

**NORTHROP GRUMMAN SYSTEMS CORPORATION PUENTE VALLEY OPERABLE UNIT, SHALLOW
ZONE – SOUTH INTERIM REMEDY PROJECT**



**NORTHROP GRUMMAN SYSTEMS
CORPORATION PUENTE VALLEY
OPERABLE UNIT, SHALLOW ZONE –
SOUTH INTERIM REMEDY PROJECT**

**DRAFT INITIAL STUDY/MITIGATED
NEGATIVE DECLARATION**

November 20, 2019

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Abbreviations

µg/m ³	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
AB 32	Global Warming Solutions Act of 2006
AQMP	Air Quality Management Plan
ARARs	Applicable or Relevant and Appropriate Requirements
Basin	San Gabriel Basin
Basin Plan	LARWQCB Water Quality Control Plan
C/GMP	Compliance/General Monitoring Plan
CAAQS	California Ambient Air Quality Standards
CAGN	Coastal California Gnatcatcher
CalEEMod	California Emissions Estimator Model
CALFIRE	California Department of Forestry and Fire Protection
CalGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	State Endangered Species Act
CFCs	Chlorofluorocarbons
CFR	Code of Federal Regulations
CGS	Conservation Geological Survey
CH ₄	Methane
CMA	Congestion Management Agency
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COCs	Chemicals of Concern
COPCs	Chemicals of Potential Concern
CUPA	Certified Unified Program Agency
CWA	Federal Clean Water Act
dB	Decibel
dBA	A-Weighted Decibel
DEHP	1,4-dioxane, bis(2-Ethylhexyl)phthalate



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DWR	California Department of Water Resources
DZ	Deep Zone
EIR	Environmental Impact Report
EPCRA	Emergency Planning and Community Right-to-Know Act
ESD	Explanation of Significant Differences
EW-C	EW-Cadbrook
EW-N	EW-Nelson
FAA	Federal Aviation Administration
Farmland	Farmland of Statewide Importance
FESA	Federal Endangered Species Act
GHGs	Greenhouse Gases
GPM	Gallons per Minute
H ₂ S	hydrogen sulfide
HCP	Habitat Conservation Plan
HDPE	High-Density Polyethylene
HFCs	Hydrofluorocarbons
IROD	Interim Record of Decision
IS/MND	Initial Study/Mitigated Negative Declaration
IZ	Intermediate Zone
Judgement	Los Angeles Superior Court Case 924128
LACDPH	Los Angeles County Department of Public Health
LACDPW	Los Angeles County Department of Public Works
LACFCD	Los Angeles County Flood Control District
LACFD	Los Angeles County Fire Department
LACSD	Los Angeles County Sanitation District
LGAC	Liquid-Phase Granular Activated Carbon
LGAC	Local Government Advisory Committee
LOS	Level of Service
LPVCWD	La Puente Valley County Water District
LRA	Local Responsibility Area
LSI	Langelier Saturation Index
LSTs	Localized Significance Thresholds
MBTA	Migratory Bird Treaty Act
Metro	Metropolitan Transportation Authority
mg/m ³	milligrams per cubic meter
MOV	Mouth of the Valley
N ₂ O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Plan
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides



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NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
O&M	Operations and Maintenance
O ₃	Ozone
OSHA	Occupation Safety and Health Administration
Pb	Lead
PFCs	Perfluorocarbons
PFDR	Pre-Final Design Report
PHG	Public Health Goals
PM ₁₀	Particulate Matter with Diameter of Less than 10 Microns
PM _{2.5}	Particulate Matter with Diameter of Less than 2.5 Microns
PRC	Public Resources Code
Project	Shallow Zone-South Interim Remedy Project
PVOU	Puente Valley Operable Unit
PVSC	Puente Valley Steering Committee
RA	Remedial Action
RAOs	Remedial Action Objectives
RCC	Reinforced Cement Concrete
RCRA	Resource Conservation and Recovery Act
RDI	Remedial Design Investigation
RO	Reverse Osmosis
RPS	Renewables Portfolio Standard
RPW	Relatively Permanent Waters
RTP	Regional Transportation Plan
RWQCB	California Regional Water Quality Control Board
San Gabriel VWC	San Gabriel Valley Water Company
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SF ₆	Sulfur Hexafluoride
SO ₂	Sulfur Dioxide
SR	California State Route
Superfund	National Priorities List
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SZ	Shallow Zone
SZ1	Shallow Zone 1
SZ2	Shallow Zone 2
SZ-South	Puente Creek
TDS	Total Dissolved Solids



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TMDL	Total Maximum Daily Load
TNW	Traditional Navigable Waters
TPH	Total Petroleum Hydrocarbons
TSCA	Toxic Substances Control Act
UAO	Unilateral Administrative Order
USACE	United States Army Corps
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGVMWD	Upper San Gabriel Valley Municipal Water District
UV/Ox	Ultraviolet Light and Hydrogen Peroxide
VFD	Variable Frequency Drive
VHFHSZ	Very High Fire Hazard Severity Zone
VOCs	Volatile Organic Compounds
WARM	Warm Freshwater Habitat
WATCH Manual	Work Area Traffic Control Handbook
Watermaster	Main San Gabriel Basin Watermaster
WILD	Wildlife Habitat
WPA	Water Production Agreement
WQA	San Gabriel Basin Water Quality Authority
µg/L	micrograms per Liter



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PROJECT SUMMARY

1.0 PROJECT SUMMARY

The purpose of the proposed Project is the hydraulic containment of the shallow zone south of Puente Creek (SZ-South) via groundwater extraction, treatment of extracted groundwater, and planned end-use as surface water discharge to San Jose Creek. The Project consists of two existing groundwater extraction wells (EW-Cadbrook (EW-C) and EW-Nelson (EW-N)), a proposed treatment plant, numerous existing compliance monitoring wells and piezometers, and proposed conveyance piping.

Groundwater in the San Gabriel Basin (Basin) has been the subject of environmental investigation since 1979, when groundwater contamination with volatile organic compounds (VOCs) was first detected. In May 1984, the Basin was placed on the United States Environmental Protection Agency's (USEPA's) National Priorities List (Superfund). USEPA subsequently divided the Basin into eight different operable units, one of which is the Puente Valley Operable Unit (PVOU), which is the location of the proposed Project. The PVOU is located within the southeastern portion of the San Gabriel Valley, about 25 miles from the Pacific Ocean, in eastern Los Angeles County.

Between 1993 and 2001, the Puente Valley Steering Committee (PVSC), which represented the parties responding to a U.S. Environmental Protection Act (USEPA) request for assessment, was actively engaged in evaluating the nature and extent of groundwater contamination in the PVOU. In September 1998, USEPA issued an interim record of decision (IROD) setting forth the means by which groundwater contamination in the PVOU would be addressed. The IROD selected "Alternative 3" from the Interim Remedial Investigation/Feasibility Study, which included migration control in the shallow and intermediate groundwater zones at the mouth of the valley (MOV), as the most appropriate remedy for the overall protection of human health and the environment.

The PVOU encompasses the Puente Basin and a portion of the Main San Gabriel Basin where Puente Valley opens into the Main San Gabriel Basin. The transition area is referred to as the MOV area. The Puente and Main San Gabriel Basins collect infiltration on the valley floors and runoff from the surrounding highlands, recharging the groundwater aquifer. Groundwater generally flows towards the Whittier Narrows, the Main San Gabriel Basin's only outlet, which hydraulically connects the Main San Gabriel Basin to the Central Basin to the south. This flow system is influenced by water supply production well fields, spreading basins, and other recharge operations.

The hydrostratigraphy in the PVOU area is divided into three principal aquifer units: Shallow Zone (SZ), Intermediate Zone (IZ), and Deep Zone (DZ). The SZ is further divided into two sub-units, Shallow Zone 1 (SZ1) and Shallow Zone 2 (SZ2), which are separated by the low permeability 70s Silt-Clay marker bed (SZ1-SZ2 aquitard). The SZ1 extends from the ground surface to the top of the SZ1-SZ2 aquitard and includes saturated sediments in the groundwater-bearing zone, as well as sediments in the overlying vadose zone. The SZ2 extends from the bottom of the SZ1-SZ2 aquitard to the top of the Galaxy Silt-Clay marker bed, which marks the division between the SZ and IZ.



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The IROD defined chemicals of potential concern (COPCs) for the PVOU, most of which were VOCs. The IROD selected containment of groundwater with COPCs in the SZ and IZ at the MOV as the most appropriate remedy (USEPA, 1998).

1.1 LOCATION

The SZ-South Interim Remedy is located in the City of Industry and City of La Puente. Contaminated groundwater from the SZ aquifer will be extracted by extraction wells and conveyed via piping system from the wells to a water treatment plant located at 111 Hudson Avenue in the City of Industry, California. Figure 1 shows the regional location of the Project site. Figure 2 shows the location of the existing extraction wells, proposed conveyance pipes, and proposed water treatment site.

1.2 GENERAL ENVIRONMENTAL SETTING

The PVOU encompasses the Puente Basin and a portion of the Main San Gabriel Basin where the Puente Valley opens into the Main San Gabriel Basin. The transition area where the Puente Valley opens into the Main San Gabriel Basin is referred to as the MOV area. The Puente and Main San Gabriel Basins are natural groundwater reservoirs filled with unconsolidated and semi-consolidated alluvial deposits that overlie relatively impermeable rock. The water-bearing deposits range widely in thickness from less than 25 feet in the extreme eastern portion and Puente Valley perimeter to approximately 1,300 feet in the MOV area.

In the PVOU, the groundwater flow occurs along a relatively narrow and shallow section parallel to the valley axis in the vicinity of San Jose Creek, then flows out of the valley toward the Main San Gabriel Basin. Groundwater in the eastern portion of the basin generally flows to the west and southwest toward the Whittier Narrows. In the western portion of the basin, west of the Rio Hondo, groundwater flow is toward the major production wells in Alhambra and Monterey Park. Outflow from the basin occurs at Whittier Narrows, which hydraulically connects the Main San Gabriel Basin to the downstream Central Basin.

The water levels in the Main San Gabriel Basin are known to vary significantly. In the PVOU area, water level fluctuations up to 30 feet have been observed at monitoring wells screened in the SZ. These fluctuating water levels have impacts on the yield and capture zones of extraction wells screened in the SZ.

Within the MOV area of the PVOU the following seven water supply production wells are actively pumped, have been recently operated, or recently installed but not yet operated:

- San Gabriel Valley Water Company (San Gabriel VWC) wells B11B, B9B, B24A, B24B, and B24C are active production wells;
- San Gabriel VWC well B7E is infrequently used for standby production; and
- San Gabriel VWC well B11A has been out of service since at least 2005.



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None of the water supply wells listed above are screened in the SZ. There is only one active or recently active water production well (B11B) that has screens within the IZ in the MOV area. The other active or recently active water production wells are screened in the DZ.

1.3 HISTORICAL PERSPECTIVE

USEPA issued an IROD for the PVOU in September 1998, that specified performance criteria for the PVOU remedy (USEPA, 1998). Specifically, the performance criteria dictated that the SZ Interim Remedy prevents VOCs at concentrations above ten times the Applicable or Relevant and Appropriate Requirements (ARARs) from migrating beyond the plume's lateral and vertical extent at the time the interim remedy is operational and functional.

The anticipated remedy in the IROD included:

- Groundwater extraction from four wells in the SZ at a combined flow of 700 gallons per minute (gpm);
- Extracted groundwater treatment for VOCs at a single, 1,700-gpm treatment plant centrally located near the extraction system;
- Discharge of treated groundwater to surface waters or to a water supply line for potable use; and
- Installation of a groundwater monitoring system to provide compliance with the Remedial Action Objectives (RAOs) and performance criteria, as well as an early warning system for the groundwater treatment plant.

Due to the presence of 1,4-dioxane and perchlorate in groundwater in the PVOU, USEPA modified the IROD by issuing an Explanation of Significant Differences (ESD) in March 2005 (USEPA, 2005). The ESD revised the performance criteria in the IROD and added requirements to treat perchlorate and to contain and treat 1,4-dioxane, as required.

1.4 PROJECT OBJECTIVES

The Project objectives are to meet the Performance Criteria of the remedy for the SZ-South Interim Remedy as specified in the IROD and ESD. These Performance Criteria are to prevent groundwater in the SZ at the MOV with chemicals of concern (COCs) greater than or equal to ten times the Containment Levels from:

- Migrating beyond the plume's lateral extent of impacts as measured at the time the SZ Remedial Action (RA) containment systems are operational and functional; and
- Migrating vertically into the IZ.

The COCs requiring hydraulic containment were identified by comparing historical SZ-South monitoring well groundwater sampling results to the Containment Levels for the COCs listed in the ESD (including 1,4-dioxane and VOCs). A chemical was included as a COC requiring hydraulic containment if at least two samples exceeded ten times the Containment Level.



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To meet the Performance Criteria, two groundwater extraction wells (EW-C and EW-N)) screened across both SZ1 and SZ2 were installed in August 2018, so the well system would be capable of extracting water and providing hydraulic containment for both SZ1 and SZ2.

The IZ Interim Remedy is being implemented concurrently by Northrop Grumman to meet the Performance Criteria for the IZ Interim Remedy as specified in the IROD and ESD. La Puente Valley County Water District (LPVCWD), as the lead agency for the proposed Project associated with the IZ Interim Remedy, conducted an Initial Study and prepared a mitigated negative declaration filed with Los Angeles County in November 2017 and adopted by LPVCWD in December 2017.

1.5 SCHEDULE

1.5.1 Construction Schedule

Northrop Grumman anticipates that the construction phase of the Project will begin once the permitting documents and design phase have been completed. Construction is currently anticipated to begin in July 2020 and to be completed by July 2021. A section of the conveyance system along Cadbrook Drive is anticipated to be installed in early 2020 prior to the rest of the treatment plant construction.

1.5.2 Operation Schedule

Operation of the extraction wells and treatment plant is expected to be initiated following completion of the construction activities.

1.6 PERMITS, APPROVALS AND AGREEMENTS

The following permits, agreements and regulatory review processes are anticipated in order to construct and operate the proposed Project. Some of these permits and approvals are not subject to California Environmental Quality Act (CEQA) compliance since the proposed Project involves procurement of federal, ministerial and/or legally exempt permits. In addition, under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121(e)(1), 42 U.S.C. Section 9621(e), no federal, state, or local permit is required for the portion of any CERCLA removal or remedial action conducted entirely on-site. CERCLA requires meeting the substantive provisions of permitting regulations that are ARARs (OSWER, 1992). Per the ESD, “ARARs include only substantive, not administrative, requirements, pertain only to on-site activities, and are frozen at the time of the IROD, or ESD.” Permit applications would be filed for on-site activities to demonstrate compliance with the specific standards and rules of relevant agencies.

1.6.1 Compliance, Sentinel, and Other Monitoring Wells

Existing compliance, sentinel, and monitoring wells are located in existing rights-of-way within City of La Puente and City of Industry. These locations allow for continuous access for groundwater monitoring. Should access to the wells for Project activities have the potential to impact traffic, Northrop Grumman will secure encroachment permits from the agencies.



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1.6.2 City of Industry

The proposed new water treatment plant will be located on the 111 Hudson Avenue property within the City of Industry. Portions of the conveyance pipeline from the extraction wells to the treatment plant and treated discharge conveyance pipeline from the treatment plant to the storm drain will be located in the City of Industry. The wastewater discharge conveyance pipeline to the Los Angeles County Sanitation District (LACSD) sewer, to be installed as part of the IZ Interim Remedy, will be located in the City of Industry. License agreements were previously executed with the City of Industry to provide for continuous access to the anticipated pipelines. The existing pipeline license agreements were amended with the City of Industry in 2016, to allow for continuous access to sections of the proposed pipeline that will be installed in the City of Industry. Should access to the pipelines or appurtenances associated with the proposed Project have the potential to impact traffic, Northrop Grumman will obtain encroachment permits from City of Industry during pipeline installation and for operation and maintenance (O&M) activities following construction.

The following permits are being obtained from the City of Industry Planning and Engineering Departments in conjunction with permitting for the IZ Interim Remedy treatment plant:

- A Development Plan application for 111 Hudson Avenue was approved by the City Council for the IZ Interim Remedy (including zoning); a separate application will be resubmitted for SZ-South specific components;
- Encroachment and construction permits for constructing the discharge line to the storm drain located along the south side of the treatment plant property were obtained from City of Industry; and
- Encroachment and excavation permits for construction of the conveyance pipeline in City of Industry rights-of-way concurrently with construction of the pipeline for the IZ Interim Remedy were obtained from City of Industry.

Additional permits will be obtained from the City of Industry Planning and Engineering Departments, as needed, for the following:

- Encroachment and building permits for use of and construction in City of Industry rights-of-way;
- Excavation permits for construction in City rights-of-way;
- Zoning approval; and
- Construction and building permits for construction of the treatment plant, via Los Angeles County Department of Public Works (LACDPW).

The 111 Hudson Avenue property and treatment plant will be developed and constructed in compliance with applicable design standards such as landscaping, setback, and traffic flow requirements.



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1.6.3 City of La Puente

The two extraction wells, EW-N and EW-C, were installed in existing rights-of-way in the City of La Puente. An encroachment permit was obtained prior to installation of the extraction wells and additional encroachment permits will be obtained for future sampling and O&M activities in the event access to wells has the potential to affect traffic.

Portions of the conveyance pipeline from the extraction wells to the treatment plant will be located in the City of La Puente. A license agreement was previously executed with the City of La Puente to provide for continuous access to the anticipated pipelines. The existing pipeline license agreement was amended with the City of La Puente in 2016, to allow for continuous access to sections of the proposed pipeline and the two extraction wells within the City of La Puente. Northrop Grumman will obtain encroachment permits from City of La Puente during pipeline installation and for O&M activities following construction in the event access to the pipelines or appurtenances has the potential to impact traffic.

1.6.4 Los Angeles County

Los Angeles County Flood Control District (LACFCD) manages storm drains within the County. A storm drain connection permit application will be submitted to the City of Industry, which may forward it to LACFCD for review via a “City Services Request.” The City of Industry is a listed discharger in the MS4 permit. LACFCD will therefore permit the surface water discharge of treated water to the storm drain, which discharges directly to San Jose Creek.

Because City of Industry contracts building and safety services from Los Angeles County, Northrop Grumman may submit a permit application for construction of the treatment plant, including design drawings, to LACDPW as needed.

1.6.5 Los Angeles County Department of Public Health (LACDPH)

Well construction permits were obtained by Northrop Grumman from the LACDPH prior to construction of the extraction wells, piezometers, and monitoring wells.

1.6.6 Los Angeles County Sanitation District (LACSD)

The treatment plant will generate wastewater from backwash of the bag filters, liquid-phase granular activated carbon (LGAC), reverse osmosis (RO), and the RO concentrate waste. Northrop Grumman will obtain an industrial wastewater permit directly from the LACSD. The LACSD has previously indicated that, because of the high total dissolved solids (TDS) levels in the RO system waste concentrate wastewater, the wastewater must be piped to a sewer that connects to the LACSD Carson treatment plant. Conveyance piping from the waste discharge at the treatment plant to the industrial wastewater sewer line will be shared with the IZ system and installed as part of the IZ Interim Remedy construction activities.



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1.6.7 Southern California Edison (SCE)

Permits will be obtained from SCE for electrical service connections, panels, and meters for the treatment plant and the extraction wells.

The SZ-South electrical permit application for providing power to extraction wells EW-C and EW-N was submitted to SCE on November 16, 2017 for review. The design was received from SCE in November 2018.

The electrical permit application for providing power to the property where the SZ-South and IZ Interim Remedy treatment plants will be located (111 Hudson Avenue) was submitted to SCE in 2018, and SCE provided drawings in February 2019. The SZ-South and IZ Interim Remedy treatment plants will have separate electrical service and meters. An application for providing a meter for electrical service for the SZ-South Interim Remedy treatment plant will be submitted.

1.6.8 Federal Aviation Administration (FAA)

The future treatment plant location at 111 Hudson Avenue is across the street from the City of Industry Civic Financial Center Heliport at the intersection of Hudson Avenue and Stafford Street. The heliport is owned by the Successor Agency and is used by the Los Angeles County Sheriff's Department. Height limits for nearby structures are determined by the FAA.

A permit application for development at 111 Hudson Avenue was submitted for the IZ Interim Remedy treatment plant, and a determination of "no hazard to air navigation" was issued for the IZ Interim Remedy treatment plant. If needed, a separate or amended application will be submitted for the SZ-South Interim Remedy treatment plant.

1.6.9 Main San Gabriel Basin Watermaster (Watermaster)

Water rights in the Main San Gabriel Basin have been established pursuant to an adjudication and judgment in Los Angeles Superior Court Case 924128 (Judgment). The Court maintains continuing jurisdiction such that extractions from the Main San Gabriel Basin are restricted and overdraft is corrected with artificial recharge of supplemental water. Pursuant to that authority, the Watermaster manages groundwater in the PVOU. The Watermaster's role and responsibilities in management of groundwater quality in the Main San Gabriel Basin are described in Section 45 of the Judgment and Section 28 of the Watermaster Rules and Regulations. Section 45 of the Judgment permits the Watermaster to take actions "to encourage, assist and accomplish the cleanup and improvement of degraded water quality in the Basin by non-parties." Section 28 of the Watermaster Rules authorizes the Watermaster to take a variety of actions to "preserve and restore the quality of Ground Water within the Basin," including the approval of the construction and operation of "Ground Water Treatment Facilities."

Northrop Grumman will obtain a Water Production Agreement (WPA) from the Watermaster for the operation of the extraction wells, the treatment plant, and the surface water discharge to San Jose Creek.



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PROJECT SUMMARY

1.6.10 California Regional Water Quality Control Board, Los Angeles Region (RWQCB)

1.6.10.1 Discharges to Surface Water

Treated groundwater will be discharged to surface water (San Jose Creek) via the storm drain. Discharges to surface waters are regulated by the RWQCB through the issuance of NPDES permits. The NPDES permit requirements include a monitoring and reporting program and Waste Discharge Requirements that specify effluent limitations for flow and water quality. Water quality effluent limitations take the form of both concentration and load-based thresholds and are generally based on Basin Plan Objectives; they are occasionally adjusted to allow for dilution credits, site specific objectives, and/or total maximum daily load waste-load allocations.

USEPA has incorporated the substantive NPDES requirements into ARARs for surface water discharge. These ARARs are published in the ESD (ESD, 2005). A letter from the RWQCB to USEPA on 29 June 2017 described other potential ARARs that would be applicable for surface water discharge to a tributary of the San Gabriel River (RWQCB, 2017), as San Jose Creek is. Northrop Grumman will apply for a NPDES permit to coordinate the discharge with the RWQCB and to demonstrate compliance with NPDES requirements.

As described previously, the connection and discharge will also need to be permitted by the City of Industry and potentially LACFCD.

1.6.10.2 Treatment Plant Property Soil Cleanup

As part of the 2015 acquisition of the treatment plant property at 111 Hudson Avenue, Northrop Grumman performed a Phase II Environmental Site Assessment to supplement and confirm historical soil, soil vapor, and groundwater information (Stantec, 2015). The Los Angeles RWQCB issued a letter to the Site owner in January 1996, indicating that no further assessment or remediation would be required. Petroleum hydrocarbons were detected in soil samples during the 2015 assessment, and Northrop Grumman has proposed to the RWQCB that an estimated 250 to 500 cubic yards be remediated where elevated petroleum hydrocarbons were detected. Northrop Grumman submitted a soil remediation work plan to the RWQCB, which was approved on May 3, 2017. The work plan was implemented in July 2017, and Northrop Grumman submitted a Completion Report for Remediating Hydrocarbon-Containing Soil to RWQCB on August 3, 2017 (Geosyntec, 2017a). On October 24, 2017, RWQCB issued a No Further Requirements Letter.

In December 2018 and January 2019, soil with potential staining were encountered during construction activities. Approximately 40 cubic yards of soil were excavated and stored in stockpiles. The analytical results indicated that the soil was non-hazardous, and the soil was transported to an off-site disposal facility. On May 3, 2019, RWQCB issued a designation of non-case status letter.



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PROJECT SUMMARY

1.6.11 San Gabriel Basin Water Quality Authority (WQA)

The WQA was created and authorized by the State of California to address the need for coordinated and accelerated groundwater cleanup programs in the San Gabriel Basin, including the PVOU, in part by coordinating the plans and activities of state and federal agencies and others involved in the cleanup. The WQA engages the existing rules, regulations, and standards of agencies of the State to coordinate and promote the reasonable and beneficial use of water produced and treated under mandate from USEPA.

The WQA is under the direction and leadership of a seven-member board. The board is comprised of one member from each of the three overlying municipal water districts, one from a city with prescriptive water pumping rights, one from a city without prescriptive water pumping rights, and two members representing water producers in the San Gabriel Basin. The three municipal water districts are: 1) San Gabriel Valley Municipal Water District; 2) Three Valleys Municipal Water District; and 3) Upper San Gabriel Valley Municipal Water District.

The WQA allocates certain federal matching grant funds to groundwater remediation projects and has an administrative role in approving payment of construction costs and operation and maintenance costs that are eligible for matching funds.

1.6.12 Third Party Agreement: Operator Agreement

A qualified entity will be contracted to operate the SZ-South treatment plant. La Puente Valley County Water District will operate the IZ Interim Remedy treatment plant on behalf of Northrop Grumman and will also operate the SZ-South Interim Remedy treatment plant. Both treatment plants will be located on the property at 111 Hudson Avenue and will be physically isolated from one another. An agreement between Northrop Grumman and LPVCWD is being developed and will be executed for the operation of the plant.



PROJECT DESCRIPTION

2.0 PROJECT DESCRIPTION

2.1 PROJECT TITLE

Puente Valley Operable Unit, Shallow Zone-South Interim Remedy Project (Project)

2.2 LEAD AGENCY

La Puente Valley County Water District (LPVCWD).

2.3 PROJECT COMPONENTS

This section provides a description of each of the following proposed Project components:

- Groundwater extraction system;
- Water conveyance system;
- Water treatment plant;
- Influent characterization;
- End-use of the treated water;
- Performance criteria; and
- Groundwater monitoring system.

2.3.1 Groundwater Extraction System

Figure 2 presents plan views of existing and proposed SZ-South Interim Remedy components. To meet the Performance Criteria set forth in the IROD and ESD, Northrop Grumman installed two extraction wells (EW-C and EW-N), screened across both SZ1 and SZ2, so that the well system would be capable of extracting water and providing hydraulic containment for both SZ1 and SZ2. The two extraction wells will be operated to accommodate fluctuating water levels observed in the MOV.

The extraction wells were installed in existing rights-of-way in the City of La Puente by a California-licensed drilling contractor, in accordance with California Well Standards, published by the California Department of Water Resources (DWR, 1990). Groundwater flow model simulations indicated that the two extraction wells have the ability to capture groundwater from both SZ1 and SZ2 for the SZ-South COCs that exceed 10 times the Containment Levels (Geosyntec, 2019a,b).

The extraction wells will have submersible pumps installed to extract and transfer groundwater to the treatment plant via the groundwater conveyance system. The extraction well pumps are anticipated to be a 4-inch-diameter, 10-horsepower, stainless steel pump and a 4-inch-diameter, 3-horsepower, stainless steel pump for EW-C and EW-N, respectively. A 10% to 20% design factor is applied to the flow rate range used in design of the groundwater extraction pumps, hydraulic calculations, and conveyance pipe sizing. Variable frequency drives (VFDs), that can be adjusted at the treatment plant central control panel and the pump control panels located near each extraction wellhead, will be included for the pump motors.



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The VFDs will allow for optimization of groundwater extraction rates and plume capture while reducing electrical consumption.

2.3.2 Water Conveyance System

The Project proposes new groundwater conveyance pipelines to connect the two extraction wells to the SZ-South Interim Remedy treatment plant, the treatment plant discharge point to a storm drain outfall, and the effluent storage tank to the wastewater discharge tank.

Existing utilities anticipated to be encountered during pipeline installation include: storm drains, industrial sewer lines, telecommunications, gas lines, traffic signal conduits, underground power transmission and distribution lines, and water lines. Utility surveys and Underground Service Alert requests will be performed for the proposed pipeline routes prior to installation. As-built utility maps will also be requested from City of Industry, City of La Puente, and the County of Los Angeles. A potable waterline owned by Suburban Water Systems adjacent to EW-N on Nelson Avenue and a Southern California Gas Company natural gas line located near EW-C on Cadbrook Drive, which were identified during the design surveys, will need to be relocated. Arrangements to relocate these lines are currently in progress with the respective utility companies.

Conveyance to the Water Treatment Plant

The following three conveyance pipelines will be constructed to connect extraction wells EW-N and EW-C to the water treatment plant; dual walled high-density polyethylene (HDPE) pipe will be used for conveyance of untreated water to the treatment plant:

- An approximately 1,000 foot-long, 3-inch inner diameter HDPE untreated water pipeline along Cadbrook Drive to connect EW-C to the combined conveyance pipeline to be installed along Nelson Avenue; this segment may be installed prior to the rest of the treatment plant construction in advance of anticipated Cadbrook Drive street improvements, planned to be performed by City of La Puente;
- An approximately 35 foot-long, 2-inch inner diameter HDPE untreated water pipeline at Cadbrook Drive/Nelson Avenue intersection Drive to connect EW-N to the combined conveyance pipeline to be installed along Nelson Avenue; this segment may be installed prior to the rest of the treatment plant construction in advance of anticipated Cadbrook Drive street improvements, planned to be performed by City of La Puente; and
- An approximately 3,200-foot-long, 4-inch inner diameter HDPE untreated water combined conveyance pipeline from the Cadbrook Drive/Nelson Avenue intersection to the water treatment plant on Hudson Avenue along Nelson Avenue, Unruh Avenue, and Stafford Street. This section will be installed prior to the rest of the treatment plant construction as part of the IZ Interim Remedy construction; impacts associated with this section of pipeline were considered as part of the IZ CEQA analysis.



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PROJECT DESCRIPTION

Conveyance from the Water Treatment Plant

Treated Water Conveyance

An approximately 80 foot-long, 4-inch diameter steel pipeline will be constructed to convey the treated water from the treatment plant to a storm drain outfall for ultimate discharge of treated effluent to San Jose Creek (Section 2.3.5).

Wastewater Conveyance

An approximately 100-foot-long, 6-inch inner diameter steel pipeline will be constructed to convey wastewater to the wastewater tank, which will be shared with the IZ Interim Remedy and installed prior to the rest of the SZ-South treatment plant construction as part of the IZ Interim Remedy construction.

2.3.3 Water Treatment Plant

The SZ-South Interim Remedy groundwater treatment plant will be located at 111 Hudson Avenue in the City of Industry. The two extraction wells will be operated to accommodate fluctuating water levels observed in the MOV. Based on results of groundwater modeling and hydraulic testing during August 2018 extraction wells installation, the flow rate of extracted groundwater from the two extraction wells to the treatment plant is estimated to range from approximately 50 to 125 gpm at low groundwater elevations and up to 220 gpm at historical high groundwater elevations. (Geosyntec, 2019b). To account for potential uncertainties during the system's operational life and to provide operational flexibility, the treatment plant is designed to accommodate system upgrades that will treat up to 300 gpm (Geosyntec, 2019b). Each treatment process is designed to treat target constituents to applicable regulatory standards for surface water discharge.

The primary treatment processes include the following:

- Ultraviolet light and hydrogen peroxide (UV/Ox) for removal of 1,4-dioxane, bis(2-Ethylhexyl) phthalate (DEHP), and VOCs;
- LGAC for removal of VOCs not adequately removed by UV/Ox; and
- RO for removal of perchlorate, copper, lead, mercury, nickel, selenium, TDS, and nitrate.

A portion of the extracted groundwater will be lost as a waste-concentrate stream due to the operation of the RO system. The waste-concentrate stream will be discharged to an industrial sewer operated by LACSD.

In addition to the above primary treatment processes, the treatment plant design includes sulfuric acid addition to provide scale and pH control, multimedia filters to remove fines prior to the advanced oxidation system, bag filters to remove LGAC fines upstream of the RO system membranes, and sodium hydroxide addition to adjust the pH and Langelier Saturation Index (LSI) following RO treatment.



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PROJECT DESCRIPTION

Northrop Grumman will be responsible, in consultation with the plant operator, for design and construction of the water treatment plant. The design information of the treatment plant, pre-final design drawings, capital and O&M cost estimate, and technical specifications were submitted to USEPA on April 19, 2019, in the Pre-Final Design Report (PFDR) (Geosyntec, 2019b) and conditionally approved by USEPA on September 26, 2019. Once constructed, the plant operator will operate the water treatment plant.

2.3.4 Influent Characterization

Average treatment plant influent concentrations were estimated using the flow-weighted average of average concentrations detected in water samples collected between January 2011 and April 2017 from wells screened in SZ-South within the limits of the capture zone (as evaluated with the groundwater flow model). The average treatment plant influent concentrations are being used to evaluate O&M requirements for the treatment system components.

Maximum treatment plant influent concentrations were similarly estimated using the flow-weighted average of maximum concentrations detected in water samples collected between January 2011 and April 2017 from wells screened in SZ-South within the limits of the capture zone. The maximum treatment plant influent concentrations are being used to size treatment capability of system components.

The average and maximum flow-weighted influent concentrations were compared to the ESD ARARs for discharge to surface water and potential ARARs for surface water discharge provided by RWQCB (RWQCB, 2017). Constituents with an estimated weighted average or weighted maximum concentration exceeding the ARARs anticipated for surface water discharge and COCs requiring hydraulic containment will require treatment prior to discharge to surface water.

2.3.5 Treated Water End-Use

The planned end-use option for the treated water of the SZ-South Interim Remedy is surface water discharge to San Jose Creek, which is a RCC channel with 100-foot bottom width. Within San Jose Creek water will flow northwesterly for approximately 3,500 feet to the confluence with Puente Creek. San Jose Creek continues downstream in a northwesterly direction for approximately 8,000 feet as a lined RCC channel, ranging in bottom width between 100 feet and 140 feet. San Jose Creek then transitions to a soft-bottom channel for 6,900 feet, with bottom width ranging from 140 to 170 feet. The soft-bottom channel has six separate riprap grade controls that span the creek bed as it runs in a northwesterly direction. San Jose Creek then confluent with the San Gabriel River, just north of the Interstate 605 and California 60 freeway interchange. Water will then flow through the San Gabriel River spreading grounds for approximately 5,500 feet in a southwesterly direction. Within this portion of the San Gabriel River the soft-bottom dirt channel is 500 feet wide and contains four drop structures to promote inundation and infiltration of surface water. Beyond the last drop structure, the San Gabriel River is a dirt channel with bottom width ranging between 150 feet and 550 feet that flows 6,000 feet to the southwest until Whittier Narrows Dam. Under normal, low-flow conditions the dam is operated to allow surface water to continue downstream through its gates.



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PROJECT DESCRIPTION

During operation (including system start-up, commissioning testing, routine system operation, and periodic maintenance), treated groundwater will be discharged via a 4-inch-diameter conveyance pipeline to the on-site BI 4301 Unit 2 storm drain for ultimate discharge to San Jose Creek. Surface water discharge approval will be obtained from RWQCB and City of Industry. Discharge flow rates (41 gpm to 103 gpm) will be consistent with the current treatment plant design influent flow rates (50 gpm to 125 gpm) minus the RO concentrate waste. The treated discharge conveyance pipeline will also be able to accommodate the maximum expanded design influent flow rate of 300 gpm.

2.3.6 Performance Criteria under the IROD and ESD

The two performance criteria for the SZ-South Interim Remedy are defined in Attachment 1 of the ESD (USEPA, 2005). In accordance with the ESD and CD, the selected RA must prevent groundwater in the SZ in the MOV area with concentrations greater than or equal to ten-times the Containment Levels from: 1) migrating beyond its lateral extent as measured at the time the SZ RA containment system is Operational and Functional, and; 2) migrating vertically into the IZ. Table 2 of Attachment 1 of the ESD lists the Containment Levels for COPCs.

Table 2 of the ESD includes VOCs, total petroleum hydrocarbons (TPH), and 1,4-dioxane. According to the ESD, the treatment technologies used in the PVOU remedy “will have to be capable of effectively and reliably removing VOCs, 1,4-dioxane, and possibly perchlorate, if treatment is necessary.” For surface water discharge, the ESD specifies that perchlorate must be treated if concentrations exceed the ARAR, which was selected to be consistent with the contemporary California Public Health Goals (PHG) of 6 µg/L in 2005.

The ESD specifies that compliance with the performance criteria for the RA containment system requires monitoring of the lateral and vertical migration of COPCs in the SZ in compliance monitoring wells. The ESD requires sentinel wells be installed laterally and vertically up-gradient of the RA containment system to provide advance warning of varying conditions that could adversely impact the containment system and/or treatment plant. Examples of conditions to be detected by sentinel well monitoring include concentrations that are likely to cause the influent water to exceed the design limits of the treatment plant or the presence of previously undetected chemicals that could not be adequately treated by the constructed treatment plant.

The data collected from monitoring and extraction wells will be analyzed in conjunction with other parameters (e.g., capture zone analysis, groundwater flow directions, hydrogeology, and treatment plant influent concentrations) to evaluate whether the RA containment system meets the Performance Criteria, and whether applicable discharge ARARs for the treated groundwater are more likely than not to be exceeded. A groundwater model is to be used to support these analyses as appropriate (Unilateral Administrative Order [UAO], 2011).

Response actions or additional remedial actions may be required under the following circumstances (UAO, 2011; ESD, 2005):

- Chemicals are detected above ten times the Containment Levels in a compliance monitoring well with initial concentrations less than the Containment Levels;



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- An increasing concentration trend, as defined by Attachment 1 to the ESD, is observed in a compliance monitoring well with initial concentrations greater than ten times the Containment Levels;
- USEPA determines that groundwater concentrations in compliance, sentinel, or other monitoring wells indicate that it is more likely than not that the Performance Criteria, or the treatment plant discharge ARARs, will be exceeded; or
- USEPA determines that groundwater concentrations in compliance, sentinel, or other monitoring wells, in conjunction with other parameters such as capture zone analysis, hydrogeological interpretations, etc., indicate that it is more likely than not that the Performance Criteria will not be achieved or maintained.

2.3.7 Groundwater Monitoring System

Existing groundwater monitoring well locations for the SZ-South Interim Remedy are described in the Remedial Design Investigation (RDI) Report (Orion Environmental, Inc., 2015). Monitoring wells will be monitored under oversight of USEPA to ensure containment to meet the performance criteria of the ESD.

In accordance with ESD requirements, selected sentinel monitoring wells will be located up-gradient of the RA containment system extraction wells.

Potential compliance and sentinel monitoring wells for the RA containment system extraction wells (EW-C and EW-N) are currently being evaluated by Northrop Grumman to meet the Performance Criteria included in the ESD (USEPA, 2005). Selections for compliance and sentinel monitoring wells will be presented to USEPA in the Compliance/General Monitoring Plan (C/GMP).



DISCUSSION OF ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

3.0 DISCUSSION OF ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

Environmental Facts Potentially Affected

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared in compliance with the California Environmental Quality Act (CEQA) pursuant to Public Resources Code (PRC) Section 21000, et seq. and the State CEQA Guidelines (California Code of Regulations Section 15000, et seq.). Specifically, the preparation of an Initial Study is guided by Section 15063 of the State CEQA Guidelines. This Project is evaluated based upon its effect on seventeen major categories of environmental factors.

LPVCWD has not received requests from any native American tribes to be notified of projects undergoing CEQA review with LPVCWD as Lead Agency. As a result, the native American tribal notification requirements pursuant to Assembly Bill 52 are not applicable to the Project. LPVCWD has fulfilled its Lead Agency obligations under Assembly Bill 52 and tribal cultural resources are not evaluated further as part of the IS/MND.

The environmental factors checked below would be potentially affected by the proposed Project in that at least one impact that is a “Potentially Significant” as indicated by the resource checklists of this IS/MND.

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



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The IS/MND fully addresses potential impacts to the environment, as described by CEQA, as “the physical conditions which exist within the area which will be affected by a proposed Project including land, air, water, flora, fauna, noise, objects of historic or aesthetic significance.” A detailed analysis of environmental impacts will be presented for each resource area (listed above) utilizing the model Environmental Checklist Form found in Appendix G of the CEQA Guidelines Section 15063(f). Impacts to the environment for construction and operation of the Project will be assessed and described, and the level of significance of impacts will be measured against criteria that have been established by regulation, accepted standards, or other definable criteria. The use of an MND is only permissible if all potentially significant environmental impacts assessed in the IS are rendered less than significant with incorporation of mitigation measures.

Each environmental resource area is reviewed by analyzing a series of questions (i.e., Initial Study Checklist) regarding level of impact posed by the Project. Substantiation is provided to justify each determination. One of four following conclusions is then provided as a determination of the analysis for each of the major environmental factors.

No Impact. A finding of no impact is made when it is clear from the analysis that the project would not affect the environment.

Less than Significant Impact. A finding of a less than significant impact is made when it is clear from the analysis that a project would cause no substantial adverse change in the environment and no mitigation is required.

Less than Significant Impact with Mitigation Incorporated. A finding of a less than significant impact with mitigation incorporated is made when it is clear from the analysis that a project would cause no substantial adverse change in the environment when mitigation measures are successfully implemented by the project proponent. In this case, LPVCWD is the Project proponent and would be responsible for implementing measures identified in a Mitigation Monitoring Program.

Potentially Significant Impact. A finding of a potentially significant impact is made when the analysis concludes that the proposed project could cause a substantial adverse change in the environment for one or more of the environmental resources assessed in the checklist. In this case, typically preparation of an Environmental Impact Report (EIR) would be required.



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DISCUSSION OF ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

3.1 AESTHETICS

3.1.1 Setting

The proposed Project is situated in an industrial, commercial and residential (north of E Nelson Avenue) setting within an urbanized area. The dominant view in the general area includes the Puente Hills to the south, Legg Lake to the west, the San Jose Hills to the northeast, and the San Gabriel Mountains located as a backdrop to the north of the proposed Project. Two small parks are located within 0.35 miles of the proposed Project. The western end of the proposed Project is located near Basset County Park and the eastern end of the proposed Project is located near La Puente Park. Dominant views to the immediate south of the proposed Project include one and two-story buildings surrounded by asphalt with some tall ornamental trees. Dominant views to the immediate north of the proposed Project include primarily one-story residential homes with tall, ornamental trees.

According to California's Scenic Highway Program, no officially designated-scenic routes, eligible scenic routes, or scenic vistas occur in the immediate vicinity of the proposed Project. The nearest eligible route is California State Route (SR) 57 located approximately seven miles southeast of the proposed Project between SR 90 and SR 60 near the City of Industry.

3.1.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
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) In non-urbanized areas, substantially degrade the existing visual character or quality public views of the site and its surroundings? (Public views are those that are experience from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



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

No impact.

The proposed Project is not located in an area with a designated scenic vista. The visual quality of the areas surrounding the proposed Project site consists predominately of employment development with some commercial and public facility developments (i.e., police station and the City of Industry Civic Financial Center). Therefore, the proposed Project will have no impact on a scenic vista.

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

No Impact.

The proposed Project is not located within an officially designated State Scenic Highway. The nearest officially designated State Scenic Highway to the proposed Project is SR 2, which is approximately 18 miles northwest of the proposed Project. The nearest eligible state scenic highway route is SR 57, located approximately seven miles southeast of the proposed Project. Therefore, no impact to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway would occur as a result of the proposed Project.

c) *In non-urbanized areas, substantially degrade the existing visual character or quality of public views the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Less than Significant Impact.

The proposed Project would involve the installation of conveyance pipes to connect the existing extraction wells, which are located within existing rights-of-way within the City of La Puente, conveyance pipeline to the new treatment plant, and a new treatment plant for the shallow zone, to be located on the 111 Hudson Avenue property within the City of Industry. Visual impacts to the surrounding community would occur temporarily during the construction phase. Although construction of the new treatment plant would introduce a new structure, this would not significantly impact the surrounding area as the current area is zoned as “employment” which includes a variety of business and employment uses including industrial manufacturing, assembly, printing, machining, milling, welding, etc. (City of Industry 2014a). The area surrounding the proposed treatment plant consists of institutional, commercial, and employment development. All of the proposed Project elements are structures common to the urban environment and are not anticipated to significantly impact the visual character of the surrounding community. Therefore, impacts to the existing visual character or quality of the site and its surroundings would be less than significant.



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DISCUSSION OF ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

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

Less than Significant Impact.

The proposed Project would be located within the existing public rights-of-way within the City of La Puente for installation of the conveyance pipes connecting the existing extraction wells, a conveyance pipeline to the new treatment plant, and a new treatment plant for the shallow zone, to be located on 111 Hudson Avenue, zoned as “employment” under the City of Industry General Plan (City of Industry 2014b). These areas are surrounded by institutional, commercial, and employment development. During the construction phase, activities would occur during daylight hours. Operation of the extraction wells would occur below ground and therefore would not create a new source of substantial light or glare. Operation of the treatment plant would provide a new source of light and glare; however, it would be general lighting within the property boundary and would correspond with the existing industrial lighting and use of the area. The lighting would all be downward and inward oriented as is required by the City of Industry. As a result, there would be less than significant impact on light-sensitive receptors.



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DISCUSSION OF ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

3.2 AGRICULTURE AND FORESTRY RESOURCES

3.2.1 Setting

The proposed Project site and surrounding areas occur within an urban context which does not support agricultural land uses or forestry resources. There are no agricultural or forestry resources within the City of Industry or the City of La Puente. Additionally, there are no areas set aside solely for agricultural purposes or defined as forestry lands on or adjacent to the proposed Project site.

3.2.2 Impact Analysis

Issues	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
AGRICULTURE AND FORESTRY RESOURCES: Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<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 Protection (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

No Impact.

See impact discussion e) below.



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

No Impact.

See impact discussion e) below.

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 Protection (as defined by Government Code section 51104(g))?

No Impact.

See impact discussion e) below.

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

No Impact.

See impact discussion e) below.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact.

The proposed Project is located within an urbanized area with no agricultural land use designations or forestry land use designations or operations in the vicinity of the proposed Project area. Construction and operations of the proposed Project would not convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance; conflict with existing zoning for agricultural use, or a Williamson Act contract; conflict with existing zoning of forest land, timberland or timberland zoned Timberland Protection; or involve other changes in the existing environment which could result in the conversion of Farmland, to non-agricultural use. Therefore, no impacts related to agriculture and forestry resources would occur from the construction and operation of the proposed Project.



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3.3 AIR QUALITY

3.3.1 Setting

The proposed Project site is located in the South San Gabriel Valley region of the southeast Los Angeles County. The proposed Project area is within the South Coast Air Basin (SCAB) which is under the jurisdiction of South Coast Air Quality Management District (SCAQMD). The proposed Project components, including the water treatment plant, conveyance pipelines to connect existing wells, and water conveyance pipelines to the treatment plant are located in commercial/industrial and residential areas. The nearest sensitive receptors to the proposed water treatment plant are residences located more than 700 feet to the northeast, along Nelson Avenue.

Regulatory oversight authority regarding air quality at the local, state, and federal levels rests with the SCAQMD, California Air Resources Board (CARB), and United States Environmental Protection Agency (USEPA), respectively.

Ambient air quality is determined by comparing pollutant levels in ambient air samples to national and state standards. These standards are established by the USEPA and CARB at levels determined to be protective of public health and welfare, with an adequate margin of safety. California Ambient Air Quality Standards (CAAQS) were established in 1967, whereas National Ambient Air Quality Standards (NAAQS) were first established by the federal Clean Air Act of 1970. California standards are generally more stringent than national standards.

Air quality standards specify the upper limits of pollutant concentrations, over defined durations, in ambient air, consistent with the management goal of preventing specific harmful effects. There are national and state standards for the “criteria pollutants” ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), fine particulate matter with an aerodynamic diameter of less than 2.5 microns (PM_{2.5}), airborne respirable particulate matter with an aerodynamic diameter of less than 10 microns (PM₁₀), sulfur dioxide (SO₂), and lead (Pb). Federal/National and State Ambient Air Quality Standards are presented in Table 1.



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Table 1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ^{a,c}	National Standards ^{b,c}	
			Primary	Secondary
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	—	—
	8 Hour	0.07 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³)	Same as Primary
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	150 µg/m ³	Same as Primary
	Annual Mean	20 µg/m ³	—	
Fine Particulate Matter (PM _{2.5})	24 Hour	No Separate State Standard	35 µg/m ³	Same as Primary
	Annual Mean	12 µg/m ³	12.0 µg/m ³	15 µg/m ³
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	—
	8 Hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	—
Nitrogen Dioxide (NO ₂)	1 Hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)	—
	Annual Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	Same as Primary
Sulfur Dioxide (SO ₂)	1 Hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)	—
	3 Hour	—	—	0.5 ppm (1,300 µg/m ³)
	24 Hour	0.04 ppm (105 µg/m ³)	0.14 ppm (365 µg/m ³) (for certain areas)	—
	Annual Mean	—	0.030 ppm (80 µg/m ³)	—
Lead (Pb)	30-Day Average	1.5 µg/m ³	—	—
	Calendar Quarter	—	1.5 µg/m ³ (for certain areas)	Same as Primary
	Rolling 3-Month	—	0.15 µg/m ³	
Visibility-Reducing Particles	8 Hour	10 mile visibility standard, extinction of 0.23 per kilometer	No National Standards	
Sulfates	24 Hour	25 µg/m ³		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m ³)		

Notes:

^a California standards for O₃, CO (except Lake Tahoe), SO₂ (1 and 24 hour), NO₂, suspended particulate matter (PM₁₀, PM_{2.5}, and visibility-reducing particles) are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

^b National standards (other than O₃, PM, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

^c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to these reference conditions; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

mg/m³ = milligrams per cubic meter; µg/m³ = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion

Source: CARB, 2016a.



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The USEPA and CARB determine the air quality attainment status of designated areas by comparing local ambient air quality measurements from state or local ambient air monitoring stations with the CAAQS and NAAQS. These attainment designations are determined on a pollutant-by-pollutant basis. Consistent with federal requirements, an unclassifiable designation is treated as an attainment designation. Table 2 presents the federal and state attainment status for the SCAB.

Table 2 Attainment Status of South Coast Air Basin

Pollutant	State Designation	Federal Designation
Ozone (O ₃)	Non-Attainment	Non-Attainment (Extreme)
Particulate Matter (PM ₁₀)	Non-Attainment	Attainment
Particulate Matter (PM _{2.5})	Non-Attainment	Non-Attainment (Serious)
Carbon Monoxide (CO)	Unclassified/Attainment	Attainment/Maintenance
Nitrogen Dioxide (NO ₂)	Unclassified/Attainment	Attainment/ Unclassifiable
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Lead (Pb)	Attainment	Partial Nonattainment (Los Angeles County only)
Hydrogen Sulfide (H ₂ S)	Unclassified	*
Sulfates	Attainment	*
Visibility Reducing Particles	Unclassified	*
Source: CARB, 2017 and EPA, 2018		
Notes: (*) = Not Applicable/ No Federal Standards		

As shown in Table 2, the proposed Project area is designated as nonattainment for both, federal and state standards for O₃ and PM_{2.5}, federal standard for lead (rolling 3 months), and state standard for PM₁₀. Because the SCAB currently exceeds several state and federal ambient air quality standards, the SCAQMD is required to implement strategies to reduce pollutant levels to recognized acceptable standards.

The SCAQMD in conjunction with the Southern California Association of Governments (SCAG), CARB, USEPA, and a number of other stakeholders, prepared the 2016 Air Quality Management Plan (AQMP) (SCAQMD, 2017). The purpose of the 2016 AQMP is to provide a comprehensive and integrated program to lead the SCAB into compliance with the national 24-hour and annual PM_{2.5} AAQS. In addition, the 2016 AQMP outlines the plan toward meeting the national 1-hour and 8-hour ozone standards.

The 2016 AQMP accounts for projected population growth, predicted future emissions in energy and transportation demand, and determined control strategies for the eventual achievement of AAQS attainment designation. These control strategies involve a combination of regulatory and incentive approaches via partnerships at all levels of government.

The 2016 AQMP includes policies that are consistent with the SCAQMD and specify review according to the recommendations of SCAQMD guidelines. Other policies are aimed at reducing transportation emissions and emissions from major stationary sources.



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The proposed Project would be subject to the following general SCAQMD rules and regulations:

- Regulation IV - Prohibitions
 - Rule 401 – Visible Emissions
 - Rule 402 – Nuisance
 - Rule 403 – Fugitive Dust

3.3.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
AIR QUALITY: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard	<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 other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The SCAQMD has adopted regional and localized significance thresholds (LSTs) to determine the significance of a project's potential air quality impacts. The thresholds of significance are adopted for the construction and operation phases of projects. The LSTs were developed by the SCAQMD to assist lead agencies in analyzing localized air quality impacts from projects. LST look-up tables for one, two, and five acre proposed projects emitting CO, nitrogen oxides (NO_x), PM_{2.5} or PM₁₀ were prepared for easy reference according to source receptor area. The LST methodology and associated mass rates are not applicable to mobile sources travelling over the roadways. It should be noted that SCAQMD does not require compliance with LSTs for new construction projects; more importantly, LSTs are a voluntary approach to be implemented at the discretion of local agencies (SCAQMD, 2008).

Table 3 below presents the regional and localized significance thresholds applicable to the proposed Project that are used for purposes of impact analysis. Because installation of the water conveyance pipelines mainly involves mobile sources operating along roadways, LSTs have only been applied to the water treatment plant site for purposes of this analysis. These LSTs are based on a one-acre site with a 200-meter receptor distance.



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Table 3 SCAQMD Air Quality Significance Thresholds (Mass Daily Thresholds)

Regional Thresholds (lbs/day)	VOC	NO_x	SO_x	CO	PM₁₀	PM_{2.5}	Lead (Pb)
Construction	75	100	150	550	150	55	3
Operation	55	55	150	550	150	55	3
Localized Thresholds (lbs/day)¹	VOC	NO_x	SO_x	CO	PM₁₀	PM_{2.5}	Lead (Pb)
Construction	n/a	123	n/a	2,110	60	20	n/a
Operation	n/a	123	n/a	2,110	15	5	n/a
SOURCE: SCAQMD Air Quality Significance (Mass Daily) Thresholds, 2015 SCAQMD Mass Rate LST Lookup Tables, Appendix C, 2009 Notes: 1. Localized significance thresholds are from the SCAQMD lookup tables for Source Area 11 assuming a one acre project site and a distance to the nearest sensitive receptor of 200 meters.							

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

Less than Significant Impact.

Projects with daily emissions below the significance thresholds established by the SCAQMD (presented in Table 3), would be in line with the goals of achieving attainment with ambient air quality standards as outlined in the latest air quality plan (2016 AQMP), and would not conflict with or obstruct implementation of the applicable plans. Emissions from proposed Project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (CARB, 2016b). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planning, and environmental professionals to quantify potential criteria air pollutant emissions associated with both construction and operation from a variety of land use projects. The model quantifies direct emissions from construction and operation including vehicle use, off-road equipment, fugitive dust, off-gas from asphalt and landscaping maintenance. Default data (i.e., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is an accurate and comprehensive tool for quantifying air quality impacts from land use projects throughout California.

The Project would result in emissions of criteria air pollutants during construction primarily from off-road equipment and on-road vehicle exhaust, fugitive dust from grading/soil disturbing activities, and off-gas from re-paving streets after pipeline installation. Operation phase emissions of criteria air pollutants are limited to vehicle exhaust from workers commute, and emissions associated with operation and maintenance of the treatment plant.

Emissions from the treatment plant operation are limited as a majority of equipment will be electrically powered and the treatment/remediation process is a closed system. Estimated Project construction and operation emissions are summarized below in Tables 4 and 5, respectively. Detailed emissions estimates and assumptions are provided in Appendix A (Project Emissions Estimates).



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Table 4 Project Construction Emissions in Comparison with SCAQMD Significance Thresholds

Component	Pollutant Emissions (lbs/day) ¹						
	VOC	NOx	CO	SOx	PM ₁₀	PM _{2.5}	Pb
Pipeline Installation and Re-paving	3.27	28.00	23.83	0.05	2.68	1.68	--
Water Treatment Plant	2.49	19.51	15.48	0.03	6.77	3.79	--
Peak Day Regional Emissions ²	5.76	47.51	39.30	0.08	9.45	5.47	--
Regional Significance Thresholds	75	100	550	150	150	55	3
Exceed Thresholds?	No	No	No	No	No	No	n/a
Peak Day Onsite Emissions ³	2.27	19.48	13.49	0.02	6.68	3.77	--
Localized Significance Thresholds	n/a	123	2,110	n/a	60	20	n/a
Exceed Thresholds?	--	No	No	--	No	No	--
Notes: n/a = not applicable, no thresholds adopted 1. Emission estimated using CalEEMod Version 2016.3.2. Results of model runs are provided in Appendix A. 2. Peak regional emissions estimated using maximum on-site and offsite daily emissions from construction activities that occur simultaneously (installation of conveyance pipelines and construction of the water treatment plant based on construction schedule). 3. Peak onsite emissions are associated with construction of water treatment plant and compared with the localized significance thresholds.							

Table 5 Project Operation Emissions in Comparison to SCAQMD Significance Criteria

Component	Emissions (lbs/day) ¹						
	VOC	NOx	CO	SOx	PM ₁₀	PM _{2.5}	Lead (Pb)
Project Operation Emissions ²	0.43	0.09	0.16	<0.01	0.03	0.01	--
Regional Thresholds Operation	55	55	550	150	150	55	3
Localized Thresholds Operation	n/a	123	2,110	n/a	15	5	n/a
Exceeds Thresholds?	No	No	No	No	No	No	n/a
Notes: 1. Emission estimated using CalEEMod Version 2016.3.2. Results of model runs are provided in Appendix A. 2. Operational emissions assumed to be limited to the water treatment plant. Assumes no measurable criteria air pollutant emissions from operation of water conveyance pipelines.							

As shown in Tables 4 and 5, proposed Project construction and operation emissions are below the applicable SCAQMD regional and localized mass emissions thresholds of significance. Considering Project mass emissions are below the thresholds of significance, the Project would not conflict with or obstruct implementation of the 2016 AQMP and impacts would be less than significant.



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

Less than Significant Impact.

By its very nature, air pollution is largely a cumulative impact. The SCAQMD's application of thresholds of significance for criteria air pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. If a project's emissions are less than the thresholds of significance for criteria air pollutants the project would not be expected to result in a cumulatively considerable air quality impact. As shown in Tables 4 and 5, Project construction and operation emissions are below the applicable SCAQMD regional and localized mass emissions thresholds of significance. Considering Project mass emissions are below the thresholds of significance, the 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 and impacts would be less than significant.

- c) Expose sensitive receptors to substantial pollutant concentrations?*

Less than Significant Impact.

As shown in Tables 4 and 5, Project construction and operation emissions are below the applicable SCAQMD localized mass emissions thresholds of significance. Considering localized Project mass emissions are below the thresholds of significance, the Project would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant.

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

Less than Significant Impact.

Construction of the proposed Project does not include any source of potentially objectionable odors that could affect a substantial number of people. There is a potential for odors to be created as a result of operating the water treatment plant. However, the proposed treatment system is a closed system. The treated water would have no odor. The treatment plant would require infrequent change out of the liquid-phase granular activated carbon which is limited to a very short duration (e.g., three to four hours monthly). This would not cause odor. As granular activated carbon is removed, it will be placed into sealed containers for transport to an appropriate receiving facility for disposal. Considering the short-term duration and distance of over 700 feet to the nearest sensitive receptors, potential odors from operating the water treatment plant would be negligible. As such, the proposed Project would not create objectionable odors affecting a substantial number of people and potential impacts would be less than significant.



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3.4 BIOLOGICAL RESOURCES

3.4.1 Setting

The proposed Project will be constructed within previously disturbed lands that lack native vegetation. The existing extraction wells, proposed conveyance pipelines, and the proposed treatment plant in the shallow zone are located within developed (i.e., street rights-of-way, residential, industrial, and institutional areas) and/or previously disturbed areas with non-native annual grassland (i.e., proposed treatment plant located within an empty lot). Ornamental trees and shrubs are interspersed throughout the proposed Project area.

3.4.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
BIOLOGICAL RESOURCES: Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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

Less than Significant Impact with Mitigation Incorporated.

The United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW), list species as threatened or endangered under the Federal and State Endangered Species Acts (FESA and CESA, respectively). A literature review was conducted to assist in determining the existence or potential occurrence of special-status plants and wildlife within the proposed Project limits and in the proposed Project vicinity. According to the literature review, no occurrence records for plant or wildlife species listed by the State and/or Federal government as endangered or threatened were identified within the Project limits. In addition, a review of the California Natural Diversity Database or “CNDDDB” (CDFW 2019) indicated no recent records (i.e., occurrences within one mile of the proposed Project over the past 30 years) of any special status species within one mile of the proposed Project site. However, the literature review indicated that the proposed Project site is located approximately three miles southwest of designated critical habitat for the Coastal California Gnatcatcher (CAGN). No suitable habitat for CAGN occurs within the proposed Project or within 500 feet of the proposed Project. As mentioned earlier, the proposed Project site and adjacent areas do not contain habitat suitable to support special-status species and the proposed Project site is not within a known migratory corridor for any special-status species. Therefore, the implementation of the proposed Project is not expected to result in impacts to threatened, endangered or other special-status species.

Treated water from the SZ-South Interim Remedy treatment plant will be discharged to San Jose Creek located south of the proposed Project. This reach of San Jose Creek is channelized (reinforced cement concrete) and does not contain suitable habitat for special status species. San Jose Creek transitions to a soft bottom creek approximately two miles downstream of the proposed discharge point. The soft bottom channel extends for 6,900 feet and contains six installed separate riprap grade controls that span the creek bed as it runs in a northwesterly direction. San Jose Creek is located within hydrological unit 405.41 of the Los Angeles County Regional Water Quality Control Board (LARWQCB) Water Quality Control Plan or “Basin Plan”, (LARWQCB 1995). San Jose Creek is identified in the Basin Plan as having intermittent beneficial uses for warm freshwater habitat (“WARM”) and existing beneficial uses for wildlife habitat (“WILD”). The WARM designation means that the creek may intermittently support warm water ecosystems that may include, but are not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife (including invertebrates). The WILD designation means that the creek supports wildlife habitats that may include, but are not limited to, the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.

The discharge into San Jose Creek may result in some minor changes to water quantity and quality in the soft-bottom natural area of the channel. These changes may include turbidity in the water column as a result of re-suspension of sediments. Changes in the volume of water caused by the additional discharge may result in minor but temporary erosion. Impacts on downstream habitats result from this increase in discharge would be negligible. The potential fluctuation in the volume of water may temporarily impact aquatic biota such as macro-invertebrates, and temporarily impact aquatic vegetation associated with the



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creek. Common wildlife such as birds that may depend upon the creek for food and shelter may be temporarily affected by these impacts. However, the riprap grade controls set along the soft bottom channel of the San Jose Creek may potentially aid in limiting the flow of water as well as the level of turbidity and erosion.

Based on the distance of the soft bottom natural area of the creek from the discharge point, lack of occurrences of or habitat suitable to support special-status species in the proposed Project area (CDFW 2019), maintenance of existing erosion control measures along the soft bottom channel, and the meeting of NPDES requirements for the discharge of the treated water, impacts to potential aquatic and wildlife species that may be associated with the San Jose Creek ecosystem is expected to be less than significant.

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) and Section 3503 of the California Fish and Game Code protects migratory nesting birds. The Project site supports non-native, ornamental trees that may be potentially used by birds for nesting activities. Construction activities that will occur in close proximity to the trees has the potential to adversely impact nesting birds, if present during construction. This is a potentially significant impact.

Mitigation Measures

BIO-1: Nesting Bird Impacts Avoidance

This proposed Project does not propose vegetation removal; however, there is nesting bird potential in trees and shrubs adjacent to proposed construction activities (e.g. landscaping occurs primarily along sidewalks immediately adjacent to proposed pipelines in existing roads). The noise and level of human activity associated with construction activities within the Project footprint have the potential to result in direct impacts or indirect disturbance to nesting birds. Any activities that could potentially cause disturbance to active nests, eggs, and/or young of nesting birds, or cause nest abandonment, shall be minimized or avoided.

Prior to initial site disturbance, seasonally timed presence/absence surveys for nesting birds shall be conducted by a qualified biologist. If construction activities carry over into a second nesting season(s) the surveys will need to be completed annually until the proposed Project is complete. A minimum of three survey events, three days apart shall be conducted (with the last survey no more than three days prior to the start of site disturbance), if construction is scheduled to begin during avian nesting season (February 15th through September 15th); surveys for raptors shall be conducted from January 1st to August 15th. Surveys shall be conducted within 500 feet of all proposed Project activities.

If endangered or threatened species are observed, consultation with U.S. Fish and Wildlife Service (USFWS) and/or CDFW is required. If breeding birds with active nests are found prior to or during construction, a qualified biological monitor shall establish a 300-foot buffer around the nest and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. The prescribed buffers may be adjusted by the qualified biologist based on existing conditions around the nest, planned construction activities, tolerance of the species, and other pertinent factors. The qualified biologist shall conduct regular monitoring of the nest to determine success/failure and to ensure that



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Project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails. If construction occurs outside of avian nesting season, only a single presence/absence survey will be required.

Residual Impacts

With the implementation of Mitigation Measure BIO-1, the Project would have a less than significant impact with mitigation incorporated to 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.

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

Less than Significant Impact.

Riparian habitat refers to the trees, other vegetation, and physical features normally found on the banks and floodplains of rivers, streams, and other bodies of fresh water. This includes willows, mule fat, and other vegetation typically associated with the banks of a stream or lake shorelines and may be consistent with United States Army Corps of Engineers (USACE) and CDFW definitions. In most situations, wetlands associated with a stream or lake would fall within the limits of the riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas and may include additional areas that do not meet USACE criteria for soils and/or hydrology (e.g., where riparian woodland canopy extends beyond the banks of a stream away from frequently saturated soils).

The proposed Project site is predominantly developed with little to no vegetation. The proposed Project site and immediate surrounding areas do not support riparian or wetland vegetation. Treated water from the SZ-South Interim Remedy treatment plant is proposed to be discharged to San Jose Creek located immediately south of the proposed Project. This reach of San Jose Creek is channelized (reinforced cement concrete) and does not support riparian habitat or other sensitive or native natural communities. The natural areas of the creek occur approximately two miles downstream of the proposed area for treated water discharge, where San Jose Creek supports a soft bottom channel and associated riparian habitat. Potential indirect impacts to the aquatic ecosystem of the creek in this area from discharge of treated water have been discussed in Impacts Analysis a) above.

Based on the lack of riparian vegetation at the proposed Project site, distance between natural riparian areas of San Jose Creek and project site, indirect nature of disturbance to the creek from discharge of treated water, and the meeting of NPDES requirements for the discharge of the treated water, impacts to riparian habitat or other sensitive natural communities would be less than significant.



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

Less than Significant Impact.

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into “waters of the U.S.” under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. “Waters of the U.S.” is a broad term and can be divided into three categories: territorial seas, tidal waters, or non-tidal waters. This permitting authority applies to all “waters of the U.S.” where the material (1) replaces any portion of “waters of the U.S.” with dry land or (2) changes the bottom elevation of any portion of any “waters of the U.S.”

The USACE generally asserts jurisdiction over “waters of the U.S.” that are: traditional navigable waters (TNW), wetlands adjacent to TNWs, non-navigable tributaries of TNWs that are relatively permanent waters (RPW) where the tributaries typically flow year-round or have continuous flow at least seasonally (typically three months), and wetlands that abut such tributaries. For certain waters including non-navigable tributaries that are not RPWs, the USACE bases their jurisdictional assertion on a fact-specific analysis to determine if a ‘significant nexus’ exists with a TNW. A significant nexus analysis assesses the flow characteristics and function of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters. A significant nexus includes consideration of hydrologic and ecologic factors.

The CDFW has jurisdictional authority over riparian/wetland resources associated with rivers, streams, and lakes pursuant to the California Fish and Game Code (§1600–1616). Pursuant to Section 1602 of the California Fish and Game Code; CDFW regulates any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. Because the CDFW includes streamside habitats (such as riparian vegetation) under its jurisdiction that, under the federal definition, may not qualify as wetlands on a particular project site, its jurisdiction may be broader than that of the USACE.

Under the jurisdictional criteria defined above, San Jose Creek is potentially subject to USACE, RWQCB, and CDFW jurisdiction. Although San Jose creek is not navigable, it is likely an RPW in most years. In addition, it is a tributary to navigable waters. San Jose creek flows into the San Gabriel River, which subsequently drains into the Pacific Ocean. However, the Project does not include the introduction of fill into the waters or any wetlands, nor would it affect either. Therefore, it is expected that USACE and CDFW would not claim jurisdiction.

The Project proposes to discharge treated water from the SZ aquifer through new groundwater conveyance pipelines from two existing extraction wells to the SZ-South Interim Remedy treatment plant, the treatment plant discharge point to a storm drain outfall, and the effluent storage tank to the



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wastewater discharge tank. The treated water released to a storm drain outfall will ultimately discharge the treated effluent to San Jose Creek. These pipeline structures will not be located within potential state and federal jurisdictional areas of the San Jose Creek. No major modification of creek bed, bank or riparian areas is proposed. The indirect and minor nature of impacts to San Jose Creek natural areas downstream of the Project have been discussed in responses to questions a) and b) above, but impacts will have no adverse effect on federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

Therefore, the implementation of the proposed Project will not have a substantial adverse effect on federally protected wetlands as defined by Sections 404/401 of the Clean Water Act or CDFW jurisdictional waters and therefore, impacts would be less than significant.

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

Less than Significant Impact.

Wildlife corridors facilitate connectivity on a larger scale between areas of suitable habitat or on a smaller scale between habitat and resources that may otherwise be isolated. The proposed Project site is located in a predominantly industrial setting, surrounded by developed areas. The proposed Project actions are primarily proposed to occur in previously disturbed areas that lack habitat suitable for wildlife and native plants. Based on this environmental setting, it is highly unlikely that the proposed Project site is utilized as a wildlife movement corridor. While San Jose Creek may be utilized by common urban wildlife for movement, the portion of the channel adjacent to the Project site is channelized, which greatly limits its potential for wildlife movement. Wildlife movement up and down the channel by small urban wildlife may be accommodated when the flow in the channel is low. Wildlife species that use developed areas for foraging and breeding will have adequate similar habitat in adjacent areas not affected by the proposed actions of this Project. As identified earlier, the Basin Plan recognizes San Jose Creek as having intermittent beneficial uses as a freshwater habitat for fish and wildlife and may also be beneficially used as a wildlife habitat. These functions and values are likely restricted to the natural areas of the creek that support the soft bottom channel with riparian habitat, which occur approximately two miles downstream of the proposed Project site. As discussed in responses to Questions a) and b) earlier, the potential impacts from discharge of treated water into San Jose Creek are indirect and minor.

Therefore, based on the lack of native resident or migratory fish and native resident or migratory wildlife corridors within and near the proposed Project and the intermittent nature of San Jose Creek as a freshwater habitat for fish and wildlife, interference to 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 by the Project would be less than significant.



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

No impact.

The City of Industry's Municipal Code does not have any specific ordinances that provide special protection for trees, other plant or animal species, or natural habitat areas. However, the City of Industry has adopted a water conservation ordinance pursuant to Assembly Bill (AB) 1881. All new and rehabilitated landscaped areas are required to meet the provisions of Chapter 13.18 of the City's Municipal Code. Since all new development must follow these regulations, the Project would not cause conflicts with the existing ordinance (City of Industry 2014a). The City of La Puente does not have any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (City of La Puente 2004). In addition, the construction and operation of the proposed Project does not include the removal of landscaping, in particular, trees. Therefore, no impact would occur.

- f) *Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?*

No impact.

The proposed Project site or Project area is not located within an area where there are draft or adopted Habitat Conservation Plans (HCP), Natural Community Conservation Plans (NCCP), or any other local, regional, or state habitat conservation plans in effect. Since no such conservation plans are in effect in the Project area, the Project site is not subject to the requirements of such plans and is therefore subject to regulation by local, State, and Federal laws on a case-by-case basis for biological resources. As there is no adopted HCP, NCCP, or other approved local, regional, or state HCP applicable to the Project, there would be no impact.



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3.5 CULTURAL RESOURCES

3.5.1 Setting

The San Gabriel Basin, including areas surrounding the proposed Project, has a rich Native American history including the Tongva Indians, also known as the Gabrielinos because of their association with the Mission San Gabriel in the late eighteenth century (Welch 2006). By the late 1700s the Spanish established a set of missions throughout California, with Mission San Gabriel built in 1771. By the mid-1800s the La Puente Rancheria of Mission San Gabriel was parceled out to several Mexican citizens. By the early 1900s the La Puente Valley was known for its abundance of citrus, walnut, and avocado crops with a growing industry of oil, banking, and communications.

3.5.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) *Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?*

No Impact.

The proposed Project would not cause any adverse change to aboveground historical resources (buildings or structures that are, or could be, eligible for the National Register of Historic Places or the California Register of Historical Resources). Construction of the new water treatment plant would be placed on a vacant lot and no structures would be demolished. Construction of the pipelines will be aligned within existing rights-of-way and would not impact any structures. Therefore, no impacts to historical structures are expected and no mitigation is required.

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



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Less than Significant Impact.

A records search performed for a previously published Class III investigation showed that there have been eight previous archaeological investigations within one mile of the proposed Project area. The Class III field survey found no resources within the general vicinity of the proposed Project area. In the unlikely event archaeological resources are discovered during construction, work activities shall cease in accordance with applicable law until a qualified archaeologist can assess the potential significance of such finds; therefore, potential impacts to archaeological resources would be less than significant.

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

Less than Significant Impact.

The proposed Project would not impact any known cemeteries. Although unlikely, in the event human remains are discovered during construction, work activities shall cease until the Los Angeles County coroner is contacted and the age of the remains can be determined. If the remains are determined to be historical a qualified archaeologist can assess the potential significance of the remains in accordance with applicable law. If the remains are determined to be Native American, the appropriate Native Americans as identified by the Native American Heritage Commission as provided in California Public Resources Code SS5097.98 shall be notified. Therefore, potential disturbance to human remains, including those interred outside of formal cemeteries would be less than significant.



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3.6 ENERGY

3.6.1 Setting

Southern California Edison is the electrical service provider within both the City of Industry as well as the City of La Puente. SCE maintains a number of distribution and substation facilities in the vicinity of the proposed Project, which would be available to provide the energy necessary for the construction, operation, and maintenance of the proposed Project facilities. Discussed in greater detail above in Section 1.6.7 (Southern California Edison), the Applicant has submitted an application to SCE for a connection to support the SZ-South Remedy treatment plant.

SCE is required by the California Energy Commission to publish a power content label describing the percentage mix of SCE's energy sources.

In 2017, SCE obtained power from the following sources:

Renewable – 32 percent
Large Hydroelectric – 8 percent
Natural Gas – 20 percent
Nuclear – 6 percent
Unspecified Sources of Power¹ - 34 percent.

SCE's renewable energy sources are further broken down as follows:

Solar – 13 percent
Wind – 10 percent
Geothermal – 8 percent
Eligible Hydroelectric – 1 percent.

3.6.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
Energy: Would the Project:				
a) Result in potentially significance environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction and 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 type="checkbox"/>	<input checked="" type="checkbox"/>

¹ "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.



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

Less than Significant.

Resources that would be consumed as a result of the proposed Project include water, electricity, and fossil fuels during construction and operation. Construction would require the manufacture of new materials, some of which may not be recyclable at the end of the proposed Project's lifetime. The energy required for the production of these materials would also result in an irretrievable commitment of natural resources. The anticipated equipment, vehicles, and materials required for construction of the proposed Project as detailed within Appendix A (CalEEMod Output). The amount and rate of consumption of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources.

Construction activities associated with the proposed Project would result in the consumption of petroleum-based fuels. There are no unusual Project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the State; therefore, it is expected that construction fuel consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Minimal daily vehicular fuel consumption would occur during operation of the proposed Project, as the Project would be unstaffed during regular operations. As such, it would be expected that vehicular fuel consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than for any other similar land use in the region.

Furthermore, to save materials and fuel for economic gain, it is to the advantage of the Applicant to implement energy efficiency and fuel use reduction strategies for all on-site equipment, and wherever possible during construction.

Compliance with all applicable building codes, state of California, County of Los Angeles, City of Industry, and City of La Puente regulations, ordinances, and policies would ensure that all natural resources are conserved to the maximum extent possible. Therefore, the proposed Project's consultation of energy resources would have a less than significant impact

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

No Impact.

The California Renewable Portfolio Standard requires that 33 percent of electricity retail sales be provided by renewable energy sources by 2020. As discussed above in Section 1.6.7 (Southern California Edison), the Applicant has committed to obtaining electrical service for the proposed Project from SCE. This agreement would be issued in compliance with all applicable state and local plans for renewable energy and energy efficiency. Detailed above via the SCE Power Content Label, approximately 32 percent of SCE's energy supply currently comes from renewable sources. SCE also offers options for increased



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renewable energy mixtures. SCE is on track to meet the California Renewables Portfolio Standard (RPS) of 33 percent by 2020 mandate, and the proposed Project would not interfere with SCE's RPS goals.

As part of the State's Energy Plan and in compliance with California Code of Regulations Title 24 energy efficiency standards, the Applicant will be required to comply with the California Green Building Standards Code (CALGreen) nonresidential requirements for energy efficient buildings and appliances, where applicable. Construction and operation of the proposed Project would not obstruct or prevent the implementation of current or future state or local plans for renewable energy or energy efficiency. Compliance with existing regulations (including CALGreen) and purchasing of energy from SCE will further the state's plans for renewable energy and energy efficiency.

Neither the City of Industry nor the City of La Puente have an adopted plan for renewable energy or energy efficiency. The City of Industry General Plan does not contain any energy conservation or renewable energy goals. The City of La Puente General Plan requires energy conservation via compliance with the Title 24 energy efficiency standards discussed above.

The proposed Project would be constructed and operated in compliance with all state and local plans for renewable energy and energy efficiency and would include the Title 24 energy efficiency standards for nonresidential uses. The Project would utilize a mixture of renewable energy as available from the local provider and would not conflict or obstruct any state or local plans for renewable energy or energy efficiency.



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3.7 GEOLOGY AND SOILS

3.7.1 Setting

The Puente Valley is a tributary basin to the Main San Gabriel Basin bounded by the San Gabriel Mountains to the north, the Raymond Basin to the northwest, and a system of low hills to the south, southwest, and southeast divided by the Whittier Narrows. Within the Puente Valley, San Jose Creek subsurface sediments are dominated by alluvial sedimentary deposits derived from consolidated marine sedimentary rocks of the Puente and San Jose Hills. These deposits range in thickness from less than 25 feet in the eastern portion of Puente Valley to approximately 1,300 feet in the northwest and predominately contain fine-grained lenses inter-fingered with coarser-grained lenses. The underlying bedrock of Puente Valley is primarily of relatively impermeable consolidated marine sedimentary rocks.

The San Gabriel basin is bounded by the Sierra Madre-Duarte faults and the Raymond fault on the north, the East Montebello fault on the west, and the Puente Hills and San Jose Hills faults on the south and east (Yeats 2001). The margins of the San Gabriel Valley basin have been the site of five earthquakes between 1987 and 1991; the 1987 Whittier Narrow earthquake, the 1988 Pasadena earthquake along the Raymond fault, the 1991 Sierra Madre earthquake, and the 1988 and 1990 Upland earthquakes along a buried fault northeast of the San Jose Hills. However, the exact geometry and location of the fault systems are unclear as the basin is underlain by several subsurface faults (Caltrans 2009).

The proposed Project engineering designs will be developed to meet current California Building Standards Code, California Uniform Building Code and the California Government Code (Section 8875-8875.10) which includes multiple earthquake and ground shaking safety standards for both new and retrofit construction.

3.7.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
GEOLOGY AND SOILS: Would the project:				
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"/>



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Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?

Less than Significant Impact.

The proposed Project is not located within the boundaries of a state-designated Alquist-Priolo Earthquake Fault Zone zone as designated by the California Department of Conservation Geological Survey (CGS, 2017). However, the area overlies the Little Puente Hill Fault and the Walnut Creek Fault. These faults, however, are not known to be active. As such, the proposed Project would not expose people or



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structures to potential substantial adverse effects, including the risk of loss, injury or death involving the rupture of a known earthquake fault. Therefore, the potential impact would be less than significant.

- ii) Strong seismic ground shaking?

Less than Significant Impact.

Seismic activity on area faults may result in ground shaking at the proposed Project site. Southern California is a seismically active area and the proposed Project site would not have a greater potential for seismic activity than other nearby locations. Additionally, proposed structures and associated elements will be designed and constructed to meet applicable state and local building code standards. Therefore, the proposed Project would have a less than significant impact in exposing people or structures to potential adverse effects from strong seismic ground shaking.

- iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact.

Seismic-related ground failure, including liquefaction, occurs when saturated, granular deposits of low relative density are subject to extreme shaking and, as a result, lose strength or stiffness due to increased pore water pressure. The consequences of liquefaction may include settlement or uplift of structures, and an increase in lateral pressure on buried structures. The majority of the proposed Project is within a liquefaction seismic hazard zone as designated by the California Department of Conservation Geological Survey (CGS, 2017). As defined in California Public Resources Code Section 2693(c) the proposed Project is in an area where historic occurrences of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements under certain high groundwater table conditions.

The proposed Project design will be conducted in accordance with applicable local and state building codes and will include mitigations for this potential liquefaction in the form of appropriate foundation design consistent with the design seismic event. Therefore, the potential impact from ground failure including liquefaction would be reduced to less than significant by employing these standards.

- iv) Landslides?

No Impact.

The proposed Project is located within an area of relatively flat terrain not adjacent to a designated hillside area. Therefore, the proposed Project is not located in an area susceptible to landslides and no impact would occur.

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

Less than Significant Impact.



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The construction and operation of the proposed Project would occur along existing paved streets and previously disturbed areas. The proposed treatment plant would be built on a vacant lot that is relatively flat and will be designed to meet the City of Industry's stormwater management standards. During construction activities, erosion impacts could occur as a result of grading, excavation or building construction. Procurement of a Construction General Permit and development of an associated Stormwater Pollution Prevention Plan (SWPPP) would occur prior to construction to reduce the potential for soil erosion impacts during construction.

Therefore, potential impacts that would result from substantial soil erosion would be reduced to less than significant employing existing standards. No new mitigation would be required.

- 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?*

Less than Significant Impact.

As discussed above, the proposed Project is characterized by relatively flat topography with no landslide hazards. While the proposed Project site may experience liquefaction in the design event, this hazard will be addressed in the design as described in detail above. Additionally, remedial grading will be required at the site to prepare the subgrade soils to accommodate foundations for the proposed structures. Therefore, the application of state and local building codes will reduce the potential impact of construction and operation of the proposed Project relative to these concerns to less than significant.

- d) *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building code (1997), creating direct or indirect risks to life or property?*

Less than Significant Impact.

The term expansive soils refers to soils which exhibit volumetric expansion when water content is increased and volumetric contraction when water content is decreased, potentially causing damage to foundations. During the site-specific investigations (Geosyntec, 2017a) laboratory testing indicated that near surface soils have a medium expansion potential. Expansive soils could result in a vertical movement of lightly loaded foundations or pavements. For lightly loaded foundations, the foundation design will consider the potential for soil expansion as required by state and local building codes. Therefore, the proposed Project would have a less than significant impact relative to creating substantial risks to life or property as a result of expansive soils.

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

No Impact.

The proposed Project area does not contain soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. The proposed Project does not include the use of



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septic tanks. Construction and operation of the proposed Project would not affect any existing, or hinder further use of, septic tanks or alternative wastewater disposal systems, or the soils that would adequately support those systems. Therefore, no impacts related to soil compatibility with septic or other alternative wastewater systems would occur.

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

No Impact.

The underlying geologic formations generally consist of Younger (Holocene) undivided alluvial fan and valley deposits overlaying Lower Fernando Formation (Pliocene) found at depths of 100 to 200 feet. The surficial sediments underlying the proposed Project area are not anticipated to have high paleontological sensitivity or contain scientifically significant paleontological resources. There are no known unique geologic features within the proposed Project area and none are anticipated to be present; therefore, there would be no impacts to unique paleontological resource or site or unique geologic feature.



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3.8 GREENHOUSE GAS EMISSIONS

3.8.1 Setting

Greenhouse Gases (GHGs) are defined as any gas that absorbs infrared radiation in the atmosphere. Common GHGs include water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), ozone (O₃), and aerosols. GHGs are emitted by both natural processes and human activities, and lead to the trapping and buildup of heat in the atmosphere near the earth's surface, commonly known as the "Greenhouse Effect." There is increasing evidence that GHGs and the Greenhouse Effect are leading to global warming and climate change (USEPA, 2015).

Climate change refers to any significant change in measures of climate (e.g., temperature or precipitation) lasting for an extended period of time (decades or longer). Climate change may result from natural processes, such as changes in the sun's intensity; natural processes within the climate system (such as changes in ocean circulation); human activities that change the atmosphere's composition (such as burning fossil fuels) and the land surface (such as urbanization). "The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the State from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems." (California Health & Safety Code, Division 25.5, Part 1).

In September 2006, the Global Warming Solutions Act of 2006 (AB 32) was signed into law by former Governor Arnold Schwarzenegger. AB 32 and subsequent Statutes establish a statewide GHG emission reduction target of require that statewide GHG emissions be reduced to 1990 levels by the year 2020 and 40 percent below 1990 levels by 2030. The law requires this reduction to be accomplished through a variety of measures, including an enforceable statewide cap on greenhouse gas emissions that has been phased-in since 2013. AB 32 directs California Air Resources Board (CARB) to develop and implement regulations to reduce statewide greenhouse gas emissions from stationary sources.

CARB adopted the AB 32 Scoping Plan on December 12, 2008. The Scoping Plan provides the outline for future actions to reduce California's GHG emissions and establishes a schedule for CARB and other state agencies to adopt implementing regulations and other initiatives to reduce GHG emissions.

One of the most significant measures called for in the Scoping Plan is the statewide cap on emissions from the largest sources of GHG emissions. The cap-and-trade regulation was approved by CARB on December 16, 2010, following public review and comment. This regulation calls for a phased program starting in 2012, which includes electricity producers, electricity imports, and large industrial facilities (those with greater than 25,000 metric tons carbon dioxide per year). Starting in 2015, distributors of transportation fuels, natural gas, and other fuels will be included in the cap-and-trade program. The plan is expected to be updated in 2016.



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Facilities covered in the cap-and-trade program are not given a specific limit on their GHG emissions but must supply a sufficient number of allowances (each covering the equivalent of one metric of carbon dioxide equivalent [CO₂e]) to cover their annual emissions. Each year, the total number of allowances issued in the state drops, requiring covered facilities to find the most cost-effective and efficient approaches to reducing their emissions. Facilities without sufficient allowances to cover their annual emissions must acquire additional allowances or offsets. By the end of the program in 2020, there will be a reduction in GHG emissions sufficient to reach the same level of emissions as the state experienced in 1990, as required under AB 32. Originally slated to expire in 2020, Governor Jerry Brown signed legislation on July 25, 2017 to extend the cap and trade regulation until 2030.

City of Industry has not adopted a GHG reduction plan or climate action plan.

3.8.2 Impact Analysis

The SCAQMD applies a significance threshold of 10,000 metric tons of CO₂e emissions per year for industrial land uses to characterize greenhouse gas/climate change impacts. To determine a project's total emissions per year, the proposed Project's construction emissions are divided by its anticipated lifetime and added to the project's annual operating emissions per SCAQMD guidance for industrial projects (SCAQMD, 2015).

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
GREENHOUSE GASES: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

Less than Significant Impact.

Construction activities associated with the proposed Project would require the operation of on-road vehicles and conventional off-road construction equipment that would emit GHG emissions from engine exhaust. In the operation phase, GHG emissions would primarily result from site worker operation of on-road vehicles and from indirect electrical consumption to operate the water treatment plant. GHG emissions for the proposed Project have been estimated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 (CalEEMod, 2016). Detailed GHG emissions estimates for the proposed



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Project are included in Appendix A (Project Emissions Estimates). Table 6, below, presents a summary of the estimated total GHG emissions as a result of implementing the proposed Project.

Table 6 Total Estimated Project GHG Emissions

Project Phase	Total Metric Tons			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Construction Emissions ¹	385.17	0.07	0.00	386.95
Operation Emissions	157.06	1.78	0.02	206.22
Total Project Emissions	542.23	1.85	0.02	593.17
Draft SCAQMD Threshold				10,000
Project Emissions Exceed SCAQMD Threshold?				No
Notes: 1. Total construction emissions were added to operation phase emissions without amortizing them over 30 years pursuant to SCAQMD guidelines to provide a conservative analysis.				

As shown above in Table 6, the proposed Project's estimated 593.17 metric tons of CO₂e emissions is well below the 10,000 metric tons CO₂e significance threshold. As such, the proposed Project would not generate greenhouse gas emissions, (total direct and indirect GHG emissions), that would have a substantial adverse effect on the environment and potential impacts would be less than significant.

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

Less than Significant Impact.

Large industrial facilities (those with emissions greater than 25,000 metric tons CO₂ per year) are subject to compliance with AB 32's cap-and-trade program. Because the proposed Project would emit less than 25,000 metric tons CO₂ per year, it is not subject to compliance with AB 32's cap-and-trade program. In addition, City of Industry has not adopted a Climate Action Plan. The proposed Project would not conflict with measures identified by the California Air Pollution Control Officer's Association to reduce GHG emissions nor would it conflict with policies in the City of Industry's 2014 General Plan (City of Industry, 2014c) for the purposes of reducing GHG emissions. Therefore, the proposed Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases and potential impacts would be less than significant.



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3.9 HAZARDS AND HAZARDOUS MATERIALS

3.9.1 Setting

There are various federal, state and local programs that regulate the use, storage, transportation, and disposal of hazardous materials and hazardous wastes. These programs can reduce the risk that hazardous substances may pose to people and businesses under normal daily circumstances and as a result of emergencies and disasters.

Federal and State

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 is the principal federal law that regulates the generation, management, transportation and disposal of hazardous waste. Hazardous waste management includes the treatment, storage, and disposal of hazardous waste. Treatment is any process that changes the physical, chemical, or biological character of the waste to reduce its potential as an environmental threat. Treatment can include neutralizing the waste, recovering energy or material resources from the waste, rendering the waste less hazardous, or making the waste safer to transport, dispose of, or store.

RCRA gave the USEPA the authority to control hazardous waste from “cradle to grave,” that is, from generation to ultimate disposal. The 1986 amendments to RCRA enabled USEPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. It should be noted that RCRA focuses only on active and future facilities and does not address abandoned or historical sites.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, commonly known as Superfund, was enacted to protect water, air, and land resources from the risks created by past chemical disposal practices such as abandoned and historical hazardous wastes sites. Through the act, USEPA was given power to seek out those parties responsible for any release and to compel appropriate cleanup activities. This federal law created a tax on the chemical and petroleum industries that went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA also enabled the revision of the National Contingency Plan, which provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The National Contingency Plan also established the National Priority List (NPL) of sites, which are known as Superfund sites.

Superfund Amendments and Reauthorization Act

CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986. Title 5 of this regulation requires that each community establish a local emergency planning committee to develop an emergency plan to prepare for and respond to a chemical emergency. The emergency plan is



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reviewed by the State Emergency Response Commission and publicized throughout the community. The Certified Unified Program Agency (CUPA) is responsible for coordinating hazardous material and disaster preparedness planning and appropriate response efforts with city departments as well as local and state agencies. The CUPA with responsibility for the project site is the Los Angeles County Fire Department (LACFD). The goal is to improve public- and private-sector readiness and to mitigate local impacts resulting from natural or man-made emergencies.

Emergency Planning and Community Right-to-Know Act

The Emergency Planning and Community Right-to-Know Act (EPCRA) was enacted by Congress as the national legislation on community safety. This law helps local communities protect public health, safety, and the environment from chemical hazards. The primary purpose of EPCRA is to inform communities and citizens of chemical hazards in their areas by requiring businesses to report the locations and quantities of chemicals stored onsite to state and local agencies. These reports help communities prepare to respond to chemical spills and similar emergencies. Section 3131 of EPCRA requires manufacturers to report releases to the environment (air, soil, and water) of more than 600 designated toxic chemicals; report offsite transfers of waste for treatment or disposal at separate facilities; pollution prevention measures and activities; and participate in chemical recycling. These annual reports are submitted to the USEPA and state agencies. The USEPA maintains and publishes a database that contains information on toxic chemical releases and other waste management activities by certain industry groups and federal facilities. This online, publicly available, national digital database is called the Toxics Release Inventory, and was expanded by the Pollution Prevention Act of 1990.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 was enacted by Congress to give USEPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United States. Under TSCA, USEPA screens these chemicals and can require reporting or testing of any that may pose an environmental or human health hazard. It can ban the manufacture and import of chemicals that pose an unreasonable risk. Also, USEPA has mechanisms in place to track the thousands of new chemicals that industry develops each year with either unknown or dangerous characteristics. It then can control these chemicals as necessary to protect human health and the environment. The act supplements other federal statutes, including the Clean Air Act and the Toxic Release Inventory under EPCRA.

Occupational Safety and Health Administration Regulation 29 CFR Standard 1926.62

The Occupational Safety and Health Administration (OSHA) Regulation 29 Code of Federal Regulations (CFR) Standard 1926.62 regulates the demolition, renovation, or construction of buildings involving lead materials. It includes requirements for the safe removal and disposal of lead and the safe demolition of buildings containing lead-based paint or other lead materials.



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Responsible agencies that regulate hazardous materials and waste include:

United States Environmental Protection Agency

USEPA is the primary federal agency that regulates hazardous materials and waste. In general, USEPA works to develop and enforce regulations that implement environmental laws enacted by congress. The agency is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. USEPA programs promote handling hazardous wastes safely, cleaning up contaminated land, and reducing trash. Under the authority of the RCRA and in cooperation with state and tribal partners, the Waste Management Division manages a hazardous waste program, an underground storage tank program, and a solid waste program that includes development of waste reduction strategies such as recycling.

California Environmental Protection Agency

Cal/EPA was created in 1991 by Governor's Executive Order. The six boards, departments, and offices were placed under the Cal/USEPA umbrella to create a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of state resources. Cal/EPA oversees hazardous materials and hazardous waste compliance throughout California.

California Department of Toxic Substances Control

California Department of Toxic Substances Control is a department of Cal/EPA, which carries out the RCRA and CERCLA programs in California to protect people from exposure to hazardous substances and wastes. The department regulates hazardous waste, cleans up existing contamination, and looks for ways to control and reduce the hazardous waste produced in California primarily under the authority of RCRA and in accordance with the California Hazardous Waste Control Law (California Health and Safety Code Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (Title 22, California Code of Regulations, Divisions 4 and 4.5). Permitting, inspection, compliance, and corrective action programs ensure that people who manage hazardous waste follow state and federal requirements and other laws that affect hazardous waste specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Local

City of Industry

As a major industrial center, the City of Industry contains business that store and use hazardous materials. Additionally, the City functions as a transportation corridor with major rail lines and numerous freeways carrying high volumes of truck and train traffic, which can pose real threats in the event of a spill or unauthorized release.

The Health Hazardous Materials Division of the LACFD oversees, plans, and responds to issues related to hazardous materials and waste for the City.



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The storage and use of hazardous materials for the proposed Project are governed by federal, state, and local laws. Applicable laws and regulations address the use and storage of hazardous materials to protect the environment from contamination as well as to protect workers and the surrounding community from exposure to hazardous materials.

3.9.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input 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 has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the Project Area?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>
g) 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) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Less than Significant Impact.



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Construction of the proposed Project would involve the use of hazardous materials typical of construction projects such as fuel and lubricants. Operation of the proposed Project would involve extraction and conveyance of non-hazardous classified contaminated groundwater, with the water being treated in the water treatment plant. The water treatment system would utilize sulfuric acid, hydrogen peroxide, sodium bisulfite, sodium hydroxide, sodium hypochlorite, anti-scalant, acid and caustic cleaners. Associated brine waste would not be considered a hazardous material.

Transport, use, or disposal of these hazardous substances during construction and operation would occur in accordance with applicable regulations designed to protect the public and environment, therefore, no significant impacts to the public or environment through the routine transport, use or disposal of hazardous waste and/or materials is anticipated. There would be a less than significant impact complying with existing standards and regulations. No new mitigation would be required.

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

Less than Significant Impact.

Construction of the water conveyance pipelines connecting the existing extraction wells will occur within public road right-of-ways which may also contain other utility pipelines. Disturbing existing utility lines, such a natural gas or crude oil during pipeline installation has the potential to result in a release of hazardous materials that could create a hazard to the public or environment. To minimize potential damage to any existing utilities, the contractor would not be allowed to excavate until all utility owners are notified, all substructures are clearly identified, and all permits have been secured (USA Dig Alert, encroachment permits, building permits, etc.).

As described in the response to impact a) above, operation of the water treatment plant would involve the use of some chemicals. A release of any of these materials could create a hazard to the public or the environment. In addition to transporting, storing, and handling these materials in accordance with applicable safety regulations, LPVCWD would be required to prepare a Hazardous Materials Business Plan. LACFD also conducts Uniform Fire Code inspections and assists in reducing risks associated with the use of hazardous materials in the community.

LACFD also has a dedicated hazardous materials response team. The hazardous materials control and safety programs and available emergency response resources of LACFD, along with LACFD periodic inspections to ensure regulatory compliance, would reduce any potential risk associated with a release within the city (City of Industry General Plan 2014c).

The nearest residences to the water treatment plant site are located more than 700 feet northeast. Although the proposed Project does include the use of some hazardous materials, compliance with existing rules and regulations and distance to sensitive receptors would reduce the potential to 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. Potential impacts would be less than significant. No new mitigation would be required.



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

No Impact.

No portion of the proposed Project is located within a quarter-mile of a school. Therefore, the proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impact would occur.

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

No Impact.

While the groundwater aquifer below the Project site is listed on the hazardous materials sites compiled pursuant to Government Code Section 65962.5, the land on which the Project will be built and operated is not identified on that list. Therefore, no impact would occur.

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

No Impact.

The proposed Project is not located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and would not result in a safety hazard for people residing or working in the Project area; therefore, construction and operation of the proposed Project will have no impact.

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

Less than Significant Impact.

The proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. As discussed previously, LACFD has a dedicated hazardous materials response team. The hazardous materials control and safety programs and available emergency response resources of LACFD, along with LACFD periodic inspections to ensure regulatory compliance, would reduce any potential risk associated with commercial and industrial businesses within the city. The proposed Project is located within the employment/ industrial business sector of the city and therefore would be consistent with this program. Pipeline installation would occur in compliance with an encroachment permit and related conditions to ensure emergency access along roadways is maintained during construction. Potential impacts would be less than significant.



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

No Impact.

The proposed Project site is not located in an area classified as a “Wildland Area That May Contain Substantial Forest Fire Risks and Hazards” or a “Very High Fire Hazard Severity Zone” by the California Department of Forestry and Fire Protection (CAL FIRE 2011). Therefore, construction and operation of the proposed Project will have no impact to expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residents are intermixed with wildlands.



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3.10 HYDROLOGY AND WATER QUALITY

3.10.1 Setting

Water supply to the City of Industry is provided by six separate water agencies: LPVCWD, Rowland Water District, San Gabriel Valley Water Company, Suburban Water Systems, Walnut Valley Water District, and City of Industry Waterworks System. The City of Industry also uses reclaimed water from the San Jose Creek Water Reclamation Plant, which is located on the western boundary of the City. Water supply to the City of La Puente is provided by three separate water agencies: Suburban Water Systems, La Puente Valley County Water District, and the San Gabriel Valley Water Company.

The City of Industry and the City of La Puente both lie within the San Gabriel River Watershed, which drains to the Pacific Ocean through the San Gabriel River, including numerous storm drainage structures and the Walnut and San Jose Creeks in or near both La Puente and Industry. The watershed in Los Angeles County is under the authority of the Los Angeles RWQCB. The County of Los Angeles Department of Public Works leads the planning and implementation of the San Gabriel River Watershed Plan.

The NPDES regulations require permits for certain municipal storm sewer system (MS4 Permit) discharges and industrial (including construction) stormwater discharges to surface water. NPDES stormwater permits are required for most municipalities, certain industrial facilities, and construction activities that result in a land disturbance of one acre or more. In California, the State Water Resources Control Board (SWRCB) and local RWQCBs have assumed the responsibility of implementing the NPDES permit program.

As noted above, USEPA has incorporated the substantive NPDES requirements into ARARs for surface water discharge. These ARARs are published in the ESD (ESD, 2005). The ESD notes that, consistent with CERCLA, an on-site discharge to surface waters must meet the substantive NPDES requirements but need not obtain an NPDES permit nor comply with the administrative requirements of the permitting process. The IROD clarifies that discharge to surface water is considered an on-site activity under the IROD. Though a NPDES permit is not required under the IROD, the Project may apply for a NPDES permit to coordinate the discharge with the RWQCB and to demonstrate compliance with NPDES requirements.

The Sanitation Districts' Wastewater Ordinance requires any business that desires to discharge industrial wastewater to the Districts' sewage system to first obtain an industrial wastewater discharge permit.



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3.10.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
HYDROLOGY AND WATER QUALITY: Would the project:				
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 substantial 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 substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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) *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 result in a disturbance greater than one acre therefore, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared to address any potential discharge requirements



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during construction. The water generated during the operation of the proposed Project would be treated and discharged to surface water (San Jose Creek) via the storm drain.

Generally, discharges to surface waters are regulated by the RWQCB through the issuance of NPDES permits. As part of the proposed Project, the USEPA has incorporated the substantive NPDES requirements into ARARs for surface water discharge. These ARARs are published in the ESD (ESD, 2005). The ESD notes that, consistent with CERCLA, an on-site discharge to surface water must meet the substantive NPDES requirements, but the Project would not need to secure an NPDES permit nor comply with the administrative requirements of the permitting process. The IROD clarifies that discharge to surface water is considered an on-site activity under the IROD.

Though a NPDES permit is not required under the IROD, Northrop Grumman may apply for a NPDES permit to coordinate the discharge with the RWQCB and to demonstrate compliance with NPDES requirements. The NPDES permit requirements include a monitoring and reporting program and Waste Discharge Requirements that specify effluent limitations for flow and water quality. Water quality effluent limitations take the form of both concentration and load-based thresholds and are generally based on Water Quality Control Plan –Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan) Objectives. They are occasionally adjusted to allow for dilution credits, site-specific objectives, and/or Total Maximum Daily Load (TMDL) waste-load allocations.

The treated water discharged to San Jose Creek would meet all applicable water quality rules, regulations and standards by complying with the existing laws, regulations, and permit requirements outlined in Section 1.6 (Permits, Approvals, and Agreements). The proposed Project would not violate any water quality standards or waste discharge requirements and would have a less than significant impact.

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

Less than Significant Impact.

The intent of the proposed Project includes removal, treatment, and protection of groundwater supplies in the San Gabriel Valley through remediation of existing groundwater contamination and limiting vertical and lateral migration of contaminated groundwater within the PVOU portion of the San Gabriel Basin. The proposed Project would extract contaminated groundwater, treat the water to applicable water quality standards, and discharge the treated water to San Jose Creek. Between 50 and 220 gallons per minute of contaminated groundwater would be extracted, treated, and discharged as part of the proposed Project.

Pumping Patterns and Groundwater Levels

The proposed Project is intended to extract water within a limited area of the Basin, with extraction rates limited to what is necessary to control the vertical and lateral migration of contaminants within the SZ-South. Existing production wells in the geographic vicinity primarily draw water from the DZ, with only a small portion of their water from the IZ. Upon operation of the IZ Interim Remedy Project, the San Gabriel VWC's well drawing from the IZ will be shut down, and all of San Gabriel VWC's water production within



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the vicinity of the PVOU will be from the deeper aquifers. The deep aquifers are relatively unaffected by the production of water in the IZ and SZ; the recharge and water supply for these aquifers are influenced more by water recharge operations in the main part of the Basin.

The Watermaster manages groundwater in the Main San Gabriel Basin. The Watermaster administers and enforces the provisions of the Judgment and the responsibility for efficient management of the quantity and quality of the Basin's groundwater. Northrop Grumman will obtain a Water Production Agreement (WPA) from the Watermaster for the operation of the extraction wells, the treatment plant, and the surface water discharge to San Jose Creek.

Compliance with the Watermaster's regulations will further ensure that the Project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.

Regional Water Supply

The supply of groundwater in the Basin is affected by two different court judgments. With respect to the Main San Gabriel Basin, the water supplies within the Main Basin are sustained as necessary with replenishment of "supplemental water." Pursuant to the terms of the Judgment, the Watermaster determines annually the "operating safe yield" of the Basin, which is the amount of water that may be pumped from the Basin each year without creating a replacement water obligation. Production in excess of this amount is replaced with water purchased from "Responsible Agencies," which supply supplemental water from either imported sources or recycled water sources. The Responsible Agencies are Upper San Gabriel Valley Municipal Water District (USGVMWD), San Gabriel Valley Municipal Water District and Three Valleys Municipal Water District.

The second Judgment concerns the San Gabriel River. The waters of the San Gabriel River are apportioned between the Main San Gabriel Basin (referred to as the Upper Basin) and the Central Basin (referred to as the Lower Basin) pursuant to the terms of the judgment in *City of Long Beach vs. San Gabriel Valley Water Company, et al.* (Los Angeles County Superior Court, 1964). Pursuant to that Judgment, the Upper Basin must provide on average a usable flow of 98,300 acre-feet per year to the Lower Basin. Usable flow is delivered as 1) supply on municipal systems in the Lower Basin from water pumped in the Upper Basin, 2) Surface flow across the Whittier Narrows that is recharged in the Central Basin, or 3) underground flow across the Whittier Narrows. If the flow from these sources is inadequate, then supplemental water either in the form of recycled water or as imported water is purchased by the Upper Basin for delivery to the Lower Basin.

Whether the production of contaminated groundwater by the SZ-South Interim Remedy Project would significantly impact the supply of groundwater in the Basin can also be determined by evaluating the end use of the treated groundwater produced by the Project. Treated water would be discharged to San Jose Creek with a vast majority of that discharged water recharging either the Main San Gabriel Basin or the lower Central Basin.

If water is recharged within the Main San Gabriel Basin, it effectively replaces the contaminated groundwater produced from the Basin by the SZ-South Interim Remedy Project. If the water recharges downstream in the lower Central Basin, it constitutes "usable flow" and satisfies a part of the adjudicated



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obligation of the Upper Area (e.g., the Main Basin) to the Lower Area. If under rare circumstances a small portion of such discharged water does not recharge into either basin, that water must be replaced by a Responsible Agency under the Main San Gabriel Judgment.

Regardless of the end use of the treated groundwater, the SZ Interim Remedy Project will produce waste concentrate (“brine”). The groundwater flow intercepted by the Project has inorganic constituents in excess of the Basin plan and the aesthetic criteria for municipal water supplies. This high TDS water would, absent the Project, flow into the larger body of water in the central part of the Main Basin and blend with the lower TDS water. However, when intercepted in this manner, the high TDS of the pumped groundwater must be reduced prior to discharge, which will result in a waste concentrate stream from the RO treatment process (i.e., brine). It is estimated that 20% of the feed water will be discharged as concentrate waste. At an influent flow rate of 85 gpm, the concentrated flow is anticipated to be approximately 15-16 gpm, per the Pre-Final Design Report (Geosyntec, 2019b). Replenishment of that amount of water is discussed below.

Significance of Potential Impact on Water Supplies

Water that is lost during surface water discharge and water that is discharged to the sewer from the RO treatment process will create a new regional demand on groundwater supply. The total increased use would be up to 70 acre-feet per year plus incidental losses during surface discharge, if applicable. The Applicant would pay the main San Gabriel Basin Watermaster Replacement Water Assessments as detailed in the Pre-Final Design Report. Each of the Agencies prepares an Urban Water Management Plan detailing its ability to meet existing obligations and future water demands. Those plans demonstrate that each of the agencies have adequate water supplies to meet future water demands, such as the future water demand of the Project. Further, the Judgment and the Watermaster Rules provide a legal framework aimed at assuring an adequate supply of water in the Basin. Based on compliance with that framework and the above technical analysis, the SZ-South Interim Remedy Project would not significantly impact the supply of water in the Basin.

In addition, the proposed Project would benefit the current groundwater supplies and recharge efforts by treating the contaminated groundwater and limiting migration of groundwater contamination in the PVOU. Potential impacts to groundwater supply or recharge would be less than significant.

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

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

No Impact.

Pipelines would be constructed along public streets and rights-of-way and the treatment facility within a zoned industrial parcel and would not permanently alter the drainage pattern of the area. the pipelines would be buried during construction and remain buried underground during operations. Construction of the proposed Project would not alter the course of a stream or river; additionally, an erosion control plan



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would be developed and implemented for all the Project components, to minimize the potential for erosion or siltation on- or off-site. None of the proposed construction methods are anticipated to substantially increase the rate or amount of surface runoff or result in flooding on- or off-site. Operation of the proposed Project would not affect the course of a stream or river. The proposed Project site is currently covered in impervious surfaces, and the proposed Project would not increase the amount of impervious surfaces above existing conditions. Therefore, no impact is anticipated.

- ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

No Impact.

See impact discussion for i) above.

- 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

Less than Significant Impact.

Operation of the proposed Project includes the treatment of groundwater to applicable water quality standards prior to discharge to San Jose Creek. Additional sources of polluted runoff are not anticipated to occur. The proposed additions to the existing treatment facility would be built on a mostly paved lot currently utilized for water treatment. During construction activities, erosion impacts could occur as a result of minor grading, excavation, or building construction. Procurement of a Construction General Permit and development of an associated Stormwater Pollution Prevention Plan (SWPPP) would occur prior to construction to reduce the potential for soil erosion impacts or loss of topsoil and to develop preferential pathways for stormwater during construction.

Therefore, potential impacts to stormwater systems from increased runoff volumes or polluted runoff due to construction and operation of the proposed Project would be less than significant.

- iv) Impede or redirect flood flows?

No Impact.

As noted above, the proposed Project components are located outside of the 100-year and 500-year floodplains. Proposed Project components are also located outside of dam inundation areas. The proposed wells and portions of the water conveyance pipeline near the northwestern project extents are located near, but outside the Puddingstone Dam Inundation Area. Project facilities would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. No impact would occur.

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

No Impact.



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The proposed Project area is not subject to flood hazard, seiche, or tsunami-related inundation, as it is not located within the range of a seiche hazard zone or tsunami hazard zone. As the proposed Project is not at risk of these events, the risk release of pollutants due to these events is not anticipated. Therefore, there would be no impact from construction and operation of the proposed Project.

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

No Impact.

As discussed above, the proposed Project is being constructed to protect existing groundwater supplies in the San Gabriel Valley through remediation of existing groundwater contamination and limiting the vertical and lateral migration to contaminated groundwater within the PVOU portion of the San Gabriel Basin. Construction, operation and maintenance of the proposed Project would not conflict or obstruct the implementation of water quality control plans or sustainable groundwater management plans, as the Project is being constructed to achieve compliance with such plans and other regulatory requirements. No impact would occur.



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3.11 LAND USE AND PLANNING

3.11.1 Setting

The Project is mainly located within area governed by the City of Industry's General Plan, although portions of the Project lie within La Puente and unincorporated Los Angeles County (City of Industry General Plan 2014, City of La Puente 2004). With respect to the City of Industry's planning documents, the Project is located within the "Employment" land use designation of the City's General Plan and the City's Industrial (I) zone. Based in the Letter dated June 23, 2015, signed by Brian James, Planning Director of the City of Industry on June 24, 2015, the proposed Project would be consistent with those land use designation and zoning in the City of Industry. The letter also indicates that the Project as proposed would not require a Conditional Use Permit.

In general, the Project is located near commercial, industrial, and institutional areas to the east, west and south, with residential areas to the north.

3.11.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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 checked="" type="checkbox"/>	<input type="checkbox"/>

a) *Physically divide an established community?*

No Impact.

The proposed installation of conveyance pipes to connect the existing extraction wells, a conveyance pipeline to the new treatment plant, and a water treatment plant for the shallow zone would not be in residential areas, with the exception of the proposed pipeline work along Cadbrook Drive. However, construction activities will be contained within the right-of-way of the street and will not physically divide an established community. The proposed treatment plant would be located within an Industrial zone. All construction activities will be temporary in nature and will not permanently divide the community. Therefore, the proposed Project would have no impact on an established community.



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

Less than Significant Impact.

The proposed Project would be compatible with the goals and policies of the City of Industry and La Puente General Plans (City of Industry 2014c; City of La Puente 2004). Based on the letter dated June 23, 2015, signed by Brian James, Planning Director of the City of Industry, the proposed Project has been found to be consistent with the City's applicable land use designation and zoning and does not require the approval of a Conditional Use Permit.

The City of Industry General Plan is intended to continue to be a business and employment hub accommodating uses such as manufacturing, assembly, machining, distribution, warehousing, retail, and offices. Institutional uses are also encouraged as needed to further accommodate the employment uses. The City of La Puente General Plan is intended to create opportunities for new commercial business growth, preserve and enhance the quality of residential neighborhoods and infrastructure, and accommodate and attract industrial businesses.

The proposed installation of conveyance pipelines to the existing extraction wells, conveyance pipeline to the new treatment plant, and a water treatment plant for the shallow zone will not impact business growth or reduce the quality of residential areas as these are proposed for underground installation along existing roads. The proposed installations will not impact business growth as the conveyance pipelines and new treatment plant will be installed in an existing developed area that will not significantly reduce the acreage available for development. The proposed treatment plant would be located within an Industrial zone and meets the overall goals and policies for uses within industrial zones for the City of Industry General Plan. Therefore, the proposed Project will result in a less than significant impact to any applicable land use plan, policy, or regulation of an agency with jurisdiction over the proposed Project.



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3.12 MINERAL RESOURCES

3.12.1 Setting

There are currently no ordinances or plans governing mineral use within the City of Industry or the City of La Puente.

3.12.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?

No Impact.

The proposed Project is not located within the vicinity of a known Mineral Resource Zone as designated by the County of Los Angeles and no Mineral Resource Zones are identified within the City of La Puente or City of Industry General Plans (City of Industry General Plan 2014c). Neither the construction nor operation of the proposed Project would result in a loss of availability of a known mineral source. Therefore, there are no impacts to known mineral resources from construction and operation of the proposed Project.

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?

No Impact.

As stated above, the proposed Project is not located in an area of known Mineral Resource Zone containing locally important mineral resources as designated by the County or Cities. Therefore, there are no impacts from the construction and operation of the proposed Project that would result in a loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.



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3.13 NOISE

3.13.1 Setting

Noise is defined as unwanted sounds, and it is known to have several adverse effects on people, including hearing loss, speech and sleep interference, psychological responses, and annoyance. As a result, the federal government, the State of California, and local jurisdictions have established noise criteria to control noise and protect public health and safety.

The decibel (dB) is the preferred unit used to measure sound levels utilizing a logarithmic scale to account for large ranges in audible sound intensities. A general rule for the decibel scale is that a ten dB increase in sound is perceived as a doubling of loudness by the human ear. Environmental noise levels are typically stated in terms of decibels on the A-weighted scale (dBA). The A-weighted decibel (dBA) is a method of sound measurement which assigns weighted values to selected frequency bands in an attempt to reflect how the human ear responds to sound. The range of human hearing is from zero dBA (the threshold of hearing) to about 140 dBA which is the threshold of pain.

Existing Noise Sources

The City of Industry is devoted to industrial commercial uses, which are less sensitive to noise than other land uses. Existing sources of noise in the proposed Project area primarily originate from roadways and commercial or industrial land uses as well as the nearby rail line and helicopter pad on an intermittent basis. Traffic and truck noise are generated on regional and local roadways within the City of Industry. Stationary sources of noise include commercial and industrial equipment and activities. Industrial and warehousing operations are major noise sources in the City of Industry. In addition to onsite mechanical equipment, which generates noise, warehousing and industrial land uses generate substantial truck traffic, which results in additional noise on local roadways in the vicinity of industrial operations.

Nearby Sensitive Noise Receptors

The nearest sensitive receptors to the proposed water treatment plant site are residences located approximately 700 feet to the northeast. There are residences located north of and parallel to East Nelson Avenue adjacent to the proposed water conveyance pipelines. One of the two existing booster pump stations proposed to be upgraded with a replacement pump is located adjacent to residential land uses.

Noise Regulations

State of California Building Code. California's noise insulation standards are codified in the California Building Code and apply to new construction for the purpose of ensuring compatibility between interior and exterior noise sources.

State of California Land Use Compatibility Criteria. Provides a tool to gauge the compatibility of new land uses relative to noise levels; identifies normally acceptable, conditionally acceptable designation acceptable and clearly unacceptable noise levels for various land uses.



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City of Industry Municipal Code. The City of Industry regulates noise nuisances under Chapter 1.30, which addresses public nuisances; and under Chapter 17.12, which addresses noise from entertainment uses. The City does not have a Noise Ordinance prescribing maximum permissible noise levels. For CEQA analyses and corresponding mitigation recommendations, the City defers to the County of Los Angeles's Noise Ordinance.

City of Industry General Plan. The City incorporates the state mandated noise element into the Safety Element of the 2014 General Plan. The Safety Element includes the following goal and policies related to noise.

Goal

S6 An environment where noise does not adversely affect sensitive land uses.

Policies

- S6-1 Coordinate with Caltrans, San Gabriel Valley Council of Governments, Southern California Association of Governments, neighboring jurisdictions, and other transportation providers in the preparation and maintenance of transportation and land use plans to minimize noise impacts and provide appropriate mitigation measures.
- S6-2 Address noise impacts through the effective enforcement of the noise ordinance, project and environmental review, and compliance with state and federal noise standards.
- S6-3 Consider the noise levels likely to be produced by any new businesses or substantially expanded business activities locating near existing noise-sensitive uses such as schools, community facilities, and residences, as well as adjacent to established businesses involving vibration-sensitive activities.

Los Angeles County

County of Los Angeles Code

The County of Los Angeles regulates noise through the County Code, Title 12, Chapter 12.08 (Noise Control). Pursuant to the County Code, the county restricts noise levels generated at a property from exceeding certain noise levels for extended periods of time.

Exterior Noise Standards

The county applies the Noise Control Ordinance standards summarized in the table below to non-transportation fans, blowers, pumps, turbines, saws, engines, and other like machinery. These standards do not gauge the compatibility of developments in the noise environment but provide restrictions on the amount and duration of noise generated at a property, as measured at the property line of the noise receptor. The county's noise ordinance is designed to protect people from objectionable non-



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transportation noise sources such as music, construction activity, machinery, pumps, and air conditioners. The noise standards in Table 7 below, unless otherwise indicated, apply to all property within a designated noise zone.

Table 7 County of Los Angeles Exterior Noise Standards

Noise Zone	Time Period	Maximum Permissible Noise Level (dBA) ^{1,2}				
		L ₅₀	L ₂₅	L ₀₈	L ₀₂	L _{max}
Noise-Sensitive Area	Anytime	45	50	55	60	65
Residential Properties	10pm to 7am	45	50	55	60	65
	7am to 10pm	50	55	60	65	70
Commercial Properties	10pm to 7am	55	60	65	70	75
	7am to 10pm	60	65	70	75	80
Industrial Properties	Anytime	70	75	80	85	90

Source: County of Los Angeles Municipal Code, Section 12.08.390.

Notes:

1. L₅₀, L₂₅, L₀₈, L₀₂ = the A-weighted noise levels that are exceeded 50 %, 25 %, 8 %, and 2 % of the time during the measurement period. L_{max} = the A-weighted maximum noise level during the measurement period.
2. According to Section 12.08.390, if the ambient noise levels exceed the exterior noise standards in the above table, then the ambient noise level becomes the noise standard. If the source of noise emits a pure tone or impulsive noise, the exterior noise levels limits shall be reduced by five decibels.
3. If the measurement location is on a boundary property between two different zones, the noise limit shall be the arithmetic mean of the maximum permissible noise level limits of the subject zones; except when an intruding noise source originates on an industrial property and is impacting another noise zone, the applicable exterior noise level shall be the daytime exterior noise level for the subject receptor property.

Construction Noise

The County prohibits the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7 PM and 7 AM, or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real-property line, except for emergency work of public service utilities or by variance. Table 8 summarizes the County's maximum noise levels that may not be exceeded during construction activities.



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Table 8 County of Los Angeles Construction Noise Limits

	Single-Family Residential	Multi-Family Residential	Semi-Residential/Commercial
Mobile Equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment			
Daily, except Sundays and legal holidays, 7 AM to 8 PM	75 dbA	80 dbA	85 dbA
Daily, 8 PM to 7 AM and all day Sunday and legal holidays	60 dbA	64 dbA	70 dbA
Stationary Equipment. Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment			
Daily, except Sundays and legal holidays, 7 AM to 8 PM	60 dBA	65 dBA	70 dBA
Daily, 8 PM to 7 AM and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA
Source: County of Los Angeles Municipal Code, Section 12.08.440.			

3.13.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project Area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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- 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?*

Less than Significant Impact.

Noise would be generated during proposed Project construction primarily from operating conventional construction equipment associated with well drilling, pipeline installation, and water treatment plant installation. Only pipeline installation and well drilling would occur in close proximity to sensitive receptors. Construction activities would occur between the hours of 7 AM to 7 PM, unless otherwise approved through variance or as an encroachment permit condition. Pipeline installation would progress in a linear manner with construction activities taking place at one location for short time periods. However, some portions of the pipe may be installed in sections that are not consistently linear. This would allow for installation at times when construction is already taking place within the City of industry and provides an opportunity of installation.

Operation phase noise would include activities associated with the water treatment plant. The pipelines would be installed in the subsurface and will not generate any noise during operation. As noted above, the water treatment plant site is located within an industrial area removed from nearby sensitive noise receptors.

Considering the above, the proposed Project would not expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Potential impacts would be less than significant.

- b) *Generation of excessive ground borne vibration or ground borne noise levels?*

Less than Significant Impact.

As discussed above in response to impact discussion a), only pipeline installation and well drilling would occur in close proximity to sensitive receptors. This activity does not involve sources of substantial ground borne vibration such as the use of impact devices or a substantial number of tracked off-road equipment. Project operation does not include any source of excessive ground borne vibration. Therefore, exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels would have a less than significant impact.

- c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project Area to excessive noise levels?*

No Impact.

The proposed Project is not located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and would not expose people residing or



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working in the Project area to excessive noise levels; therefore, no impact would occur as a result of construction or operation of the proposed Project.



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3.14 POPULATION AND HOUSING

3.14.1 Setting

According to the City of Industry Population and Housing Section of the General Plan EIR, the Southern California Association of Governments reports a population of less than 500 (219) residents in 2010 for the City (City of Industry, 2014c). The City of Industry was founded with the intent of providing an environment for industry and commerce to thrive without conflicting with sensitive land uses, such as residential. The City's General Plan and Zoning Code do not designate any land for residential use: only 57 dwelling units and two group homes currently exist within the City, and these are considered legal nonconforming uses (City of Industry, 2014c). Demographic statistics for the City of La Puente report a population of 40,435 in 2018 (City of La Puente, 2018).

3.14.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
POPULATION AND HOUSING: Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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)?

Less than Significant Impact.

The proposed Project includes the installation of conveyance pipes connecting to existing extraction wells, a conveyance pipe to the new treatment plant, and a water treatment plant for the shallow zone. The Project does not include new construction, including but not limited to, residential, commercial, or manufacturing uses, that would have the potential to induce population growth in the area. It is anticipated that the work force needed to support construction and operation of the proposed Project would primarily come from the region and not substantially increase the population of the area. Therefore, the Project would have a less than significant impact on population growth in the area.



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

No Impact.

The proposed Project does not include any components that would cause the displacement of substantial numbers of existing housing or necessitate the construction of replacement housing. Therefore, no impact to existing housing would occur as a result of the proposed Project.



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3.15 PUBLIC SERVICES

3.15.1 Setting

Growth and development can directly impact the delivery of critical city services to residents, visitors and workers. Public Services throughout the Cities of Industry and La Puente include law enforcement, fire protection, schools and medical facilities.

The County of Los Angeles Fire Department and Los Angeles County Sheriff's Department cover both the City of Industry and La Puente for law enforcement and fire protection, respectively.

The City of Industry has one High School and one middle School within the City limits. William Workman High School, located at 16030 East Temple Avenue, and Torch Middle School, located at 751 North Vineland Avenue.

The City of Industry maintains two 18-hole golf courses. The City of La Puente maintains two parks; La Puente Park and the Puente Creek Nature Education Center.

3.15.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
PUBLIC SERVICES: Would the project:				
a) 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 impact, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



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- a) *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 impact, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*
- i) Fire protection?
 - ii) Police protection?
 - iii) Schools?
 - iv) Parks?
 - v) Other public facilities?

No Impact.

The proposed Project would not induce an increase in population or create structures that would result in an increased need for any of the public services listed above (i.e., fire protection, public, schools, parks, or other public facilities). Installation of conveyance pipes connecting to existing extraction wells, a conveyance pipe to the new treatment plant, and a water treatment plant for the shallow zone will require construction workers that may require public services while staying in the area; however, this increase would be minimal and temporary. Current emergency services would be sufficient to cover an incremental increase in demand for emergency, criminal and firefighting services associated with the proposed Project without then need to alter existing or construct new public service facilities. Since the Project would not permanently increase the population of the surrounding area there would be no impacts associated with an increased need for schools in the area. The proposed Project would not conflict with any policies and goals set for in the City of Industry and City of La Puente General Plans. As the proposed Project would not require the provision of new or physically altered governmental facilities, no impact would occur.



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3.16 RECREATION

3.16.1 Setting

As a largely developed, business-oriented City with a limited population, the City of Industry does not serve the recreational needs of a residential base. The City does not have a department devoted exclusively to recreation and does not maintain developed “parks” in a traditional sense. However, this does not mean that the City is void of recreational or green areas. The City of Industry has approximately 790 acres of land designated for recreation and open space, including two private golf courses, the Pacific Palms Resort, a former Duck Farm property, and a privately held open area for the Wildwood Mobile Home Park (City of Industry, 2014b).

The primary recreational facility in the City of La Puente is La Puente Park. The park is approximately 22 acres and is bordered by Glendora, Temple Avenue and Hacienda Boulevard. The City has approximately 0.57 acres of park space for every 1,000 residents (City of La Puente, 2004).

The proposed Project does not fall within any areas designated by a General Plan as recreational or open space.

3.16.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
RECREATION: Would the project:				
a) 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"/>

a) *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 involve any component that would increase the use of parks or recreation facilities. No Impacts associated with the increased use or substantial physical deterioration of existing neighborhoods, regional parks or other recreational facilities would occur as a result of the proposed Project.



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- 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 recreation facilities which might have an adverse physical effect on the environment. No impacts would occur.



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3.17 TRANSPORTATION

3.17.1 Setting

For purposes of this section, the public roadway network surrounding the proposed Project is referred to as the Project area. The Project area is served by an extensive transportation system, including major freeways, highways, airport, and rail facilities. The Project area is not located within an airport land use plan or within two miles of a private airstrip or public use airport.

The Metropolitan Transportation Authority (Metro) serves as the Congestion Management Agency (CMA) for Los Angeles County. State statute requires that a congestion management program be developed, adopted and updated biennially for every county that includes an urbanized area and shall include every city and the county government within that county. The CMA is responsible for developing, adopting, and updating the Congestion Management Program (CMP).

The CMP became effective with the passage of Proposition 111 in 1990 and it addresses the impact of local growth on the regional transportation system. The first CMP for Los Angeles County was adopted in 1992. Statutory elements of the CMP include Highway and Roadway System monitoring, multi-modal system performance analysis, the Transportation Demand Management Program, the Land Use Analysis Program and local conformance for all the county's jurisdictions.

On October 28, 2010, the Metro Board adopted the 2010 CMP for Los Angeles County. The 2010 CMP summarizes the results of 18 years of CMP highway and transit monitoring and 15 years of monitoring local growth. CMP implementation guidelines for local jurisdictions are also contained in the 2010 CMP.

The Regional Transportation Plan (RTP) is a component of the Regional Comprehensive Plan and Guide prepared by SCAG to address regional issues, goals, objectives, and policies for the Southern California region. The RTP sets broad goals for the region and provides strategies to reduce issues related to congestion and mobility. The RTP program helps to implement the Circulation Element of the City of Industry's General Plan.

The Circulation Element of the City of Industry General Plan (City of Industry, 2014c) governs circulation, infrastructure, and maintenance of roadway levels of service. The standard measure used to gauge traffic congestion is Level of Service (LOS). LOS uses field data (volume-to-capacity [V/C] ratios) to report the flow and mobility of vehicles along road segments and delays at intersections. LOS is then rated from "A", indicating free-flow traffic and minimal delays, to "F", indicating traffic exceeding capacity, with stop-and-go gridlock. The City of Industry's Circulation Element Policy C1-2 is to "Maintain a peak-hour LOS D at intersections identified on the Roadway Classification Plan." State maintained roadways within the project area are within the California Department of Transportation (Caltrans) District 7 jurisdiction. The Circulation element identifies that any modifications to the State maintained roadways will require approval from Caltrans. The City of Industry does not have established truck routes within the City.



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3.17.2 Impact Analysis

The following roadways have the potential to be impacted by the proposed Project:

1. Stafford Street;
2. Hudson Avenue;
3. Nelson Avenue;
4. North Unruh Avenue; and
5. Cadbrook Drive.

The construction period of the proposed Project is short-term (approximately 12 months) which would have temporary minor alterations to the current traffic patterns. The proposed Project includes the installation of pipeline conveyance within the public road right-of-way alignment. Encroachment permits are required for access within the public road right-of-way. They will be processed through the City of Industry and the City of La Puente as appropriate.

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
TRANSPORTATION: Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) 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"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



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

Less than Significant Impact.

The construction period of the proposed Project is short-term (approximately 12 months) which would have temporary minor alterations to the current traffic patterns. The proposed Project includes the installation of pipeline conveyance within the public road right-of-way alignment. Encroachment permits are required for access within the public road right-of-way. The encroachment permits will stipulate road or lane closure requirements, work hours, and roadway accessibility. The construction work area associated with the installation of the pipelines would consist of an area approximately one to two traffic lanes in width within a short street block length. A section of the roadway would be temporarily blocked (per the Work Area Traffic Control Handbook (WATCH Manual) and the encroachment permit) as the installation of the pipeline progresses along the public road right-of-way. After the pipeline is installed and the open hole or trench is backfilled and paved, the section of roadway would reopen. The size of the work area would be limited to maintain through traffic in accordance with the stipulations dictated in the encroachment permits.

The changes to traffic patterns and service during the construction phase would be temporary and limited to the immediate area in which construction activities are occurring and are therefore not expected to significantly affect traffic flow. All physical changes to traffic patterns, (i.e., lane closures) would be coordinated with local jurisdictions and /or METRO, as appropriate, to minimize impacts to motorists, public transportation patrons, and pedestrians.

Installation of the conveyance pipelines and construction of the treatment plant, if implemented at the same time, could result in approximately 36 construction related vehicles (e.g., equipment, worker vehicles, and haul trucks) to be added to the street system throughout a day. The addition of approximately 36 vehicles throughout a day, during a worst-case construction scenario, is not anticipated to result in a substantial increase in traffic that would result in congestion with the affected street system.

Operation of the proposed Project would generate up to 16 additional daily vehicle trips (e.g., worker vehicles) to be added to the street system throughout a day.

No significant adverse environmental impacts associated with traffic load or congestion is anticipated to result from construction and operation of the Proposed Project. Therefore, impacts are considered to be less than significant.

- b) *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (B)?*

Less than Significant Impact.

The CMP was created statewide as a result of Proposition 111 and has been implemented locally by the Metropolitan Transportation Authority (Metro). The latest CMP was reviewed to determine whether any of the roadways within the Project area are part of the facilities designated within the CMP highways and roadway system. None of the roadways within the vicinity of the proposed Project were found to be



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included with the CMP system. During construction, haul routes would include surrounding highways, all of which are within the CMP. However, construction activities would not add enough peak-hour trips to the existing CMP system to trigger further analysis as set forth by the CMP. Therefore, potential impacts would be less than significant.

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

Construction of the proposed Project would temporarily alter existing street/traffic patterns within sections of roadway within the Project area. These temporary changes to traffic patterns and service during the construction phase would be temporary and limited to the immediate area in which construction activities are occurring. All physical changes to traffic patterns (i.e., lane closures) would be coordinated with local jurisdictions and/or Metro, as appropriate, to minimize impacts to motorists, public transportation patrons, and pedestrians. No design features (e.g. sharp curves or dangerous intersections) or incompatible uses are proposed as part of the operation of the proposed Project. The proposed project includes the use of heavy duty trucks during construction and periodically during operation (primarily for equipment/materials deliveries and periodic waste disposal activities). The City of Industry does not have any roadway restrictions for trucks operating in the City.

No significant adverse environmental impacts associated with an increase of hazards due to a design feature are anticipated to result from construction and operation of the proposed Project. Therefore, there would be no impact.

d) Result in inadequate emergency access?

Less than Significant Impact.

The proposed Project does not include any component that would result in inadequate emergency access to the site or surrounding areas. All physical changes to traffic patterns, (i.e., lane closures) would be coordinated with local jurisdictions and/or Metro, as appropriate, to minimize impacts to motorists, public transportation patrons, and pedestrians. In addition, construction activities performed within public streets would be coordinated with local police and fire protection services and carried out in accordance with all applicable local emergency access standards, such that any temporary lane closures would not significantly impact emergency services.

No significant adverse environmental impacts associated with inadequate emergency access are anticipated to result from construction and operation of the proposed Project. Therefore, impacts would be less than significant.



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3.18 UTILITIES AND SERVICE SYSTEMS

3.18.1 Setting

The proposed Project, located within the Cities of Industry and La Puente, is based on an Interim Record of Decision by the USEPA to contain and treat chemicals of potential concern (COPCs) within the groundwater of the Puente Basin. Therefore, the entire proposed Project is based on extraction, treatment, and surface water discharge within the requirements of the USEPA, other regulatory agencies, and regional ordinances and general plans.

3.18.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) 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 relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) *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 relocation of which could cause significant environmental effects?*

Less than Significant with Mitigation Incorporated.



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Detailed above in Section 1.4 (Project Objectives), one of the purposes of the proposed Project is the construction and expansion of new water treatment and drainage facilities. The potential environmental impacts associated with these project components have been analyzed through Section 3.0 (Discussion of Environmental Setting, Impacts, and Mitigation Measures). Where a potentially significant environmental effect could occur, mitigation measures have been incorporated to reduce these effects to a less-than-significant level. The proposed Project would implement the following Mitigation Measures BIO-1.

The proposed Project would result in the discharge of concentrate into an existing LACSD facility for treatment, and the volume which would be generated by the operation of the proposed Project would be accommodated within existing treatment capacity. As the project would result in the construction of new and expanded water treatment facilities and would implement mitigation measures to address otherwise potentially significant impacts, implementation of these mitigation measures would serve to reduce these impacts to a less than significant level. No additional mitigation measures, other than those outlined above, are needed to further reduce these potential impacts.

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

No Impact.

As discussed above in Section 3.10 (Hydrology and Water Quality), the proposed Project would not result in a significant impact on water supplies and would have sufficient water supplies available to serve the project via the Project's purchase agreements with the Watermaster. As such, no impact would occur.

- 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?*

No Impact.

As detailed above in Section 2.0 (Project Description), the proposed Project would generate concentrate waste as part of the water treatment process. As part of the permits required for the proposed Project, the Applicant would ensure that the treatment volumes which are conveyed to an existing LACSD for treatment would be accommodated by existing systems.

- d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

No Impact.

Construction and operation of the proposed Project would result in the installation of pipelines, and the decontamination of regional groundwater. None of the activities proposed would generate quantities of solid waste in excess of state or local standards, and the incidental waste generated during construction



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and operation (such as spent treatment media or packaging) would be easily accommodated by local infrastructure. No impact would occur.

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

No Impact.

As discussed above in d), construction and operation of the proposed Project would not result in the generation of large amounts of solid wastes. The incidental waste generated during construction and operation (such as spent treatment media or packaging) would be handled in accordance with all applicable regulatory requirements. These existing requirements would ensure compliance with federal, state and local management and reduction statutes. Therefore, no impact would occur.



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3.19 WILDFIRE

3.19.1 Setting

The proposed Project is located within the Cities of Adelanto and La Puente. The site is mapped by the California Department of Forestry and Fire Protection (CALFIRE) as a Local Responsibility Area (LRA). Neither City of Industry nor City of La Puente maintain individual fire departments. Fire protection and response within and near the proposed Project site is provided by the County of Los Angeles Fire Department. The proposed Project site is an urbanized area not classified as a Very High Fire Hazard Severity Zone (VHFHSZ). The lands immediately adjacent to the proposed Project are also mapped as LRA and are not mapped as a VHFHSZ. The nearest mapped VHFHSZ is approximately 0.5 mile to the south of the proposed Project and is separated from the proposed Project site by State Route 60.

3.19.2 Impact Analysis

Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<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 significance 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"/>

Discussion of Impacts

The proposed Project does not meet the criteria for impact analysis under the above significance criteria.

Projects are only subject to wildfire analysis when one of four conditions is fulfilled.

1. The Project is located in a State Responsibility Area.
2. The Project is located near a State Responsibility Area
3. The Project is located on lands classified as VHFHSZ.



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4. The Project is located near lands classified as VHFHSZ.

The proposed Project does not fulfil any of these four conditions. The proposed Project is located wholly within the borders of the Cities of Industry and La Puente, in an area mapped as an LRA by CALFIRE. The lands surrounding the Project are also mapped as LRA. Additionally, the proposed Project is not located in lands mapped as VHFHSZ. The nearest mapped VHFHSZ is approximately 0.5 mile to the southwest of the proposed Project and separated from the proposed Project by numerous barriers including San Jose Creek and California State Route 60. As such, the proposed Project is not subject to wildfire analysis and no impact would occur.

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

No Impact.

See Discussion of Impacts (above).; no impact.

- b) Due to slope, prevailing winds, or 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.

See Discussion of Impacts (above); no impact.

- 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?*

No Impact.

See Discussion of Impacts (above); no impact.

- d) Expose people or structures to significance risks, including downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes?*

No Impact.

See Discussion of Impacts (above); no impact.



DISCUSSION OF ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

3.20 MANDATORY FINDINGS OF SIGNIFICANCE

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

The proposed Project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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.

- 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.)*

There are no past projects, the effects of current projects or the effects of probable future projects that when considered with this Project would be cumulatively considerable.

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

The Project does not have any environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly.



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LIST OF PREPARERS

5.0 LIST OF PREPARERS

Lead Agency	La Puente Valley County Water District	
Project Manager	StephAnnie Roberts	Stantec Consulting Services Inc.
Graphics Design	Daniel Law	Stantec Consulting Services Inc.
Project Description	StephAnnie Roberts Julie Chambon	Stantec Consulting Services Inc. Geosyntec
Aesthetics	Lindsay McDonough	Stantec Consulting Services Inc.
Agriculture and Forestry Resources	Lindsay McDonough	Stantec Consulting Services Inc.
Air Quality	Michael Weber/ Nasrin Behmanesh	Stantec Consulting Services Inc.
Biological Resources	Priya Pratap/ Jared Varonin	Stantec Consulting Services Inc.
Cultural Resources	StephAnnie Roberts	Stantec Consulting Services Inc.
Energy	Patrick Meddaugh	
Geology and Soils	Lindsay McDonough	Stantec Consulting Services Inc.
Greenhouse Gas Emissions	Michael Weber/ Nasrin Behmanesh	Stantec Consulting Services Inc.
Hazards and Hazardous Materials	Lindsay McDonough	Stantec Consulting Services Inc.
Hydrology and Water Quality	Michael Weber/ Nasrin Behmanesh	Stantec Consulting Services Inc.
Land Use and Planning	David Christie/ Lindsay McDonough	Stantec Consulting Services Inc.
Mineral Resources	StephAnnie Roberts	Stantec Consulting Services Inc.
Noise	Michael Weber/ Nasrin Behmanesh	Stantec Consulting Services Inc.
Population and Housing	Colleen Hulbert	Stantec Consulting Services Inc.
Public Services	Colleen Hulbert	Stantec Consulting Services Inc.
Recreation	StephAnnie Roberts	Stantec Consulting Services Inc.
Transportation and Traffic	Michael Weber/ Nasrin Behmanesh	Stantec Consulting Services Inc.
Tribal Cultural Resources	StephAnnie Roberts	Stantec Consulting Services Inc.
Utilities and Service System	Patrick Meddaugh	Stantec Consulting Services Inc.
Wildfire	Patrick Meddaugh	Stantec Consulting Services Inc.
Mandatory Findings of Significance	StephAnnie Roberts	Stantec Consulting Services Inc.



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6.0 REFERENCES

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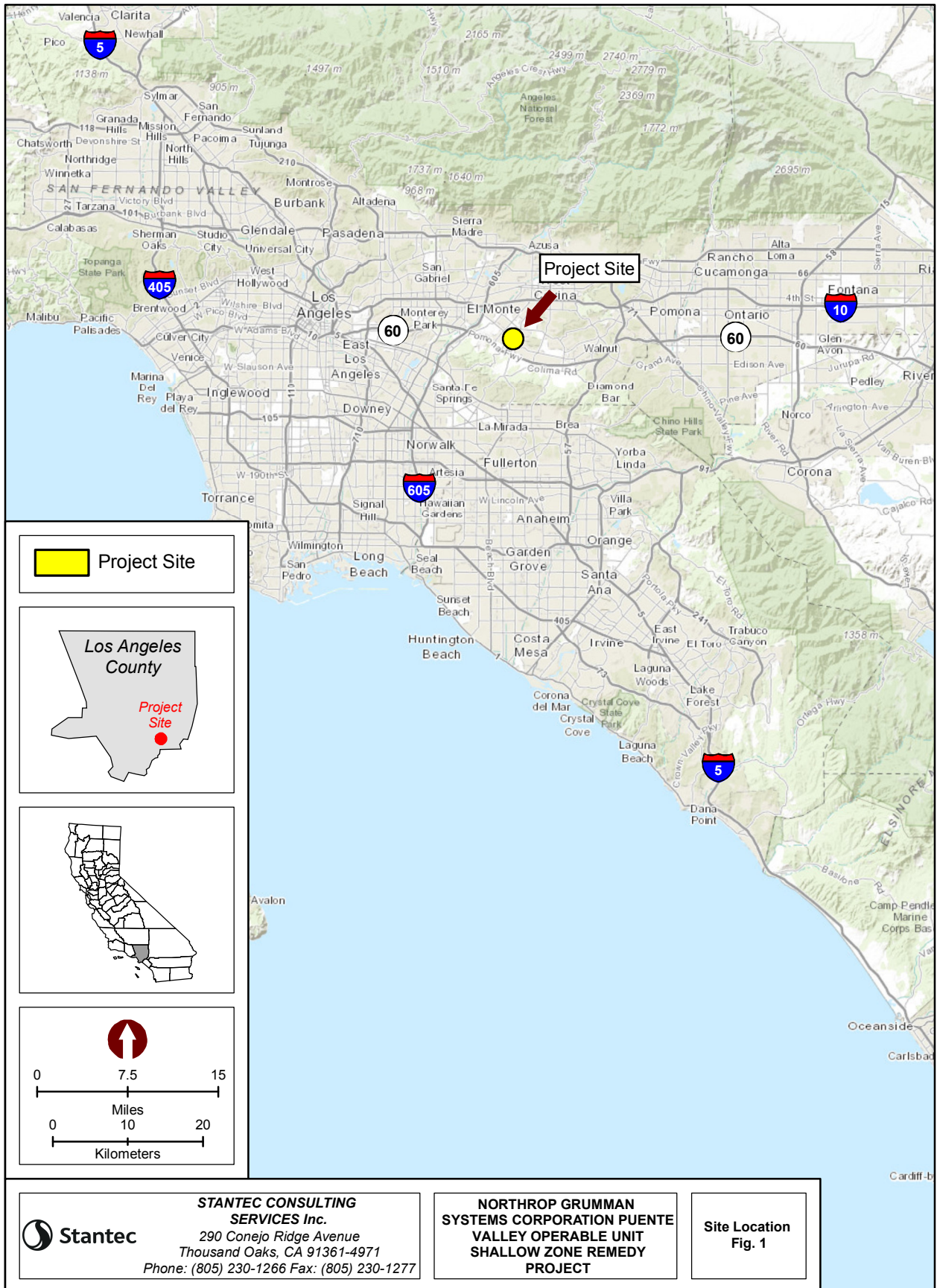
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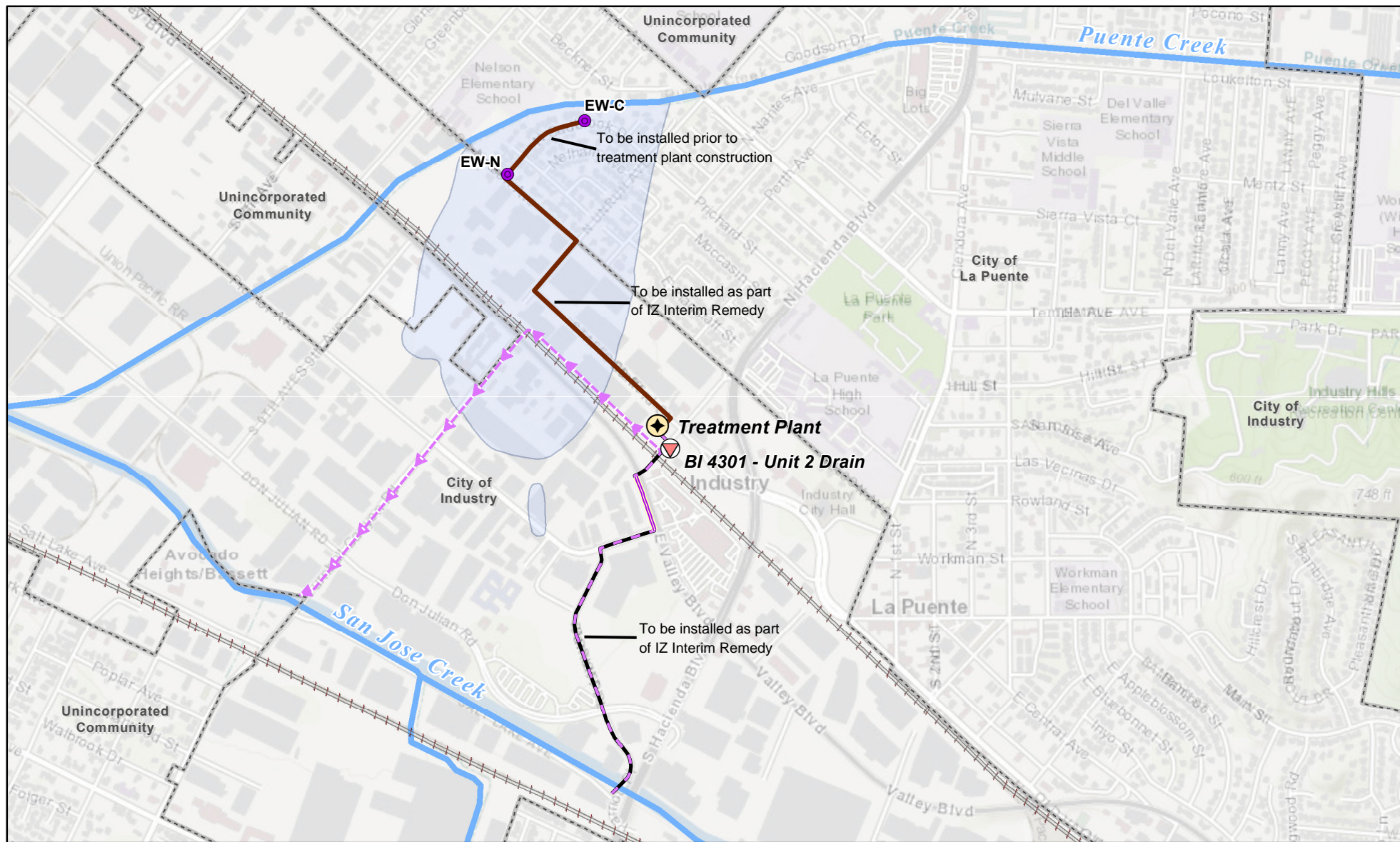
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Legend

- SZ-South Extraction Well
- Proposed Conveyance Pipeline for
Extracted Groundwater (from Extraction
Wells to Treatment Plant)
- Proposed Surface Water Discharge
Route via Existing Storm Drain to San
Jose Creek
- Wastewater Pipeline
- Existing Wastewater Pipeline
- Proposed Potential Drain for Surface
Water Discharge (Location
Approximate)
- Treatment Plant (111 Hudson Avenue)

Notes:
- The composite contour lines represent the lateral extent of PCE, TCE, 1,1-DCE, 1,1-DCA, and 1,4-dioxane relative to 10x the California Maximum Contaminant Level (MCL) or California Department of Drinking Water Notification Level (NL) in the Shallow Zone (SZ).

- Rivers & Creeks
- SZ 10X MCL Contour South of Puente
Creek (Composite Contours 2014-2017)
- City Boundaries
- California Rail Network (Caltrans, 2013)

0 1,300 Feet

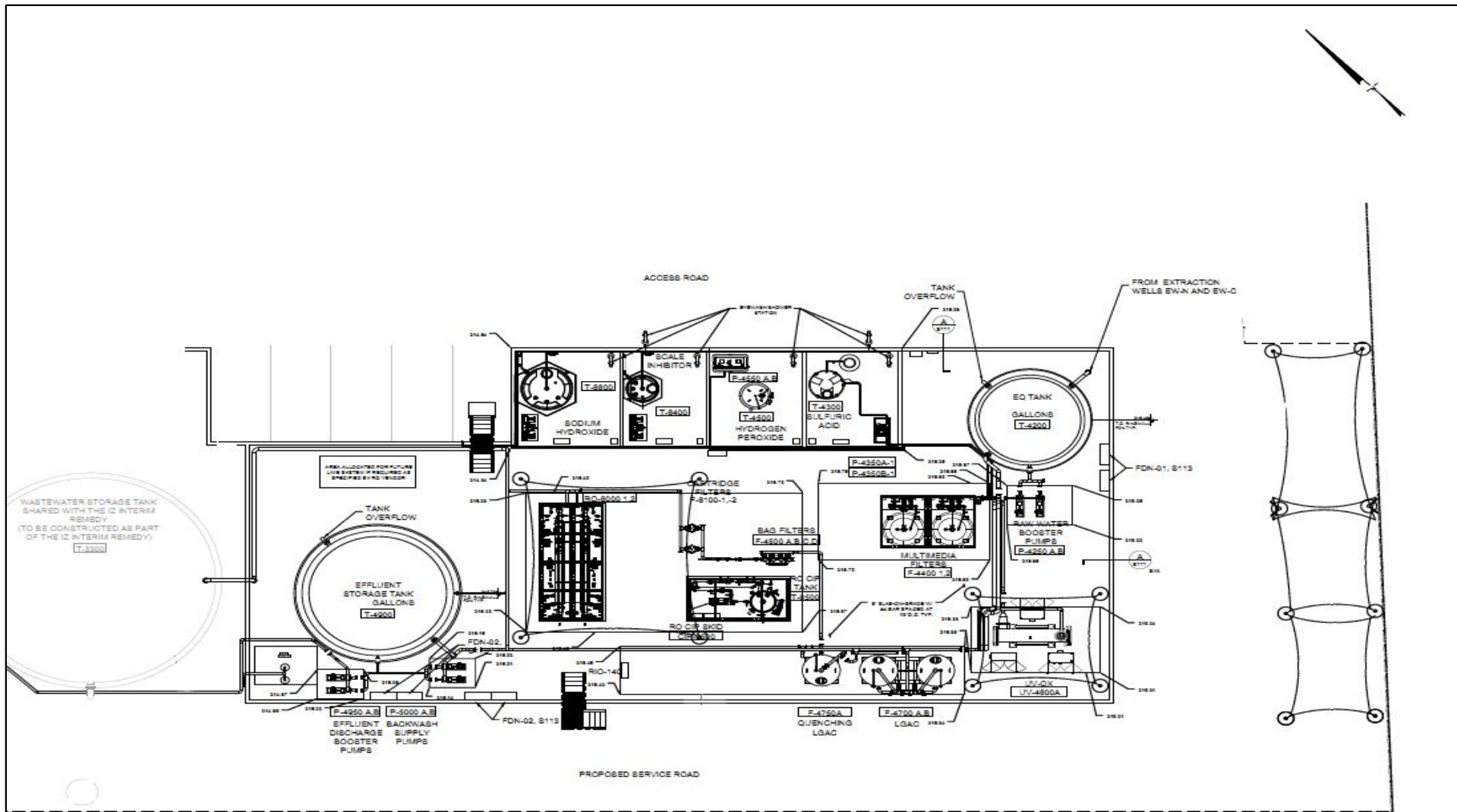


**STANTEC CONSULTING
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**NORTHROP GRUMMAN
SYSTEMS CORPORATION PUENTE
VALLEY OPERABLE UNIT
SHALLOW ZONE REMEDY
PROJECT**

**Shallow Zone Remedy
Infrastructure Map**

Fig. 2



Note:
 1. **NOT TO SCALE**
 2. Geosyntec, 2019. Pre-Final Design Report. 19 April

0 2,500 Feet



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NORTHROP GRUMMAN SYSTEMS CORPORATION
PUENTE VALLEY OPERABLE UNIT
SHALLOW ZONE- SOUTH INTERIM REMEDIATION SYSTEM

SZ Treatment Facility Foundation Plan
Fig. 3

**NORTHROP GRUMMAN SYSTEMS CORPORATION PUENTE VALLEY OPERABLE UNIT, SHALLOW
ZONE – SOUTH INTERIM REMEDY PROJECT**

Appendix A PROJECT EMISSIONS ESTIMATES

APPENDIX A PROJECT EMISSIONS ESTIMATES



PVOU SZ-South Interim Remedy - Pipeline Installation - Los Angeles-South Coast County, Annual

PVOU SZ-South - Interim Remedy - Pipeline Installation
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 Asphalt Surfaces	8.75	1000sqft	0.20	8,750.00	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

Project Characteristics - pipeline installation

Land Use - Conservatively assumes 8.750 square feet of pipeline installation (up to 4,191 linear feet of pipeline with average 2 foot trench width).

Construction Phase - Per workplan schedule

Off-road Equipment - Component-specific equipment assumptions

Off-road Equipment - component-specific equipment assumptions

Off-road Equipment - Component-specific equipment assumptions

Trips and VMT -

Vehicle Trips -

Area Coating -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	525	1800
tblConstructionPhase	NumDays	5.00	62.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1008	0.8681	0.7399	1.4400e-003	0.0370	0.0454	0.0823	9.3200e-003	0.0426	0.0520	0.0000	125.8657	125.8657	0.0306	0.0000	126.6301
Maximum	0.1008	0.8681	0.7399	1.4400e-003	0.0370	0.0454	0.0823	9.3200e-003	0.0426	0.0520	0.0000	125.8657	125.8657	0.0306	0.0000	126.6301

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1008	0.8681	0.7399	1.4400e-003	0.0370	0.0454	0.0823	9.3200e-003	0.0426	0.0520	0.0000	125.8656	125.8656	0.0306	0.0000	126.6300
Maximum	0.1008	0.8681	0.7399	1.4400e-003	0.0370	0.0454	0.0823	9.3200e-003	0.0426	0.0520	0.0000	125.8656	125.8656	0.0306	0.0000	126.6300

	ROG	NOx	CO	SO2	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	0.03	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-2-2019	9-30-2019	0.0558	0.0558
		Highest	0.0558	0.0558

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Pipeline Installation	Trenching	9/26/2019	12/22/2019	5	62	
2	Re-paving	Paving	9/26/2019	12/22/2019	5	62	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Cranes	1	4.00	231	0.29
Pipeline Installation	Off-Highway Trucks	2	4.00	402	0.38
Pipeline Installation	Signal Boards	4	8.00	6	0.82
Pipeline Installation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Pipeline Installation	Welders	1	6.00	46	0.45
Re-paving	Cement and Mortar Mixers	0	6.00	9	0.56
Re-paving	Pavers	1	7.00	130	0.42
Re-paving	Rollers	1	7.00	80	0.38

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3500e-003	3.6200e-003	0.0394	1.0000e-004	0.0342	8.0000e-005	0.0343	8.6000e-003	8.0000e-005	8.6700e-003	0.0000	9.1431	9.1431	3.1000e-004	0.0000	9.1510
Total	4.3500e-003	3.6200e-003	0.0394	1.0000e-004	0.0342	8.0000e-005	0.0343	8.6000e-003	8.0000e-005	8.6700e-003	0.0000	9.1431	9.1431	3.1000e-004	0.0000	9.1510

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	0.0746	0.6545	0.4963	1.0300e-003		0.0329	0.0329		0.0312	0.0312	0.0000	88.6975	88.6975	0.0221	0.0000	89.2508
Total	0.0746	0.6545	0.4963	1.0300e-003		0.0329	0.0329		0.0312	0.0312	0.0000	88.6975	88.6975	0.0221	0.0000	89.2508

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3500e-003	3.6200e-003	0.0394	1.0000e-004	0.0342	8.0000e-005	0.0343	8.6000e-003	8.0000e-005	8.6700e-003	0.0000	9.1431	9.1431	3.1000e-004	0.0000	9.1510
Total	4.3500e-003	3.6200e-003	0.0394	1.0000e-004	0.0342	8.0000e-005	0.0343	8.6000e-003	8.0000e-005	8.6700e-003	0.0000	9.1431	9.1431	3.1000e-004	0.0000	9.1510

3.3 Re-paving - 2019

Unmitigated Construction On-Site

Paving	2.6000e-004					0.0000	0.0000			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total	0.0205	0.2089	0.1929	2.8000e-004		0.0124	0.0124			0.0114	0.0114	0.0000	25.4126	25.4126	8.0400e-003	0.0000	25.6136

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2400e-003	1.0400e-003	0.0113	3.0000e-005	2.7200e-003	2.0000e-005	2.7400e-003	7.2000e-004	2.0000e-005	7.4000e-004	0.0000	2.6123	2.6123	9.0000e-005	0.0000	2.6146
Total	1.2400e-003	1.0400e-003	0.0113	3.0000e-005	2.7200e-003	2.0000e-005	2.7400e-003	7.2000e-004	2.0000e-005	7.4000e-004	0.0000	2.6123	2.6123	9.0000e-005	0.0000	2.6146

PVOU SZ-South Interim Remedy - Pipeline Installation - Los Angeles-South Coast County, Winter

PVOU SZ-South Interim Remedy - Pipeline Installation

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 Asphalt Surfaces	8.75	1000sqft	0.20	8,750.00	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

Project Characteristics - pipeline installation

Land Use - Conservatively assumes 8.750 square feet of pipeline installation (up to 4,191 linear feet of pipeline with average 2 foot trench width).

Construction Phase - Per workplan schedule

Off-road Equipment - Component-specific equipment assumptions

Off-road Equipment - component-specific equipment assumptions

Off-road Equipment - Component-specific equipment assumptions

Trips and VMT -

Vehicle Trips -

Area Coating -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	525	1800
tblConstructionPhase	NumDays	5.00	62.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.2693	27.9986	23.8263	0.0465	1.2187	1.4637	2.6824	0.3071	1.3754	1.6825	0.0000	4,468.7491	4,468.7491	1.0870	0.0000	4,495.9234
Maximum	3.2693	27.9986	23.8263	0.0465	1.2187	1.4637	2.6824	0.3071	1.3754	1.6825	0.0000	4,468.7491	4,468.7491	1.0870	0.0000	4,495.9234

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.2693	27.9986	23.8263	0.0465	1.2187	1.4637	2.6824	0.3071	1.3754	1.6825	0.0000	4,468.7491	4,468.7491	1.0870	0.0000	4,495.9234
Maximum	3.2693	27.9986	23.8263	0.0465	1.2187	1.4637	2.6824	0.3071	1.3754	1.6825	0.0000	4,468.7491	4,468.7491	1.0870	0.0000	4,495.9234

	ROG	NOx	CO	SO2	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	Pipeline Installation	Trenching	9/26/2019	12/22/2019	5	62	
2	Re-paving	Paving	9/26/2019	12/22/2019	5	62	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Cranes	1	4.00	231	0.29
Pipeline Installation	Off-Highway Trucks	2	4.00	402	0.38
Pipeline Installation	Signal Boards	4	8.00	6	0.82
Pipeline Installation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Pipeline Installation	Welders	1	6.00	46	0.45
Re-paving	Cement and Mortar Mixers	0	6.00	9	0.56
Re-paving	Pavers	1	7.00	130	0.42
Re-paving	Rollers	1	7.00	80	0.38
Re-paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

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
Pipeline Installation	11	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Re-paving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4078	21.1122	16.0107	0.0333		1.0609	1.0609		1.0048	1.0048		3,153.9487	3,153.9487	0.7869		3,173.6219
Total	2.4078	21.1122	16.0107	0.0333		1.0609	1.0609		1.0048	1.0048		3,153.9487	3,153.9487	0.7869		3,173.6219

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1551	0.1138	1.2389	3.2100e-003	1.1293	2.7000e-003	1.1319	0.2834	2.4900e-003	0.2859		319.7966	319.7966	0.0110		320.0717
Total	0.1551	0.1138	1.2389	3.2100e-003	1.1293	2.7000e-003	1.1319	0.2834	2.4900e-003	0.2859		319.7966	319.7966	0.0110		320.0717

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4078	21.1122	16.0107	0.0333		1.0609	1.0609		1.0048	1.0048	0.0000	3,153.948	3,153.948	0.7869		3,173.621
												7	7			9
Total	2.4078	21.1122	16.0107	0.0333		1.0609	1.0609		1.0048	1.0048	0.0000	3,153.948	3,153.948	0.7869		3,173.621
												7	7			9

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1551	0.1138	1.2389	3.2100e-003	1.1293	2.7000e-003	1.1319	0.2834	2.4900e-003	0.2859		319.7966	319.7966	0.0110		320.0717
Total	0.1551	0.1138	1.2389	3.2100e-003	1.1293	2.7000e-003	1.1319	0.2834	2.4900e-003	0.2859		319.7966	319.7966	0.0110		320.0717

3.3 Re-paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Off-Road	0.6537	6.7400	6.2227	9.1300e-003		0.3993	0.3993		0.3674	0.3674		903.6333	903.6333	0.2859		910.7808
Paving	8.4500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6622	6.7400	6.2227	9.1300e-003		0.3993	0.3993		0.3674	0.3674		903.6333	903.6333	0.2859		910.7808

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6537	6.7400	6.2227	9.1300e-003		0.3993	0.3993		0.3674	0.3674	0.0000	903.6333	903.6333	0.2859		910.7808
Paving	8.4500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6622	6.7400	6.2227	9.1300e-003		0.3993	0.3993		0.3674	0.3674	0.0000	903.6333	903.6333	0.2859		910.7808

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491

PVOU SZ-South Interim Remedy - Pipeline Installation - Los Angeles-South Coast County, Summer

PVOU SZ-South Interim Remedy - Pipeline Installation

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 Asphalt Surfaces	8.75	1000sqft	0.20	8,750.00	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

Project Characteristics - pipeline installation

Land Use - Conservatively assumes 8.750 square feet of pipeline installation (up to 4,191 linear feet of pipeline with average 2 foot trench width).

Construction Phase - Per workplan schedule

Off-road Equipment - Component-specific equipment assumptions

Off-road Equipment - component-specific equipment assumptions

Off-road Equipment - Component-specific equipment assumptions

Trips and VMT -

Vehicle Trips -

Area Coating -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	525	1800
tblConstructionPhase	NumDays	5.00	62.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.2498	27.9844	23.9691	0.0468	1.2187	1.4637	2.6824	0.3071	1.3754	1.6825	0.0000	4,494.2451	4,494.2451	1.0878	0.0000	4,521.4407
Maximum	3.2498	27.9844	23.9691	0.0468	1.2187	1.4637	2.6824	0.3071	1.3754	1.6825	0.0000	4,494.2451	4,494.2451	1.0878	0.0000	4,521.4407

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.2498	27.9844	23.9691	0.0468	1.2187	1.4637	2.6824	0.3071	1.3754	1.6825	0.0000	4,494.2451	4,494.2451	1.0878	0.0000	4,521.4407
Maximum	3.2498	27.9844	23.9691	0.0468	1.2187	1.4637	2.6824	0.3071	1.3754	1.6825	0.0000	4,494.2451	4,494.2451	1.0878	0.0000	4,521.4407

	ROG	NOx	CO	SO2	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	Pipeline Installation	Trenching	9/26/2019	12/22/2019	5	62	
2	Re-paving	Paving	9/26/2019	12/22/2019	5	62	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.2

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Pipeline Installation	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Installation	Cranes	1	4.00	231	0.29
Pipeline Installation	Off-Highway Trucks	2	4.00	402	0.38
Pipeline Installation	Signal Boards	4	8.00	6	0.82
Pipeline Installation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Pipeline Installation	Welders	1	6.00	46	0.45
Re-paving	Cement and Mortar Mixers	0	6.00	9	0.56
Re-paving	Pavers	1	7.00	130	0.42
Re-paving	Rollers	1	7.00	80	0.38
Re-paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

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
Pipeline Installation	11	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Re-paving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Pipeline Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4078	21.1122	16.0107	0.0333		1.0609	1.0609		1.0048	1.0048		3,153.9487	3,153.9487	0.7869		3,173.6219
Total	2.4078	21.1122	16.0107	0.0333		1.0609	1.0609		1.0048	1.0048		3,153.9487	3,153.9487	0.7869		3,173.6219

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1399	0.1028	1.3501	3.4100e-003	1.1293	2.7000e-003	1.1319	0.2834	2.4900e-003	0.2859		339.6268	339.6268	0.0117		339.9185
Total	0.1399	0.1028	1.3501	3.4100e-003	1.1293	2.7000e-003	1.1319	0.2834	2.4900e-003	0.2859		339.6268	339.6268	0.0117		339.9185

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4078	21.1122	16.0107	0.0333		1.0609	1.0609		1.0048	1.0048	0.0000	3,153.948	3,153.948	0.7869		3,173.621
												7	7			9
Total	2.4078	21.1122	16.0107	0.0333		1.0609	1.0609		1.0048	1.0048	0.0000	3,153.948	3,153.948	0.7869		3,173.621
												7	7			9

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1399	0.1028	1.3501	3.4100e-003	1.1293	2.7000e-003	1.1319	0.2834	2.4900e-003	0.2859		339.6268	339.6268	0.0117		339.9185
Total	0.1399	0.1028	1.3501	3.4100e-003	1.1293	2.7000e-003	1.1319	0.2834	2.4900e-003	0.2859		339.6268	339.6268	0.0117		339.9185

3.3 Re-paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Off-Road	0.6537	6.7400	6.2227	9.1300e-003		0.3993	0.3993		0.3674	0.3674		903.6333	903.6333	0.2859		910.7808
Paving	8.4500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6622	6.7400	6.2227	9.1300e-003		0.3993	0.3993		0.3674	0.3674		903.6333	903.6333	0.2859		910.7808

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6537	6.7400	6.2227	9.1300e-003		0.3993	0.3993		0.3674	0.3674	0.0000	903.6333	903.6333	0.2859		910.7808
Paving	8.4500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6622	6.7400	6.2227	9.1300e-003		0.3993	0.3993		0.3674	0.3674	0.0000	903.6333	903.6333	0.2859		910.7808

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196

PVOU SZ-South Interim Remedy - Water Treatment Plant - Los Angeles-South Coast County, Annual

PVOU SZ-South Interim Remedy - Water Treatment Plant
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	10.91	1000sqft	0.25	10,912.50	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

Project Characteristics -

Land Use - Treatment plant = 0.25 acres

Construction Phase -

Vehicle Trips - estimated 60 labor hours per week for plant operation and maintenance. Analysis conservatively assumes up to 3 trips per day = 3/10.91 = 0.275

Area Coating -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblVehicleTrips	ST_TR	1.32	0.28
tblVehicleTrips	SU_TR	0.68	0.28

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-26-2019	12-25-2019	0.6495	0.6495
2	12-26-2019	3-25-2020	0.6059	0.6059
3	3-26-2020	6-25-2020	0.6082	0.6082
4	6-26-2020	9-25-2020	0.1395	0.1395
		Highest	0.6495	0.6495

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0762	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Energy	1.0700e-003	9.6800e-003	8.1300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	49.1344	49.1344	1.8000e-003	5.2000e-004	49.3351
Mobile	1.2700e-003	6.8600e-003	0.0193	6.0000e-005	5.1300e-003	7.0000e-005	5.2000e-003	1.3800e-003	6.0000e-005	1.4400e-003	0.0000	5.9623	5.9623	3.2000e-004	0.0000	5.9704
Waste						0.0000	0.0000		0.0000	0.0000	19.9804	0.0000	19.9804	1.1808	0.0000	49.5006
Water						0.0000	0.0000		0.0000	0.0000	5.8237	76.1574	81.9811	0.6013	0.0148	101.4162
Total	0.0786	0.0165	0.0276	1.2000e-004	5.1300e-003	8.1000e-004	5.9400e-003	1.3800e-003	8.0000e-004	2.1800e-003	25.8041	131.2544	157.0585	1.7842	0.0153	206.2226

Mitigated Operational

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

Area	0.0762	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Energy	1.0700e-003	9.6800e-003	8.1300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	49.1344	49.1344	1.8000e-003	5.2000e-004	49.3351
Mobile	1.2700e-003	6.8600e-003	0.0193	6.0000e-005	5.1300e-003	7.0000e-005	5.2000e-003	1.3800e-003	6.0000e-005	1.4400e-003	0.0000	5.9623	5.9623	3.2000e-004	0.0000	5.9704
Waste						0.0000	0.0000		0.0000	0.0000	19.9804	0.0000	19.9804	1.1808	0.0000	49.5006
Water						0.0000	0.0000		0.0000	0.0000	5.8237	76.1574	81.9811	0.6013	0.0148	101.4162
Total	0.0786	0.0165	0.0276	1.2000e-004	5.1300e-003	8.1000e-004	5.9400e-003	1.3800e-003	8.0000e-004	2.1800e-003	25.8041	131.2544	157.0585	1.7842	0.0153	206.2226

	ROG	NOx	CO	SO2	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	Site Preparation	Site Preparation	9/26/2019	9/27/2019	5	2	
2	Grading	Grading	9/28/2019	10/3/2019	5	4	
3	Building Construction	Building Construction	10/4/2019	7/9/2020	5	200	
4	Paving	Paving	7/10/2020	7/23/2020	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40

Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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 Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	33.00	13.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0195	7.8900e-003	2.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	1.5467	1.5467	4.9000e-004	0.0000	1.5589
Total	1.7100e-003	0.0195	7.8900e-003	2.0000e-005	5.8000e-003	8.8000e-004	6.6800e-003	2.9500e-003	8.1000e-004	3.7600e-003	0.0000	1.5467	1.5467	4.9000e-004	0.0000	1.5589

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.6000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0843	0.0843	0.0000	0.0000	0.0843
Total	4.0000e-005	3.0000e-005	3.6000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0843	0.0843	0.0000	0.0000	0.0843

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0195	7.8900e-003	2.0000e-005		8.8000e-004	8.8000e-004		8.1000e-004	8.1000e-004	0.0000	1.5467	1.5467	4.9000e-004	0.0000	1.5589

Total	1.7100e-003	0.0195	7.8900e-003	2.0000e-005	5.8000e-003	8.8000e-004	6.6800e-003	2.9500e-003	8.1000e-004	3.7600e-003	0.0000	1.5467	1.5467	4.9000e-004	0.0000	1.5589
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.6000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0843	0.0843	0.0000	0.0000	0.0843
Total	4.0000e-005	3.0000e-005	3.6000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0843	0.0843	0.0000	0.0000	0.0843

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8400e-003	0.0321	0.0132	3.0000e-005		1.4700e-003	1.4700e-003		1.3600e-003	1.3600e-003	0.0000	2.5336	2.5336	8.0000e-004	0.0000	2.5536
Total	2.8400e-003	0.0321	0.0132	3.0000e-005	9.8300e-003	1.4700e-003	0.0113	5.0500e-003	1.3600e-003	6.4100e-003	0.0000	2.5336	2.5336	8.0000e-004	0.0000	2.5536

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	7.0000e-005	7.3000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1685	0.1685	1.0000e-005	0.0000	0.1687
Total	8.0000e-005	7.0000e-005	7.3000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1685	0.1685	1.0000e-005	0.0000	0.1687

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8400e-003	0.0321	0.0132	3.0000e-005		1.4700e-003	1.4700e-003		1.3600e-003	1.3600e-003	0.0000	2.5336	2.5336	8.0000e-004	0.0000	2.5536
Total	2.8400e-003	0.0321	0.0132	3.0000e-005	9.8300e-003	1.4700e-003	0.0113	5.0500e-003	1.3600e-003	6.4100e-003	0.0000	2.5336	2.5336	8.0000e-004	0.0000	2.5536

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	7.0000e-005	7.3000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1685	0.1685	1.0000e-005	0.0000	0.1687
Total	8.0000e-005	7.0000e-005	7.3000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1685	0.1685	1.0000e-005	0.0000	0.1687

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0716	0.5034	0.4248	6.9000e-004		0.0289	0.0289		0.0279	0.0279	0.0000	57.6677	57.6677	0.0111	0.0000	57.9448
Total	0.0716	0.5034	0.4248	6.9000e-004		0.0289	0.0289		0.0279	0.0279	0.0000	57.6677	57.6677	0.0111	0.0000	57.9448

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7300e-003	0.0484	0.0132	1.1000e-004	2.5800e-003	3.0000e-004	2.8800e-003	7.4000e-004	2.9000e-004	1.0400e-003	0.0000	10.2401	10.2401	6.8000e-004	0.0000	10.2572
Worker	5.2100e-003	4.3400e-003	0.0472	1.2000e-004	0.0114	1.0000e-004	0.0115	3.0300e-003	9.0000e-005	3.1200e-003	0.0000	10.9497	10.9497	3.8000e-004	0.0000	10.9591
Total	6.9400e-003	0.0527	0.0604	2.3000e-004	0.0140	4.0000e-004	0.0144	3.7700e-003	3.8000e-004	4.1600e-003	0.0000	21.1898	21.1898	1.0600e-003	0.0000	21.2163

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	0.0716	0.5034	0.4248	6.9000e-004		0.0289	0.0289		0.0279	0.0279	0.0000	57.6676	57.6676	0.0111	0.0000	57.9447
Total	0.0716	0.5034	0.4248	6.9000e-004		0.0289	0.0289		0.0279	0.0279	0.0000	57.6676	57.6676	0.0111	0.0000	57.9447

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7300e-003	0.0484	0.0132	1.1000e-004	2.5800e-003	3.0000e-004	2.8800e-003	7.4000e-004	2.9000e-004	1.0400e-003	0.0000	10.2401	10.2401	6.8000e-004	0.0000	10.2572
Worker	5.2100e-003	4.3400e-003	0.0472	1.2000e-004	0.0114	1.0000e-004	0.0115	3.0300e-003	9.0000e-005	3.1200e-003	0.0000	10.9497	10.9497	3.8000e-004	0.0000	10.9591
Total	6.9400e-003	0.0527	0.0604	2.3000e-004	0.0140	4.0000e-004	0.0144	3.7700e-003	3.8000e-004	4.1600e-003	0.0000	21.1898	21.1898	1.0600e-003	0.0000	21.2163

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1391	1.0130	0.9034	1.5100e-003		0.0545	0.0545		0.0527	0.0527	0.0000	124.3564	124.3564	0.0231	0.0000	124.9335
Total	0.1391	1.0130	0.9034	1.5100e-003		0.0545	0.0545		0.0527	0.0527	0.0000	124.3564	124.3564	0.0231	0.0000	124.9335

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.2300e-003	0.0965	0.0261	2.3000e-004	5.6100e-003	4.5000e-004	6.0600e-003	1.6200e-003	4.3000e-004	2.0500e-003	0.0000	22.1224	22.1224	1.4100e-003	0.0000	22.1575
Worker	0.0104	8.4100e-003	0.0931	2.6000e-004	0.0248	2.1000e-004	0.0250	6.5800e-003	1.9000e-004	6.7700e-003	0.0000	23.0876	23.0876	7.3000e-004	0.0000	23.1058
Total	0.0137	0.1049	0.1192	4.9000e-004	0.0304	6.6000e-004	0.0310	8.2000e-003	6.2000e-004	8.8200e-003	0.0000	45.2100	45.2100	2.1400e-003	0.0000	45.2633

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	0.1391	1.0130	0.9034	1.5100e-003		0.0545	0.0545		0.0527	0.0527	0.0000	124.3562	124.3562	0.0231	0.0000	124.9333

Total	0.1391	1.0130	0.9034	1.5100e-003		0.0545	0.0545		0.0527	0.0527	0.0000	124.3562	124.3562	0.0231	0.0000	124.9333
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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	3.2300e-003	0.0965	0.0261	2.3000e-004	5.6100e-003	4.5000e-004	6.0600e-003	1.6200e-003	4.3000e-004	2.0500e-003	0.0000	22.1224	22.1224	1.4100e-003	0.0000	22.1575
Worker	0.0104	8.4100e-003	0.0931	2.6000e-004	0.0248	2.1000e-004	0.0250	6.5800e-003	1.9000e-004	6.7700e-003	0.0000	23.0876	23.0876	7.3000e-004	0.0000	23.1058
Total	0.0137	0.1049	0.1192	4.9000e-004	0.0304	6.6000e-004	0.0310	8.2000e-003	6.2000e-004	8.8200e-003	0.0000	45.2100	45.2100	2.1400e-003	0.0000	45.2633

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8829	5.8829	1.8600e-003	0.0000	5.9295
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8829	5.8829	1.8600e-003	0.0000	5.9295

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.4000e-004	2.6800e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6639	0.6639	2.0000e-005	0.0000	0.6644
Total	3.0000e-004	2.4000e-004	2.6800e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6639	0.6639	2.0000e-005	0.0000	0.6644

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	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8828	5.8828	1.8600e-003	0.0000	5.9295
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8828	5.8828	1.8600e-003	0.0000	5.9295

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.4000e-004	2.6800e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6639	0.6639	2.0000e-005	0.0000	0.6644
Total	3.0000e-004	2.4000e-004	2.6800e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6639	0.6639	2.0000e-005	0.0000	0.6644

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2700e-003	6.8600e-003	0.0193	6.0000e-005	5.1300e-003	7.0000e-005	5.2000e-003	1.3800e-003	6.0000e-005	1.4400e-003	0.0000	5.9623	5.9623	3.2000e-004	0.0000	5.9704
Unmitigated	1.2700e-003	6.8600e-003	0.0193	6.0000e-005	5.1300e-003	7.0000e-005	5.2000e-003	1.3800e-003	6.0000e-005	1.4400e-003	0.0000	5.9623	5.9623	3.2000e-004	0.0000	5.9704

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	3.05	3.05	3.05	13,528	13,528
Total	3.05	3.05	3.05	13,528	13,528

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	38.5942	38.5942	1.5900e-003	3.3000e-004	38.7323
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	38.5942	38.5942	1.5900e-003	3.3000e-004	38.7323
NaturalGas Mitigated	1.0700e-003	9.6800e-003	8.1300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.5402	10.5402	2.0000e-004	1.9000e-004	10.6029
NaturalGas Unmitigated	1.0700e-003	9.6800e-003	8.1300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.5402	10.5402	2.0000e-004	1.9000e-004	10.6029

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					

General Light Industry	197516	1.0700e-003	9.6800e-003	8.1300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.5402	10.5402	2.0000e-004	1.9000e-004	10.6029
Total		1.0700e-003	9.6800e-003	8.1300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.5402	10.5402	2.0000e-004	1.9000e-004	10.6029

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	197516	1.0700e-003	9.6800e-003	8.1300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.5402	10.5402	2.0000e-004	1.9000e-004	10.6029
Total		1.0700e-003	9.6800e-003	8.1300e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.5402	10.5402	2.0000e-004	1.9000e-004	10.6029

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	121129	38.5942	1.5900e-003	3.3000e-004	38.7323
Total		38.5942	1.5900e-003	3.3000e-004	38.7323

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	121129	38.5942	1.5900e-003	3.3000e-004	38.7323
Total		38.5942	1.5900e-003	3.3000e-004	38.7323

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0762	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Unmitigated	0.0762	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0368					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0394					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Total	0.0762	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0368					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0394					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004
Total	0.0762	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.7000e-004	2.7000e-004	0.0000	0.0000	2.9000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
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Category	MT/yr			
Mitigated	81.9811	0.6013	0.0148	101.4162
Unmitigated	81.9811	0.6013	0.0148	101.4162

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	18.3566 / 0	81.9811	0.6013	0.0148	101.4162
Total		81.9811	0.6013	0.0148	101.4162

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	18.3566 / 0	81.9811	0.6013	0.0148	101.4162
Total		81.9811	0.6013	0.0148	101.4162

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.9804	1.1808	0.0000	49.5006
Unmitigated	19.9804	1.1808	0.0000	49.5006

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	98.43	19.9804	1.1808	0.0000	49.5006
Total		19.9804	1.1808	0.0000	49.5006

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	98.43	19.9804	1.1808	0.0000	49.5006
Total		19.9804	1.1808	0.0000	49.5006

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

PVOU SZ-South Interim Remedy - Water Treatment Plant - Los Angeles-South Coast County, Summer

PVOU SZ-South Interim Remedy - Water Treatment Plant

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	10.91	1000sqft	0.25	10,912.50	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

Project Characteristics -

Land Use - Treatment plant = 0.25 acres

Construction Phase -

Vehicle Trips - estimated 60 labor hours per week for plant operation and maintenance. Analysis conservatively assumes up to 3 trips per day = $3/10.91 = 0.275$

Area Coating -

Energy Use -

Table Name	Column Name	Default Value	New Value
tblVehicleTrips	ST_TR	1.32	0.28
tblVehicleTrips	SU_TR	0.68	0.28

[illegible]

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4178	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003
Energy	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419
Mobile	7.2900e-003	0.0358	0.1108	3.7000e-004	0.0288	3.7000e-004	0.0291	7.7000e-003	3.4000e-004	8.0400e-003		37.4317	37.4317	1.9900e-003		37.4814
Total	0.4309	0.0889	0.1565	6.9000e-004	0.0288	4.4000e-003	0.0332	7.7000e-003	4.3700e-003	0.0121		101.0976	101.0976	3.2200e-003	1.1700e-003	101.5258

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4178	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003
Energy	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419
Mobile	7.2900e-003	0.0358	0.1108	3.7000e-004	0.0288	3.7000e-004	0.0291	7.7000e-003	3.4000e-004	8.0400e-003		37.4317	37.4317	1.9900e-003		37.4814
Total	0.4309	0.0889	0.1565	6.9000e-004	0.0288	4.4000e-003	0.0332	7.7000e-003	4.3700e-003	0.0121		101.0976	101.0976	3.2200e-003	1.1700e-003	101.5258

[illegible]

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/26/2019	9/27/2019	5	2	
2	Grading	Grading	9/28/2019	10/3/2019	5	4	
3	Building Construction	Building Construction	10/4/2019	7/9/2020	5	200	
4	Paving	Paving	7/10/2020	7/23/2020	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42

Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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 Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	33.00	13.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.7123	19.4821	7.8893	0.0172		0.8824	0.8824		0.8118	0.8118		1,704.9189	1,704.9189	0.5394		1,718.4044
Total	1.7123	19.4821	7.8893	0.0172	5.7996	0.8824	6.6819	2.9537	0.8118	3.7655		1,704.9189	1,704.9189	0.5394		1,718.4044

Unmitigated Construction Off-Site

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.4197	16.0357	6.6065	0.0141		0.7365	0.7365		0.6775	0.6775		1,396.3909	1,396.3909	0.4418		1,407.4359
Total	1.4197	16.0357	6.6065	0.0141	4.9143	0.7365	5.6507	2.5256	0.6775	3.2032		1,396.3909	1,396.3909	0.4418		1,407.4359

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.4197	16.0357	6.6065	0.0141		0.7365	0.7365		0.6775	0.6775	0.0000	1,396.3909	1,396.3909	0.4418		1,407.4359
Total	1.4197	16.0357	6.6065	0.0141	4.9143	0.7365	5.6507	2.5256	0.6775	3.2032	0.0000	1,396.3909	1,396.3909	0.4418		1,407.4359

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196
Total	0.0400	0.0294	0.3857	9.7000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		97.0362	97.0362	3.3300e-003		97.1196

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day				
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	2,018.0224	2,018.0224	0.3879		2,027.7210
Total	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	2,018.0224	2,018.0224	0.3879		2,027.7210

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0540	1.5045	0.3992	3.4000e-003	0.0832	9.5900e-003	0.0928	0.0240	9.1800e-003	0.0331		362.4590	362.4590	0.0232		363.0397
Worker	0.1649	0.1212	1.5911	4.0200e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		400.2745	400.2745	0.0138		400.6182
Total	0.2189	1.6256	1.9903	7.4200e-003	0.4521	0.0128	0.4649	0.1218	0.0121	0.1339		762.7335	762.7335	0.0370		763.6579

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	0.0000	2,018.0224	2,018.0224	0.3879		2,027.7210
Total	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	0.0000	2,018.0224	2,018.0224	0.3879		2,027.7210

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	0.0540	1.5045	0.3992	3.4000e-003	0.0832	9.5900e-003	0.0928	0.0240	9.1800e-003	0.0331		362.4590	362.4590	0.0232		363.0397
Worker	0.1649	0.1212	1.5911	4.0200e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		400.2745	400.2745	0.0138		400.6182
Total	0.2189	1.6256	1.9903	7.4200e-003	0.4521	0.0128	0.4649	0.1218	0.0121	0.1339		762.7335	762.7335	0.0370		763.6579

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0462	1.3828	0.3623	3.3700e-003	0.0832	6.5100e-003	0.0897	0.0240	6.2300e-003	0.0302		360.1321	360.1321	0.0220		360.6815
Worker	0.1519	0.1080	1.4449	3.9000e-003	0.3689	3.0800e-003	0.3720	0.0978	2.8400e-003	0.1007		388.1173	388.1173	0.0122		388.4232
Total	0.1981	1.4909	1.8072	7.2700e-003	0.4521	9.5900e-003	0.4617	0.1218	9.0700e-003	0.1309		748.2494	748.2494	0.0342		749.1047

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467

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	0.0462	1.3828	0.3623	3.3700e-003	0.0832	6.5100e-003	0.0897	0.0240	6.2300e-003	0.0302		360.1321	360.1321	0.0220		360.6815
Worker	0.1519	0.1080	1.4449	3.9000e-003	0.3689	3.0800e-003	0.3720	0.0978	2.8400e-003	0.1007		388.1173	388.1173	0.0122		388.4232
Total	0.1981	1.4909	1.8072	7.2700e-003	0.4521	9.5900e-003	0.4617	0.1218	9.0700e-003	0.1309		748.2494	748.2494	0.0342		749.1047

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328		1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328		1,296.9461	1,296.9461	0.4111		1,307.2246

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0598	0.0426	0.5692	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		152.8947	152.8947	4.8200e-003		153.0152
Total	0.0598	0.0426	0.5692	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		152.8947	152.8947	4.8200e-003		153.0152

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.9461	1,296.9461	0.4111		1,307.2246

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0598	0.0426	0.5692	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		152.8947	152.8947	4.8200e-003		153.0152
Total	0.0598	0.0426	0.5692	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		152.8947	152.8947	4.8200e-003		153.0152

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.2900e-003	0.0358	0.1108	3.7000e-004	0.0288	3.7000e-004	0.0291	7.7000e-003	3.4000e-004	8.0400e-003		37.4317	37.4317	1.9900e-003		37.4814
Unmitigated	7.2900e-003	0.0358	0.1108	3.7000e-004	0.0288	3.7000e-004	0.0291	7.7000e-003	3.4000e-004	8.0400e-003		37.4317	37.4317	1.9900e-003		37.4814

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	3.05	3.05	3.05	13,528	13,528
Total	3.05	3.05	3.05	13,528	13,528

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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	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

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	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419
NaturalGas Unmitigated	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419

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					
General Light Industry	541.14	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419
Total		5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419

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					

General Light Industry	0.54114	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419
Total		5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4178	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003
Unmitigated	0.4178	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2016					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2161					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Landscaping	1.1000e-004	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003
Total	0.4178	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2016					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2161					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003
Total	0.4178	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003

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

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

PVOU SZ-South Interim Remedy - Water Treatment Plant - Los Angeles-South Coast County, Winter

PVOU SZ-South Interim Remedy - Water Treatment Plant
Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	10.91	1000sqft	0.25	10,912.50	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

Project Characteristics -
Land Use - Treatment plant = 0.25 acres
Construction Phase -
Vehicle Trips - estimated 60 labor hours per week for plant operation and maintenance. Analysis conservatively assumes up to 3 trips per day = 3/10.91 = 0.275
Area Coating -
Energy Use -

Table Name	Column Name	Default Value	New Value
tblVehicleTrips	ST_TR	1.32	0.28
tblVehicleTrips	SU_TR	0.68	0.28

[illegible]

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4178	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003
Energy	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419
Mobile	7.1000e-003	0.0370	0.1044	3.5000e-004	0.0288	3.7000e-004	0.0291	7.7000e-003	3.4000e-004	8.0400e-003		35.6290	35.6290	1.9700e-003		35.6783
Total	0.4307	0.0901	0.1500	6.7000e-004	0.0288	4.4000e-003	0.0332	7.7000e-003	4.3700e-003	0.0121		99.2950	99.2950	3.2000e-003	1.1700e-003	99.7227

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4178	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003
Energy	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419
Mobile	7.1000e-003	0.0370	0.1044	3.5000e-004	0.0288	3.7000e-004	0.0291	7.7000e-003	3.4000e-004	8.0400e-003		35.6290	35.6290	1.9700e-003		35.6783
Total	0.4307	0.0901	0.1500	6.7000e-004	0.0288	4.4000e-003	0.0332	7.7000e-003	4.3700e-003	0.0121		99.2950	99.2950	3.2000e-003	1.1700e-003	99.7227

[illegible]

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	9/26/2019	9/27/2019	5	2	
2	Grading	Grading	9/28/2019	10/3/2019	5	4	
3	Building Construction	Building Construction	10/4/2019	7/9/2020	5	200	
4	Paving	Paving	7/10/2020	7/23/2020	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42

Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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 Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	33.00	13.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.7123	19.4821	7.8893	0.0172		0.8824	0.8824		0.8118	0.8118		1,704.9189	1,704.9189	0.5394		1,718.4044
Total	1.7123	19.4821	7.8893	0.0172	5.7996	0.8824	6.6819	2.9537	0.8118	3.7655		1,704.9189	1,704.9189	0.5394		1,718.4044

Unmitigated Construction Off-Site

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.4197	16.0357	6.6065	0.0141		0.7365	0.7365		0.6775	0.6775		1,396.3909	1,396.3909	0.4418		1,407.4359
Total	1.4197	16.0357	6.6065	0.0141	4.9143	0.7365	5.6507	2.5256	0.6775	3.2032		1,396.3909	1,396.3909	0.4418		1,407.4359

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.4197	16.0357	6.6065	0.0141		0.7365	0.7365		0.6775	0.6775	0.0000	1,396.3909	1,396.3909	0.4418		1,407.4359
Total	1.4197	16.0357	6.6065	0.0141	4.9143	0.7365	5.6507	2.5256	0.6775	3.2032	0.0000	1,396.3909	1,396.3909	0.4418		1,407.4359

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491
Total	0.0443	0.0325	0.3540	9.2000e-004	0.0894	7.7000e-004	0.0902	0.0237	7.1000e-004	0.0244		91.3705	91.3705	3.1400e-003		91.4491

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day				
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	2,018.0224	2,018.0224	0.3879		2,027.7210
Total	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	2,018.0224	2,018.0224	0.3879		2,027.7210

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0563	1.5065	0.4400	3.3100e-003	0.0832	9.7500e-003	0.0930	0.0240	9.3300e-003	0.0333		352.6602	352.6602	0.0248		353.2796
Worker	0.1827	0.1342	1.4602	3.7900e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		376.9032	376.9032	0.0130		377.2273
Total	0.2391	1.6407	1.9002	7.1000e-003	0.4521	0.0129	0.4650	0.1218	0.0123	0.1340		729.5634	729.5634	0.0377		730.5069

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	0.0000	2,018.0224	2,018.0224	0.3879		2,027.7210
Total	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	0.0000	2,018.0224	2,018.0224	0.3879		2,027.7210

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	0.0563	1.5065	0.4400	3.3100e-003	0.0832	9.7500e-003	0.0930	0.0240	9.3300e-003	0.0333		352.6602	352.6602	0.0248		353.2796
Worker	0.1827	0.1342	1.4602	3.7900e-003	0.3689	3.1800e-003	0.3720	0.0978	2.9300e-003	0.1008		376.9032	376.9032	0.0130		377.2273
Total	0.2391	1.6407	1.9002	7.1000e-003	0.4521	0.0129	0.4650	0.1218	0.0123	0.1340		729.5634	729.5634	0.0377		730.5069

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0483	1.3826	0.3996	3.2800e-003	0.0832	6.6100e-003	0.0898	0.0240	6.3200e-003	0.0303		350.2838	350.2838	0.0234		350.8694
Worker	0.1686	0.1196	1.3233	3.6700e-003	0.3689	3.0800e-003	0.3720	0.0978	2.8400e-003	0.1007		365.4487	365.4487	0.0115		365.7367
Total	0.2170	1.5022	1.7229	6.9500e-003	0.4521	9.6900e-003	0.4618	0.1218	9.1600e-003	0.1310		715.7325	715.7325	0.0349		716.6061

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467

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	0.0483	1.3826	0.3996	3.2800e-003	0.0832	6.6100e-003	0.0898	0.0240	6.3200e-003	0.0303		350.2838	350.2838	0.0234		350.8694
Worker	0.1686	0.1196	1.3233	3.6700e-003	0.3689	3.0800e-003	0.3720	0.0978	2.8400e-003	0.1007		365.4487	365.4487	0.0115		365.7367
Total	0.2170	1.5022	1.7229	6.9500e-003	0.4521	9.6900e-003	0.4618	0.1218	9.1600e-003	0.1310		715.7325	715.7325	0.0349		716.6061

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328		1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328		1,296.9461	1,296.9461	0.4111		1,307.2246

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0664	0.0471	0.5213	1.4500e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		143.9647	143.9647	4.5400e-003		144.0781
Total	0.0664	0.0471	0.5213	1.4500e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		143.9647	143.9647	4.5400e-003		144.0781

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.9461	1,296.9461	0.4111		1,307.2246

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0664	0.0471	0.5213	1.4500e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		143.9647	143.9647	4.5400e-003		144.0781
Total	0.0664	0.0471	0.5213	1.4500e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		143.9647	143.9647	4.5400e-003		144.0781

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.1000e-003	0.0370	0.1044	3.5000e-004	0.0288	3.7000e-004	0.0291	7.7000e-003	3.4000e-004	8.0400e-003		35.6290	35.6290	1.9700e-003		35.6783
Unmitigated	7.1000e-003	0.0370	0.1044	3.5000e-004	0.0288	3.7000e-004	0.0291	7.7000e-003	3.4000e-004	8.0400e-003		35.6290	35.6290	1.9700e-003		35.6783

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	3.05	3.05	3.05	13,528	13,528
Total	3.05	3.05	3.05	13,528	13,528

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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	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

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	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419
NaturalGas Unmitigated	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419

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					
General Light Industry	541.14	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419
Total		5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419

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					

General Light Industry	0.54114	5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419
Total		5.8400e-003	0.0531	0.0446	3.2000e-004		4.0300e-003	4.0300e-003		4.0300e-003	4.0300e-003		63.6636	63.6636	1.2200e-003	1.1700e-003	64.0419

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4178	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003
Unmitigated	0.4178	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2016					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2161					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Landscaping	1.1000e-004	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003
Total	0.4178	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2016					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2161					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003
Total	0.4178	1.0000e-005	1.1200e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3900e-003	2.3900e-003	1.0000e-005		2.5500e-003

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

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
