200e-003		14.2947

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.4 Well Drilling - 2019**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															
Off-Road	4.7919	42.7070	37.5123	0.0814		2.3175	2.3175		2.2846	2.2846	0.0000	7,837.213 ₉	7,837.213 ₉	1.2792		7,869.192 ₉
Total	4.7919	42.7070	37.5123	0.0814		2.3175	2.3175		2.2846	2.2846	0.0000	7,837.213₉	7,837.213₉	1.2792		7,869.192₉

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															
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	3.5100e-003	0.1199	0.0376	1.0000e-004	5.0000e-005	1.1000e-004	1.6000e-004	2.0000e-005	1.1000e-004	1.3000e-004		10.7186	10.7186	2.1900e-003		10.7735
Worker	0.0171	5.4500e-003	0.0800	4.0000e-005	1.5000e-004	1.0000e-004	2.5000e-004	6.0000e-005	9.0000e-005	1.5000e-004		3.5104	3.5104	4.3000e-004		3.5212
Total	0.0206	0.1254	0.1176	1.4000e-004	2.0000e-004	2.1000e-004	4.1000e-004	8.0000e-005	2.0000e-004	2.8000e-004		14.2291	14.2291	2.6200e-003		14.2947

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.5 Well Casing - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	5.0982	45.3646	38.7674	0.0860		2.3386	2.3386		2.2843	2.2843		8,257.899 7	8,257.899 7	1.5492		8,296.629 5
Total	5.0982	45.3646	38.7674	0.0860		2.3386	2.3386		2.2843	2.2843		8,257.899 7	8,257.899 7	1.5492		8,296.629 5

Unmitigated Construction Off-Site

Category	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
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	3.5100e-003	0.1199	0.0376	1.0000e-004	5.0000e-005	1.1000e-004	1.6000e-004	2.0000e-005	1.1000e-004	1.3000e-004		10.7186	10.7186	2.1900e-003		10.7735
Worker	0.0228	7.2600e-003	0.1067	5.0000e-005	2.0000e-004	1.3000e-004	3.3000e-004	8.0000e-005	1.2000e-004	2.0000e-004		4.6806	4.6806	5.7000e-004		4.6950
Total	0.0263	0.1272	0.1442	1.5000e-004	2.5000e-004	2.4000e-004	4.9000e-004	1.0000e-004	2.3000e-004	3.3000e-004		15.3992	15.3992	2.7600e-003		15.4685

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.5 Well Casing - 2019**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															
Off-Road	5.0982	45.3646	38.7674	0.0860		2.3386	2.3386		2.2843	2.2843	0.0000	8,257.899 ₇	8,257.899 ₇	1.5492		8,296.629 ₅
Total	5.0982	45.3646	38.7674	0.0860		2.3386	2.3386		2.2843	2.2843	0.0000	8,257.899 ₇	8,257.899 ₇	1.5492		8,296.629 ₅

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															
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	3.5100e-003	0.1199	0.0376	1.0000e-004	5.0000e-005	1.1000e-004	1.6000e-004	2.0000e-005	1.1000e-004	1.3000e-004		10.7186	10.7186	2.1900e-003		10.7735
Worker	0.0228	7.2600e-003	0.1067	5.0000e-005	2.0000e-004	1.3000e-004	3.3000e-004	8.0000e-005	1.2000e-004	2.0000e-004		4.6806	4.6806	5.7000e-004		4.6950
Total	0.0263	0.1272	0.1442	1.5000e-004	2.5000e-004	2.4000e-004	4.9000e-004	1.0000e-004	2.3000e-004	3.3000e-004		15.3992	15.3992	2.7600e-003		15.4685

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.6 Well Development - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.9760	19.8787	13.1669	0.0321		0.9446	0.9446		0.9088	0.9088		3,122.0788	3,122.0788	0.6819		3,139.1271
Total	1.9760	19.8787	13.1669	0.0321		0.9446	0.9446		0.9088	0.9088		3,122.0788	3,122.0788	0.6819		3,139.1271

Unmitigated Construction Off-Site

Category	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
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	3.5100e-003	0.1199	0.0376	1.0000e-004	5.0000e-005	1.1000e-004	1.6000e-004	2.0000e-005	1.1000e-004	1.3000e-004		10.7186	10.7186	2.1900e-003		10.7735
Worker	0.0114	3.6300e-003	0.0533	2.0000e-005	1.0000e-004	7.0000e-005	1.7000e-004	4.0000e-005	6.0000e-005	1.0000e-004		2.3403	2.3403	2.9000e-004		2.3475
Total	0.0149	0.1236	0.0909	1.2000e-004	1.5000e-004	1.8000e-004	3.3000e-004	6.0000e-005	1.7000e-004	2.3000e-004		13.0589	13.0589	2.4800e-003		13.1210

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.6 Well Development - 2019**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	1.9760	19.8787	13.1669	0.0321		0.9446	0.9446		0.9088	0.9088	0.0000	3,122.078 ₈	3,122.078 ₈	0.6819		3,139,127 ₁
Total	1.9760	19.8787	13.1669	0.0321		0.9446	0.9446		0.9088	0.9088	0.0000	3,122.078 ₈	3,122.078 ₈	0.6819		3,139,127 ₁

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	3.5100e-003	0.1199	0.0376	1.0000e-004	5.0000e-005	1.1000e-004	1.6000e-004	2.0000e-005	1.1000e-004	1.3000e-004		10.7186	10.7186	2.1900e-003		10.7735
Worker	0.0114	3.6300e-003	0.0533	2.0000e-005	1.0000e-004	7.0000e-005	1.7000e-004	4.0000e-005	6.0000e-005	1.0000e-004		2.3403	2.3403	2.9000e-004		2.3475
Total	0.0149	0.1236	0.0909	1.2000e-004	1.5000e-004	1.8000e-004	3.3000e-004	6.0000e-005	1.7000e-004	2.3000e-004		13.0589	13.0589	2.4800e-003		13.1210

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.7 Test Pumping - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.4110	11.5014	11.3436	0.0197		0.7137	0.7137		0.7137	0.7137		1,869.103 ₇	1,869.103 ₇	0.1250		1,872.228 ₂
Total	1.4110	11.5014	11.3436	0.0197		0.7137	0.7137		0.7137	0.7137		1,869.103₇	1,869.103₇	0.1250		1,872.228₂

Unmitigated Construction Off-Site

Category	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
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	3.5100e-003	0.1199	0.0376	1.0000e-004	5.0000e-005	1.1000e-004	1.6000e-004	2.0000e-005	1.1000e-004	1.3000e-004		10.7186	10.7186	2.1900e-003		10.7735
Worker	3.4200e-003	1.0900e-003	0.0160	1.0000e-005	3.0000e-005	2.0000e-005	5.0000e-005	1.0000e-005	2.0000e-005	3.0000e-005		0.7021	0.7021	9.0000e-005		0.7042
Total	6.9300e-003	0.1210	0.0536	1.1000e-004	8.0000e-005	1.3000e-004	2.1000e-004	3.0000e-005	1.3000e-004	1.6000e-004		11.4207	11.4207	2.2800e-003		11.4777

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.7 Test Pumping - 2019**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															
Off-Road	1.4110	11.5014	11.3436	0.0197		0.7137	0.7137		0.7137	0.7137	0.0000	1,869.103 ₇	1,869.103 ₇	0.1250		1,872.228 ₂
Total	1.4110	11.5014	11.3436	0.0197		0.7137	0.7137		0.7137	0.7137	0.0000	1,869.103₇	1,869.103₇	0.1250		1,872.228₂

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															
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	3.5100e-003	0.1199	0.0376	1.0000e-004	5.0000e-005	1.1000e-004	1.6000e-004	2.0000e-005	1.1000e-004	1.3000e-004		10.7186	10.7186	2.1900e-003		10.7735
Worker	3.4200e-003	1.0900e-003	0.0160	1.0000e-005	3.0000e-005	2.0000e-005	5.0000e-005	1.0000e-005	2.0000e-005	3.0000e-005		0.7021	0.7021	9.0000e-005		0.7042
Total	6.9300e-003	0.1210	0.0536	1.1000e-004	8.0000e-005	1.3000e-004	2.1000e-004	3.0000e-005	1.3000e-004	1.6000e-004		11.4207	11.4207	2.2800e-003		11.4777

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3.8 Site Improvements - 2019**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.2676	11.6630	8.2443	0.0172		0.5827	0.5827		0.5496	0.5496		1,663.667 2	1,663.667 2	0.4332		1,674.496 1
Total	1.2676	11.6630	8.2443	0.0172		0.5827	0.5827		0.5496	0.5496		1,663.667 2	1,663.667 2	0.4332		1,674.496 1

Unmitigated Construction Off-Site

Category	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
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	0.0130	0.3477	0.1015	7.6000e-004	0.0192	2.2500e-003	0.0215	5.5300e-003	2.1500e-003	7.6800e-003		81.3831	81.3831	5.7200e-003		81.5261
Worker	0.0498	0.0366	0.3982	1.0300e-003	0.1006	8.7000e-004	0.1015	0.0267	8.0000e-004	0.0275		102.7918	102.7918	3.5400e-003		102.8802
Total	0.0628	0.3842	0.4998	1.7900e-003	0.1198	3.1200e-003	0.1229	0.0322	2.9500e-003	0.0352		184.1749	184.1749	9.2600e-003		184.4062

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.8 Site Improvements - 2019**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															
Off-Road	1.2676	11.6630	8.2443	0.0172		0.5827	0.5827		0.5496	0.5496	0.0000	1,663.667 2	1,663.667 2	0.4332		1,674.496 1
Total	1.2676	11.6630	8.2443	0.0172		0.5827	0.5827		0.5496	0.5496	0.0000	1,663.667 2	1,663.667 2	0.4332		1,674.496 1

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															
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	0.0130	0.3477	0.1015	7.6000e-004	0.0192	2.2500e-003	0.0215	5.5300e-003	2.1500e-003	7.6800e-003		81.3831	81.3831	5.7200e-003		81.5261
Worker	0.0498	0.0366	0.3982	1.0300e-003	0.1006	8.7000e-004	0.1015	0.0267	8.0000e-004	0.0275		102.7918	102.7918	3.5400e-003		102.8802
Total	0.0628	0.3842	0.4998	1.7900e-003	0.1198	3.1200e-003	0.1229	0.0322	2.9500e-003	0.0352		184.1749	184.1749	9.2600e-003		184.4062

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.9 Operations - Well Rehabilitation - 2025**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.1282	9.5799	10.5565	0.0237		0.3990	0.3990		0.3835	0.3835		2,266.3250	2,266.3250	0.3838		2,275.9188
Total	1.1282	9.5799	10.5565	0.0237		0.3990	0.3990		0.3835	0.3835		2,266.3250	2,266.3250	0.3838		2,275.9188

Unmitigated Construction Off-Site

Category	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
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	1.9400e-003	0.0956	0.0240	9.0000e-005	5.0000e-005	3.0000e-005	8.0000e-005	2.0000e-005	2.0000e-005	5.0000e-005		9.8555	9.8555	1.3600e-003		9.8894
Worker	6.8300e-003	1.7400e-003	0.0292	2.0000e-005	1.0000e-004	6.0000e-005	1.6000e-004	4.0000e-005	5.0000e-005	9.0000e-005		1.9133	1.9133	1.4000e-004		1.9167
Total	8.7700e-003	0.0974	0.0532	1.1000e-004	1.5000e-004	9.0000e-005	2.4000e-004	6.0000e-005	7.0000e-005	1.4000e-004		11.7687	11.7687	1.5000e-003		11.8061

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

3.9 Operations - Well Rehabilitation - 2025**Mitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.1282	9.5799	10.5565	0.0237		0.3990	0.3990		0.3835	0.3835	0.0000	2,266.324 ₉	2,266.324 ₉	0.3838		2,275.918 ₈
Total	1.1282	9.5799	10.5565	0.0237		0.3990	0.3990		0.3835	0.3835	0.0000	2,266.324 ₉	2,266.324 ₉	0.3838		2,275.918 ₈

Mitigated Construction Off-Site

Category	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
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	1.9400e-003	0.0956	0.0240	9.0000e-005	5.0000e-005	3.0000e-005	8.0000e-005	2.0000e-005	2.0000e-005	5.0000e-005		9.8555	9.8555	1.3600e-003		9.8894
Worker	6.8300e-003	1.7400e-003	0.0292	2.0000e-005	1.0000e-004	6.0000e-005	1.6000e-004	4.0000e-005	5.0000e-005	9.0000e-005		1.9133	1.9133	1.4000e-004		1.9167
Total	8.7700e-003	0.0974	0.0532	1.1000e-004	1.5000e-004	9.0000e-005	2.4000e-004	6.0000e-005	7.0000e-005	1.4000e-004		11.7687	11.7687	1.5000e-003		11.8061

4.0 Operational Detail - Mobile

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	
Other Non-Asphalt Surfaces	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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

5.2 Energy by Land Use - NaturalGas**Unmitigated**

Land Use	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
	kBTU/yr																
lb/day																	
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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

Mitigated

Land Use	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
	kBTU/yr																
lb/day																	
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

Category	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
	lb/day										lb/day					
Mitigated	9.0000e-003	0.0000	5.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-004
Unmitigated	9.0000e-003	0.0000	5.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-004

6.2 Area by SubCategory

Unmitigated

SubCategory	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
	lb/day										lb/day					
Architectural Coating	1.5900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.4100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-004
Total	9.0000e-003	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-004

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.5900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.4100e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-004
Total	9.0000e-003	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.1000e-004	1.1000e-004	0.0000		1.1000e-004

7.0 Water Detail**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**

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Winter

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
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

APPENDIX B

CalEEMod Model Annual Printouts

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Annual

West Coast Basin Dominguez Well Station 300 Project
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses		Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces		0.48	Acre	0.48	20,908.80	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2020

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
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1.3 User Entered Comments & Non-Default Data

West Coast Basin Dominguez Well Station 300 Project - Los Angeles-South Coast County, Annual

Project Characteristics - Operational Year 2020

Land Use - 0.48 AC of Other Non-Asphalt Surfaces

Construction Phase - 5 days Noise Barrier; 5 days Conductor Casing; 15 days Well Drilling; 5 days Well Casing; 10 days Well Development; 15 days Test Pumping; 65 days Site Improvements; and 5 days Well Rehab

Off-road Equipment - Equipment and hours of operation provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Equipment and construction schedule provided by applicant.

Off-road Equipment - Operational equipment and schedule provided by applicant.

Trips and VMT - To account for transportation of equipment; 2 vendor trips added to all phases.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	5.00
tblConstructionPhase	NumDays	100.00	65.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	NumDaysWeek	5.00	7.00
tblConstructionPhase	PhaseEndDate	7/15/2019	7/6/2019
tblConstructionPhase	PhaseStartDate	7/13/2019	7/1/2019
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.29	0.29

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tbOffRoadEquipment	OffRoadEquipmentType			Cranes
tbOffRoadEquipment	OffRoadEquipmentType			Off-Highway Trucks
tbOffRoadEquipment	OffRoadEquipmentType			Aerial Lifts
tbOffRoadEquipment	OffRoadEquipmentType			Forklifts
tbOffRoadEquipment	OffRoadEquipmentType			Rubber Tired Loaders
tbOffRoadEquipment	OffRoadEquipmentType			Bore/Drill Rigs
tbOffRoadEquipment	OffRoadEquipmentType			Tractors/Loaders/Backhoes
tbOffRoadEquipment	OffRoadEquipmentType			Welders
tbOffRoadEquipment	OffRoadEquipmentType			Off-Highway Trucks
tbOffRoadEquipment	OffRoadEquipmentType			Pumps
tbOffRoadEquipment	OffRoadEquipmentType			Bore/Drill Rigs
tbOffRoadEquipment	OffRoadEquipmentType			Air Compressors
tbOffRoadEquipment	OffRoadEquipmentType			Pumps
tbOffRoadEquipment	OffRoadEquipmentType			Tractors/Loaders/Backhoes
tbOffRoadEquipment	OffRoadEquipmentType			Generator Sets
tbOffRoadEquipment	OffRoadEquipmentType			Generator Sets
tbOffRoadEquipment	OffRoadEquipmentType			Bore/Drill Rigs
tbOffRoadEquipment	OffRoadEquipmentType			Pumps
tbOffRoadEquipment	OffRoadEquipmentType			Generator Sets
tbOffRoadEquipment	OffRoadEquipmentType			Generator Sets
tbOffRoadEquipment	OffRoadEquipmentType			Off-Highway Trucks
tbOffRoadEquipment	OffRoadEquipmentType			Pumps
tbOffRoadEquipment	OffRoadEquipmentType			Tractors/Loaders/Backhoes
tbOffRoadEquipment	OffRoadEquipmentType			Welders
tbOffRoadEquipment	OffRoadEquipmentType			Bore/Drill Rigs
tbOffRoadEquipment	OffRoadEquipmentType			Air Compressors
tbOffRoadEquipment	OffRoadEquipmentType			Cranes

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tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Well Casing
tblOffRoadEquipment	PhaseName		Operations - Well Rehabilitation
tblOffRoadEquipment	PhaseName		Operations - Well Rehabilitation
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	PhaseName		Conductor Casing
tblTripsAndVMT	PhaseName		Well Drilling
tblTripsAndVMT	PhaseName		Well Casing
tblTripsAndVMT	PhaseName		Well Development
tblTripsAndVMT	PhaseName		Test Pumping
tblTripsAndVMT	PhaseName		Operations - Well Rehabilitation
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-1-2019	9-30-2019	1.4471	1.4471
2	10-1-2019	12-31-2019	1.2065	1.2065
23	1-1-2025	3-31-2025	0.0270	0.0270
		Highest	1.4471	1.4471

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	1.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-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	1.6400e-003	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005

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2.2 Overall Operational**Mitigated Operational**

Category	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
	tons/yr										MT/yr					
Area	1.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-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	1.6400e-003	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-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**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Noise Barrier and Site Improvements	Site Preparation	7/1/2019	7/6/2019	5	5	
2	Conductor Casing	Trenching	7/7/2019	7/12/2019	5	5	
3	Well Drilling	Trenching	7/13/2019	7/27/2019	7	15	
4	Well Casing	Trenching	7/28/2019	8/1/2019	7	5	
5	Well Development	Trenching	8/2/2019	8/15/2019	5	10	
6	Test Pumping	Trenching	8/16/2019	8/30/2019	7	15	
7	Site Improvements	Building Construction	8/31/2019	11/29/2019	5	65	
8	Operations - Well Rehabilitation	Trenching	1/1/2025	1/7/2025	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.48

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
Operations - Well Rehabilitation	Cranes	1	10.00	231	0.29
Operations - Well Rehabilitation	Off-Highway Trucks	1	2.00	402	0.38
Site Improvements	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Noise Barrier and Site Improvements	Aerial Lifts	4	8.00	63	0.31
Noise Barrier and Site Improvements	Forklifts	10	8.00	89	0.20
Noise Barrier and Site Improvements	Rubber Tired Loaders	4	6.00	203	0.36
Conductor Casing	Bore/Drill Rigs	1	12.00	221	0.50
Conductor Casing	Tractors/Loaders/Backhoes	1	12.00	97	0.37

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Conductor Casing	Welders	1	12.00	46	0.45
Conductor Casing	Off-Highway Trucks	1	4.00	402	0.38
Conductor Casing	Pumps	1	4.00	84	0.74
Well Drilling	Bore/Drill Rigs	1	24.00	221	0.50
Well Drilling	Air Compressors	1	24.00	78	0.48
Well Drilling	Pumps	1	24.00	84	0.74
Well Drilling	Tractors/Loaders/Backhoes	1	5.00	97	0.37
Noise Barrier and Site Improvements	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Well Drilling	Generator Sets	1	12.00	84	0.74
Well Drilling	Generator Sets	1	12.00	84	0.74
Well Casing	Bore/Drill Rigs	1	24.00	221	0.50
Well Casing	Pumps	1	24.00	84	0.74
Well Casing	Generator Sets	1	12.00	84	0.74
Well Casing	Generator Sets	1	12.00	84	0.74
Well Casing	Off-Highway Trucks	1	4.00	402	0.38
Well Casing	Pumps	1	4.00	84	0.74
Well Casing	Tractors/Loaders/Backhoes	1	12.00	97	0.37
Well Casing	Welders	1	12.00	46	0.45
Well Development	Bore/Drill Rigs	1	10.00	221	0.50
Well Development	Air Compressors	1	10.00	78	0.48
Well Development	Cranes	1	10.00	231	0.29
Well Development	Generator Sets	1	10.00	84	0.74
Test Pumping	Pumps	1	24.00	84	0.74
Site Improvements	Welders	1	4.00	46	0.45
Site Improvements	Off-Highway Trucks	1	4.00	402	0.38
Site Improvements	Pumps	1	4.00	84	0.74
Site Improvements	Cranes	1	4.00	231	0.29

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Operations - Well Rehabilitation	Air Compressors	1	10.00	78	0.48
Operations - Well Rehabilitation	Generator Sets	1	10.00	84	0.74

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
Site Improvements	5	9.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Noise Barrier and Site Improvements	22	55.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Conductor Casing	5	13.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Well Drilling	6	15.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Well Casing	8	20.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Well Development	4	10.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Test Pumping	1	3.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT
Operations - Well Rehabilitation	4	10.00	2.00				20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 Noise Barrier and Site Improvements - 2019**Unmitigated Construction On-Site**

Category	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
	tons/yr										MT/yr					
Off-Road	9.1400e-003	0.0962	0.0706	1.3000e-004		5.3200e-003	5.3200e-003		4.8900e-003	4.8900e-003	0.0000	11.2427	11.2427	3.5600e-003	0.0000	11.3316
Total	9.1400e-003	0.0962	0.0706	1.3000e-004		5.3200e-003	5.3200e-003		4.8900e-003	4.8900e-003	0.0000	11.2427	11.2427	3.5600e-003	0.0000	11.3316

Unmitigated Construction Off-Site

Category	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
	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	2.0000e-005	5.9000e-004	1.6000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1250	0.1250	1.0000e-005	0.0000	0.1252
Worker	6.9000e-004	5.7000e-004	6.2400e-003	2.0000e-005	1.5100e-003	1.0000e-005	1.5200e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.4484	1.4484	5.0000e-005	0.0000	1.4496
Total	7.1000e-004	1.1600e-003	6.4000e-003	2.0000e-005	1.5400e-003	1.0000e-005	1.5600e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.5734	1.5734	6.0000e-005	0.0000	1.5749

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3.2 Noise Barrier and Site Improvements - 2019**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	9.1400e-003	0.0962	0.0706	1.3000e-004		5.3200e-003	5.3200e-003		4.8900e-003	4.8900e-003	0.0000	11.2427	11.2427	3.5600e-003	0.0000	11.3316
Total	9.1400e-003	0.0962	0.0706	1.3000e-004		5.3200e-003	5.3200e-003		4.8900e-003	4.8900e-003	0.0000	11.2427	11.2427	3.5600e-003	0.0000	11.3316

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	2.0000e-005	5.9000e-004	1.6000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1250	0.1250	1.0000e-005	0.0000	0.1252
Worker	6.9000e-004	5.7000e-004	6.2400e-003	2.0000e-005	1.5100e-003	1.0000e-005	1.5200e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.4484	1.4484	5.0000e-005	0.0000	1.4496
Total	7.1000e-004	1.1600e-003	6.4000e-003	2.0000e-005	1.5400e-003	1.0000e-005	1.5600e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.5734	1.5734	6.0000e-005	0.0000	1.5749

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3.3 Conductor Casing - 2019**Unmitigated Construction On-Site**

Category	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
	tons/yr										MT/yr					
Off-Road	4.8400e-003	0.0425	0.0329	8.0000e-005		1.9800e-003	1.9800e-003		1.8700e-003	1.8700e-003	0.0000	7.0960	7.0960	1.9600e-003	0.0000	7.1451
Total	4.8400e-003	0.0425	0.0329	8.0000e-005		1.9800e-003	1.9800e-003		1.8700e-003	1.8700e-003	0.0000	7.0960	7.0960	1.9600e-003	0.0000	7.1451

Unmitigated Construction Off-Site

Category	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
	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
Worker	4.0000e-005	1.0000e-005	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.9400e-003	6.9400e-003	0.0000	0.0000	6.9600e-003
Total	4.0000e-005	1.0000e-005	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.9400e-003	6.9400e-003	0.0000	0.0000	6.9600e-003

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3.3 Conductor Casing - 2019**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	4.8400e-003	0.0425	0.0329	8.0000e-005		1.9800e-003	1.9800e-003		1.8700e-003	1.8700e-003	0.0000	7.0960	7.0960	1.9600e-003	0.0000	7.1451
Total	4.8400e-003	0.0425	0.0329	8.0000e-005		1.9800e-003	1.9800e-003		1.8700e-003	1.8700e-003	0.0000	7.0960	7.0960	1.9600e-003	0.0000	7.1451

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
Worker	4.0000e-005	1.0000e-005	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.9400e-003	6.9400e-003	0.0000	0.0000	6.9600e-003
Total	4.0000e-005	1.0000e-005	1.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6.9400e-003	6.9400e-003	0.0000	0.0000	6.9600e-003

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3.4 Well Drilling - 2019**Unmitigated Construction On-Site**

Category	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
	tons/yr										MT/yr					
Off-Road	0.0359	0.3203	0.2813	6.1000e-004		0.0174	0.0174		0.0171	0.0171	0.0000	53.3235	53.3235	8.7000e-003	0.0000	53.5411
Total	0.0359	0.3203	0.2813	6.1000e-004		0.0174	0.0174		0.0171	0.0171	0.0000	53.3235	53.3235	8.7000e-003	0.0000	53.5411

Unmitigated Construction Off-Site

Category	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
	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
Worker	1.2000e-004	4.0000e-005	5.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0240	0.0240	0.0000	0.0000	0.0241
Total	1.2000e-004	4.0000e-005	5.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0240	0.0240	0.0000	0.0000	0.0241

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3.4 Well Drilling - 2019**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	0.0359	0.3203	0.2813	6.1000e-004		0.0174	0.0174		0.0171	0.0171	0.0000	53.3234	53.3234	8.7000e-003	0.0000	53.5410
Total	0.0359	0.3203	0.2813	6.1000e-004		0.0174	0.0174		0.0171	0.0171	0.0000	53.3234	53.3234	8.7000e-003	0.0000	53.5410

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
Worker	1.2000e-004	4.0000e-005	5.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0240	0.0240	0.0000	0.0000	0.0241
Total	1.2000e-004	4.0000e-005	5.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0240	0.0240	0.0000	0.0000	0.0241

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3.5 Well Casing - 2019**Unmitigated Construction On-Site**

Category	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
	tons/yr										MT/yr					
Off-Road	0.0128	0.1134	0.0969	2.1000e-004		5.8500e-003	5.8500e-003		5.7100e-003	5.7100e-003	0.0000	18.7286	18.7286	3.5100e-003	0.0000	18.8164
Total	0.0128	0.1134	0.0969	2.1000e-004		5.8500e-003	5.8500e-003		5.7100e-003	5.7100e-003	0.0000	18.7286	18.7286	3.5100e-003	0.0000	18.8164

Unmitigated Construction Off-Site

Category	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
	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
Worker	5.0000e-005	2.0000e-005	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0107	0.0107	0.0000	0.0000	0.0107
Total	5.0000e-005	2.0000e-005	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0107	0.0107	0.0000	0.0000	0.0107

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3.5 Well Casing - 2019**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	0.0128	0.1134	0.0969	2.1000e-004		5.8500e-003	5.8500e-003		5.7100e-003	5.7100e-003	0.0000	18.7286	18.7286	3.5100e-003	0.0000	18.8164
Total	0.0128	0.1134	0.0969	2.1000e-004		5.8500e-003	5.8500e-003		5.7100e-003	5.7100e-003	0.0000	18.7286	18.7286	3.5100e-003	0.0000	18.8164

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
Worker	5.0000e-005	2.0000e-005	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0107	0.0107	0.0000	0.0000	0.0107
Total	5.0000e-005	2.0000e-005	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0107	0.0107	0.0000	0.0000	0.0107

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3.6 Well Development - 2019**Unmitigated Construction On-Site**

Category	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
tons/yr										MT/yr						
Off-Road	9.8800e-003	0.0994	0.0658	1.6000e-004		4.7200e-003	4.7200e-003		4.5400e-003	4.5400e-003	0.0000	14.1615	14.1615	3.0900e-003	0.0000	14.2388
Total	9.8800e-003	0.0994	0.0658	1.6000e-004		4.7200e-003	4.7200e-003		4.5400e-003	4.5400e-003	0.0000	14.1615	14.1615	3.0900e-003	0.0000	14.2388

Unmitigated Construction Off-Site

Category	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
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
Worker	5.0000e-005	2.0000e-005	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0107	0.0107	0.0000	0.0000	0.0107
Total	5.0000e-005	2.0000e-005	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0107	0.0107	0.0000	0.0000	0.0107

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3.6 Well Development - 2019**Mitigated Construction On-Site**

Category	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
tons/yr											MT/yr					
Off-Road	9.8800e-003	0.0994	0.0658	1.6000e-004		4.7200e-003	4.7200e-003		4.5400e-003	4.5400e-003	0.0000	14.1615	14.1615	3.0900e-003	0.0000	14.2388
Total	9.8800e-003	0.0994	0.0658	1.6000e-004		4.7200e-003	4.7200e-003		4.5400e-003	4.5400e-003	0.0000	14.1615	14.1615	3.0900e-003	0.0000	14.2388

Mitigated Construction Off-Site

Category	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
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
Worker	5.0000e-005	2.0000e-005	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0107	0.0107	0.0000	0.0000	0.0107
Total	5.0000e-005	2.0000e-005	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0107	0.0107	0.0000	0.0000	0.0107

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3.7 Test Pumping - 2019**Unmitigated Construction On-Site**

Category	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
	tons/yr										MT/yr					
Off-Road	0.0106	0.0863	0.0851	1.5000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003	0.0000	12.7172	12.7172	8.5000e-004	0.0000	12.7384
Total	0.0106	0.0863	0.0851	1.5000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003	0.0000	12.7172	12.7172	8.5000e-004	0.0000	12.7384

Unmitigated Construction Off-Site

Category	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
	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
Worker	2.0000e-005	1.0000e-005	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.8000e-003	4.8000e-003	0.0000	0.0000	4.8200e-003
Total	2.0000e-005	1.0000e-005	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.8000e-003	4.8000e-003	0.0000	0.0000	4.8200e-003

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3.7 Test Pumping - 2019**Mitigated Construction On-Site**

Category	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
tons/yr											MT/yr					
Off-Road	0.0106	0.0863	0.0851	1.5000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003	0.0000	12.7172	12.7172	8.5000e-004	0.0000	12.7384
Total	0.0106	0.0863	0.0851	1.5000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003	0.0000	12.7172	12.7172	8.5000e-004	0.0000	12.7384

Mitigated Construction Off-Site

Category	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
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
Worker	2.0000e-005	1.0000e-005	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.8000e-003	4.8000e-003	0.0000	0.0000	4.8200e-003
Total	2.0000e-005	1.0000e-005	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.8000e-003	4.8000e-003	0.0000	0.0000	4.8200e-003

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3.8 Site Improvements - 2019**Unmitigated Construction On-Site**

Category	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
tons/yr											MT/yr					
Off-Road	0.0412	0.3791	0.2679	5.6000e-004		0.0189	0.0189		0.0179	0.0179	0.0000	49.0507	49.0507	0.0128	0.0000	49.3700
Total	0.0412	0.3791	0.2679	5.6000e-004		0.0189	0.0189		0.0179	0.0179	0.0000	49.0507	49.0507	0.0128	0.0000	49.3700

Unmitigated Construction Off-Site

Category	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
tons/yr											MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1000e-004	0.0115	3.1500e-003	3.0000e-005	6.1000e-004	7.0000e-005	6.9000e-004	1.8000e-004	7.0000e-005	2.5000e-004	0.0000	2.4381	2.4381	1.6000e-004	0.0000	2.4422
Worker	1.4700e-003	1.2200e-003	0.0133	3.0000e-005	3.2100e-003	3.0000e-005	3.2300e-003	8.5000e-004	3.0000e-005	8.8000e-004	0.0000	3.0811	3.0811	1.1000e-004	0.0000	3.0837
Total	1.8800e-003	0.0127	0.0164	6.0000e-005	3.8200e-003	1.0000e-004	3.9200e-003	1.0300e-003	1.0000e-004	1.1300e-003	0.0000	5.5192	5.5192	2.7000e-004	0.0000	5.5259

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3.8 Site Improvements - 2019**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	0.0412	0.3791	0.2679	5.6000e-004		0.0189	0.0189		0.0179	0.0179	0.0000	49.0507	49.0507	0.0128	0.0000	49.3700
Total	0.0412	0.3791	0.2679	5.6000e-004		0.0189	0.0189		0.0179	0.0179	0.0000	49.0507	49.0507	0.0128	0.0000	49.3700

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.1000e-004	0.0115	3.1500e-003	3.0000e-005	6.1000e-004	7.0000e-005	6.9000e-004	1.8000e-004	7.0000e-005	2.5000e-004	0.0000	2.4381	2.4381	1.6000e-004	0.0000	2.4422
Worker	1.4700e-003	1.2200e-003	0.0133	3.0000e-005	3.2100e-003	3.0000e-005	3.2300e-003	8.5000e-004	3.0000e-005	8.8000e-004	0.0000	3.0811	3.0811	1.1000e-004	0.0000	3.0837
Total	1.8800e-003	0.0127	0.0164	6.0000e-005	3.8200e-003	1.0000e-004	3.9200e-003	1.0300e-003	1.0000e-004	1.1300e-003	0.0000	5.5192	5.5192	2.7000e-004	0.0000	5.5259

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3.9 Operations - Well Rehabilitation - 2025**Unmitigated Construction On-Site**

Category	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
	tons/yr										MT/yr					
Off-Road	2.8200e-003	0.0240	0.0264	6.0000e-005		1.0000e-003	1.0000e-003		9.6000e-004	9.6000e-004	0.0000	5.1399	5.1399	8.7000e-004	0.0000	5.1617
Total	2.8200e-003	0.0240	0.0264	6.0000e-005		1.0000e-003	1.0000e-003		9.6000e-004	9.6000e-004	0.0000	5.1399	5.1399	8.7000e-004	0.0000	5.1617

Unmitigated Construction Off-Site

Category	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
	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
Worker	2.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.3600e-003	4.3600e-003	0.0000	0.0000	4.3700e-003
Total	2.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.3600e-003	4.3600e-003	0.0000	0.0000	4.3700e-003

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3.9 Operations - Well Rehabilitation - 2025**Mitigated Construction On-Site**

Category	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
	tons/yr										MT/yr					
Off-Road	2.8200e-003	0.0240	0.0264	6.0000e-005		1.0000e-003	1.0000e-003		9.6000e-004	9.6000e-004	0.0000	5.1399	5.1399	8.7000e-004	0.0000	5.1617
Total	2.8200e-003	0.0240	0.0264	6.0000e-005		1.0000e-003	1.0000e-003		9.6000e-004	9.6000e-004	0.0000	5.1399	5.1399	8.7000e-004	0.0000	5.1617

Mitigated Construction Off-Site

Category	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
	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
Worker	2.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.3600e-003	4.3600e-003	0.0000	0.0000	4.3700e-003
Total	2.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.3600e-003	4.3600e-003	0.0000	0.0000	4.3700e-003

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

Category	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
	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	
Other Non-Asphalt Surfaces	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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

[illegible]

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	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**

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Category	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
tons/yr											MT/yr					
Mitigated	1.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Unmitigated	1.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005

6.2 Area by SubCategory

Unmitigated

SubCategory	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
tons/yr											MT/yr					
Architectural Coating	2.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3500e-003					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	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	1.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3500e-003					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	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	1.6400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005

7.0 Water Detail**7.1 Mitigation Measures Water**

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	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

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	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
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

APPENDIX B – Biological Technical Report



**BIOLOGICAL TECHNICAL REPORT FOR THE
WEST COAST BASIN DOMINGUEZ 300-01
NEW WELL PROJECT
COMPTON, CALIFORNIA**

Prepared for:

CALIFORNIA WATER SERVICES COMPANY
2632 W. 237th Street
Torrance, California 90505

Prepared by:

CHAMBERS GROUP, INC.
5 Hutton Centre Drive, Suite 750
Santa Ana, California 92707
(949) 261-5414

December 7, 2018

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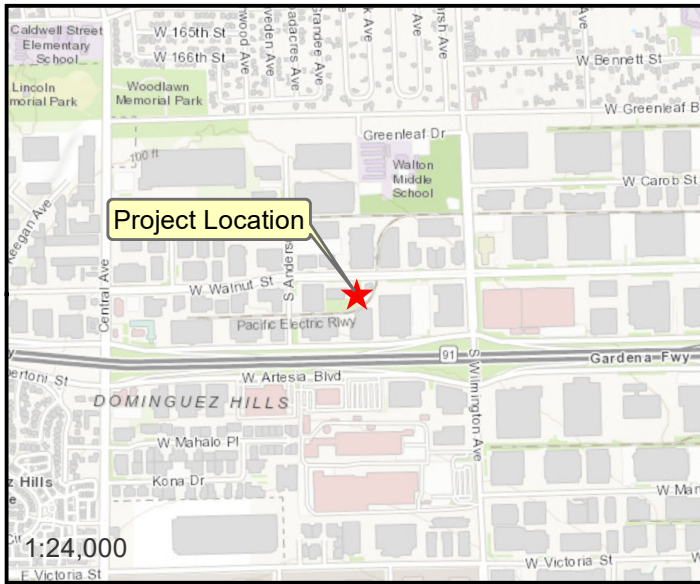
SECTION 1.0 – INTRODUCTION

Chambers Group, Inc. (Chambers Group) was retained by California Water Services Company (Cal Water) to conduct a literature review and reconnaissance-level biological survey for the proposed West Coast Basin Dominguez 300-01 New Well Project (Project). This Biological Technical Report has been prepared for Cal Water to support the requirements of the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) associated with the proposed actions of the Project. Information contained in this document is in accordance with accepted scientific and technical standards that are consistent with agency requirements.

During the survey, biologists identified vegetation communities, determined the potential for the occurrence of sensitive species and habitats that could support sensitive wildlife species on site, and recorded all plants and animals observed or detected within the Project boundary.

1.1 PROJECT LOCATION

The Project site is located on West Walnut Street between South Andersen Avenue and South Wilmington Avenue in the City of Compton (Figure 1). The Project site occurs within the United States Geological Survey (USGS) *South Gate*, California 7.5-minute topographic quadrangle. At the time of the survey, the Project site consisted of a small, narrow parcel of undeveloped land with portions of bare ground, and portions with non-native weeds or ornamental trees and shrubs. The Project site is bordered to the east by a fire station, industrial and commercial buildings, and city streets. The elevation of the Project site is approximately 105 feet above mean sea level (amsl).



Legend

Project Location

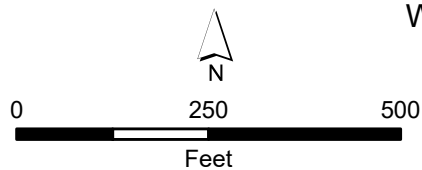


Figure 1
West Coast Basin Dominguez 300-01
New Well Project
Location and Vicinity

SECTION 2.0 – METHODOLOGY

2.1 LITERATURE REVIEW

Prior to performing the field survey, a desktop analysis was performed to review the existing species occurrence documentation relevant to the Project site. Topographic maps were referenced for the California USGS 7.5 minute quadrangles containing and surrounding the Project site: *South Gate, Hollywood, Los Angeles, El Monte, Whittier, Los Alamitos, Long Beach, Torrance, and Inglewood* (USGS 2018). The most recent records of the California Natural Diversity Database (CNDDB) managed by CDFW (CDFW 2018) and the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2018) were also reviewed. These databases contain records of reported occurrence data for federal- or state-listed endangered or threatened species, proposed endangered or threatened species, California Species of Special Concern (SSC), or otherwise sensitive species or habitats that may occur within or in the immediate vicinity (approximately 5 miles) of the Project site.

2.2 SOILS

Soil maps for Los Angeles County were referenced online to determine the types of soils found within the Project site. Soils were determined in accordance with categories set forth by the U.S. Department of Agriculture (USDA) Soil Conservation Service and by referencing the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2018).

2.3 BIOLOGICAL RECONNAISSANCE-LEVEL SURVEY

Chambers Group biologist Christiana Conser, conducted the reconnaissance survey at the Project site to identify the potential for occurrence of vegetation communities or habitats that could support sensitive plant or wildlife species. The survey was conducted on November 30, 2018 between 1015 and 1130 hours. Weather conditions during the survey were approximately 66 degrees Fahrenheit, with 0 to 20 percent cloud cover, and no precipitation. Photographs of the Project site were recorded to document existing conditions (Appendix A).

2.3.1 Vegetation

All plant species observed within the Project site were recorded. Vegetation communities within the Project site were identified, qualitatively described, and mapped onto an aerial photograph. Plant communities were determined in accordance with the categories set forth in Sawyer et al. (2009). Descriptions of Disturbed and Ornamental Landscaping areas were determined in accordance with the categories set forth in Gray and Bramlet (1992). Plant nomenclature follows that of Baldwin et al. (2012).

2.3.2 Wildlife

All wildlife and wildlife signs observed and/or detected, including tracks, scat, carcasses, burrows, excavations, and vocalizations, were recorded. Additional survey time was spent in those habitats most likely to be utilized by wildlife (trees were surveyed with binoculars for bird nests, etc.) or in habitats with the potential to support state- and/or federal-listed or otherwise sensitive species. Notes were made on the general habitat types, species observed, and the conditions of the Project site.

SECTION 3.0 – RESULTS

3.1 SOILS

After referencing the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2018), it was determined that the Project site is located within the *Los Angeles County, Southeastern Part Soil Map Unit* (CA696). Based on the results of the database search, the Project site consists of Urban Land-Typic Xerorthents, Terraced-Windfetch Complex (Appendix B). This soil is comprised of human-transported parent material from alluvial fan remnants and as such, is typical of urban areas and not natural habitats. The soil is typically a well-drained loam to clay loam with a medium water holding capacity. The depth to the water table in this soil type is typically 80 inches.

3.2 VEGETATION TYPES

Two vegetation types were observed within the Project site: Disturbed/Ruderal and Ornamental Trees and Shrubs. A map showing the vegetation types observed and other areas within the Project site is provided as Figure 2.

3.2.1 Disturbed or Barren

The main vegetation type observed within the Project site was Disturbed or Barren with approximately 50 percent unvegetated bare ground. Disturbed or Barren areas may be nearly devoid of vegetation because of clearing or grading and are typically dominated by pioneering herbaceous species that readily colonize disturbed soils (Gray and Bramlet 1992). The vegetation in these areas is adapted to living in compact soils where water does not readily penetrate the soil. Plant species found in the Disturbed or Barren areas onsite include non-native hairy crabgrass (*Digitaria sanguinalis*), red-stemmed filaree (*Erodium cicutarium*), prickly lettuce (*Lactuca serriola*), bull mallow (*Malva nicaeensis*), Bermuda buttercup (*Oxalis pes-caprae*), common sow-thistle (*Sonchus oleraceus*), and Russian thistle (*Salsola tragus*).

3.2.2 Developed

The Developed area was a large rectangle of concrete pavement that extended from the southeast corner of the Project site and extended within 10 feet of the shed/bird coop on the east side of the property about midway between the north and south ends. The shed contained an abandoned bird coop inside that could have formerly been used for pigeons or chickens. There are concrete stalls to the south of the shed that could have been used to store or compost chicken manure or landscaping materials.

3.2.3 Ornamental Landscaping

The other vegetation type present at the Project site was Ornamental Landscaping. This vegetation type consists of introduced trees and shrubs that were installed as horticultural plantings (Gray and Bramlet 1992). There were three species of non-native ornamental trees at the Project site: red gum (*Eucalyptus camaldulensis*), Chinese elm (*Ulmus parvifolia*) and Mexican fan palm (*Washingtonia robusta*). The five mature red gum trees and single mature Chinese elm tree appeared to be ornamental plantings. Four of the five mature red gum trees were planted in a straight line, usually indicating a windbreak. There were approximately seven red gum saplings growing along the north fence line of the Project area, which

probably recruited from seed. There were two Mexican fan palm seedlings that had probably recruited from seed on the Project site, but no mature palm trees present.

There were nine species of shrubs growing in a contiguous hedge planted along the western fence of the Project site, including eight non-native species and one native species. The non-native shrubs were: common box (*Buxus sempervirens*), camellia (*Camellia* sp.), glossy privet (*Ligustrum lucidum*), olive (*Olea europaea*), blackthorn plum (*Prunus spinosa*), white mulberry (*Morus alba*), and carrotwood (*Cupaniopsis anacardioides*). The single native plant species identified onsite was mule fat (*Baccharis salicifolia* subsp. *salicifolia*). One herbaceous species was also planted in the hedge, Sprenger's asparagus fern (*Asparagus densiflorus*). The native plant species is most likely a volunteer blown into the site as a seed and is not likely persisting from remnant native habitat. Mule fat is widely distributed in California including southern California, but there is no suitable habitat onsite for other native riparian species. There were no features of remnant native habitat present. The soils were highly compacted and there were no seeps or water sources present. The Project site was not contiguous with or nearby any other native habitats.

3.3 SENSITIVE SPECIES

The following information is a list of abbreviations used to help determine the significance of biological sensitive resources potentially occurring on the Project site.

California Rare Plant Rank (CRPR)

- | | | |
|---------|---|---|
| List 1A | = | Plants presumed extinct in California. |
| List 1B | = | Plants rare and endangered in California and throughout their range. |
| List 2 | = | Plants rare, threatened or endangered in California but more common elsewhere in their range. |
| List 3 | = | Plants about which we need more information; a review list. |
| List 4 | = | Plants of limited distribution; a watch list. |

CRPR Extensions

- | | | |
|-----|---|---|
| 0.1 | = | Seriously endangered in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat). |
| 0.2 | = | Fairly endangered in California (20-80 percent occurrences threatened). |
| 0.3 | = | Not very endangered in California (less than 20 percent of occurrences threatened). |

Federal

- | | | |
|----|---|-------------------------------|
| FE | = | Federally listed; Endangered |
| FT | = | Federally listed; Threatened |
| FC | = | Federal Candidate for listing |

State

- | | | |
|----|---|--------------------------|
| ST | = | State listed; Threatened |
| SE | = | State listed; Endangered |



Legend

Project Boundary

Vegetation Type

Chinese Elm Tree

Ornamental Landscaping

Red Gum Trees

Disturbed or Barren

Developed

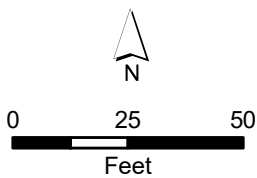


Figure 2
West Coast Basin Dominguez 300-01
New Well Project
Vegetation Communities

RARE	=	State-listed; Rare (Listed “Rare” animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
SSC	=	State Species of Special Concern
WL	=	CDFW Watch List

The following information was used to determine the significance of biological resources potentially occurring within the Project site. The criteria used to evaluate the potential for sensitive species to occur on the Project site are outlined in Table 1.

Table 1: Criteria for Evaluating Sensitive Species Potential for Occurrence (PFO)

PFO*	CRITERIA
Absent:	Species is restricted to habitats or environmental conditions that do not occur within the Project site.
Low:	Historical records for this species do not exist within the immediate vicinity (approximately 5 miles) of the Project site, and/or habitats or environmental conditions needed to support the species are of poor quality.
Moderate:	Either a historical record exists of the species within the immediate vicinity of the Project site (approximately 5 miles) and marginal habitat exists on the Project site, or the habitat requirements or environmental conditions associated with the species occur within the Project site, but no historical records exist within 5 miles of the Project site.
High:	Both a historical record exists of the species within the Project site or its immediate vicinity (approximately 5 miles), and the habitat requirements and environmental conditions associated with the species occur within the Project site.
Present:	Species was detected within the Project site at the time of the survey.

* PFO: Potential for Occurrence

3.3.1 Sensitive Plant Species

Current database searches (CDFW 2018 and CNPS 2018) resulted in a list of 41 federally and/or state listed threatened and endangered or sensitive plant species documented to occur within 5 miles of the Project site. After the literature review and the reconnaissance-level survey, it was determined that all 41 species can be considered absent from the Project site based on the assessment of the various habitat types and specific requirements of those plant species. Factors used to determine the potential for occurrence included the quality of habitat, level of anthropogenic influence, elevation, and the soils present on site. In addition, the location of prior CNDDDB records of occurrence were used as additional data, but as the CNDDDB is a positive-sighting database, these data were used only in support of the analysis from the previously identified factors.

The following 41 plant species are considered **Absent** from the Project site due to lack of suitable habitat present within the Project site:

- aphanisma (*Aphanisma blitoides*) – CRPR 1B.2
- marsh sandwort (*Arenaria paludicola*) – FE, SE, CRPR 1B.1

- Branton's milk-vetch (*Astragalus brauntonii*) – FE, CRPR 1B.1
- Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*) – FE, SE, CRPR 1B.1
- coastal dunes milk-vetch (*Astragalus tener* var. *titi*) – FE, SE, CRPR 1B.1
- Coulter's saltbush (*Atriplex coulteri*) – CRPR 1B.2
- south coast saltscale (*Atriplex pacifica*) – CRPR 1B.2
- Parish's brittle scale (*Atriplex parishii*) – CRPR 1B.1
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*) – CRPR 1B.2
- Nevin's barberry (*Berberis nevinii*) – FE, SE, CRPR 1B.1
- Catalina mariposa lily (*Calochortus catalinae*) – CRPR 4.2
- Plummer's mariposa-lily (*Calochortus plummerae*) – CRPR 4.2
- intermediate mariposa-lily (*Calochortus weedii* var. *intermedius*) – CRPR 1B.2
- lucky morning-glory (*Calystegia felix*) – CRPR 1B.1
- Peirson's morning-glory (*Calystegia peirsonii*) – CRPR 4.2
- southern tarplant (*Centromadia parryi* subsp. *australis*) – CRPR 1B.1
- salt marsh bird's-beak (*Chloropyron maritimum* subsp. *maritimum*) – FE, SE, CRPR 1B.2
- monkey-flower savory (*Clinopodium mimuloides*) – CRPR 4.2
- small-flowered morning-glory (*Convolvulus simulans*) – CRPR 4.2
- Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*) – CRPR 2B.2
- many-stemmed dudleya (*Dudleya multicaulis*) – CRPR 1B.2
- San Diego button-celery (*Eryngium aristulatum* var. *parishii*) – FE, SE, CRPR 1B.1
- mesa horkelia (*Horkelia cuneata* var. *puberula*) – CRPR 1B.1
- decumbent goldenbush (*Isocoma menziesii* var. *decumbens*) – CRPR 1B.2
- Southern California black walnut (*Juglans californica*) – CRPR 4.2
- Coulter's goldfields (*Lasthenia glabrata* subsp. *coulteri*) – CRPR 1B.1
- mud nama (*Nama stenocarpa*) – CRPR 2B.2
- Gambel's water cress (*Nasturtium gambelii*) – FE, SE, CRPR 1B.1
- spreading navarretia (*Navarretia fossalis*) – FT, CRPR 1B.1
- prostrate vernal pool navarretia (*Navarretia prostrata*) – CRPR 1B.1
- coast woolly-heads (*Nemacaulis denudata* var. *denudata*) – CRPR 1B.2
- California Orcutt grass (*Orcuttia californica*) – FE, SE, CRPR 1B.1
- Lyon's pentachaeta (*Pentachaeta lyonii*) – FE, SE, CRPR 1B.1
- Hubby's phacelia (*Phacelia hubbyi*) – CRPR 4.2
- Brand's star phacelia (*Phacelia stellaris*) – CRPR 1B.1
- white rabbit-tobacco (*Pseudognaphalium leucocephalum*) – CRPR 2B.2
- southern mountains skullcap (*Scutellaria bolanderi* subsp. *austromontana*) – CRPR 1B.2
- salt spring checkerbloom (*Sidalcea neomexicana*) – CRPR 2B.2
- estuary seablite (*Suaeda esteroa*) – CRPR 1B.2
- San Bernardino aster (*Symphyotrichum defoliatum*) – CRPR 1B.2
- Greata's aster (*Symphyotrichum greatae*) – CRPR 1B.3

3.3.2 Sensitive Wildlife

A current database search (CDFW 2018) resulted in a list of 30 federal- and/or state-listed endangered or threatened, Species of Special Concern, or otherwise sensitive wildlife species that may potentially occur within the Project site. Factors used to determine potential for occurrence included the quality of habitat,

the location of prior CNDDDB records of occurrence in relation to the Project site, and connectivity of the Project site with sensitive species habitat.

The following 30 wildlife species are considered **Absent** from the Project site due to lack of suitable habitat present:

- tricolored blackbird (*Agelaius tricolor*) – SSC
- southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) – SSC
- southern California legless lizard (*Anniella stebbinsi*) – SSC
- pallid bat (*Antrozous pallidus*) – SSC
- California glossy snake (*Arizona elegans occidentalis*) – SSC
- coastal whiptail (*Aspidoscelis tigris stejnegeri*) – SSC
- burrowing owl (*Athene cunicularia*) – SSC
- Swainson's hawk (*Buteo swainsoni*) – **ST**
- green turtle (*Chelonia mydas*) – **FT**
- western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) – **FT, SE**
- yellow rail (*Coturnicops noveboracensis*) – SSC
- southwestern willow flycatcher (*Empidonax traillii extimus*) – **FE, SE**
- western pond turtle (*Emys marmorata*) – SSC
- western mastiff bat (*Eumops perotis californicus*) – SSC
- western yellow bat (*Lasiurus xanthinus*) – SSC
- south coast marsh vole (*Microtus californicus stephensi*) – SSC
- pocketed free-tailed bat (*Nyctinomops femorosaccus*) – SSC
- big free-tailed bat (*Nyctinomops macrotis*) – SSC
- Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) – **SE**
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) – SSC
- Pacific pocket mouse (*Perognathus longimembris pacificus*) – **FE, SSC**
- coast horned lizard (*Phrynosoma blainvilli*) – SSC
- coastal California gnatcatcher (*Polioptila californica californica*) – **FT**
- bank swallow (*Riparia riparia*) – **ST**
- Mohave tui chub (*Siphateles bicolor mohavensis*) – **FE, SE**
- western spadefoot (*Spea hammondi*) – SSC
- California least tern (*Sternula antillarum browni*) – **FE, SE**
- Riverside fairy shrimp (*Streptocephalus woottoni*) – **FE**
- American badger (*Taxidea taxus*) – SSC
- least Bell's vireo (*Vireo bellii pusillus*) – **FE, SE**

3.4 GENERAL PLANTS

A total of 20 plant species were observed during the survey. Plant species observed or detected during the site survey were characteristic of the existing Project site conditions. No sensitive species were observed during the survey effort. A comprehensive list of the plant species observed during the survey is provided in Appendix C.

3.5 GENERAL WILDLIFE

A total of six wildlife species were observed during the survey. Wildlife species observed or detected during the site survey were characteristic of the existing Project site conditions. No sensitive species were

observed during the survey effort. A comprehensive list of the wildlife species observed during the survey is provided in Appendix D.

SECTION 4.0 – CONCLUSIONS AND RECOMMENDATIONS

4.1 SENSITIVE PLANTS

After the literature review, the assessment of the habitat types in the Project area, and the reconnaissance survey, it was determined that all 41 sensitive plant species with a potential to occur on site are considered absent from the Project site due to lack of suitable habitat. Therefore, no further surveys are needed for plant species.

4.2 SENSITIVE WILDLIFE

Of the sensitive wildlife species identified in the literature review, it was determined that 30 sensitive wildlife species were considered absent from the Project site due to lack of suitable habitat. No sensitive wildlife species were observed during the survey effort. Furthermore, the Project site is isolated by development and is not expected to support foraging or dispersal of sensitive wildlife species. The six species of wildlife observed or detected during the site survey were common and characteristic of the existing Project site conditions.

There is a potential for avian species covered by the Migratory Bird Treaty Act (MBTA) to nest onsite, particularly within mature trees. No active or old avian nests were observed; however, the survey was conducted outside of the bird breeding season (February 15 to September 15). Nesting bird surveys will be required in accordance with the MBTA, as described in Section 4.3, below.

4.3 MIGRATORY BIRD TREATY ACT, AS AMENDED (16 USC 703-711)

In order to comply with the MBTA, any vegetation clearing should take place outside the general bird breeding season, to the maximum extent practical. If this is not possible, prior to ground-disturbing activities, a qualified biologist should conduct a nesting bird survey and submit a migratory nesting bird and raptor survey report. The survey should occur no more than three days prior to initiation of Project activities, and any occupied passerine and/or raptor nests occurring within or adjacent to the work area should be delineated. Additional follow-up surveys may be required by the resource agencies. To the maximum extent practicable, a minimum buffer zone around occupied nests should be maintained during physical ground-disturbing activities. The buffer zone should be sufficient in size to prevent impacts to the nest. Once nesting has ceased, the buffer may be removed.

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APPENDIX A – SITE PHOTOGRAPHS



APPENDIX A – SITE PHOTOGRAPHS



Photo 1. The West Coast Basin Dominguez 300-01 new well project site. The site is primarily composed of disturbed/ruderal habitat with ornamental trees and shrubs. Photo is taken from the southwest corner of the lot facing north.



Photo 2. The West Coast Basin Dominguez 300-01 new well project site. Photo is taken from the southeast corner of the lot facing north.



Photo 3. The West Coast Basin Dominguez 300-01 new well project site. Photo is taken from the northwest corner of the lot facing south.



Photo 4. The West Coast Basin Dominguez 300-01 new well project site. Photo is taken from the northeast corner of the lot facing south.



Photo 5. The West Coast Basin Dominguez 300-01 new well project site. Photo is taken from the northwest corner of the lot facing east.



Photo 6. The West Coast Basin Dominguez 300-01 new well project site. Photo is taken from the northeast corner of the lot facing west.

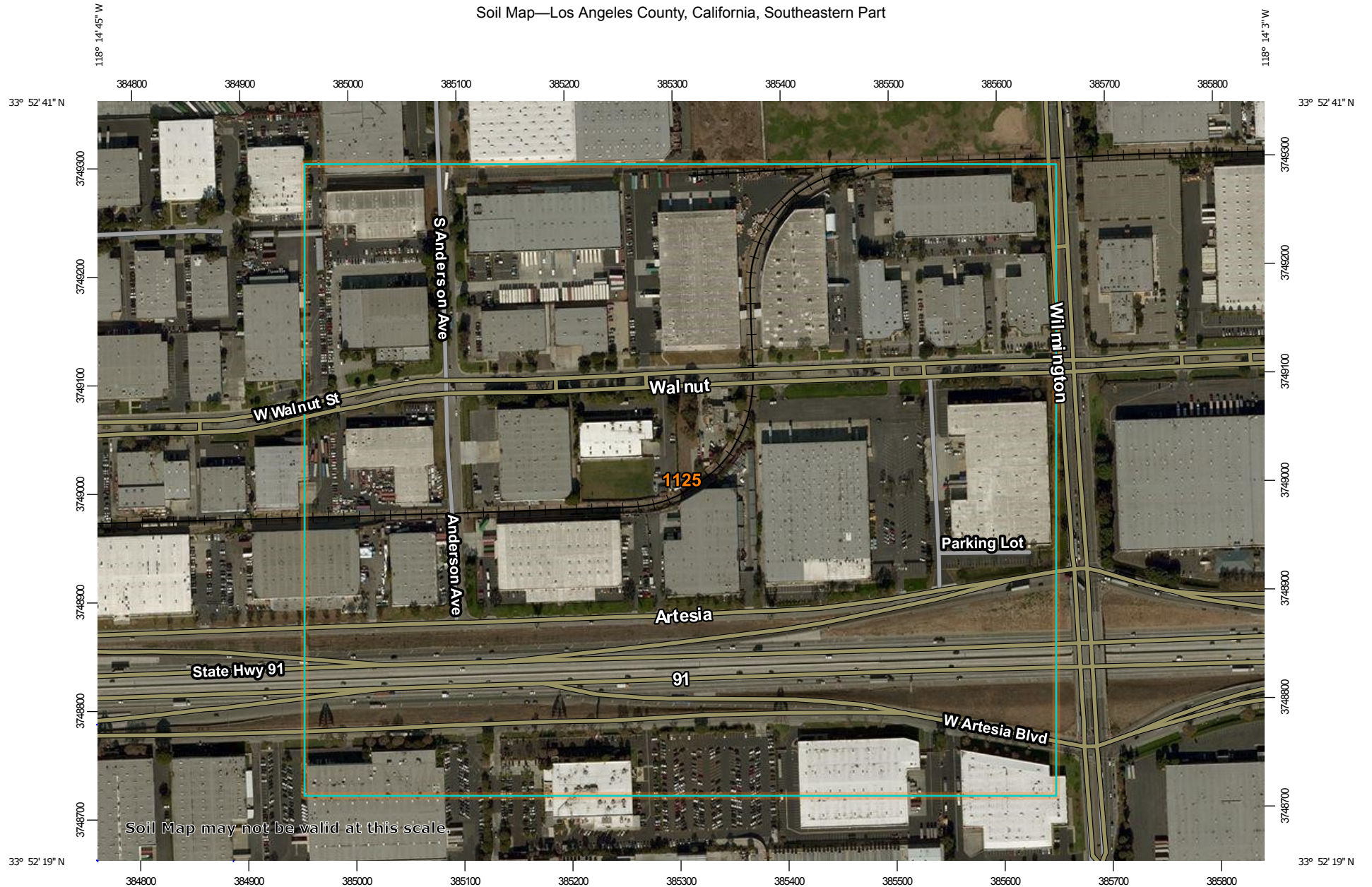


Photo 7. The West Coast Basin Dominguez 300-01 new well project site. Photo is taken from the northeast corner of the lot facing south showing the mature red gum trees on the lot.

APPENDIX B – SOIL SURVEY RESULTS



Soil Map—Los Angeles County, California, Southeastern Part



Map Scale: 1:4,940 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters

0 200 400 800 1200 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

11/28/2018
Page 1 of 3

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: Los Angeles County, California, Southeastern Part

Survey Area Data: Version 5, Sep 12, 2018

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

Date(s) aerial images were photographed: Nov 16, 2014—Nov 24, 2014

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.

Los Angeles County, California, Southeastern Part

1125—Urban land-Typic Xerorthents, terraced-Windfetch complex, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2w615

Elevation: 20 to 260 feet

Mean annual precipitation: 13 to 15 inches

Mean annual air temperature: 63 to 64 degrees F

Frost-free period: 360 to 365 days

Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 65 percent

Windfetch and similar soils: 15 percent

Typic xerorthents, terraced, and similar soils: 15 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Fan remnants

Properties and qualities

Slope: 0 to 5 percent

Depth to restrictive feature: 0 inches to manufactured layer

Runoff class: Very high

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

Description of Windfetch

Setting

Landform: Fan remnants

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Riser

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Discontinuous human-transported material over mixed alluvium

Typical profile

^A - 0 to 2 inches: loam

^Au - 2 to 16 inches: loam

2Bt - 16 to 28 inches: clay loam

2Btk1 - 28 to 37 inches: clay loam

2Btk2 - 37 to 51 inches: loam

2Btk3 - 51 to 79 inches: loam

Properties and qualities

Slope: 2 to 9 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat):

Moderately high (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 3 percent

Salinity, maximum in profile: Very slightly saline to slightly saline
(2.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 12.0

Available water storage in profile: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Typic Xerorthents, Terraced

Setting

Landform: Fan remnants

Landform position (three-dimensional): Tread, riser

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Human-transported material

Typical profile

^A - 0 to 5 inches: loam

^Cu1 - 5 to 15 inches: clay loam

^Cu2 - 15 to 30 inches: clay loam

^Cu3 - 30 to 55 inches: clay loam

^Cu4 - 55 to 79 inches: clay loam

Properties and qualities

Slope: 2 to 9 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat):

Moderately high (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 3 percent

Salinity, maximum in profile: Very slightly saline to slightly saline
(2.0 to 4.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 8.0

Available water storage in profile: High (about 10.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Centinela

Percent of map unit: 3 percent

Landform: Fan remnants

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Calcic haploxeralfs

Percent of map unit: 1 percent

Landform: Fan remnants

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Riser

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Thums

Percent of map unit: 1 percent

Landform: Fan remnants

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Riser

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Data Source Information

Soil Survey Area: Los Angeles County, California, Southeastern Part

Survey Area Data: Version 5, Sep 12, 2018

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1125	Urban land-Typic Xerorthents, terraced-Windfetch complex, 2 to 9 percent slopes	100.5	100.0%
Totals for Area of Interest		100.5	100.0%

APPENDIX C – PLANT SPECIES OBSERVED



APPENDIX C – PLANT SPECIES LIST

Scientific Name	Common Name
ANGIOSPERMS (EUDICOTS)	
ASTERACEAE	SUNFLOWER FAMILY
<i>Baccharis salicifolia</i> subsp. <i>salicifolia</i>	mule fat
<i>Lactuca serriola</i> *	prickly lettuce
<i>Sonchus oleraceus</i> *	common sow thistle
BUXACEAE	BOX FAMILY
<i>Buxus sempervirens</i> *	common box
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Chenopodium album</i> *	lamb's quarters
<i>Salsola tragus</i> *	Russian thistle
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i> *	red-stemmed filaree
MALVACEAE	MALLOW FAMILY
<i>Malva nicaeensis</i> *	bull mallow
MORACEAE	MULBERRY FAMILY
<i>Morus alba</i> *	white mulberry
MYRTACEAE	MYRTLE FAMILY
<i>Eucalyptus camaldulensis</i> *	red gum
OLEACEAE	OLIVE FAMILY
<i>Ligustrum lucidum</i> *	glossy privet
<i>Olea europaea</i> *	olive
OXALIDACEAE	OXALIS FAMILY
<i>Oxalis pes-caprae</i> *	Bermuda buttercup
ROSACEAE	ROSE FAMILY
<i>Prunus spinosa</i> *	Blackthorn plum
SAPINDACEAE	SOAPBERRY FAMILY
<i>Cupaniopsis anacardioides</i> *	carrotwood
THEACEAE	TEA FAMILY
<i>Camellia</i> sp.*	camellia
ULMACEAE	ELM FAMILY
<i>Ulmus parvifolia</i> *	Chinese elm
ANGIOSPERMS (MONOCOTS)	
ARECACEAE	PALM FAMILY
<i>Washingtonia robusta</i> *	Mexican fan palm
ASPARAGACEAE	ASPARAGUS FAMILY
<i>Asparagus densiflorus</i> *	Sprenger's asparagus fern
POACEAE	GRASS FAMILY
<i>Digitaria sanguinalis</i> *	hairy crabgrass

*Non-Native Species, +Ornamental, Unlikely to be Invasive

APPENDIX D – WILDLIFE SPECIES OBSERVED/DETECTED



APPENDIX D
WILDLIFE SPECIES OBSERVED/DETECTED AT THE PROJECT SITE

Scientific Name	Common Name
CLASS AVES	BIRDS
CORVIDAE	CROWS, JAYS, MAGPIES
<i>Corvus brachyrhynchos</i>	American crow
PASSERELLIDAE	NEW WORLD SPARROWS
<i>Melospiza crissalis</i>	California Towhee
PASSERIDAE	OLD WORLD SPARROWS
<i>Passer domesticus</i>	house sparrow
TROCHILIDAE	HUMMINGBIRDS
<i>Calypte anna</i>	Anna's hummingbird
TYRANNIDAE	TYRANT FLYCATCHERS
<i>Sayornis nigricans</i>	black Phoebe
CLASS MAMMALIA	MAMMALS
FELIDAE	CATS
<i>Felis catus</i>	domestic cat

APPENDIX C – Archaeological & Paleontological Assessment Report



**ARCHAEOLOGICAL AND
PALEONTOLOGICAL ASSESSMENT REPORT
FOR
THE WEST COAST BASIN
DOM 300-01 WELL PROJECT,
LOS ANGELES COUNTY,
CALIFORNIA**

Prepared for:

CALIFORNIA WATER SERVICE COMPENY

Clyde Arucan, P-4 Engineer
2632 W. 237th Street.
Torrance, CA 90505

Prepared by:

CHAMBERS GROUP, INC.
Ted Roberts, M.A., RPA,
Lauren DeOliveira
5 Hutton Centre Drive, Suite 750
Santa Ana, California 92707
(949) 261-5414

November 2018

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NATIONAL ARCHAEOLOGICAL DATABASE INFORMATION

Authors: Ted Roberts and Lauren DeOliveira

Firm: Chambers Group, Inc.

Client/Project Proponent: California Water Service Company

Report Date: November 2018

Report Title: Archaeological and Paleontological Assessment Report for West Coast Basin DOM 300-01 Well, Los Angeles County, California

Type of Study: Cultural and Paleontological Record Search and Literature Review

New Sites: N/A

Updated Sites: None

USGS Quad: South Gate 7.5-minute quadrangle

Acreage: 0.48

Permit Numbers: N/A

Key Words: County of Los Angeles, Compton, Negative Survey, West Walnut Street, CEQA

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APPENDIX D – Noise Impact Assessment Report



DOM 300-01 Well Drilling Noise Impact Assessment Report

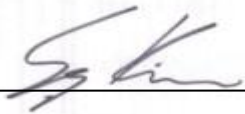
August 1, 2018

Prepared for:

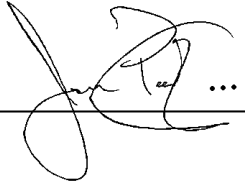
California Water Services Co.
Rancho Dominguez District
2632 W. 237th St.
Torrance, CA 90505

Prepared by:

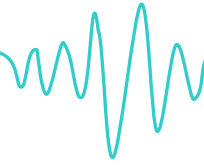
Behrens and Associates, Inc.
13806 Inglewood Avenue
Hawthorne California 90250



Simon Kim
Senior Acoustical Engineer



Jason Peetz
Engineering Manager



1. Introduction

The purpose of this study is to assess the drilling operational noise levels of the proposed DOM 300-01 well located at 985 W. Walnut Street, Compton, California.

The DOM 300-01 well is located approximately 160 feet south of W. Walnut Street and 1,140 feet west of Wilmington Avenue in Compton, California. Figure 1-1 contains a map of the site and surrounding area.

The following is provided in this report:

- Information regarding the fundamentals of noise
- A review of relevant noise standards
- Documentation of the existing ambient noise levels at the site
- An analysis of the projected noise impact due to the proposed operation at the site

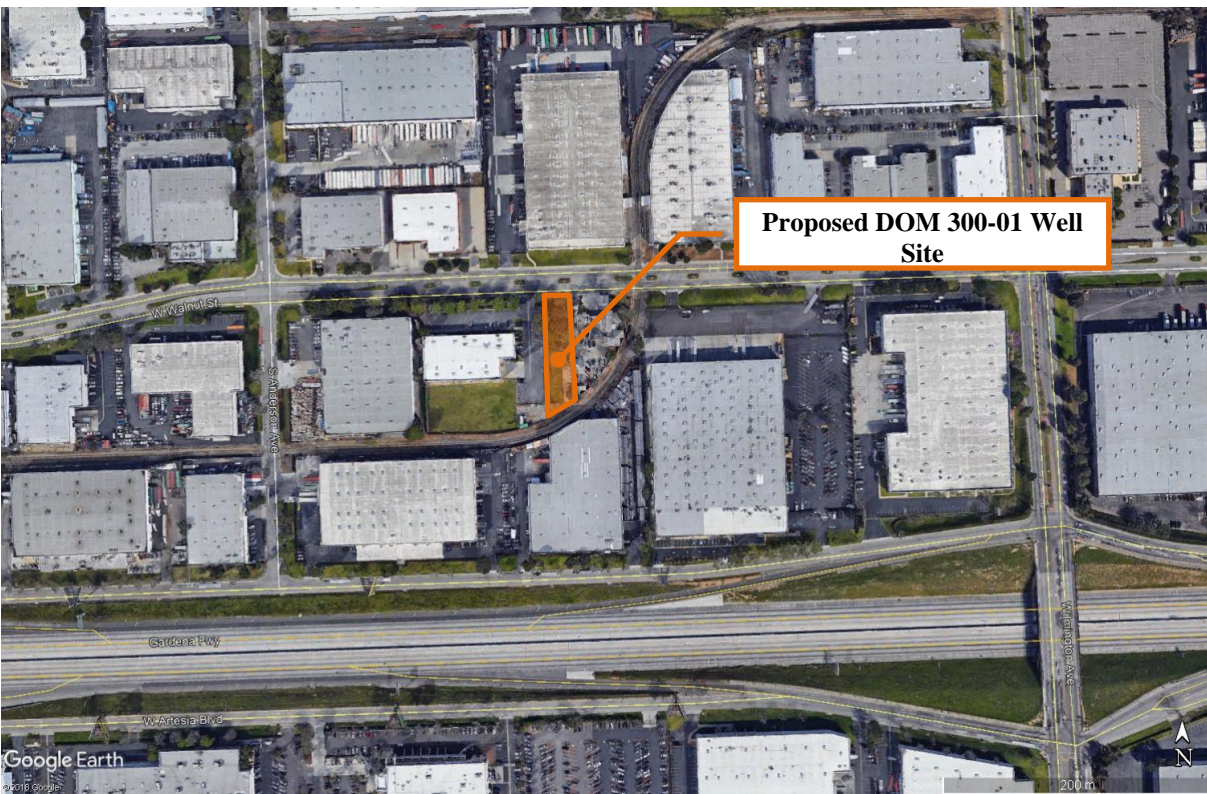
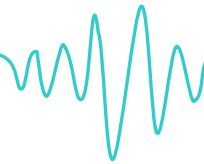


Figure 1-1 Proposed DOM 300-01 Well Site Location and Surroundings



2. Noise Fundamentals

Sound is most commonly experienced by people as pressure waves passing through air. These rapid fluctuations in air pressure are processed by the human auditory system to produce the sensation of sound. The rate at which sound pressure changes occur is called the frequency. Frequency is usually measured as the number of oscillations per second or Hertz (Hz). Frequencies that can be heard by a healthy human ear range from approximately 20 Hz to 20,000 Hz. Toward the lower end of this range are low-pitched sounds, including those that might be described as a “rumble” or “boom”. At the higher end of the range are high-pitched sounds that might be described as a “screech” or “hiss”.

Environmental noise generally derives, in part, from a combination of distant noise sources. Such sources may include common experiences such as distant traffic, wind in trees, and distant industrial or farming activities. These distant sources create a low-level “background noise” in which no particular individual source is identifiable. Background noise is often relatively constant from moment to moment but varies slowly from hour to hour as natural forces change or as human activity follows its daily cycle.

Superimposed on this low-level, slowly varying background noise is a succession of identifiable noisy events of relatively brief duration. These events may include the passing of single-vehicles, aircraft flyovers, screeching of brakes, and other short-term events. The presence of these short-term events causes the noise level to fluctuate. Detailed acoustical definitions are provided in the Appendix A.

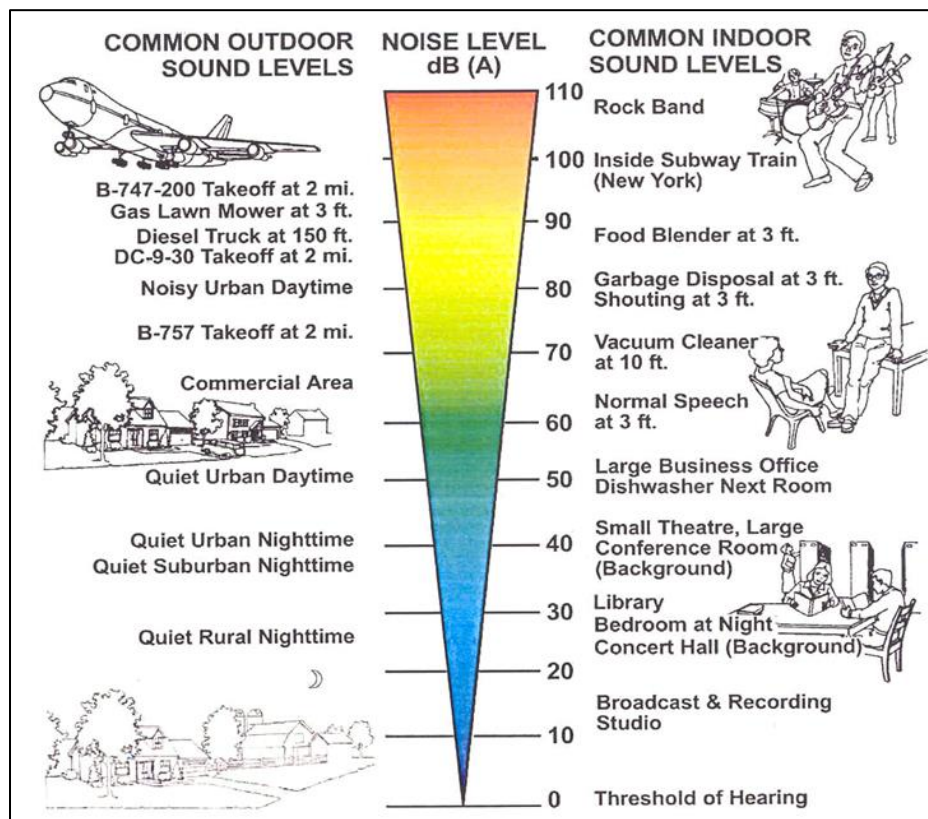
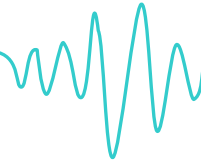


Figure 2-1 Typical Indoor and Outdoor Sound Levels



3. Noise Standards

This section summarizes the City of Compton Municipal Code, the City of Compton General Plan Noise Element and the noise standards in the provided Noise Mitigation Plan that apply to proposed operation.

3.1 City of Compton Municipal Code

7-12 Noise

Part 2: Special Noise Sources

7-12.11 Machinery, Equipment, Fans and Air Conditioning.

It shall be unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus or similar mechanical device in any manner so as to create any **noise** which would cause the **noise** level at the property line of any property to exceed the ambient **noise** level by more than five (5) decibels.

Part 3: Other Noise Making Devices, or Noise Producing Activities

7-12.17 Exemptions.

The provisions of subsection 7-12.18 et seq. shall not apply to construction, operation, maintenance and repairs of equipment, apparatus or facilities of essential public services and facilities, including those public utilities subject to the regulatory jurisdiction of the California Public Utilities Commission.

7-12-20 Exhaust Mufflers.

No person shall discharge into the open air the exhaust of any steam engine or stationary internal combustion engine except through a muffler or other device which effectively will reduce such loud or explosive noises.

3.2 City of Compton Draft General Plan Noise Element

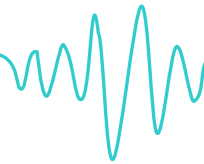
3.9 NOISE IMPACTS

3.9.2 ENVIRONMENTAL SETTING

Regulatory Setting

- *City of Compton Noise Control Ordinance.* The City of Compton Municipal Code also regulates noise levels in the City by referencing the Los Angeles County Noise Control Ordinance. The Code makes it unlawful for any person to make or cause any loud, unnecessary, and unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.

- *City of Compton Noise Element.* The Draft General Plan includes a Noise Element that is designed to address noise and land use compatibility. The element includes standards that serve as a guide for considering the



ambient noised environment when proposing new development. Figure 3-1 illustrates the land use and noise compatibility standards included in the City's noise element.

Land Use Categories		Community Noise Equivalent Level (in dBA, CNEL)					
		<55	60	65	70	75	80>
Residential	Single-family, Duplex, Multiple-family						
	Mobile Homes, Mixed Use						
Commercial	Hotel, Motel, Other Lodging						
	General Commercial, Retail						
	Office						
Industrial	Business Park, Research & Development						
	Manufacturing, Warehousing						
institutional	Hospitals, Schools, Libraries						
	Churches, Civic Uses						
Recreation and Open Space	Public Parks						
	Golf Course, Natural Habitat						
	Commercial Recreation						

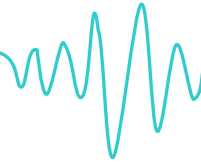
Figure 3-1 Ambient Noise Levels and Land Use Compatibility

3.3 Noise Mitigation Plan

The provided Noise Mitigation Plan states:

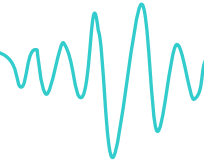
Noise Standards

The City of Compton Municipal Code regulates noise levels in the City by referencing the Los Angeles County Noise Control Ordinance. The Code makes it unlawful for any person to make or cause any loud, unnecessary, and unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. The standard that may be referred to in determining whether a violation exists may include, but not be limited to the following: the level of noise; whether the nature of the noise is usual or unusual; the level and intensity of any background noise; the proximity of the noise to residential sleeping facilities; the nature and zoning of



the area within the noise emanates; the time of the day or night the noise occurs; the duration of the noise; and whether the noise is recurrent, intermittent, or constant.

For long-term construction (typically more than 21 days), maximum noise levels from 7 a.m. to 8 p.m., excluding Sundays and holidays, are 60 dB for single-family residential land uses, 65 dB for multifamily residential land uses, and 70 dB for semi-residential/commercial land uses. From 8 p.m. to 7 a.m. daily and all day on Sundays and holidays, maximum noise levels are 50 dB for single family residential land uses, 55 dB for multifamily residential land uses, and 60 dB for semi-family/commercial land uses.



4. Ambient Sound Level Survey

4.1 Ambient Sound Level Survey

An ambient sound level survey was conducted at the proposed site to document the existing ambient sound levels. The survey equipment detailed in Table 4-1 was utilized in the 48-hour survey. The measurement location is shown in Figure 4-1.

Table 4-1 Sound Level Survey Instrumentation

Item	Qty	Equipment
Sound Level Meter	1	SVANTEK 971 Type 1 Sound Level Meter
Calibrator	1	Quest Technologies QC-10

The sound level survey was conducted from Tuesday, July 10, to Thursday, July 12, 2018 over a 48-hour measurement period. The instrumentation used for the survey was a SVANTEK Model 971 Type 1 sound level meter, which were calibrated prior to deployment. The sound level meter was programmed to continuously measure and record A-weighted L_{eq} sound levels.

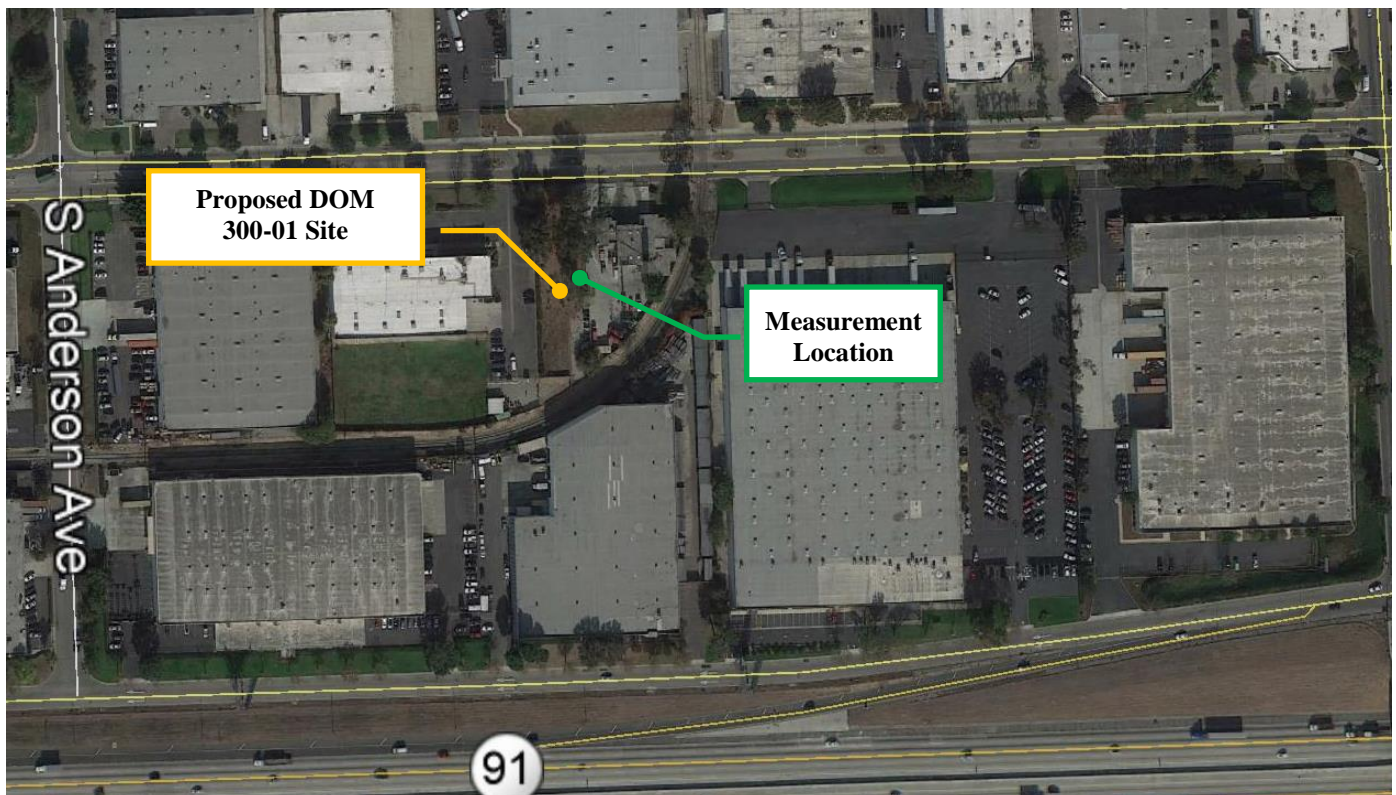
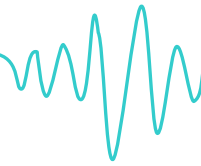


Figure 4-1 Sound Level Survey Measurement Location



The A-weighted filter is applied to instrument-measured sound levels in effort to account for the relative loudness perceived by the human ear. As the human ear is less sensitive to low frequencies, the A-weighted filter correspondingly discounts low frequency sound observed during measurements and is widely utilized for environmental noise measurements.

Hourly average L_{eq} noise levels were measured using the A-weighted scale (dBA). The hourly average sound levels begin on the reported hour (e.g., the 9 p.m. hourly average sound level is the average sound level between 9 p.m. and 10 p.m.).

A-weighted hourly average sound levels were calculated and tabulated in Table 4-2 and presented graphically in Figure 4-2. Weather data sourced from www.wunderground.com for the ambient sound level survey was shown in Table 4-3.

Table 4-2 Measured A-Weighted Hourly Average and L_{dn} Sound Levels

Time	Sound Level	Time	Sound Level	Time	Sound Level
7/10/18 1:00 PM	59.4	5:00 AM	57.4	9:00 PM	58.8
2:00 PM	59.2	6:00 AM	57.4	10:00 PM	56.9
3:00 AM	59.4	7:00 AM	58.0	11:00 PM	53.3
4:00 PM	59.4	8:00 AM	56.2	7/12/18 12:00 AM	53.9
5:00 PM	59.5	9:00 AM	57.7	1:00 AM	50.7
6:00 PM	59.0	10:00 AM	57.1	2:00 AM	50.0
7:00 PM	58.6	11:00 AM	58.2	3:00 AM	50.7
8:00 PM	57.4	12:00 PM	59.1	4:00 AM	55.9
9:00 PM	56.5	1:00 PM	59.3	5:00 AM	56.6
10:00 PM	54.7	2:00 PM	60.1	6:00 AM	57.4
11:00 PM	53.7	3:00 PM	60.7	7:00 AM	58.5
7/11/18 12:00 AM	53.9	4:00 PM	60.9	8:00 AM	58.7
1:00 AM	51.6	5:00 PM	60.4	9:00 AM	56.3
2:00 AM	53.3	6:00 PM	59.0	10:00 AM	57.3
3:00 AM	53.0	7:00 PM	60.4	11:00 AM	57.3
4:00 AM	55.2	8:00 PM	61.2	12:00 PM	59.8

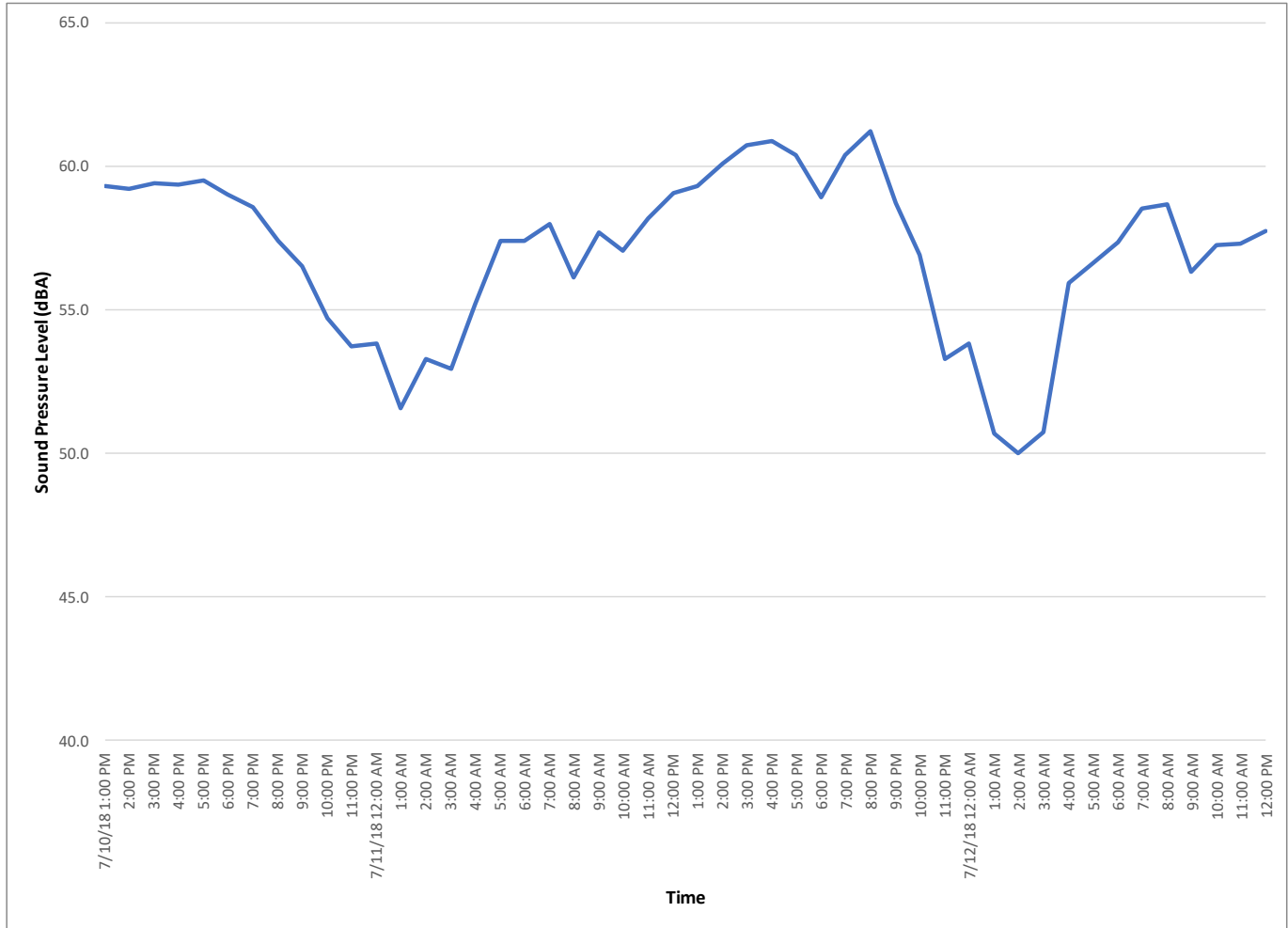
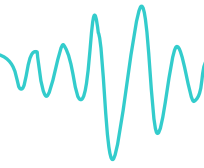


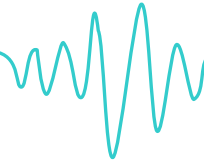
Figure 4-2 Sound Level Survey Results

Table 4-3 Weather Data

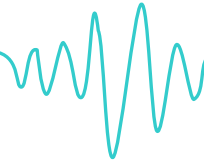
Time	Temp.	Humidity	Wind Dir.	Wind Speed	Pressure	Condition
7/10/18 12:47 PM	91 F	34%	CALM	0 mph	29.7 in	Fair
1:47 PM	86 F	51%	WSW	5 mph	29.7 in	Fair
2:47 PM	84 F	51%	CALM	0 mph	29.7 in	Partly Cloudy
3:47 PM	85 F	49%	CALM	0 mph	29.7 in	Fair
4:47 PM	84 F	51%	VAR	7 mph	29.7 in	Fair
5:47 PM	82 F	54%	VAR	3 mph	29.7 in	Fair
6:47 PM	81 F	52%		0 mph	29.7 in	Fair
7:47 PM	78 F	56%	W	3 mph	29.7 in	Fair

Behrens and Associates, Inc.

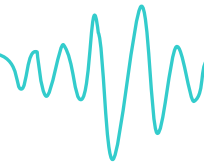
Environmental Noise Control



Time	Temp.	Humidity	Wind Dir.	Wind Speed	Pressure	Condition
8:47 PM	77 F	62%	CALM	0 mph	29.7 in	Fair
10:47 PM	73 F	79%	CALM	0 mph	29.7 in	Fair
11:47 PM	74 F	73%	CALM	0 mph	29.7 in	Fair
7/11/18 12:47 AM	74 F	73%	W	3 mph	29.7 in	Fair
1:47 AM	74 F	73%	CALM	0 mph	29.7 in	Fair
2:47 AM	74 F	73%	CALM	0 mph	29.7 in	Fair
3:47 AM	73 F	79%	CALM	0 mph	29.7 in	Fair
4:47 AM	72 F	81%	CALM	0 mph	29.7 in	Fair
5:47 AM	72 F	81%	CALM	0 mph	29.7 in	Fair
6:18 AM	72 F	84%	CALM	0 mph	29.7 in	Mostly Cloudy
6:26 AM	72 F	84%	CALM	0 mph	29.7 in	Partly Cloudy
6:47 AM	72 F	81%	CALM	0 mph	29.7 in	Fair
7:47 AM	75 F	76%	CALM	0 mph	29.7 in	Fair
8:47 AM	79 F	64%	CALM	0 mph	29.7 in	Partly Cloudy
9:47 AM	83 F	54%	CALM	0 mph	29.7 in	Partly Cloudy
10:47 AM	87 F	44%	CALM	0 mph	29.7 in	Partly Cloudy
11:47 AM	86 F	55%	VAR	5 mph	29.7 in	Partly Cloudy
12:47 PM	87 F	53%	VAR	3 mph	29.7 in	Fair
1:47 PM	85 F	51%	CALM	0 mph	29.6 in	Fair
2:47 PM	85 F	49%	CALM	0 mph	29.6 in	Partly Cloudy
3:47 PM	84 F	46%	VAR	7 mph	29.6 in	Fair
4:47 PM	82 F	47%	VAR	3 mph	29.6 in	Partly Cloudy
5:47 PM	82 F	44%	CALM	0 mph	29.6 in	Partly Cloudy
6:47 PM	82 F	49%	CALM	0 mph	29.6 in	Mostly Cloudy
7:47 PM	80 F	47%	VAR	3 mph	29.6 in	Mostly Cloudy
8:47 PM	77 F	52%	VAR	3 mph	29.7 in	Mostly Cloudy
9:47 PM	76 F	67%	CALM	0 mph	29.7 in	Partly Cloudy
10:47 PM	75 F	71%	WSW	3 mph	29.7 in	Partly Cloudy



Time	Temp.	Humidity	Wind Dir.	Wind Speed	Pressure	Condition
11:47 PM	73 F	79%	CALM	0 mph	29.7 in	Mostly Cloudy
7/12/18 12:47 AM	72 F	81%	CALM	0 mph	29.7 in	Partly Cloudy
1:47 AM	72 F	81%	CALM	0 mph	29.7 in	Partly Cloudy
2:47 AM	72 F	81%	CALM	0 mph	29.7 in	Fair
3:47 AM	72 F	78%	CALM	0 mph	29.7 in	Mostly Cloudy
4:47 AM	73 F	76%	CALM	0 mph	29.7 in	Mostly Cloudy
5:47 AM	72 F	78%	CALM	0 mph	29.7 in	Partly Cloudy
6:47 AM	72 F	78%	CALM	0 mph	29.7 in	Partly Cloudy
7:47 AM	74 F	79%	CALM	0 mph	29.7 in	Mostly Cloudy
8:47 AM	78 F	68%	CALM	0 mph	29.8 in	Partly Cloudy
9:47 AM	82 F	60%	CALM	0 mph	29.7 in	Fair
10:47 AM	86 F	53%	CALM	0 mph	29.8 in	Partly Cloudy
11:47 AM	86 F	51%	VAR	3 mph	29.7 in	Fair
12:47 PM	86 F	51%	W	5 mph	29.7 in	Fair



5. DOM 300-01 Drilling Operation Noise Modeling

The noise modeling was completed with use of three-dimensional computer noise modeling software. All models in this report were developed with SoundPLAN 8.0 software using the ISO 9613-2 standard. Noise levels are predicted based on the locations, noise levels and frequency spectra of the noise sources, and the geometry and reflective properties of the local terrain, buildings and barriers. To ensure a conservative assessment and compliance with ISO 9613-2 standards, light to moderate winds are assumed to be blowing from the source to receptor.

The predicted noise levels represent only the contribution of the project operations and do not include ambient noise or noise from other facilities. Actual field sound level measurements may vary from the modeled noise levels due to other noise sources such as traffic, other facilities, other human activity, or environmental factors.

The given sound power levels of the drilling rig and ancillary equipment provided by California Water Service have been used to construction the drilling operational noise model at the DOM 300-01 site.

The DOM 300-01 site and surrounding area are classified as a heavy manufacturing zone by the City of Compton as shown in Figure 5-1. To minimize the noise level to the adjacent fire station sleeping quarters the noise limit of 70 dB for semi-residential/commercial land used will be applied to the proposed drilling operation at the site.

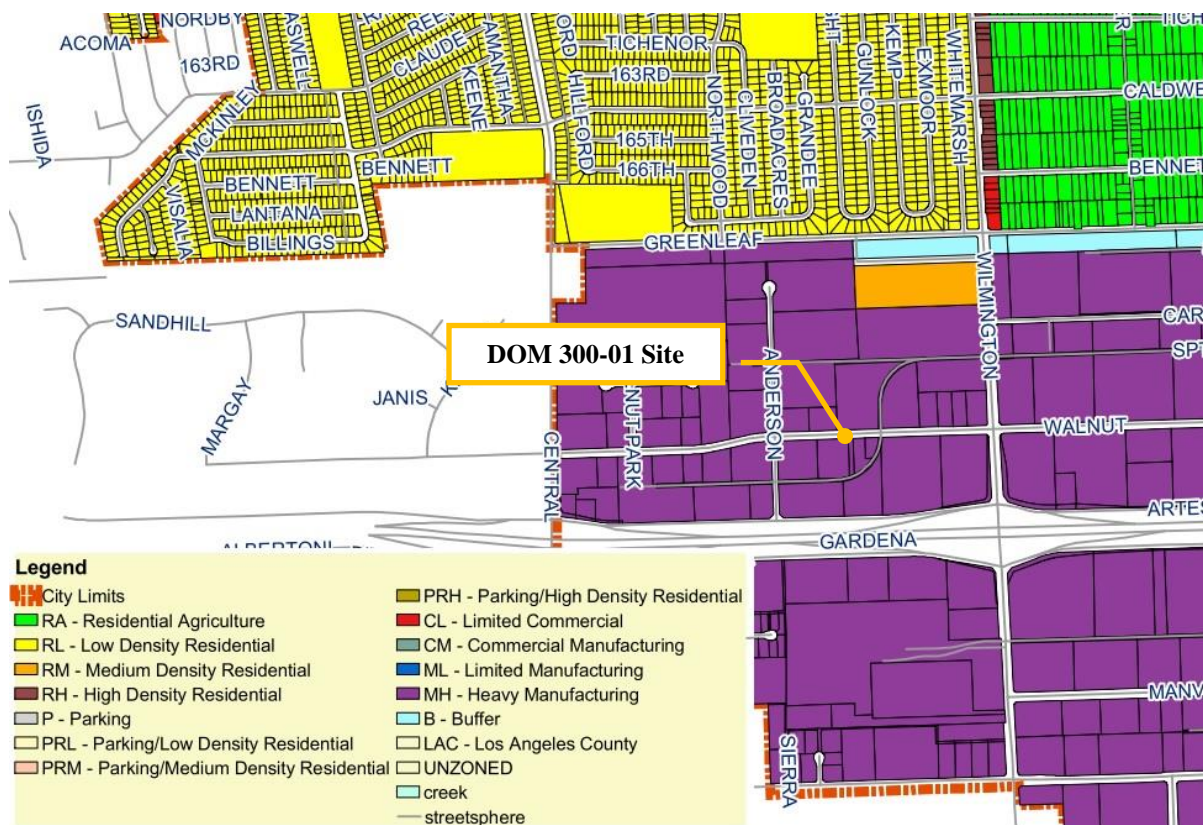


Figure 5-1 City of Compton Zoning Map

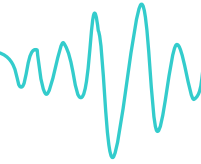


Table 5-1 shows the equipment that will be utilized during the drilling operations at the site. As such, a drilling model was constructed to predict the constant, steady-state noise levels at the site. All equipment will be operating simultaneously in the model to represent a “worst-case” noise impact scenario. The drilling operations are expected to occur during daytime hours.

The sound power levels and quantities of equipment included in the noise model are provided in Table 5-1.

Table 5-1 Equipment in the Noise Model

Freq	Frequency (dBA)								Overall (dBA)	
	31 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz		8k Hz
Drill Rig										
Rotary Table	57.6	72.0	80.4	87.9	98.0	100.5	97.5	91.5	79.5	103.6
Drawworks	56.7	67.9	77.3	85.4	89.4	91.2	89.4	81.5	73.2	95.6
Rig Engine	56.3	69.8	77.8	83.1	88.3	92.5	91.2	84.9	94.2	98.4
Rig Engine Exhaust	65.9	65.2	73.9	77.8	80.2	83.1	81.6	74.8	64.1	87.6
Ancillary Equipment										
Air Compressor	61.8	75.8	93.5	97.5	99.5	100.6	99.8	95.8	88.9	109.1
Portable Generator	32.9	84.1	85.7	93.6	82.5	88.6	85.7	82.0	74.4	97.8
Backhoe	60.3	70.5	73.3	84.0	95.4	90.0	90.5	84.6	85.6	98.2

5.1 Unmitigated Noise Modeling Results

Noise levels were assessed at selected properties around the site. The selected properties are shown as Receptor 1 through Receptor 4 in Figure 5-2.

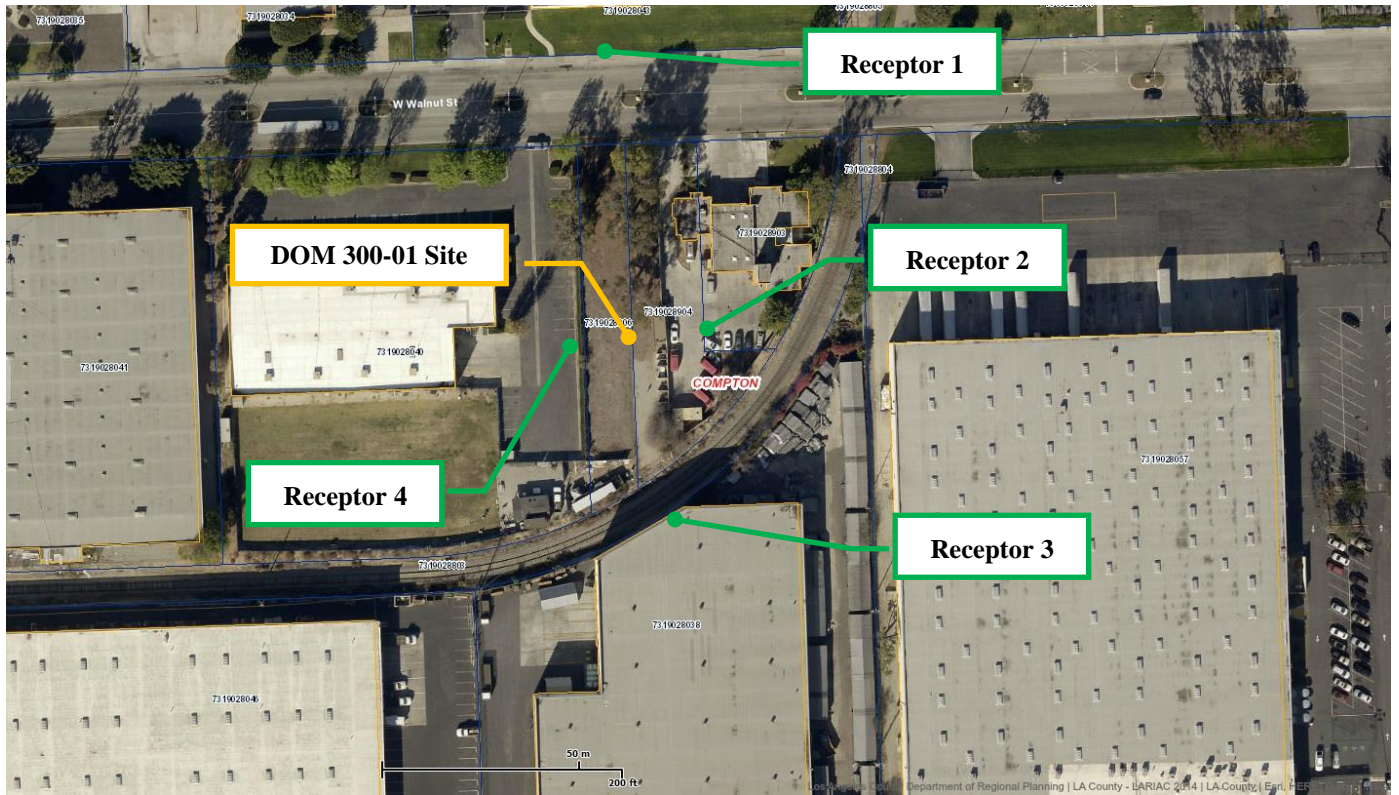
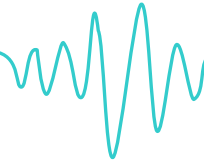


Figure 5-2 Receptor Locations

The results of the drilling operational noise modeling are presented in Table 5-2.

Table 5-2 Noise Modeling Results (dBA) with Noise Limit

Receptor	Unmitigated	Noise Limit
1	58.0	-
2	71.1	70
3	66.4	-
4	77.0	-

The results of the noise modeling are also shown as noise contour maps. Figure 5-2 shows the drilling operational noise contour map in the A-weighted decibel scale.

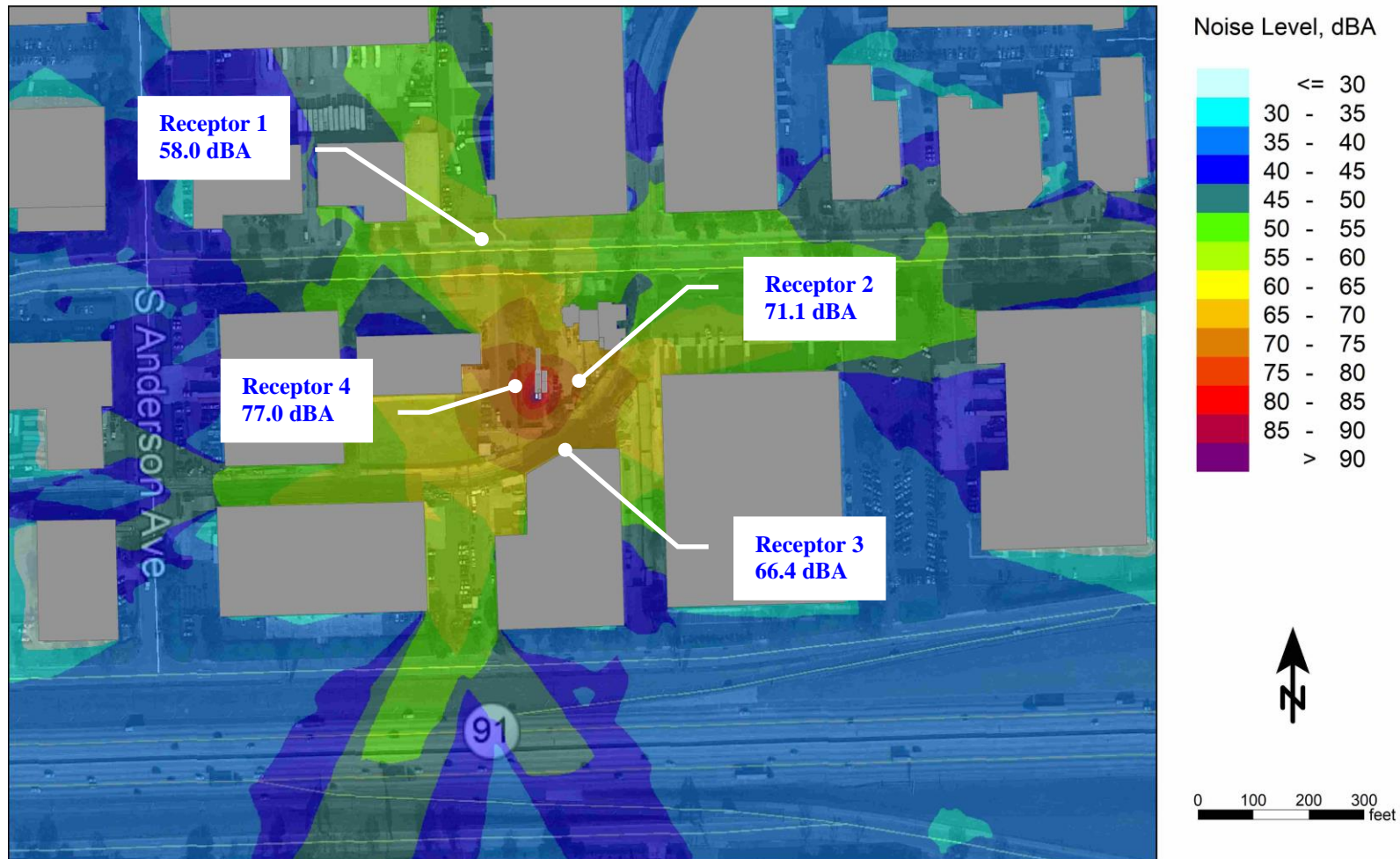
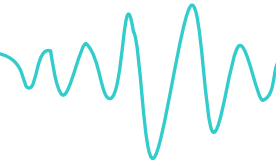
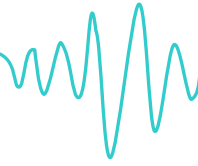


Figure 5-2 Unmitigated Noise Contour Map (dBA)



5.2 Mitigated Noise Modeling Results

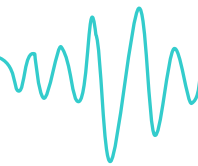
Based on the unmitigated noise modeling, the drilling operation will exceed the noise level limit up to 1.1 dB at Receptor 2 and therefore require noise mitigation. The following noise mitigation measures are recommended at DOM 300-01 site:

- 220 linear feet of 16-ft high sound barrier wall with a Sound Transmission Class (STC) rating of at least 25 on the east and partial south sides of the proposed site with no openings or gaps in the wall.

Figure 5-3 below shows the layout of the recommended sound barrier wall.



Figure 5-3 Layout of Mitigation



The predicted noise levels represent only the contribution of the project operations and do not include ambient noise or noise from other facilities. Actual field sound level measurements may vary from the modeled noise levels due to other noise sources such as traffic, other facilities, other human activity, or environmental factors.

The results of the drilling operational noise modeling are presented in Table 5-2.

Table 5-3 Noise Modeling Results (dBA) with Noise Limit

Receptor	Unmitigated	Mitigated	Noise Limit
1	58.0	58.4	-
2	71.1	58.2	70
3	66.4	56.5	-
4	77.0	77.2	-

The results of the noise modeling are also shown as noise contour maps. Figure 5-2 shows the drilling operational noise contour map in the A-weighted decibel scale.

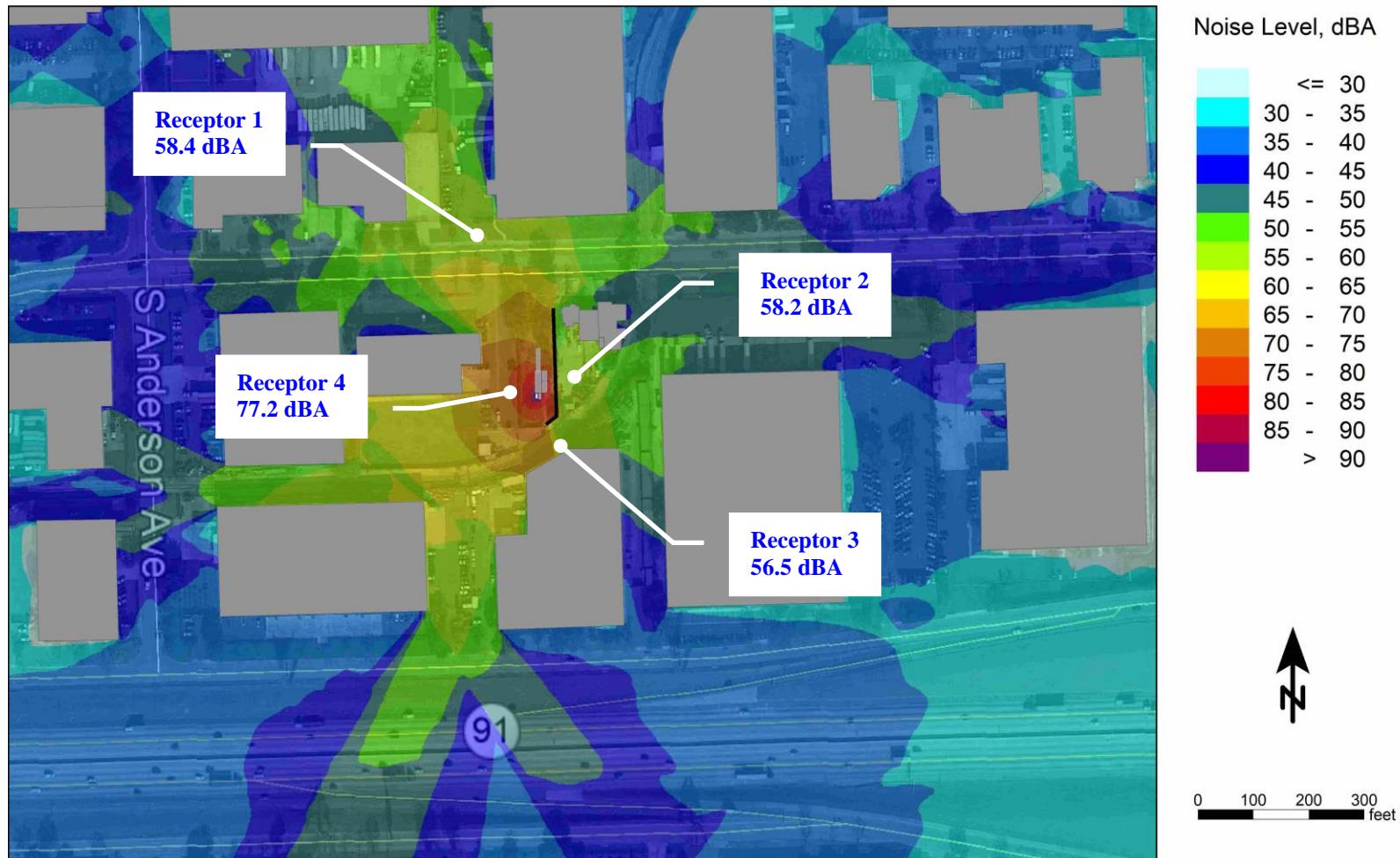
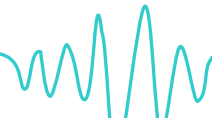
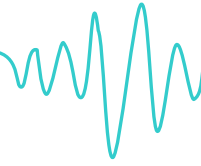


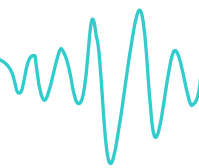
Figure 5-4 Mitigated Noise Contour Map (dBA)



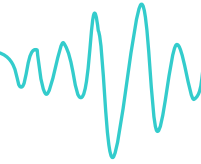
6. Conclusion

A noise model representing the drilling operation was constructed to represent the DOM 300-01 site in the City of Compton, California. The unmitigated modeling predicted operational noise levels of up to 71.1 L_{eq} dBA at Receptor 2.

With implementation of the mitigation measures in Chapter 5.2, the mitigated modeling predicted operational noise levels up to 58.2 L_{eq} dBA at Receptor 2 and therefore the predicted mitigated noise levels comply with the noise limit of 70 dBA at the fire station.



Appendix A - Glossary of Acoustical Terms



Ambient Noise

The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources both near and far.

Average Sound Level

See Equivalent-Continuous Sound Level.

A-Weighted Sound Level, dB(A)

The sound level obtained by use of A-weighting. Weighting systems were developed to measure sound in a way that more closely mimics the ear's natural sensitivity relative to frequency so that the instrument is less sensitive to noise at frequencies where the human ear is less sensitive and more sensitive at frequencies where the human ear is more sensitive.

Community Noise Equivalent Level (CNEL)

A 24-hour A-weighted average sound level which takes into account the fact that a given level of noise may be more or less tolerable depending on when it occurs. The CNEL measure of noise exposure weights average hourly noise levels by 5 dB for the evening hours (between 7:00 pm and 10:00 pm), and 10 dB between 10:00 pm and 7:00 am, then combines the results with the daytime levels to produce the final CNEL value. It is measured in decibels, dB.

Day-Night Average Sound Level (Ldn)

A measure of noise exposure level that is similar to CNEL except that there is no weighting applied to the evening hours of 7:00 pm to 10:00 pm. It is measured in decibels, dB.

Daytime Average Sound Level

The time-averaged A-weighted sound level measured between the hours of 7:00 am to 7:00 pm. It is measured in decibels, dB.

Decay Rate

The time taken for the sound pressure level at a given frequency to decrease in a room. It is measured in decibels per second, dB/s.

Decibel (dB)

The basic unit of measurement for sound level.

Direct Sound

Sound that reaches a given location in a direct line from the source without any reflections.

Divergence

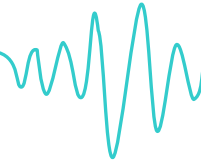
The spreading of sound waves from a source in a free field, resulting in a reduction in sound pressure level with increasing distance from the source.

Energy Basis

This refers to the procedure of summing or averaging sound pressure levels on the basis of their squared pressures. This method involves the conversion of decibels to pressures, then performing the necessary arithmetic calculations, and finally changing the pressure back to decibels.

Equivalent-Continuous Sound Level (Leq)

The average sound level measured over a specified time period. It is a single-number measure of time-varying noise over a specified time period. It is the level of a steady sound that, in a stated time period and at a stated location, has the same A-Weighted sound energy as the time-varying sound. For example, a person who experiences an Leq of 60 dB(A) for a period of 10 minutes standing next to a busy street is exposed to the same amount of sound energy as if he had experienced a constant noise level of 60 dB(A) for 10 minutes rather than the time-varying traffic noise level. It is measured in decibels, dB.



Fast Response

A setting on the sound level meter that determines how sound levels are averaged over time. A fast sound level is always more strongly influenced by recent sounds, and less influenced by sounds occurring in the distant past, than the corresponding slow sound level. For the same non-steady sound, the maximum fast sound level is generally greater than the corresponding maximum slow sound level. Fast response is typically used to measure impact sound levels.

Field Impact Insulation Class (FIIC)

A single number rating similar to the impact insulation class except that the impact sound pressure levels are measured in the field.

Field Sound Transmission Class (FSTC)

A single number rating similar to sound transmission class except that the transmission loss values used to derive this class are measured in the field.

Flanking Sound Transmission

The transmission of sound from a room in which a source is located to an adjacent receiving room by paths other than through the common partition. Also, the diffraction of noise around the ends of a barrier.

Frequency

The number of oscillations per second of a sound wave.

Hourly Average Sound Level (HNL)

The equivalent-continuous sound level, L_{eq} , over a 1-hour time period.

Impact Insulation Class (IIC)

A single number rating used to compare the effectiveness of floor/ceiling assemblies in providing reduction of impact-generated sound such as the sound of a person's walking across the upstairs floor.

Impact Noise

The noise that results when two objects collide.

Impulse Noise

Noise of a transient nature due to the sudden impulse of pressure like that created by a gunshot or balloon bursting.

Insertion Loss

The decrease in sound level measured at the location of the receiver when an element (e.g., a noise barrier) is inserted in the transmission path between the sound source and the receiver.

Inverse Square Law

A rule by which the sound intensity varies inversely with the square of the distance from the source. This results in a 6dB decrease in sound pressure level for each doubling of distance from the source.

Masking

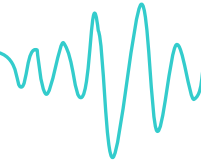
The process by which the threshold of hearing for one sound is raised by the presence of another sound.

Maximum Sound Level (L_{max})

The greatest sound level measured on a sound level meter during a designated time interval or event.

NC Curves (Noise Criterion Curves)

A system for rating the noisiness of an occupied indoor space. An actual octave-band spectrum is compared with a set of standard NC curves to determine the NC level of the space.



Noise Isolation Class (NIC)

A single number rating derived from the measured values of noise reduction between two enclosed spaces that are connected by one or more partitions. Unlike STC or NNIC, this rating is not adjusted or normalized to a measured or standard reverberation time.

Noise Reduction

The difference in sound pressure level between any two points.

Noise Reduction Coefficient (NRC)

A single number rating of the sound absorption properties of a material. It is the average of the sound absorption coefficients at 250, 500, 1000, and 2000 Hz, rounded to the nearest multiple of 0.05.

Normalized Noise Isolation Class (NNIC)

A single number rating similar to the noise isolation class except that the measured noise reduction values are normalized to a reverberation time of 0.5 seconds.

Octave

The frequency interval between two sounds whose frequency ratio is 2. For example, the frequency interval between 500 Hz and 1,000 Hz is one octave.

Octave-Band Sound Level

For an octave frequency band, the sound pressure level of the sound contained within that band.

One-Third Octave

The frequency interval between two sounds whose frequency ratio is $2^{1/3}$. For example, the frequency interval between 200 Hz and 250 Hz is one-third octave.

One-Third-Octave-Band Sound Level

For a one-third-octave frequency band, the sound pressure level of the sound contained within that band.

Outdoor-Indoor Transmission Class (OITC)

A single number rating used to compare the sound insulation properties of building façade elements. This rating is designed to correlate with subjective impressions of the ability of façade elements to reduce the overall loudness of ground and air transportation noise.

Peak Sound Level (Lpk)

The maximum instantaneous sound level during a stated time period or event.

Pink Noise

Noise that has approximately equal intensities at each octave or one-third-octave band.

Point Source

A source that radiates sound as if from a single point.

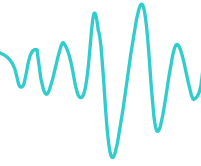
RC Curves (Room Criterion Curves)

A system for rating the noisiness of an occupied indoor space. An actual octave-band spectrum is compared with a set of standard RC curves to determine the RC level of the space.

Real-Time Analyzer (RTA)

An instrument for the determination of a sound spectrum.

Receiver



A person (or persons) or equipment which is affected by noise.

Reflected Sound

Sound that persists in an enclosed space as a result of repeated reflections or scattering. It does not include sound that travels directly from the source without reflections.

Reverberation

The persistence of a sound in an enclosed or partially enclosed space after the source of the sound has stopped, due to the repeated reflection of the sound waves.

Room Absorption

The total absorption within a room due to all objects, surfaces and air absorption within the room. It is measured in Sabins or metric Sabins.

Slow Response

A setting on the sound level meter that determines how measured sound levels are averaged over time. A slow sound level is more influenced by sounds occurring in the distant past than the corresponding fast sound level.

Sound

A physical disturbance in a medium (e.g., air) that is capable of being detected by the human ear.

Sound Absorption Coefficient

A measure of the sound-absorptive property of a material.

Sound Insulation

The capacity of a structure or element to prevent sound from reaching a receiver room either by absorption or reflection.

Sound Level Meter (SLM)

An instrument used for the measurement of sound level, with a standard frequency-weighting and standard exponentially weighted time averaging.

Sound Power Level

A physical measure of the amount of power a sound source radiates into the surrounding air. It is measured in decibels.

Sound Pressure Level

A physical measure of the magnitude of a sound. It is related to the sound's energy. The terms sound pressure level and sound level are often used interchangeably.

Sound Transmission Class (STC)

A single number rating used to compare the sound insulation properties of walls, floors, ceilings, windows, or doors. This rating is designed to correlate with subjective impressions of the ability of building elements to reduce the overall loudness of speech, radio, television, and similar noise sources in offices and buildings.

Source Room

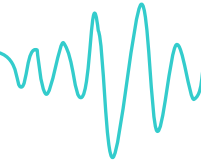
A room that contains a noise source or sources.

Spectrum

The spectrum of a sound wave is a description of its resolution into components, each of different frequency and usually different amplitude.

Tapping Machine

A device used in rating different floor constructions against impacts. It produces a series of impacts on the floor under test, 10 times per second.



Tone

A sound with a distinct pitch.

Transmission Loss (TL)

A property of a material or structure describing its ability to reduce the transmission of sound at a particular frequency from one space to another. The higher the TL value the more effective the material or structure is in reducing sound between two spaces. It is measured in decibels.

White Noise

Noise that has approximately equal intensities at all frequencies.

Windscreen

A porous covering for a microphone, designed to reduce the noise generated by the passage of wind over the microphone.

X-Percentile-Exceeded Sound Level

The A-Weighted sound level equaled or exceeded by a fluctuating sound level x percent of a stated time period. E.g., the letter symbol L10 represents the sound level which exceeded for more than 30 minutes in an hour, L25 is the sound level exceeded for more than 15 minutes in an hour, L8 is the sound level exceeded for more than 5 minutes in an hour, and L2 is the sound level exceeded for more than 1 minute in an hour.

ENGINEERING CALCULATIONS

DOMINGUEZ WELL NO. 300
PHASE 1

24 FT HIGH TEMPORARY SOUNDWALL
STRUCTURAL DESIGN

Date: July 31, 2018
Rev.: 0

Prepared by:

ENVIRONMENTAL NOISE CONTROL
13806 Inglewood Avenue,
Hawthorne CA 90250



7/31/18
Edwin O. Olweny Stamp/Seal

CALCULATION SHEET

Project: Dominguez Well No. 300 - 24 ft High Temporary Soundwall	Client: California Water Services	Page: 2 <i>(Including Cover Sht)</i> Total: 20
Subject: Structural Design of Framing and Foundation	By: EO	Date: 7-31-2018

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1.0 DESIGN CRITERIA

1.1 APPLICABLE CODES AND STANDARDS

1. California Building Code (CBC); 2016 Edition
2. ASCE Standard, ASCE/SEI 7-10; Minimum Design Loads for Buildings and Other Structures
3. ANSI/AISC 360-10; Specification for Structural Steel Buildings; 14th Edition; June 22, 2010
4. ASCE/SEI 37-14; Design Loads on Structures During Construction

1.2 DESIGN PARAMETERS

a) Wind Criteria:

Wind design is in accordance with the CBC, 2016 Edition

Ultimate Design Wind Speed, V_{ULT} :	100 mph	(Fig. 1609.3(3))
Exposure:	B	
Risk Category: (Temporary Structure)	I	(Table 1604.5)

A 20% reduction in wind speed shall be applied to the Ultimate Design Wind Speed based on the following criteria in ASCE 37-14. This due to the temporary nature of the walls at the Tract 74353 site. The wall will be up for less than one year:

6.2.1 Design Wind Speed The design wind speed shall be taken as the following factor times the basic wind speed in ASCE/SEI 7-10, except as required in Section 6.2.1.1.1.

Construction Period	Factor
Less than six weeks	0.75
From six weeks to one year	0.8
From one to two years	0.85
From two to five years	0.9

C6.2.1 Design Wind Speed Wind speeds are reduced from requirements for permanent structures, consistent with the philosophy explained in Section C6.0. The quantitative method used to achieve this objective is that the wind load should have the same likelihood of being exceeded in the construction period as the permanent structure design wind does in a 50-year period. The reduced construction period speed factors have been developed to achieve this objective (Boggs and Peterka 1992; Rosowsky 1995).

Factors for construction periods less than one year are developed based on judgment, because statistical analyses of seasonal wind variations have not been performed for all regions. Local wind speed data should be consulted when using these factors.

$$V_{ult} = 0.80 \times 100 \text{ mph} = 80 \text{ mph will be used.}$$

b) Seismic Criteria:

Seismic design does not govern for this light framed structure. Design wind loads are far greater. The weight of the wall system is less than 5.0 psf while the design wind pressure is greater than 9 psf. In addition, the ASD load combination reduces

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the seismic loads to 0.7. Seismic design is therefore concluded to be enveloped by the wind load.

c) Steel Materials:

Steel Shapes	ASTM A992, $F_y = 50$ ksi
Steel Plates.....	ASTM A36, $F_y = 36$ ksi, or better
Steel Pipe and (Tube).....	ASTM A500, Gr. B, $F_y = 42$ ksi, (46 ksi,)
Bolts:	ASTM A307 (U.N.O.)
Welds:.....	E70xx Electrodes

d) Weight:

- The erected wall weighs no more than 5 psf

Item: 8 x 20 Panel Upper & Base	Length	Width	Area	Unit Weight		Total Wt
				Length	Area	
	ft	ft	ft ²	lb/ft	lb/ft ²	lbs
HSS 2 x 2 x 14 Ga , Galvanized	94	---	---	2.02	---	189.9
STC-25 or 32 Acoustical Cladding	20	8.0	160	---	1.75	280.0
W12x19 (2 per Panel)	16	---	---	19	---	304.0
Miscellaneous (@ 10%)	---	---	---	---	---	23.5
		Wall Total Weight , W =				797.4
		Wall wt / sf (= W / 160 sf) =				5.0

e) Soil Classification:

- No soils report is available for this project.
- The presumptive load-bearing values provided in the CBC Section 1806 are assumed.
- It shall also be noted that this project is for a temporary light-weight non-building structure.
- One condition to be met is that the soil conditions at the site shall not include mud, organic silt, organic clays, peat or unprepared fill; unless it is deemed acceptable for this lightweight and temporary structure per the Exception noted in Section 1806.2.

Thus, the following CBC acceptable presumptive values are used:

1. Presumptive vertical soil bearing pressure: 1500 psf (Table 1806.2)
2. Presumptive lateral soil bearing pressure: 100 psf/ft depth (Table 1806.2)
With consideration of 6. Below, Use: 200 psf/ft depth

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3. Presumptive cohesion (clay): 130 psf (Table 1806.2)
4. Conservatively, the class of soil values used will be that of clay, sandy clay, silty clay, clayey silt, silt and sandy silt.
5. The lateral bearing value will be increased for depth below grade, when establishing lateral soil resistance for the posts in accordance with CBC Section 1806.3.3 criteria.
6. Given the sound walls would not be adversely affected by a ½ inch deflection at the base of the poles, lateral bearing capacities per Table 1806.2 may be doubled per Section 1806.3.4 when considering short-term lateral loads.

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2.0 DESIGN WIND FORCES

Velocity Pressure:

$$q_z = 0.00256 * K_z * K_{zt} * K_d * V^2 \quad (\text{lb/ft}^2) \quad \text{velocity pressure} \quad (\text{Eq 27.3-1})$$

$$V = 80 \quad \text{mph} \quad (\text{Fig 1609C; uno by Owner/Jurisdiction})$$

$$K_d = 0.85 \quad \text{wind directionality factor (Table 26.6-1)}$$

$$K_z = 2.01 * (z/z_g)^{2/\alpha} \quad \text{Velocity Pressure Exposure if } 15' < z < z_g \quad (\text{Table 29.3-1})$$

For Exposure B

$$z = 24 \quad \text{ft} \quad \text{If } z < 15' \text{ then set } z = 15'$$

$$z_g = 1200 \quad \text{ft} \quad (\text{Tab 26.9-1; atmospheric boundary layer height})$$

$$\alpha = 7.0 \quad (\text{Tab 26.9-1; 3 sec gust speed power law exponent})$$

$$K_{zt} = (1 + K_1 * K_2 * K_3)^2 \quad \text{topographic factor (Eqn 26.8-1)}$$

If terrain is flat then $K_{zt} = 1$

$$K_1 = 1$$

$$K_2 = 1$$

$$K_3 = 0$$

$$K_{zt} = 1$$

Calculate pressures at appropriate wall elevations:

Elevation z ft	K_z	q_z
0-15	0.575	8.0
16	0.585	8.2
17	0.596	8.3
18	0.605	8.4
19	0.615	8.6
20	0.624	8.7
21	0.633	8.8
22	0.641	8.9
23	0.649	9.0
24	0.657	9.2

Gust Effect Factor:

Exposure Category	B
h =	24 ft
$\hat{z} = 0.6h$	30 ft
c =	0.2
$\lambda =$	320 ft
$\epsilon =$	0.333
$L_{\hat{z}} =$	310.0 ft
B =	220
Q =	0.805
$I_z =$	0.203
$g_Q =$	3.4
$g_V =$	3.4

$Z_{min} = 30$ for Exp B , and $Z_{min} = 15$ for Exp C

where: "c" = 0.3 for Exp B, = 0.2 for Exp C
 $\lambda = 320$, Exp B ; $\lambda = 500$, Exp C

where "e" = 1/3.0, Exp B; = 1/5.0, Exp C

=200'+20' ; Longest straight run of wall

$$G = 0.828$$

So, Use G 0.828

Note: G need not be > 0.85

CALCULATION SHEET

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Force Coefficient:

Per Fig. 29.4-1: $B/s \geq 9$ $s/h = 1$

Case A: $S_o, C_f = 1.30$

Case C: Consider w/ (1.8 -s/h) reduction = 0.8, for 220 ft long wall

$S_o, C_f = 2.92$ (= 3.65 x 0.8) for Distance s = 0 ft to 24 ft

$S_o, C_f = 1.88$ (= 2.35 x 0.8) for Distance s = 24 ft to 48 ft

$S_o, C_f = 1.4$ (= 1.75 x 0.8) for Distance s = 48 ft to 72 ft

Deign Wind Force:

$$F = (q_z)(G)(C_f)(A_f) \text{ lbs, Eqn: 29.4-1}$$

Case A: 24 FT High Post Forces: Exposure B ($C_f = 1.30$)						
Height Above Grade H (ft)	Wind Press. q_z (psf)	Tributary Vertical Section of Wall S (ft)	Post Spacing B (ft)	Tributary Area A_f (ft ²)	Tributary Wind Force F (lbs)	Tributary Moment M (ft-lb)
0 to 15	8.0	15.0	10	150.0	1291.9	9689.3
16	8.2	1.0	10	10.0	87.7	1359.8
17	8.3	1.0	10	10.0	89.3	1472.8
18	8.4	1.0	10	10.0	90.7	1587.8
19	8.6	1.0	10	10.0	92.1	1704.7
20	8.7	1.0	10	10.0	93.5	1823.3
21	8.8	1.0	10	10.0	94.8	1943.8
22	8.9	1.0	10	10.0	96.1	2065.9
23	9.0	1.0	10	10.0	97.3	2189.6
24	9.2	1.0	10	10.0	98.5	2314.9
Total OTM (ft-lbs) =						26,151.8
Total Wind Force =						2,132.0

CALCULATION SHEET

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Case C: 24 FT High Post Forces: Exposure B, ($C_f = 1.88$)

Height Above Grade H (ft)	Wind Press. q_z (psf)	Tributary Vertical Section of Wall S (ft)	Post Spacing B (ft)	Tributary Area A_t (ft ²)	Tributary Wind Force F (lbs)	Tributary Moment M (ft-lb)
0 to 15	8.0	15.0	10	150.00	1868.3	14012.2
16	8.2	1.0	10	10.00	126.9	1966.5
17	8.3	1.0	10	10.00	129.1	2129.9
18	8.4	1.0	10	10.00	131.2	2296.2
19	8.6	1.0	10	10.00	133.3	2465.2
20	8.7	1.0	10	10.00	135.2	2636.8
21	8.8	1.0	10	10.00	137.1	2811.0
22	8.9	1.0	10	10.00	139.0	2987.5
23	9.0	1.0	10	10.00	140.7	3166.5
24	9.2	1.0	10	10.00	142.5	3347.7
				Total OTM (ft-lbs) =		37,819.5
				Total Wind Force =		3,083.2

Case C: 24 FT High Post Forces: Exposure B, ($C_f = 2.92$)

Height Above Grade H (ft)	Wind Press. q_z (psf)	Tributary Vertical Section of Wall S (ft)	Post Spacing B (ft)	Tributary Area A_t (ft ²)	Tributary Wind Force F (lbs)	Tributary Moment M (ft-lb)
0 to 15	8.0	15.0	10	150.00	2901.8	21763.6
16	8.2	1.0	10	10.00	197.1	3054.3
17	8.3	1.0	10	10.00	200.5	3308.2
18	8.4	1.0	10	10.00	203.8	3566.5
19	8.6	1.0	10	10.00	207.0	3829.0
20	8.7	1.0	10	10.00	210.0	4095.5
21	8.8	1.0	10	10.00	213.0	4366.0
22	8.9	1.0	10	10.00	215.8	4640.2
23	9.0	1.0	10	10.00	218.6	4918.1
24	9.2	1.0	10	10.00	221.3	5199.5
				Total OTM (ft-lbs) =		58,741.0
				Total Wind Force =		4,788.8

CALCULATION SHEET

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3.0 FRAMING DESIGN

3.1 COLUMNS (W12 POSTS)

a) Load Combination: ASD

$$D + 0.6W$$

$$0.6 D \pm 0.6 W \quad (\text{Uplift Cases})$$

Note: All other load combinations do not govern so are not evaluated

c) Posts in Flexure (Moment)

$$M_a = \text{Required Strength}$$

$$M_n = \text{Nominal Strength}$$

$$\Omega = \text{Safety Factor}$$

$$M_n / \Omega = \text{Allowable Strength}$$

For Case A:

$$M_a = 0.6 \times 58,741 \text{ ft-lb} \quad ; \text{ from Table on page 6}$$

$$= 35,245 \text{ ft-lb}$$

$$\Omega = 1.67 \quad ; \text{ Section I3.2a; AISC 360-10}$$

$$M_n = F_y \cdot Z_x = 50 \cdot Z_x \text{ k-in}$$

$$\text{Req'd } Z_x = (35,245 \cdot 12 \text{ in} / 1000 \text{ lb}) \cdot (1.67) / (50 \text{ ksi}) = \underline{14.13 \text{ in}^3}$$

Use: W12 x 19 or larger ; $Z_x = 24.7 \text{ in}^3$

Post Lateral Restraint

The posts are restrained laterally and against rotation by the panel system in combination with the clamp system every 4 ft in height. Unbraced length is not a significant factor in the bending moment design.

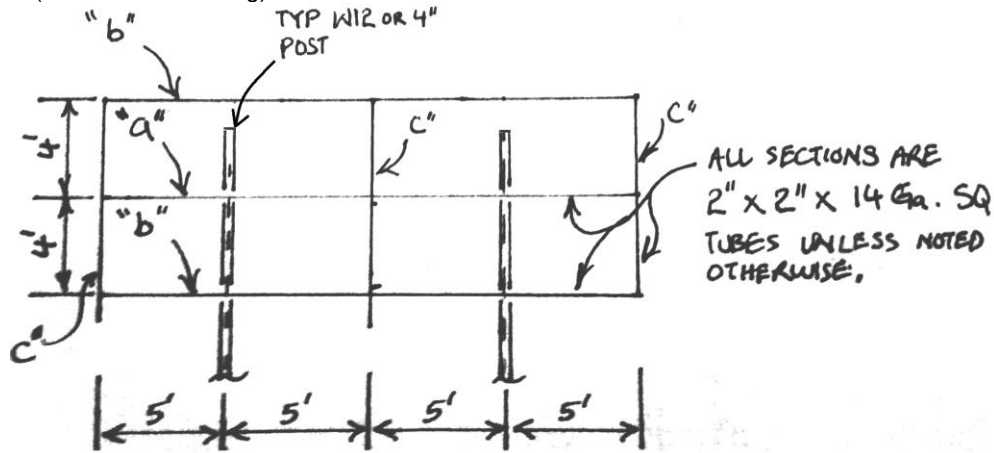
Conclusion: Use of W12x19 as a minimum post size is acceptable

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3.2 **ACOUSTICAL PANELS**

(Panel Tube Framing)



Note:

Since member "c" is fairly rigid, consider that the resulting linear load distributed to members "a" and "b" due to the wind pressure are equal.

2" x 2" x 14 Ga Sq Tube Properties:

$$\begin{aligned} S_x &= 0.289 \text{ in}^3 \\ Z_x &= 0.375 \text{ in}^3 \\ F_y &= 46 \text{ ksi} \end{aligned}$$

Wind Parameters:

$$\begin{aligned} C_f &= 2.92 \\ G &= 0.85 \end{aligned}$$

$$\text{Avg. Design Wind Pressure on wall} = 9.2 \text{ psf}$$

$$\begin{aligned} \text{Total Design Force on Panel} &= 8' \times 20' \times 9.2 \text{ psf} \times C_f \times G \\ &= 8' \times 20' \times 9.2 \text{ psf} \times 2.92 \times 0.85 \\ &= 3653.50 \text{ lbs} \end{aligned}$$

a) CHECK SQ TUBE:

$$\text{Uniform Load on ea. tube:} = \frac{3653.504 \text{ lbs}}{(3 \text{ tubes} \times 20')} = 60.9 \text{ lbs/ft}$$

$$\text{So, } W = 0.0051 \text{ k/in}$$

Highest moments occur at cantilevered end:

$$\begin{aligned} L &= 5.0 \text{ ft} = 60.0 \text{ in} \\ M_a &= \frac{0.6 \times WL^2}{2} = 5.48 \text{ k-in} \quad (0.6 = \text{ASD load factor}) \end{aligned}$$

$$\Omega = 1.67$$

$$M_n = (F_y)(Z_x) = 46 \text{ ksi} \times 0.375 \text{ in}^3 = 17.3 \text{ k-in}$$

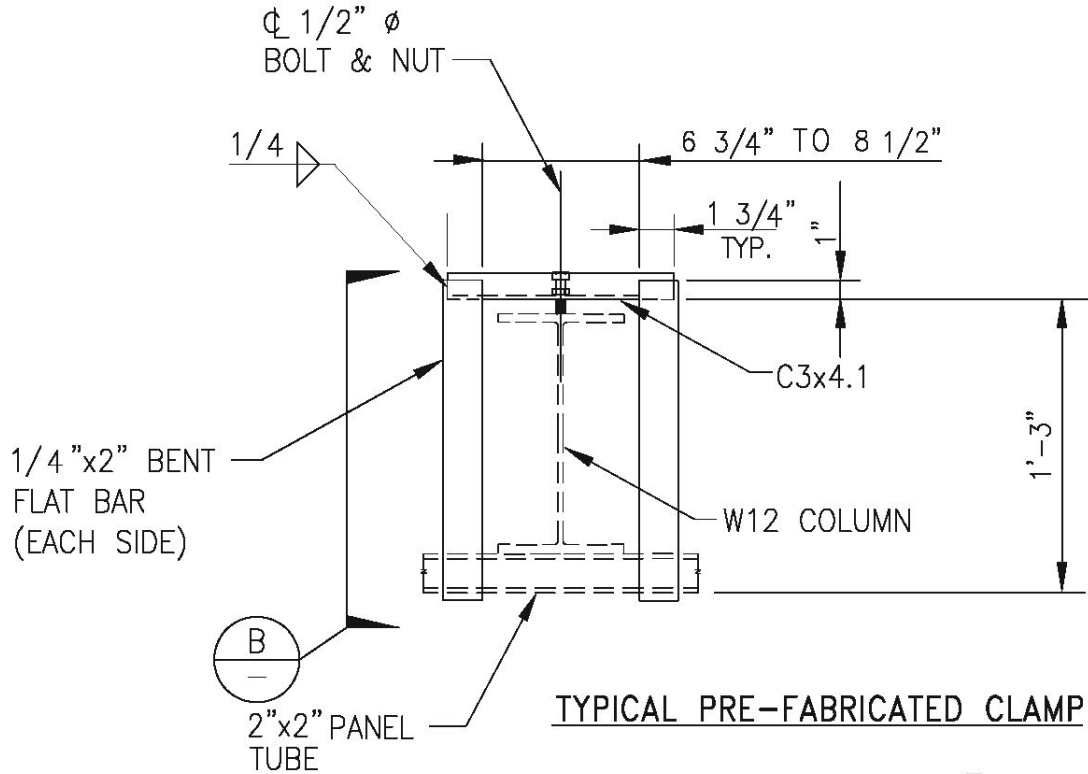
$$M_n / \Omega = 10.3 \text{ k-in} > M_a$$

Conclusion: 2" x 2" x 14 Ga Square Tube is **OK!**

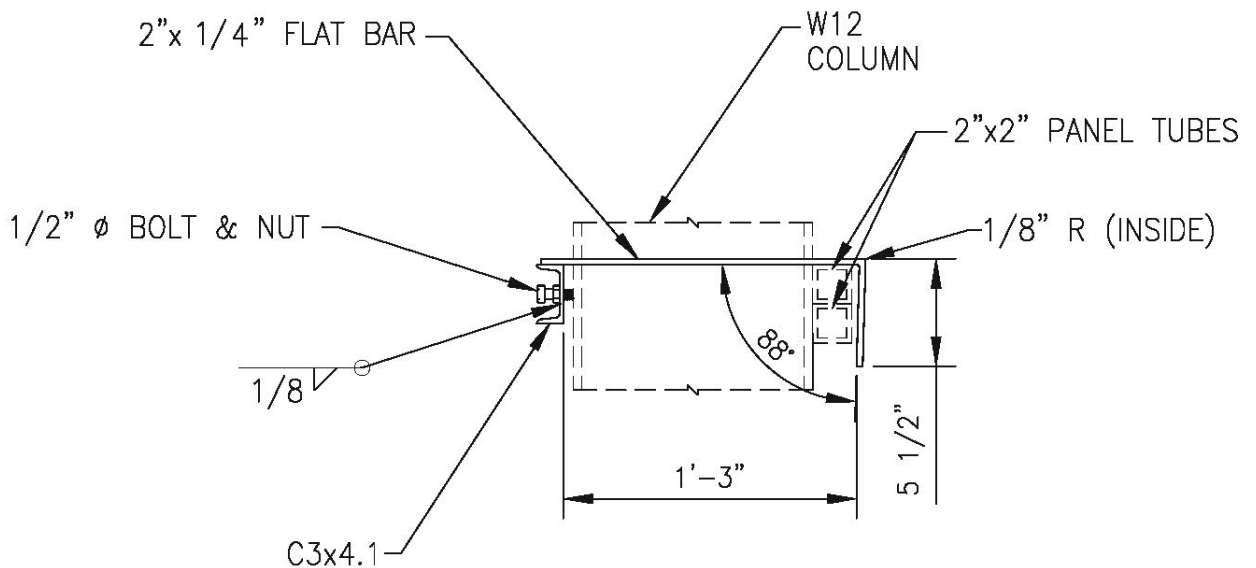
CALCULATION SHEET

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b) Clamp to Pipe Post



SECTION A
1 1/2"=1'-0"



SECTION B
1 1/2"=1'-0"

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Assessment of Load Paths in Clamp:

- The bolt does not experience any tension force. Shear forces are negligible (i.e. self - weight of the clamp generates only shear.)
- Tension in bent plates
- Bending in bent plate ends
- Tension in bent plate causes weak axis bending in the channel.

i) CHECK CRITICAL WELDS & BOLT

Since clamps are at all post crossings, the tributary area supported per clamp = $4' \times 10' = 40 \text{ ft}^2$

- To establish critical clamp forces, use the avg. wind pressure of the top 8'x20' panel.

Wind Press., $q = 9.2 \text{ psf}$

Design Clamp Force, = $0.6 \times 40 \text{ sf} \times 9.2 \times C_f \times G \text{ ps}$
(ASD) = 548 lbs

WELD: Weld Length @ bent bar to channel connection:

$2" + 2" + 1" + 1" = 6"$

Weld Size = $1/4"$ fillet

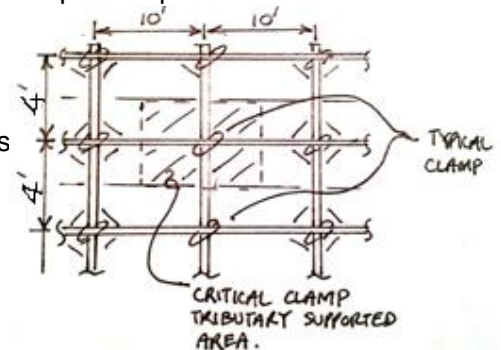
$\Omega = 2.0$

Weld Strength = $0.707 \times 1/4" \times 6" \times 2 \text{ legs} \times (0.6 \times 70 \text{ ksi}) (1/\Omega)$
= 44.5 kips
> 0.548 kips OK!

BOLT: Bolt Capacity, $F_{nt}/\Omega = 22.5 \text{ ksi}$, (ASTM A307 or better)

$1/2" \phi$ Bolt Area = 0.196 in^2

So, Capacity = 4.41 kips
> 0.548 kips OK!



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ii) CHECK CHANNEL CAPACITY

Take moment arm to be distance between bolt center and edge of bent pl.

$$M_a = 3.25 \text{ in} \times 0.5480256 \text{ k} \times 1/2 = 0.891 \text{ k-in}$$

$$\text{Assume } C3 \times 4.1 \text{ (or larger); } Z_y = 0.401 \text{ in}^3$$

$$M_n/\Omega = (F_y)(Z_x) / 1.67 = (36 \text{ ksi} \times 0.401 \text{ in}^3) / 1.67 = 8.64 \text{ k-in} > 0.891 \text{ k-in} \quad \text{OK!}$$

iii) 1/4" BENT PLATE TENSION

$$\text{Width, } b = 2 \text{ in} \quad \text{Thk, } t = 0.2500 \text{ in}$$

$$\text{X-Sectional Area} = 2 \text{ in} \times 0.25 \text{ in} = 0.5 \text{ in}^2$$

$$P_n = F_y A_g = 36 \text{ ksi} \times 0.5 \text{ in}^2 = 18 \text{ kips}$$

$$\text{So, } P_n/\Omega = 10.8 \text{ kips} > 0.548 \text{ k} \quad \text{OK!}$$

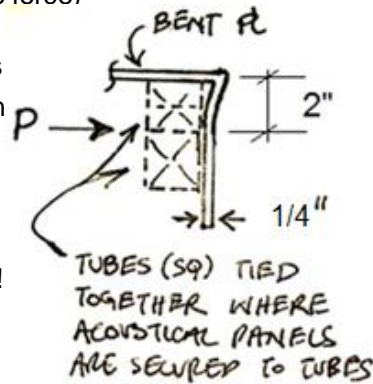
iv) BENDING @ HOOKED ENDS (2 hooks so use half the force)

$$\text{Reaction, } P = 0.5480256 \text{ k} \times 1/2 = 0.274 \text{ kips}$$

$$\text{Moment, } M_a = 0.2740128 \text{ kips} \times 2 = 0.548 \text{ k-in}$$

$$Z_x(\text{pl}) = 1.5 \times S_x(\text{pl}) = 1.5 \times (bt^2)/6 = 0.0313 \text{ in}^3$$

$$M_n/\Omega = (F_y)(Z_x)/1.67 = 0.674 \text{ k-in} > 0.548 \text{ k-in} \quad \text{OK!}$$



v) Acoustical Fabric (Blanket) Connection to Framing

Assume the fabric acts as a catenary system between two parallel supports. The sag will be assumed to be at least 6" at midpoint over the 4 ft span during high winds due to high elasticity (60 times more elastic than steel) and by observation/experience. The Tension force will be compared to the capacity of the screws and fabric at the framing connection:

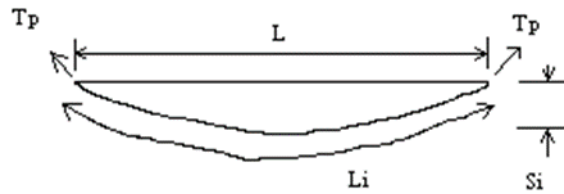
$$\text{Ultimate wind pressure} = 16 \text{ psf} \quad (\text{Actual is } 9.2 \text{ psf} \text{ so this value is conservative})$$

$$\text{Over a } 2' - 0'' \text{ ft width of fabric (= screw spacing)} = 16 \text{ psf} \times 2 \text{ ft} = 32 \text{ plf}$$

$$\text{Design wind load (applying factor per ASD load combination for wind load);} \\ = 0.6 \times 32 = \underline{19.2} \text{ plf}$$

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$$S_i = (wL^2)/(8T_p) \quad (\text{ft})$$

Where: w = applied uniform wind load on strip of fabric (lb/ft)
 T_p = pretension (lbs)

$$\begin{aligned}
 T_p &= (wL^2)/(8S_i) = (19.2 \times 4^2) / (8 \times 6"/12 \text{ in/ft}) \\
 &= \underline{76.8 \text{ lbs}} \\
 &< \underline{100 \text{ lbs}} \quad \text{Tongue tear strength, See attachment Pg 18.} \\
 &\text{(Note: This conservatively ignores the effect of support along vertical frame members)}
 \end{aligned}$$

Use: ¼ - 14 Tek Screw see pg 19 for spec. To affix vinyl fabric to the frame at 2' -0" c to c.

Allowable Fastener Capacities: Tension = 447 lbs, Shear = 867 lbs

As a first order check. Conservatively assume that only the horizontal rows of screws on each panel support the wind loads and ignore the vertical framing. So for a typical 8 ft high x 20 ft panel the row of screws have a tributary load width of 2 ft.

Check:

Uniform load on row of screws:

$$0.6 \times 16 \text{ psf} \times 2 \text{ ft} = 19.2 \text{ plf}$$

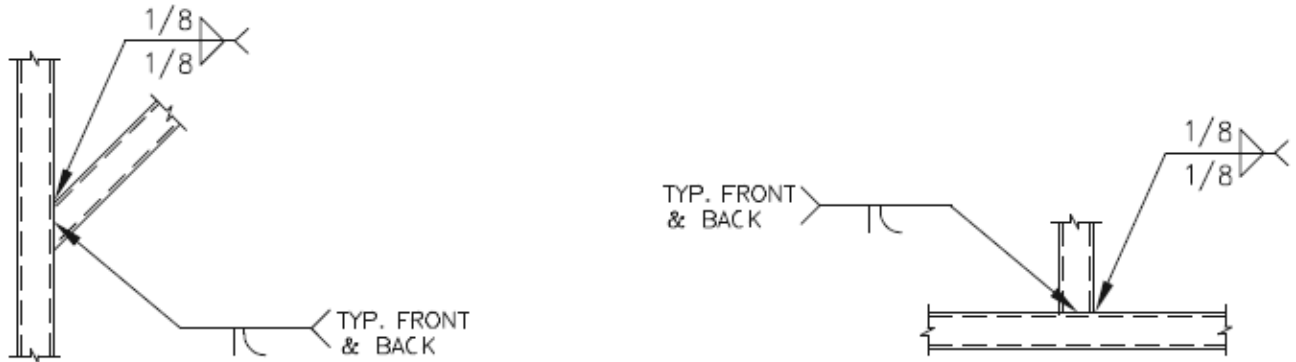
Tek screw allowable pull-out capacity per liner ft:

$$447 \text{ lbs} / 2 \text{ ft spacing} = 223.5 \text{ plf} \gg 19.2 \text{ plf}, \quad \text{OK!}$$

Conclusion: The #14 Tek Screws have ample strength to withstand the wind forces.
Use washers

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TYPICAL PRE-FABRICATED ACOUSTICAL PANEL FRAMING WELDS

Typical Framing Connections
(w/ min welds sizes as indicated)

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4.0 FOUNDATION

Broms' Method for Laterally Loaded Short Piles

Task: Determine the **minimum required embedment, L (ft)**, of the steel Columns/posts given the design wind forces and presumptive soil conditions per code:

Parameters:

Per ASD Load Combination = Design wind load, P per leg
= $0.6(W) = 0.6 \times (\text{Ult. Wind Force Calculated in Section 2.0})$
= $(0.6 \times 4,788.8) \text{ lbs}$
P = 2,873.3 lbs : Applied horizontal design force, Results Table in Section 2.0 of Calc
Per Section soil properties references (next page), $C_u = 0.75 \text{ ksf to } 1.13 \text{ ksf}$ (Conservative)
Take the average value, (though this site is on a paved surface so the max would be acceptable), so:
 $C_u = 940 \text{ lbs/ft}^2$ Soil bearing at depth
D = 4 in : Diameter (Bearing Width) of Foundation (Sleeve)
e = 12 ft : Eccentricity; Distance above grade of resolved load

Solution:

$$f = P / [9 \times C_u \times (D / 12)]$$
$$= 1.02 \text{ ft}$$

$$M_{\max} = P \times [e + 1.5(D/12) + 0.5f] = 2.25(D/12) \times g^2 \times C_u$$
$$= 37,379.8 \text{ ft-lb}$$

$$\text{So, } g = (M_{\max} / [2.25(D/12) \times C_u])^{1/2}$$
$$= 7.28 \text{ ft}$$

$$L = 1.5(D / 12) + f + g$$
$$= 8.80 \text{ ft}$$

Say, 9' - 0" ft to be conservative

Conclusion: The SoundWall posts should be embedded **9' -0"** below grade

CALCULATION SHEET

Project: Dominguez Well No. 300 - 24 ft High Temporary Soundwall	Client: California Water Services	Page: 17 <i>(Including Cover Sht)</i> Total: 20
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ATTACHMENTS

CALCULATION SHEET

Project: Dominguez Well No. 300 - 24 ft High Temporary Soundwall	Client: California Water Services	Page: 18 (Including Cover Sht) Total: 20
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SOIL CLASSIFICATION AND PROPERTIES

COHESIVE SOILS

1500 psf per Table 1806.2

<u>CONSISTENCY</u>	<u>VERY SOFT</u>	<u>SOFT</u>	<u>MEDIUM</u>	<u>STIFF</u>	<u>VERY STIFF</u>	<u>HARD</u>
q_u = unconfined comp. strength (PSF)	500	1000	2000	4000	8000	
Standard Penetration Resistance, N = Blows/Ft *	2	4	8	16	32	
Unit Weight (PCF) Saturated	100-120	110-130	120-140	130+		
<p>VERY SOFT: Exudes from between fingers when squeezed in hand. SOFT: Molded by light finger pressure. MEDIUM: Molded by strong finger pressure. STIFF: Indent by thumb. VERY STIFF: Indent by thumb nail. HARD: Difficult to indent by thumb nail.</p> <p>* N = Blows/Ft as measured by the standard penetration test (See Appendix B).</p>						

To be used only as a rough guide.

TABLE 13

Table 2.6
Consistency of Saturated Cohesive Soils

Consistency	Consolidation History	Blows/ft (N_{60})	Cohesion, ksf (kPa)	Comments
Very Soft	Normally Consolidated	0 - 2	<0.25 (12)	Runs through fingers
Soft	Normally Consolidated	3 - 5	0.38 (18.2) to 0.63 (30.2)	Squeezes easily in fingers
Medium	Normally Consolidated	6 - 9	0.75 (36) to 1.13 (54.1)	Can be formed into a ball
Stiff	Normally Consolidated to Overconsolidation Ratio of 2 - 3	10 - 16	1.25 (59.9) to 2 (95.8)	Hard to deform by hand squeezing
Very Stiff	Overconsolidated	17 - 30	2.13 (102) to 3.75 (179.6)	Very hard to deform by hand
Hard	Highly Overconsolidated	>30	>3.75 (179.6)	Nearly impossible to deform by hand

CALCULATION SHEET

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CAPTARP

9164510379 >>

P 1/1

VINYL TEX

VINYL COATED POLYESTER FABRICS

PRODUCT SPECIFICATIONS

	10oz	14oz	18.5oz	F/R 18.5oz	22oz
Total Weight oz/yd* FS 191-5041	10oz/yd*	14oz/yd*	18.5oz/yd*	18.5oz/yd*	22oz/yd*
Fabric Type	Polyester Woven	Polyester Woven	Polyester Woven	Polyester Woven	Polyester Woven
Thread Count (Warp x Fill)	16 x 16 (1000Dx1000D)	18 x 17 (1000Dx1300D)	18 x 17 (1000Dx1300D)	18 x 17 (1000Dx1300D)	16 x 16 (1500Dx1500D)
Tensile Strength, Grab FS 191-5100 (lbs.)	Warp 335 Fill 315	Warp 410 Fill 410	Warp 410 Fill 410	Warp 410 Fill 410	Warp 500 Fill 500
Tensile Strength, Strip FS 191-5102 (lbs.)	Warp 250 Fill 220	Warp 300 Fill 300	Warp 300 Fill 300	Warp 300 Fill 300	Warp 430 Fill 380
Tear Strength, Tongue FS 191-5134 (lbs.)	Warp 50 Fill 35	Warp 100 Fill 100	Warp 100 Fill 100	Warp 100 Fill 100	Warp 145 Fill 145
Adhesion FS 191-5970 (lbs./inch)	Warp 10 Fill 10	Warp 10 Fill 10	Warp 12 Fill 10	Warp 12 Fill 10	Warp 15 Fill 12
Abrasion Resistance FS 191-5306	300 Cycles	375 Cycles	400 Cycles	400 Cycles	600 Cycles
Hydrostatic Resistance FS 191-5512 (lbs./inch*)	At Least 600 PSI	At Least 600 PSI	At Least 600 PSI	At Least 600 PSI	At Least 600 PSI
Cold Crack FS 191-5874	-40° F	-40° F	-40° F	-40° F	-40° F
High Temperature Resistance FS 191-5872	180° F (Does Not Block)	180° F (Does Not Block)	180° F (Does Not Block)	180° F (Does Not Block)	180° F (Does Not Block)
U.V. Resistance Weather-O-Meter	Not Excessive Fading After 300 Hours	Not Excessive Fading After 300 Hours	Not Excessive Fading After 300 Hours	Not Excessive Fading After 300 Hours	Not Excessive Fading After 300 Hours
Flame Resistance / Vertical NFPA 701, Large & CSFM	N/A	N/A	N/A	PASS	N/A

ALL COLORS OFFERED IN 18.5oz

Call for color availability for 10oz, 14oz, F/R 18.5oz & 22oz

The information and recommendations contained herein are offered as a service to our customers, but are not intended to relieve the user from his responsibility to investigate and understand other pertinent sources of information and to comply with all laws and procedures applicable to the safe handling and use of other materials. The information and recommendations provided herein were believed to be accurate at the time of preparation or obtained from sources believed to be generally reliable. However, we make no warranty concerning their accuracy and will not be liable for claims relating to any party's use of or reliance on information or recommendations contained herein, regardless of whether it is claimed that the information or recommendations are inaccurate, incomplete or otherwise misleading.

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TABLE 1—ALLOWABLE SCREWS LOADS^{1,2,3,4}

FASTENER TYPE (Size Number)	FASTENER DIMENSIONS			STEEL THICKNESS ⁵											
				No. 20 Gage (0.0341 inch)		No. 18 gage (0.0451 inch)		No. 16 gage (0.0578 inch)		No. 14 gage (0.072 inch)		No. 12 gage (0.0906 inch)		No. 10 gage (0.127 inch)	
	Nominal Screw Diameter (inch)	Head O.D. (inch)	Point Type ⁶	Shear (pounds)	Tension pullout (pounds)	Shear (pounds)	Tension pullout (pounds)	Shear (pounds)	Tension pullout (pounds)	Shear (pounds)	Tension pullout (pounds)	Shear (pounds)	Tension pullout (pounds)	Shear (pounds)	Tension pullout (pounds)
10	0.190	0.312	SD #3	186	83	326	133	—	—	—	—	—	—	—	—
12	0.220	0.312	SD #3 or 2	—	—	341	171	570	256	664	387	—	—	—	—
¹ / ₄ - 14	0.250	0.375	SD #3	—	—	—	—	741	261	867	447	1,002	555	—	—
12 - 24	0.220	0.312	SD #4.5	—	—	—	—	—	—	—	—	926	549	1,033	882

For SI: 1 inch = 25.4 mm, 1 lbf = 4.45 N, 1 psi = 6.89 kPa.

¹Steel members must conform with Chapter 22, Division VII, of the UBC, and with Section A3 of the AISI Specification Manual.

No. 20 gage and No. 18 gage steel comply with ASTM A 653, with a minimum 38,000-psi yield strength.

No. 16 gage, No. 14 gage, No. 12 gage and No. 10 gage steel comply with ASTM A 653, with a minimum 55,000-psi yield strength.

²Allowable screw shear and tension pullout loads are based on test methods provided in AISI CF 92-1, "Test Methods for Mechanically Fastened Cold-formed Steel Connections."

³Allowable shear values are based on two steel sheets of the same material type, thickness and minimum yield strength.

⁴Allowable tension pullout values are for withdrawal of a screw fastener from a single sheet of steel.

⁵Steel thickness is the thickness for a single sheet.

⁶SD = Self-drill point size number.

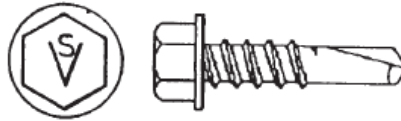


FIGURE 1—HEAD MARKINGS

DOMINGUEZ WELL NO. 300

COMPTON, CA

24 FT HIGH TEMPORARY
SOUNDWALL

PROJECT DATA:

SITE ADDRESS:

VACANT LOT
BETWEEN 950 & 1050 W. WALNUT ST.
COMPTON, CA 90220

LEGAL DESCRIPTION:

APN NO. 7319-028-904

CONTRACTOR:

CALIFORNIA WATER SERVICES CO.
2632 WEST 237TH ST.,
TORRANCE CA 90505

CODES AND STANDARDS:

1. CALIFORNIA BUILDING CODE (CBC); 2016 EDITION
2. ASCE STANDARD, ASCE/SEI 7-10; MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
3. ANSI/ASCE 360-10; SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS; 14TH EDITION; 2010

STATEMENT OF SPECIAL INSPECTIONS:

1. FIELD WELDING, HIGH-STRENGTH BOLTING, REINFORCED CONCRETE > 2500 PSI STRENGTH, CAST OR POST-INSTALLED ANCHORS, OR SPECIAL SEISMIC OR WINDFORCE RESISTING SYSTEMS ARE NOT USED IN THIS PROJECT. SPECIAL INSPECTION OF THESE MATERIALS AND SYSTEMS IS NOT REQUIRED FOR THE WORK.
2. THE SOUNDWALL PANEL FRAMING AND COMPONENTS ARE EXISTING PRE-FABRICATED PRODUCTS THAT ARE ROUTINELY ERECTED FOR USE ON A TEMPORARY BASIS. NO STRUCTURAL FABRICATION OF STEEL COMPONENTS IS PERFORMED IN THIS PROJECT. THE DESIGN CALCULATIONS ARE PROVIDED ONLY AS A CONFIRMATION THAT THEIR DESIGN MEETS THE MINIMUM LOAD REQUIREMENTS FOR THIS PROJECT SITE.

POLE INSTALLATION SPECIFICATION

- 1.0 EXCAVATION
- 1.1 POLES SHALL BE INSTALLED IN PRE-AUGERED HOLES AS INDICATED IN THE DRAWINGS.
- 1.2 THE HOLES WILL BE AUGERED USING MECHANICAL DRILLING OR EXCAVATION EQUIPMENT.
- 1.3 IF CAVE-INS OCCUR DURING EXCAVATION, SUCH THAT THE SIDEWALLS OF THE HOLE ARE DEEMED TO BE UNSTABLE, A WIDER HOLE SUITABLE TO ALLOW THE POST TO BE INSTALLED TO THE MINIMUM DEPTH SHALL BE EXCAVATED. A FLOWABLE AGGREGATE FILL SHALL BE USED FOR BACKFILL.
- 1.4 THE CONTRACTOR SHALL ASSESS THE SOIL CONDITIONS

- THE MATERIALS TO BE OBSERVED SHALL BE GENERALLY FREE OF MUD, ORGANIC SILT, ORGANIC CLAYS, PEAT, OR IF COMPOSED OF FILL, THAT THE FILL HAS LITTLE TO NO DEBRIS OR ORGANIC MATERIAL. SHOULD ANY OF THESE CONDITIONS BE OTHERWISE PRESENT OR SUSPECTED THE ENGINEER OF RECORD SHALL BE NOTIFIED FOR THE RECOMMENDED RESOLUTION AND/OR APPROVAL.

- 2.0 BACKFILL
- 2.1 BACKFILL SHALL BE SUITABLE EXCAVATED NATIVE MATERIAL, OR OTHER SUITABLE FLOWABLE AGGREGATE MATERIAL UNLESS NOTED OTHERWISE.

- 2.2 THE BACKFILL SHALL BE EVENLY PLACED AROUND THE POST TO LIMIT UNRESTRAINED LATERAL POST DISPLACEMENT AT THE GROUND SURFACE.

- 2.3 WHERE NATIVE MATERIAL IS USED AS BACKFILL, THE PLACEMENT OF THE BACKFILL SHALL BE ACCOMPISHED BY A HAND TAMPING TOOL OR MANUALLY DIRECTED POWER TAMPER AFTER THE POST IS CENTRALLY PLACED IN THE AUGURED HOLE.

- 2.4 THE TAMPER SHALL APPLY DIRECT IMPACT ENERGY TO EACH LIFT OF BACKFILL MATERIAL AND WILL BE REGARDED AS SUFFICIENT WHEN THE BACKFILL SURFACE DISPLACES LESS THAN 1/2 INCH. THE BACKFILL SHALL BE PLACED IN A 5 FT HIGH LIFT, FOLLOWED BY 2½ FT HIGH LIFTS.

DESIGN PARAMETERS:

WIND: SPEED: 100 MPH

EXPOSURE:

RISK CATEGORY:

OCCUPANCY: GROUP U, UTILITY & MISC.

EARTHQUAKE DESIGN DATA:

SEISMIC DESIGN CATEGORY: D

SITE CLASS: S₀SEISMIC IMPORTANCE FACTOR: $I = 1.0$

SPECTRAL RESPONSE ACCELERATION:

SPECTRAL RESPONSE ACCELERATION

DESIGN SPECTRAL RESPONSE ACCELERATION CATEGORY 1

SEISMIC RISK CATEGORY: I

STRUCTURAL MATERIALS:

STEEL SHAPES (W SECTIONS): ____ ASTM A992, FY = 50 KSI

STEEL PLATES:

STEEL PIPE.

STEEL TYPE: _____ ASTM A500, GR. B, 1/2" - 3/8" KSI
STEEL TYPE: _____ ASTM A500, GR. B, 1/2" - 1/4" KSI

STEEL TUBE: _____ ASTM A307, GR. B, F1 = 40 KSI
 BOLTS: _____ ASTM A307 (UNS)

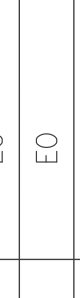
BULBS: _____ ASIM A307 (U.N.O.)
WELDS: _____ E70xx ELECTRODES _____

SOIL CLASSIFICATION:

CODE ACCEPTABLE VALUES ARE ASSUMED:

1. ALLOW. SOIL BEARING PRESSURE: 200 PSF (CBC TABLE 1806.2)
2. ALLOW. SOIL LAT. BEARING PRESSURE: 200 LB/FT/FT DEPTH (SEE 5. BELOW)
3. A 1.33 ALLOWABLE INCREASE IS APPLICABLE PER CBC SECTION 1806.1
4. SOIL AT THE SITE SHALL BE CLAY, SANDY-CLAY, CLAYEY-SAND, CLAYEY-GRAVEL OR CLAYEY-SILT, AND SANDY-SILT OR BETTER.
5. A ½ INCH DEFLECTION AT THE BASE OF THE POLES WOULD NOT ADVERSELY AFFECT WALL STABILITY. PER CBC SECTION 1806.3.3 LATERAL BEARING CAPACITIES PER TABLE 1806.2 ARE DOUBLED.

[illegible]



7/31/18

ENVIRONMENTAL NOISE CONTROL, INC.

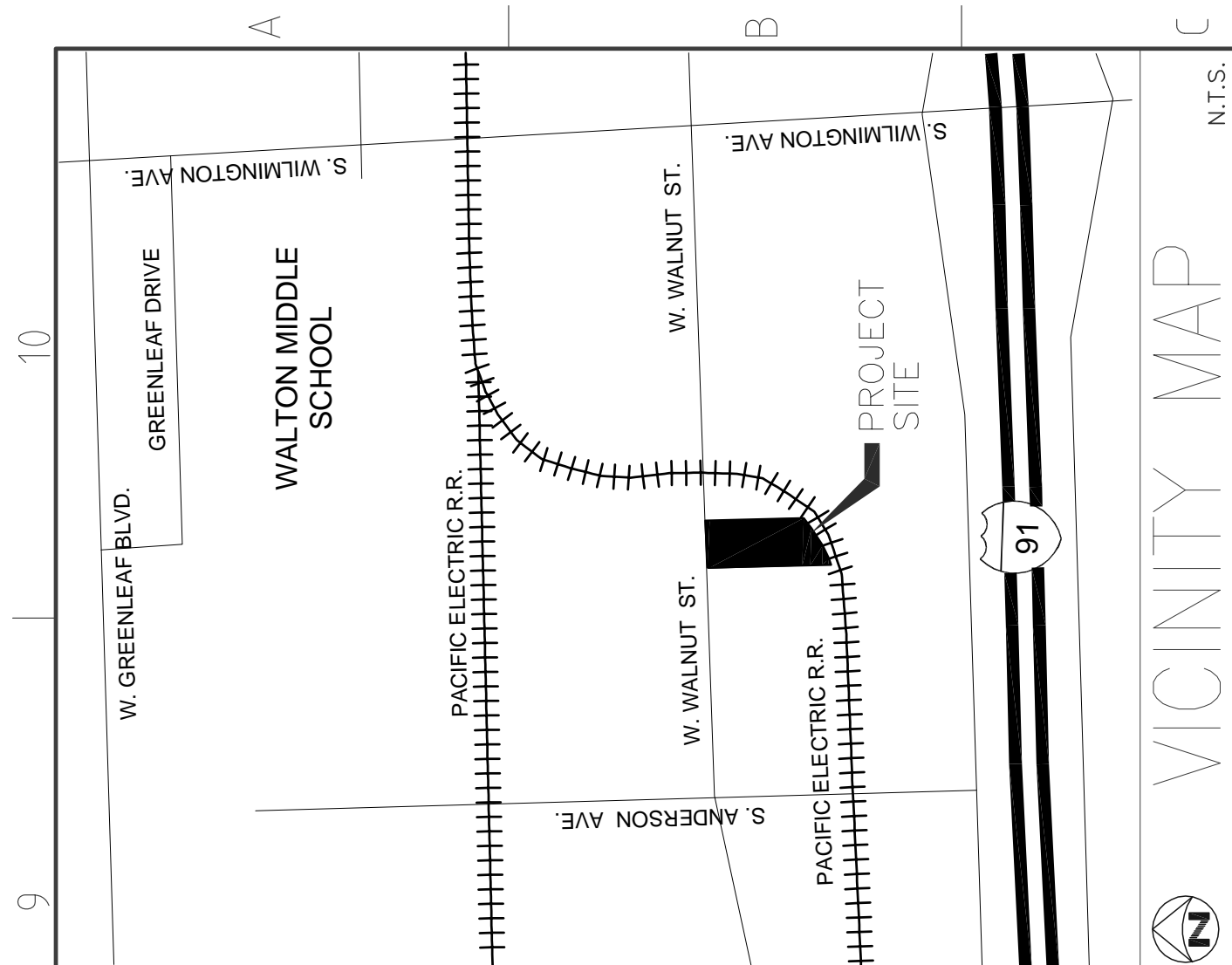
13806 Ingewood Avenue,
Hawthorne, CA 90250

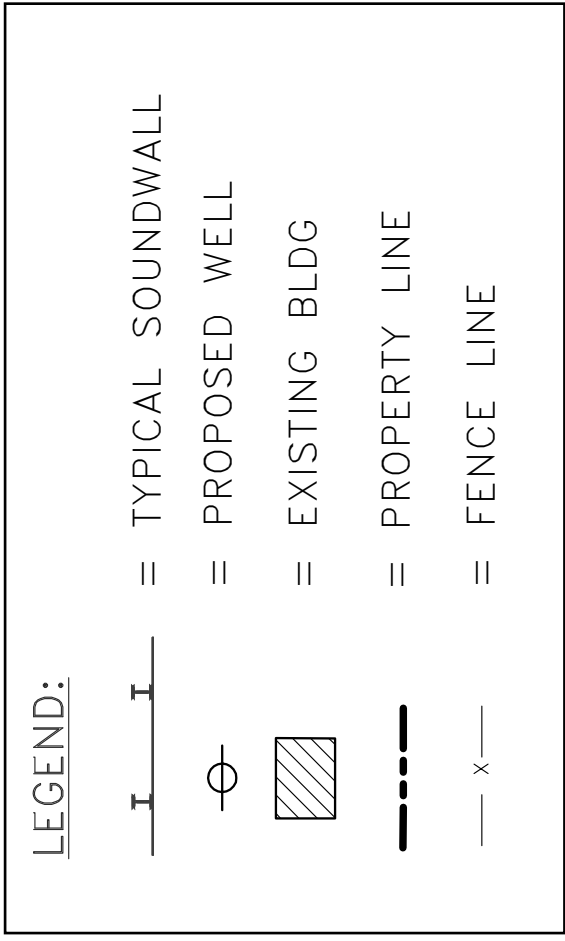
Tel: (310) 679-8633 Fax: (310) 331-1538

DRAWN BY:	JT	CHK'D BY:	EO
DESIGNED BY:	EO	APP'D BY:	EO
JOB NO.		SCALE:	AS NOTED
CAD FILE:		DATE:	07/31/18

ENGINEER:

SHEET TITLE:		TITLE SHEET : NOTES & SPECIFICATIONS	
PROJECT/OWNER:		DOMINGUEZ WELL NO. 300 – PHASE 1 24 FT HIGH TEMPORARY SOUNDWALL	
ENC DRWG NO.	DRWG NO.	SHT NO.	REV.
ENC –CWS–001		1	0





SITE PLAN – SOUNDWALL LAYOUT

SCALE: 3/64" = 1'-0"

[illegible]

ELEVATION & SECTIONS

PROJECT/OWNER:

DOMINGUEZ WELL NO. 300 - PHASE 1
24 FT HIGH TEMPORARY SOUNDWALL

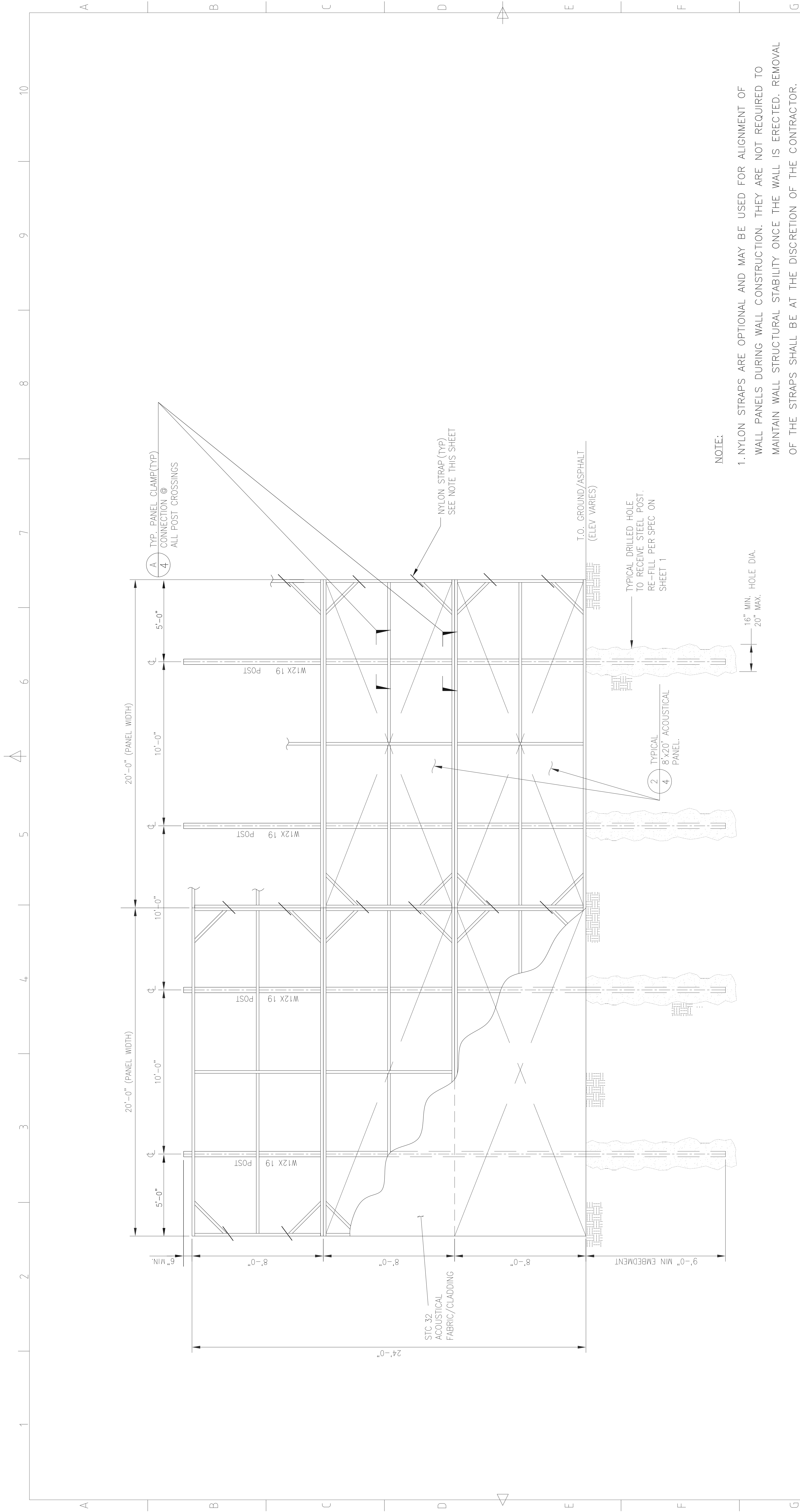
ENC DRWG NO.

ENC - CWS - 001

Hawthorne, CA 90250
Tel: (310) 679-8633 Fax: (310) 331-1538

Tel: (310) 679-8633

Tel: (310) 679-8633 Fax: (310) 331-1538



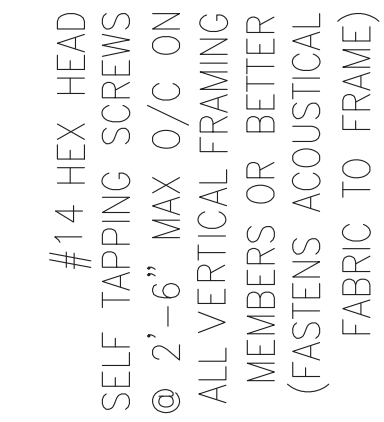
NOTE:

1. NYLON STRAPS ARE OPTIONAL AND MAY BE USED FOR ALIGNMENT OF WALL PANELS DURING WALL CONSTRUCTION. THEY ARE NOT REQUIRED TO MAINTAIN WALL STRUCTURAL STABILITY ONCE THE WALL IS ERECTED. REMOVAL OF THE STRAPS SHALL BE AT THE DISCRETION OF THE CONTRACTOR.
2. STRAP SHALL BE 2" WIDE NYLON STRAP, 500 LB WORK LOAD LIMIT, Mc MASTER CARR PRODUCT NO. 8842T852 OR EQUAL.

TYPICAL ACOUSTICAL WALL FRAMING – ELEVATION	
1	
2	

3/8" = 1' - 0"

[illegible]



APPENDIX E – Mitigation Monitoring and Reporting Program



MITIGATION MONITORING AND REPORTING PROGRAM

**California Water Service Company
Dominguez (DOM) 300-01 New Well
COMPTON, CALIFORNIA**

Prepared for:

STATE WATER RESOURCES CONTROL BOARD
PO Box 944212
Sacramento, CA 94244-2120

Prepared by:



5 Hutton Centre Drive, Suite 750
Santa Ana, California 92707

April 2019

MITIGATION MONITORING AND REPORTING PROGRAM

Public Resources Code, Section 21081.6 (Assembly Bill 3180) requires that mitigation measures identified in environmental review documents prepared in accordance with California Environmental Quality Act (CEQA) are implemented after a project is approved. Therefore, this Mitigation Monitoring and Reporting Program (MMRP) has been prepared to ensure compliance with the adopted mitigation measures during the construction phase of The Rincon Development Project.

The State Water Resources Control Board (SWRC) is the agency responsible for implementation of the mitigation measures identified in the MND. This MMRP provides the SWRCB with a convenient mechanism for quickly reviewing all the mitigation measures including the ability to focus on select information such as timing. The MMRP includes the following information for each mitigation measure:

- The phase of the Project during which the required mitigation measure must be implemented;
- The phase of the Project during which the required mitigation measure must be monitored; and
- The enforcement agency.

The MMRP includes a checklist to be used during the mitigation monitoring period. The checklist will verify the name of the monitor, the date of the monitoring activity, and any related remarks for each mitigation measure.

MITIGATION MONITORING AND REPORTING PROGRAM							
Dominguez DOM 300-01 New Well Project							
Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Level of Significance After Mitigation	Verification of Compliance		
					Initial	Date	Remarks
BIO-1: In order to comply with the MBTA, any vegetation clearing should take place outside the general bird breeding season (February 15 to September 15), to the maximum extent practical. If this is not possible, prior to ground-disturbing activities, a qualified biologist should conduct a nesting bird survey and complete a migratory nesting bird and raptor survey report. The survey should occur no more than three days prior to initiation of Project activities, and any occupied passerine and/or raptor nests occurring within or adjacent to the work area should be delineated. Additional follow-up surveys may be required by the resource agencies. To the maximum extent practicable, a minimum buffer zone around occupied nests should be specified by a qualified biologist and maintained during physical ground-disturbing activities. The buffer zone should be sufficient in size to prevent impacts to the nest. Once nesting has ceased, the buffer may be removed.	Construction	Construction	SWRCB	Less than significant			
GEO-1: Because the project area contains surficial deposits of older Quaternary Alluvium, a qualified paleontologist is required be on site to monitor any significant excavation 5-feet below the surface or deeper in the event that any significant vertebrate fossil remains are discovered.	Construction	Construction	SWRCB	Less than significant			
NOI-1: Install 220 linear feet of 16-ft high temporary sound barrier wall with a Sound Transmission Class (STC) rating of at least 25 on the east and partial south sides of the Proposed Project site with no openings or gaps in the wall.	Construction	Construction	SWRCB	Less than significant			
TCR-1: Professional Standards: Archaeological and Native American monitoring and excavation during construction projects will be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects shall be taken. The principal archaeologist must meet the Secretary of the Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist shall ensure that all other personnel are appropriately trained and qualified.	Construction	Construction	SWRCB	Less than significant			

MITIGATION MONITORING AND REPORTING PROGRAM							
Dominguez DOM 300-01 New Well Project							
Mitigation Measure	Implementation Phase	Monitoring Phase	Enforcement Agency	Level of Significance After Mitigation	Verification of Compliance		
					Initial	Date	Remarks
TCR-2: Unanticipated Discovery of Tribal Cultural, Historical, and Archaeological Resources: Upon discovery of archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed by a qualified archaeologist. All archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request reburial or preservation for educational purposes. After the assessment is completed, the archaeologist shall submit a report to the State Water Board describing the significance of the discovery with cultural resource management recommendations. Work may continue on other parts of the project while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a “historical resource” or “unique archaeological resource”, time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to a local school or historical society in the area for educational purposes.	Construction	Construction	SWRCB	Less than significant			
TCR-3: Retain a Native American Monitor: The project Applicant will be required to obtain the services of a tribal monitor approved by the Gabrieleño Band of Mission Indians-Kizh Nation and will be present on-site during the construction phases that involve any ground disturbing activities. Ground disturbance is defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, weed abatement, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor will complete monitoring logs on a daily basis that will provide descriptions of the daily activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor have indicated that the site has a low potential for archeological resources.	Construction	Construction	SWRCB	Less than significant			

<p>TCR-4: Unanticipated Discovery of Human Remains and Associated Funerary Objects: Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called “associated grave goods” in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission and PRC 5097.98 shall be followed.</p> <p>Upon discovery, the Tribal monitor will immediately divert work at minimum of 50 feet and place an exclusion zone around the burial. The monitor will then notify the qualified archaeologist and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).</p> <p>If the Gabrieleno Band of Mission Indians – Kizh Nation is designated MLD, the following treatment measures shall be implemented. To the Tribe, the term “human remains” encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. These remains are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.</p> <p>Prior to the start of ground disturbing activities, the land owner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the NAHC. The Tribe does not authorize any scientific study or the utilization of any invasive diagnostics on human remains.</p> <p>Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure</p>	Construction	Construction	SWRCB	Less than significant			
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