Alondra Park Multi-Benefit Stormwater Capture Project

ADDENDUM

Prepared for:
County of Los Angeles
Department of Public Works
900 South Fremont Avenue
Alhambra, CA 91803

Prepared by:

Aspen Environmental Group

March 2022

INTENTIONALLY LEFT BLANK

Contents

Tables

Figures

Appendices

Acronyms

AB	Assembly Bill
AF	acre-feet
AQMP	air quality management plan
ARB	Air Resources Board
ARMR	Archaeological Resource Management Reports
BMP	best management practice
BP	before present
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal-EPA	California Environmental Protection Agency
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDS	Continuous Deflective Separation
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CH4	methane
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO2	carbon dioxide
CO2e	carbon dioxide equivalent
COMM	Commercial and Sport Fishing
CRHR	California Register of Historical Resources
CWA	Clean Water Act
CY	cubic yards
dB	decibels
dBA	A-weighted decibel
DCW	Dominguez Channel Watershed
DCWMA	Dominguez Channel Watershed Management Area
DOC	California Department of Conservation
DPR	County of Los Angeles, Department of Parks and Recreation
DSBB	Debris Separating Baffle Box
EST	Estuarine Habitat
EWMP	Enhanced Watershed Management Program
FEMA	Federal Emergency Management Agency
FHSZ	fire hazard severity zone
FHWA	Federal Highway Administration
GHG	greenhouse gas
GPM	gallons per minute
GWP	global warming potential
HCP/NCCP	Habitat Conservation Plan/Natural Community Conservation Plan
HP	horsepower
in/sec	inches per second

IPCC	Intergovernmental Panel on Climate Change
JDS	Jensen Deflective Separator
LACFCD	Los Angeles County Flood Control District
LACFD	Los Angeles County Fire Department
LACM	Natural History Museum of Los Angeles County
LACPW	Los Angeles County Public Works
LACSD	Los Angeles County Sheriff's Department
LARWQCB	Los Angeles Regional Water Quality Control Board
lbs	pounds
Ldn	Day/Night Average Noise Level
Leq	Energy Equivalent or Energy Average Level
LID	Low Impact Development
Lmax	maximum A-weighted sound level
LRA	Local Responsibility Area
LST	Localized Significance Threshold
MAR	Marine Habitat
MBTA	Migratory Bird Treaty Act
MIGR	Migration of Aquatic Organisms
MMRP	Mitigation Monitoring and Reporting Program
MRZ	Mineral Resource Zones
MS4	Municipal Separate Storm Sewer System
Mw	moment magnitude
N2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NAV	Navigation
NO2	nitrogen dioxide
NOx	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NSBB	Nutrient Separating Baffle Box
O3	ozone
PEIR	Program Environmental Impact Report
PM	particulate matter
PM2.5	fine particulate matter
PM10	respirable particulate matter
PMM	program mitigation measure
PPV	peak particle velocity
PRMP	paleontological resource mitigation program
RARE	Rare, Threatened, or Endangered Species
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SPWN	Spawning, Reproduction and/or Early Development
SRA	source receptor area
SVP	Society of Vertebrate Paleontologists
SWPPP	Stormwater Pollution and Prevention Plan
TAC	toxic air contaminant

TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VdB	vibration level in decibels
VMT	vehicle miles traveled
VOC	Volatile Organic Compounds
WILD	Wildlife Habitat
WRD	Water Replenishment District
WWII	World War II

1. Introduction

1.1 Purpose of this Addendum

As part of the Enhanced Watershed Management Program (EWMP) for the Dominguez Channel Watershed submittal to the Los Angeles Regional Water Quality Control Board (LARWQCB), Los Angeles County (County) certified the 2015 Los Angeles County Flood Control District Enhanced Watershed Management Programs Final Environmental Impact Report (PEIR) on May 26, 2015 (LACPW, 2015). The PEIR analyzed the general effects due to the structural and non-structural best management practices (BMPs) identified in the 12 EWMPs submitted to the LARWQCB. Alondra Park was selected as a high-priority regional project in the EWMP for the Dominguez Channel Watershed Management Area (DCWMA) Group (DCWMA, 2016). The PEIR analyzed the general effects of the BMPs and identified program mitigation measures (PMMs) to reduce potential impacts; however, site-specific environmental analysis was not completed.

The purpose of this Addendum to the PEIR is to evaluate the site-specific environmental effects associated with the proposed Alondra Park Multi-Benefit Stormwater Capture Project (proposed Project) and determine whether these impacts are consistent with the evaluation presented in the PEIR in compliance with the California Environmental Quality Act (CEQA) (Public Resources Code Sections 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Sections 15000 et seq.).

1.2 CEQA Requirements

An Addendum to an Environmental Impact Report is the appropriate tool to evaluate the environmental effects associated with *minor modifications* to previously approved projects. In the case of a PEIR, if the agency finds that pursuant to State CEQA Guidelines Section 15162 (see below), no new effects could occur or new mitigation measures would be required, the agency (County) can approve the site-specific activity as being within the scope of the program covered by the PEIR, and no new environmental document would be required.

According to State CEQA Guidelines Section 15164(a), "the lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." An addendum may be prepared if only minor technical changes or additions are necessary. A brief explanation of the decision not to prepare a subsequent EIR must also be provided in the addendum, findings or the public record.

State CEQA Guidelines Section 15162 lists the conditions that would require the preparation of a subsequent EIR or negative declaration rather than an addendum. These include the following:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration

due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. New information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

    a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

    b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;

    c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternative; or

    d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The proposed Project is described in detail within Section 2 of this Addendum, and the site-specific impacts of this Project would be as described and analyzed in the PEIR. The proposed Project has been reviewed by County of Los Angeles (County) in light of State CEQA Guidelines Sections 15162 and 15163 (see Section 3). As the CEQA Lead Agency, County has determined, based on the analysis presented herein, that none of the conditions apply which would require preparation of a subsequent or supplemental EIR and that an Addendum to the certified PEIR is the appropriate environmental documentation under CEQA for the proposed Project.

Section 3 discusses issue-by-issue how the impacts anticipated for the proposed Project would be within those previously identified in the PEIR. The Mitigation Monitoring and Reporting Program (MMRP) adopted with the PEIR would continue to apply to the proposed Project to ensure all significant impacts are reduced to a less-than-significant level.

2. Project Description

2.1 Project Location and Setting

The proposed Alondra Park Multi-Benefit Stormwater Capture Project (Project) is located at the approximately 53-acre Alondra Community Regional Park (Alondra Park or Park) in the unincorporated area of El Camino Village at 3850 Manhattan Beach Boulevard, Lawndale, California 90260. The Park is owned and operated by the County of Los Angeles (County) and provides recreational benefits to the surrounding community. Amenities include baseball and softball fields, an open field, picnic areas, splash pad, fishing lake, children's playground equipment, skate park, basketball courts, public restrooms, and parking lots. The Alondra Golf Course, which is owned by the County of Los Angeles, Department of Parks and Recreation (DPR) and operated by American Golf, surrounds the Project site directly adjacent to the east and south. Land uses adjacent to the Project site include residential uses to the north, mixed residential and commercial uses to the west, recreational use to the south and east (Alondra Golf Course), and educational use farther east (El Camino College).

The proposed Project would generally be constructed within the northwest corner of Alondra Park near the parking lots located at the intersection of Manhattan Beach Boulevard and Prairie Avenue. Some elements of the proposed Project would also be constructed underground within Manhattan Beach Boulevard to the intersection of Doty Avenue. A regional map showing the Park's tributary area is provided in Figure 1 and the Project Site is provided in Figure 2.

Alondra Park is located within the densely urbanized Dominguez Channel Watershed (DCW). The area of the Park where Project components are planned lies immediately south of the Manhattan Beach Boulevard Drain [Project Bl0012 Line A; double 11.75-foot by 11-foot reinforced concrete box running east-west under Manhattan Beach Boulevard] and immediately north of the Alondra Park Drain (96-inch reinforced concrete pipe running east-west through Alondra Park). Surface runoff and storm drain flows during dry and wet weather would be diverted from the Manhattan Beach Boulevard and Alondra Park Drains, which currently discharge into the Dominguez Channel located east of the proposed Project location, which drains to the Pacific Ocean at the Port of Los Angeles. In total, the drainage area for the proposed Project is approximately 4,945 acres and includes the DCWMA cities of Lawndale, El Segundo, Hawthorne, and unincorporated Los Angeles County, and portions of the cities of Manhattan Beach and Redondo Beach as shown in Figure 1. A peak flow rate and total runoff for the 85th percentile design storm (approximately 0.74 inches) was used to approximate that 223 acre-feet (AF) of stormwater runoff in an average rainfall year could be diverted, of which a small portion would be diverted to the proposed Project. Full capture of runoff from the 85th percentile design storm for the Project area would be infeasible at Alondra Park, but Project components would be designed to capture as much of the runoff as possible.

Figure 1. Alondra Park Tributary Area

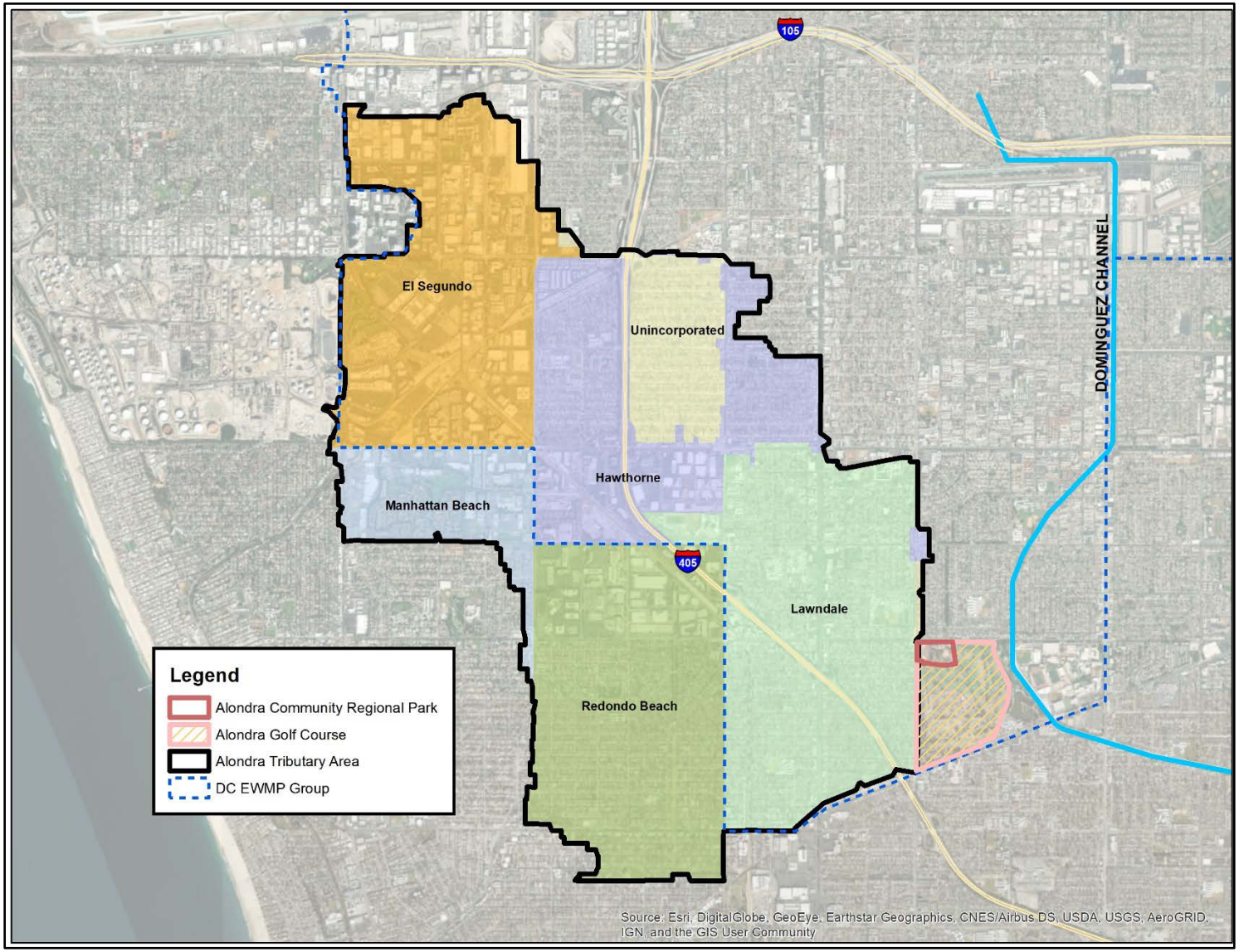


Figure 2. Project Site

2.2 Background

Many of the waterbodies in the County have been identified as impaired and were listed in Section 303(d) of the Clean Water Act. As a result, the Los Angeles Regional Water Quality Control Board (LARWQCB) developed Total Maximum Daily Load (TMDL) limits for a number of pollutants transported by urban and stormwater runoff in the watersheds throughout the County. The Dominguez Channel is listed as an impaired waterbody having TMDLs and would benefit from the proposed Project.

In December 2012, the LARWQCB adopted the Municipal Separate Storm Sewer System (MS4) Permit to regulate stormwater discharges and achieve water quality objectives. The 2012 MS4 Permit provides permittees an innovative approach to TMDL compliance through development and implementation of Enhanced Watershed Management Programs (EWMPs). The Los Angeles County Flood Control District (LACFCD), as lead agency under the California Environmental Quality Act (CEQA), prepared the EWMP Program Environmental Impact Report (PEIR), which provides a program-level analysis of structural best management practices (BMPs) and non-structural control measures/institutional BMPs (LACPW, 2015). The EWMP PEIR was adopted by the County in May 2015.

The DCWMA Group, comprised of the County, LACFCD, and the cities of Carson, El Segundo, Hawthorne, Inglewood, Lawndale, Lomita, and Los Angeles (including the Port of Los Angeles), developed the Dominguez Channel EWMP (DCWMA, 2016), which was approved by the Regional Board in February 2016. The Dominguez Channel EWMP identifies a combination of institutional and structural control measures, including multi-benefit regional projects, to address compliance towards TMDLs. Alondra Park was selected as a high-priority regional project (i.e., BMP) site in the Dominguez Channel EWMP. By diverting flows from existing storm drains in Alondra Park, urban runoff that would otherwise discharge to the Dominguez Channel would instead be captured, pretreated, and discharged to the sanitary sewer, or treated and released back to the storm drain under the proposed Project. By diverting and treating urban runoff, TMDLs would be reduced, thereby improving water quality.

2.3 Project Objectives

The primary goals and objectives identified in the 2015 EWMP PEIR include the following:

- To collaborate among agencies (Permittee jurisdictions) across the watershed to promote more cost-effective and multi-beneficial water quality improvement projects to comply with the MS4 (Municipal Separate Storm Sewer System) Permit.
- To develop watershed-wide EWMPs that will, once implemented, remove or reduce pollutants from dry- and wet-weather urban runoff in a cost-effective manner.
- To reduce the impact of stormwater and non-stormwater on receiving water quality.

In accordance with these goals and objectives, the proposed Project, would accomplish the following objectives:

- Improve water quality in the Dominguez Channel.
- Assist the County and its partner Cities in addressing its stormwater permit requirements.
- Achieve water quality objectives for the Project drainage area.
- Enhance recreational opportunities that would increase public awareness of water quality and water conservation issues.

The primary objective of the proposed Project is to meet water quality goals of the EWMP. The underground storage gallery BMP would reduce the amount of metals, sediment, nutrients, trash, and debris being discharged into the Dominguez Channel, by intercepting and treating a small portion (40 AF up to 56 AF – see Figure 2) of the 85th percentile 24-hour stormwater runoff volume of 223 AF from the approximately 4,945-acre drainage area that covers DCWMA cities (see Figure 1) and neighboring Beach cities. Although this amount is not the full estimated 223-acre feet during the 85th percentile 24-hour stormwater runoff volume, the proposed Project would be designed to optimally address the group's TMDL compliance efforts to meet stormwater permit requirements by reducing zinc, which is identified as the limiting pollutant of interest in the MS4 Permit. The proposed Project would remove approximately 664 pounds of zinc annually from the Dominguez Channel drainage area. A balanced approach between the capture of 85th percentile stormwater runoff as well as longer term water quality benefits formed the basis for the Project design. The proposed Project would assist in addressing bacteria concerns by treating dry weather flows and a portion of wet weather flows. The Project is also anticipated to reduce other TMDL concerns such as copper, lead, ammonia, unideal pH, and other heavy metals.

The proposed Project would also provide enhancements within the Park through aboveground improvements to the parking lots, recreational amenities, lighting, and landscaping. Section 2.4 (Project Details) describes the underground and aboveground components of the proposed Project.

2.4 Project Details

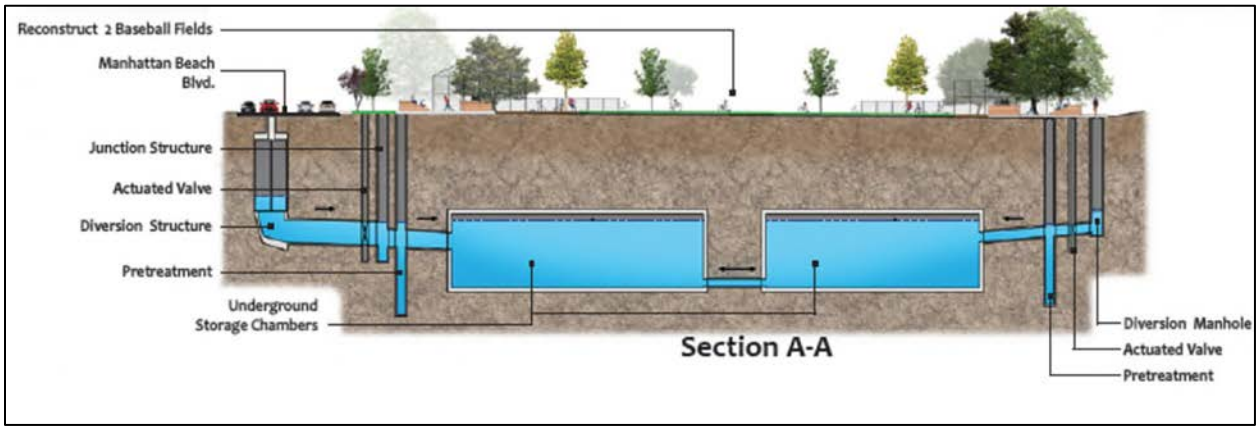
The Dominguez Channel EWMP identifies Alondra Park as a priority multi-benefit regional project site (DCWMA, 2016). The proposed Project includes construction of an underground storage gallery that would capture runoff from the Manhattan Beach Boulevard Drain and Alondra Park Drain. Two diversion structures would be located at these two drains to divert runoff into the underground storage gallery. A water surface pressure gradient analysis was performed for the existing storm drains, ensuring that flows would continue to be conveyed adequately. Figure 3 shows a section view of the proposed underground components. Each of the underground components is discussed further below.

2.4.1 Diversion Structures

Based on the Project's Preliminary Design Concept Report (Tetra Tech, 2019), the Alondra Park Drain would divert approximately 25 cfs from the 85th percentile, 24-hour storm event at this diversion. The Manhattan Beach Boulevard Drain would divert approximately 100 cfs, which is below the estimated approximately 413 cfs of the 85th percentile, 24-hour storm event at this diversion (24 percent diverted). These flows would be diverted using two gravity diversion structures.

The first diversion structure would be located at the Alondra Park Drain and would divert water from the pipe via gravity along a 24-inch RCP to a pretreatment device and into the storage gallery. An existing manhole provides access to the Alondra Park Drain. The second diversion would be located within the Manhattan Beach Boulevard drain and would consist of a grated drop inlet structure to divert runoff to a pretreatment device via gravity along a 48-inch RCP. Each of the diversion structures would connect to a valve/actuator vault and junction structure before entering the stormwater pre-treatment system.

Figure 3. Proposed Underground Components



2.4.2 Stormwater Pretreatment System

The diverted stormwater flows would be sent to pretreatment devices, as shown in Figure 3, which would remove a majority of solids such as metals, sediment, nutrients, trash, and debris that would otherwise pollute receiving waters, and would reduce the maintenance frequency of the Alondra Park stormwater facilities. The stormwater pretreatment devices would be manhole/vault structures installed approximately 32 feet below ground surface. Access would be provided by ladder or stairs. Pretreatment devices may include, but are not limited to, the Contech Continuous Deflective Separation (CDS) unit, Stormceptor, Jensen Deflective Separator (JDS), or the Bio Clean Debris Separating Baffle Box (DSBB) or Suntree Technologies Nutrient Separating Baffle Box (NSBB).

Devices such as the Contech CDS, Stormceptor, and JDS are hydrodynamic separators, which collect stormwater and direct it to a separation chamber that swirls water, forcing solid particles out of the water. Hydrodynamic separators are 100 percent effective at removing floating debris larger than 2,400 microns and remove approximately 80 percent of particles 130 microns or larger during flows of 50 cfs. Hydrodynamic separators can capture hydrocarbons (oil) from runoff.

Debris separating baffle box pretreatment devices such as the Bio Clean DSBB and Suntree Technologies NSBB may also be used to capture trash and debris. These DSBB devices act as multistage sedimentation chambers and can also capture hydrocarbons from runoff.

2.4.3 Underground Storage Gallery

Following pretreatment, water would flow to an underground storage gallery (i.e., underground storage reservoir). The underground storage gallery provides approximately 40 AF of storage (approximately 10-foot high, 4.4-acre), but may be expanded to provide 56 AF of storage (approximately 10-foot high, 6.2 acre). For the purposes of CEQA analysis and to ensure all impacts are fully analyzed, construction of the 56 AF underground storage gallery is analyzed in this addendum. The invert (i.e., the floor or base level of the underground storage gallery) is proposed to be at a depth of about 25 feet below the current grade. Excavation for the underground storage gallery would be approximately 30 feet below current grade (including over-excavation). The top of the underground storage gallery would be approximately 15 feet below the current grade. For the 56 AF storage reservoir, approximately 347,304 cubic yards (CY) would be excavated during construction (includes all Project components). Excavated material would be reused onsite to cover the underground storage gallery; however, a portion would be hauled offsite for disposal (approximately 188,804 CY; includes all Project components). Excavated

areas would be restored to current elevations and landscaped with improvements to existing recreational amenities.

A forebay (i.e., settling compartment that allows sediment to settle) may be constructed within the underground storage gallery to reduce maintenance, such as vacuuming and debris removal within the gallery. The underground storage gallery would either consist of a modular design or cast-in-place design. The modular precast design would be made from durable, reinforced, high-strength concrete that can be modified to meet the desired storage volume. Because the precast design may be brought to the site in several pieces and assembled on site, the joints along each segment may be more susceptible to leakage. A cast-in-place foundation may also be required to protect the precast structure from liquefaction and resist buoyant forces. The cast-in-place design would require more time than the modular precast design to complete but would provide flexibility in design and more watertight capabilities. Stormwater captured in the underground storage gallery would either be pumped to a sewer trunk line located at the intersection of Manhattan Beach Boulevard and Doty Avenue or be further treated by cartridge filters or up-flow media filters before being released back into the Manhattan Beach Blvd Drain.

See Section 2.4.6 Aboveground Improvements for details on proposed removal or replacement of trees, athletic fields and amenities, and other aboveground components requiring removal to allow for construction of the underground components.

2.4.4 Discharge Treatment Pump and Filter System

A total of four pumps would be used to pump the water from the underground storage gallery to the storm drain and sanitary sewer (two pumps per outlet). The two 35-horsepower (HP) stormwater pumps are anticipated to pump at a rate of approximately 3,400 gallons per minute (GPM); the two 5-HP sewer pumps are anticipated to pump at a rate of approximately 500 GPM. The pumps would be housed in two pump station vaults located underground within the Park near Manhattan Beach Boulevard, with the control panel located adjacent to the existing wall to the east of the underground storage gallery.

During the sewer system's peak hours or during major storm events, water in the storage gallery would be filtered and released back into Manhattan Beach Blvd Drain. Filtration systems may include cartridge filters or up-flow media filters. Cartridge filters collect flows, which treat between 0.05 GPM to 1 GPM per square foot of cartridge surface area. Cartridges trap pollutants and can be cleaned and reused. Up-flow media filters force high flows of water to flow up through a layer of media, trapping pollutants underneath that fall to the bottom of the unit for removal. During low-flow events, the water level in the unit lowers and passively removes the pollutants to prevent clogging.

2.4.5 Aboveground Improvements

Installation of the underground components would first require excavation including removal of aboveground park features. This would also provide an opportunity to replace or improve aboveground components in the Park to enhance recreation, landscaping (including replacement of the irrigation system), and recreational facilities (see Figure 4). The parking lots along Prairie Avenue and Manhattan Boulevard would be repaved with asphalt, and the parking stalls would be resurfaced with porous pavement or permeable pavers to enhance drainage.

The Manhattan Beach Boulevard parking lot entrance/exit driveway may need reconfiguring for a wider turn radius (i.e., wider driveway) (see Photo 1) to accommodate regular entrance of maintenance trucks access to the underground stormwater capture infrastructure. Additionally, the grass strips on either side of the parking lot entrance may be revegetated. Furthermore, the thin strip between the parking stalls and the chain link fence of the Alondra Golf Course, which is currently unpaved/vegetated may be replanted with native plants as opposed to installing asphalt/pavers to the fence line. Construction work within these parking lots would not occur simultaneously, such that at least one lot would be available to the general public for parking and to provide continued access to the open portions of the Park.

Photo 2. *Manhattan Beach Boulevard parking lot entrance/exit driveway (facing north).*

The Project site (northwest area of the Park) would be secured with construction fencing and closed to the public during construction. A maintenance loop driveway would be constructed at the north end of the Project site, adjacent to Manhattan Beach Boulevard, to provide maintenance access to the Manhattan Beach Boulevard Drain diversion pipe, pretreatment devices and pump wet well. Placement of this driveway may require tree and light pole removal (see Photo 2).

Photo 1. *The light pole in vicinity of proposed maintenance loop driveway (facing north).*

A 12-foot-wide multi-function access road would be constructed beginning at the existing maintenance yard on the eastern side of the Project site (south end of Manhattan Beach Boulevard parking lot) and running southerly to the property boundary, then westerly towards the Alondra Park Drain diversion point providing access to the Alondra Park drain manhole (see Photo 3) and the Alondra Park Drain diversion pipe and pretreatment devices. This access road may be constructed from permeable materials such as Invisible Structures product (or equivalent) or permeable pavement. Additional or replacement trees may be planted along this access road (with proper offset to playing fields).

Photo 3. *Southern boundary of Project site adjacent to the Alondra Golf Course (facing west).*

The existing two softball diamonds would be removed and replaced. The existing softball diamond on the eastern side of the Project site would be removed and replaced with a multi-use turf area to accommodate a wide range of recreational uses. A new approximately 150-foot by 300-foot soccer field would be installed in the center of the Project site above the proposed underground storage gallery. Currently, 19 field lights would be removed to accommodate construction of the underground components and replaced with 15 light poles and light fixtures.

Existing trees along the eastern edge of the BMP footprint (see Photo 4) would be removed or relocated depending on health and size to allow for construction of the underground components and would be replaced using a minimum 2:1 replacement ratio. The replacement trees would be planted primarily along Prairie Avenue and within the Park along the southerly access road adjacent to the Alondra Golf Course.

Additionally, some replacement trees may be placed along the southern portion of Manhattan Beach Boulevard but may be limited by the existing tree density and bioswale offset requirements (see Photo 5). All trees would receive water from general turf irrigation and are not anticipated to require increased irrigation.

New bioswales planted with native landscaping and trees (noted above) would be installed along the western and northern edge of the Project site adjacent to Prairie Avenue (see Photo 6) and Manhattan Beach Boulevard. These bioswales would enhance Park aesthetics and provide additional stormwater treatment. The bioswales would utilize native and/or drought-tolerant plants and landscaping with lower water demand than existing vegetation.

Excavation for the underground storage gallery would require extensive modifications to the existing irrigation system. The irrigation system would be reconfigured after the underground storage gallery is covered.

The existing DPR maintenance yard south of the Manhattan Beach Boulevard parking lot and the existing multi-purpose building and DPR offices would remain protected in place and would not be affected by construction.

Photo 4. *BMP footprint area (looking east); trees approximate the eastern edge of the BMP footprint.*

Photo 5. *Alondra Park (looking west) along Manhattan Beach Boulevard.*

Photo 6. *Parking lot off Prairie Avenue (looking south).*

Figure 4. Proposed Aboveground Improvements

2.4.6 Construction

Construction of the proposed Project is anticipated to occur over approximately 27 months, beginning in August 2022, and concluding in October 2024. Construction would occur Monday through Friday from 7:00 a.m. to 5:00 p.m. (one shift per day). No construction is expected on weekends or holidays. No daytime lighting would be required during construction, including at the staging area. This construction schedule may differ from the selected contractor's schedule depending on the contractor's equipment and personnel resources. The construction contractor would be responsible for coordinating with the County and provide continuous security for the Project site during construction.

Access, Parking, and Staging Areas

Access to the Project site and staging areas would occur at the existing parking lot entrances off Prairie Avenue (west parking lot) and Manhattan Beach Boulevard (east parking lot). During construction of components within the interior of the Park, parking for construction personnel and staging of materials is anticipated to occur within the east and west parking lots. Temporary construction parking would also occur on Prairie Avenue during the improvements to the parking lots. Final staging areas would be determined by the construction contractor. To maintain traffic flow when trenching within Manhattan Beach Boulevard and Doty Ave, temporary striping, barriers, traffic cones, and steel plates would be utilized.

The construction areas, including the three existing baseball/softball fields, would be fenced off during construction. Other Park facilities such as the tennis and paddleball courts, children's play area, multi-purpose room, DPR office, restrooms, and at least one parking lot would remain open to the public.

Traffic control plans would be prepared during the final design phase. The County plans to hold community meetings to discuss the impacts of lane closures and potential traffic detours with the nearby residents and businesses. The County will also coordinate with the City of Lawndale and the Los Angeles County Public Works (LACPW) Traffic Safety and Mobility Division to minimize traffic impacts on Manhattan Beach Boulevard.

Construction Dewatering

Excavation for the underground storage gallery would be approximately 30 feet below current grade (including over-excavation), and groundwater dewatering would be required for excavations into water yielding geologic formations. It is anticipated that groundwater will be directed by gravity to a sump location within the excavation area and pumped to the Alondra Drain for discharge in compliance with the National Pollutant Discharge Elimination System (NPDES) dewatering permit.

Workforce, Equipment, and Materials

Anticipated construction equipment required to build the proposed Project include the following:

- Mobilization and Staging: Forklift;
- Clear and Grub: dozer, loader, chipper, chainsaw;
- Underground Storage Gallery and Connector Pipes: dozer, loader, excavator, vibratory soil compactor, vibratory plate compactors (small and large), telescopic boom crane; boom lift, air compressor, generator;

- Underground Pump Vaults and Pre/Post- Stormwater Treatment Systems: backhoe, excavator, vibrator plate compactors (small and large), crane, boom lift, air compressor, generator;
- Diversion Structures and Pipes: sawcutter, backhoe, excavator, vibratory plate compactor (small), AC paving equipment, roller, air compressor, generator;
- Construction Dewatering: dewatering pump (2-inch, 3.2HP, 164 gpm portable pump);
- Aboveground Design Components: bobcat, air compressor, boom lift, generator, crane (small), backhoe, sawcutter, roller, AC paving machine, vibratory plate compactor (small); and
- Demobilization: forklift, bobcat.

A detailed list of equipment and personnel required to construct the proposed Project (assumed 56 AF underground storage gallery for the purposes of CEQA), as well as the materials that would be imported and exported from the site, are provided in Appendix B. The anticipated *peak* workforce would be approximately 36 personnel, including construction workers, management, and monitoring staff.

Standard erosion control BMPs (e.g., silt fence, straw waddles) would be applied during construction as required by the existing 2012 MS4 Permit. Additionally, a Spill Prevention Countermeasure and Control Plan, which is a standard BMP, would be included in the construction contract as a special provision. Water used for dust control would be provided from an on-site source.

2.4.7 Operations and Maintenance

The County would develop an operations and maintenance (O&M) plan to ensure the proposed Project performs as designed and attains its projected lifespan. Public Works Stormwater Quality Division, in consultation with County Counsel, would coordinate with the Public Works Stormwater Maintenance Division, DPR, and the Chief Executive Office on the operation and maintenance of the proposed Project. Maintenance activities for each component of the proposed Project are as follows:

- Diversion structures – The gravity diversion structures (a gravity diversion structure at Alondra Park Drain and a grated drop inlet at Manhattan Beach Boulevard Drain) would be inspected two times per storm season and after each storm event. Regular maintenance would include removal of debris and vacuum cleaning at least three times during the wet season and once during the dry season or as needed.
- Stormwater pretreatment system – Regular inspections would be conducted monthly and after storm events. Maintenance may include cleaning screens and vacuum cleaning sumps or chambers monthly and after storm events.
- Underground storage gallery – Inspections would be conducted monthly and after storm events. Forebay and vault vacuum cleaning would be conducted as determined by inspections. During the first year of operation, maintenance may be conducted up to four times to clean settled solids. After the first year, forebay vacuum cleaning may occur every two years depending on sediment loading. Forebay vacuum cleaning would occur at every 2 years or as needed depending on sediment loading.
- Discharge Treatment Pump System – Inspection of the wet well would be conducted after each major storm event or monthly during the wet season (whichever is more frequent)

and twice during the dry season. Wet well vacuum cleaning would be conducted as determined by inspection or at least annually. Valves would be maintained as needed following manufacturer recommendations. Pumps would be run monthly at a minimum if no rainfall has occurred to maintain optimal performance. Cleaning and servicing would occur annually before the wet season or as recommended by the manufacturer. Pumps would be replaced every 20 years or as recommended by the manufacturer.

- Return flow stormwater filtration system – Regular maintenance of the return flow stormwater filtration system would occur monthly and after storm events. The filtration units would be vacuum cleaned as needed based on inspection or rinsed every 6 months to ensure continued operation. Up-flow filter media would be inspected every year or replaced as needed if damaged or clogged beyond recovery.

Waste components, such as rinsed material from the filter cartridge, would be disposed of following County requirements.

2.5 Anticipated Permits and Coordination

The proposed Project would require certification of the California Environmental Quality Act (CEQA) document and approval from the County of Los Angeles Board of Supervisors. Additional anticipated permits and coordination with regulatory agencies for the proposed Project include, but is not limited to, the following:

- Los Angeles County Parks and Recreation
    - Los Angeles County Parks and Recreation is the property owner.
- Los Angeles County Public Works, Building and Safety Division
    - A Building Permit (Complex) is required for a structure being built on Los Angeles County Unincorporated property.
    - A Grading Permit is required for grading in excess of 5,000 cubic yards or grading that will support a structure (designated as engineered grading).
    - An Electrical Permit (Complex) is required for new and/or expanded electrical systems.
    - A Mechanical Permit (Complex) is required for slide gates and other mechanical items.
- Los Angeles County Public Works
    - An encroachment permit is required because Project construction would require temporary lane closures at the following locations: Manhattan Beach Boulevard; the return storm drain line to Manhattan Beach Boulevard; sewer crossing of Manhattan Beach Boulevard; and the frontage road to Doty Avenue. All closures would be partial and temporary, anticipated to occur for approximately three weeks at each location. No closures would be necessary for O&M.
- Los Angeles County Flood Control District
    - A Landscape Review/Permit is required for installation of a parkway, greenway, and/or beautification improvements along a Los Angeles County right-of-way.

    - A Major Modification Permit is required because the proposed Project is considered a drainage facility modification.
    - A Discharge Permit is required because non-storm water (treated water) would be discharged directly into an existing District facility.
- Los Angeles County Sanitation Districts
    - An Industrial Waste Discharge Permit is required because storm water (non-treated) would be discharged directly into an existing District facility.
- State Water Resources Control Board
    - A Stormwater Pollution Prevention Plan would be required to satisfy the Construction General Permit because one or more acres of soil would be disturbed during construction.
- Los Angeles County Department of Public Health
    - A Cross Connection and Water Pollution Control Program would be developed to ensure that no hazards would occur to the potable water system.
- Greater Los Angeles County Vector Control District
    - The County would provide conceptual project plans for review to address potential mosquito concerns.
- South Coast Air Quality Management District
    - The County would comply with requirements of Rule 403 to prevent, reduce, or mitigate fugitive dust emissions from construction activities.
- Southern California Edison (SCE)
    - The County would be required to contact SCE's Local Planning Department regarding the installation of a new electrical service plan.
- Water Replenishment District (WRD)
    - The County would be required to coordinate with WRD to determine is a non-consumptive permit is required for dewatering activities.
- Los Angeles Regional Water Quality Control Board
    - The County would be required to comply with Order No. R4-2018-0125, General National Pollutant Discharge Elimination System Permit No. CAG994004, Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties.

3. Project-Level Evaluation

The following evaluation assesses the project-specific impacts of the Alondra Park Multi-Benefit Stormwater Capture Project (proposed Project) in light of the analysis completed in the 2015 PEIR (LACPW, 2015). Determinations are made as to whether the proposed Project would result in new significant effects or substantially more severe effects, which would trigger the need for a Subsequent or Supplemental EIR.

As part of this evaluation, program mitigation measures (PMMs) identified in and approved as part of the certification of the Los Angeles County Flood Control District Enhanced Watershed Management Programs Final Environmental Impact Report (PEIR or 2015 PEIR) (LACPW, 2015), have been applied to the proposed Project. The PMMs that apply to the proposed Project are listed below. The implementing agency for these measures would be the Los Angeles County Public Works (LACPW).

Program Mitigation Measures

Air Quality

AIR-1: Implementing agencies shall require for large regional or centralized BMPs the use of low-emission equipment meeting Tier II emissions standards at a minimum and Tier III and IV emissions standards where available as California Air Resources Board (CARB)-required emissions technologies become readily available to contractors in the region.

AIR-2: For large construction efforts that may result in significant air emissions, implementing agencies shall encourage contractors to use lower-emission equipment through the bidding process where appropriate.

AIR-3: For large construction efforts associated with regional or centralized BMPs, implementing agencies shall conduct a project-specific LST analysis where necessary to determine local health impacts to neighboring land uses. Where it is determined that construction emissions would exceed the applicable LSTs or the most stringent applicable federal or state ambient air quality standards, the structural BMP project shall reduce its daily construction intensity (e.g., reducing the amount of equipment used daily, reducing the amount of soil graded/excavated daily) to a level where the structural BMP project's construction emissions would no longer exceed SCAQMD's LSTs or result in pollutant emissions that would cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards.

AIR-4: During planning of structural BMPs, implementing agencies shall assess the potential for nuisance odors to affect a substantial number of people. BMPs that minimize odors shall be considered the priority when in close proximity to sensitive receptors.

Biological Resources

BIO-3: If a special-status wildlife species is determined to be present or potentially present within the limits of construction activities, a qualified biologist shall conduct preconstruction surveys of proposed work zones and within an appropriately sized buffer around each area as determined by a qualified biologist within 14 days prior to ground disturbing activities. Any potential habitat capable of supporting a special-status wildlife species shall be flagged for avoidance if feasible.

BIO-5: If construction and vegetation removal is proposed between February 1 and August 31, a qualified biologist shall conduct a pre-construction survey for breeding and nesting birds and raptors within 500-feet of the construction limits to determine and map the location and extent of breeding birds that could be affected by the project. Active nest sites located during the pre-construction surveys shall be avoided until the adults and young are no longer reliant on the nest site for survival as determined by a qualified biologist.

Cultural Resources

CUL-2: Implementing agencies shall ensure that individual EWMP projects that require ground disturbance shall be subject to a Phase I cultural resources inventory on a project-specific basis prior to the implementing agency's approval of project plans. The study shall be conducted or supervised by a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, and shall be conducted in consultation with the local Native American representatives expressing interest. The cultural resources inventory shall include a cultural resources records search to be conducted at the South Central Coastal Information Center; scoping with the NAHC and with interested Native Americans identified by the NAHC; a pedestrian archaeological survey where deemed appropriate by the qualified archaeologist; and formal recordation of all identified archaeological resources on California Department of Parks and Recreation 523 forms and significance evaluation of such resources presented in a technical report following the guidelines in *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format*, Department of Parks and Recreation, Office of Historic Preservation, State of California, 1990.

If potentially significant archaeological resources are encountered during the survey, the implementing agency shall require that the resources are evaluated by the qualified archaeologist for their eligibility for listing in the CRHR and for significance as a historical resource or unique archaeological resource per CEQA Guidelines Section 15064.5. Recommendations shall be made for treatment of these resources if found to be significant, in consultation with the implementing agency and the appropriate Native American groups for prehistoric resources. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred manner of mitigation to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, project reroute or redesign, project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, which may include data recovery or other appropriate measures, in consultation with the implementing agency, and any local Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.

CUL-3: The implementing agency shall retain archaeological monitors during ground-disturbing activities that have the potential to impact archaeological resources qualifying as historical resources or unique archaeological resources, as determined by a qualified archaeologist in consultation with the implementing agency, and any local Native American representatives expressing interest in the project. Native American monitors shall be retained for projects that have a high potential to impact sensitive Native American resources, as determined by the implementing agency in coordination with the qualified archaeologist.

CUL-4: During project-level construction, should subsurface archaeological resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5.

If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, project reroute or redesign, project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.

CUL-5: For individual structural BMP projects that require ground disturbance, the implementing agency shall evaluate the sensitivity of the project site for paleontological resources. If deemed necessary, the implementing agency shall retain a qualified paleontologist to evaluate the project and provide recommendations regarding additional work, potentially including testing or construction monitoring.

CUL-6: In the event that paleontological resources are discovered during construction, the implementing agency shall notify a qualified paleontologist. The paleontologist will evaluate the potential resource, assess the significance of the find, and recommend further actions to protect the resource.

CUL-7: The implementing agency shall require that, if human remains are uncovered during project construction, work in the vicinity of the find shall cease and the County Coroner shall be contacted to evaluate the remains, following the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the Coroner will contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC will then designate a Most Likely Descendant of the deceased Native American, who will engage in consultation to determine the disposition of the remains.

Hazards and Hazardous Materials

HAZ-1: Implementing agencies shall prepare and implement maintenance practices that include periodic removal and replacement of surface soils and media that may accumulate constituents that could result in further migration of constituents to sub-soils and groundwater. A BMP Maintenance Plan shall be prepared by Implementing Agencies upon approval of the BMP projects, that identifies the frequency and procedures for removal and/or replacement of accumulated debris, surface soils and/or media (to depth where constituent concentrations do not represent a hazardous condition and/or have the potential to migrate further and impact groundwater) to avoid accumulation of hazardous concentrations and the potential to migrate further to sub-soils and groundwater. The BMP Maintenance Plan may consist of a general maintenance guideline that applies to several types of smaller distributed BMPs. For smaller distributed BMPs on private property, these plans may consist of a maintenance covenant that includes requirements to avoid the accumulation of hazardous concentrations in these BMPs that may impact underlying subsoils and groundwater. Structural BMPs shall be designed to prevent migration of constituents that may impact groundwater.

Hydrology and Water Quality

HYDRO-1: Prior to approving an infiltration BMP, the Permittee shall conduct an evaluation of the suitability of the BMP location. Appropriate infiltration BMP sites should avoid areas with low permeability where recharge could adversely affect neighboring subsurface infrastructure.

Noise

NOISE-1: The implementing agencies shall implement the following measures during construction as needed:

- Include design measures necessary to reduce the construction noise levels to where feasible. These measures may include noise barriers, curtains, or shields.
- Place noise-generating construction activities (e.g., operation of compressors and generators, cement mixing, general truck idling) as far as possible from the nearest noise-sensitive land uses.
- Locate stationary construction noise sources as far from adjacent noise-sensitive receptors as possible.
- If construction is to occur near a school, the construction contractor shall coordinate the with school administration in order to limit disturbance to the campus. Efforts to limit construction activities to non-school days shall be encouraged.
- For the centralized and regional BMP projects located adjacent to noise-sensitive land uses, identify a liaison for these off-site sensitive receptors, such as residents and property owners, to contact with concerns regarding construction noise and vibration. The liaison's telephone number(s) shall be prominently displayed at construction locations.
- For the centralized and regional BMP projects located adjacent to noise-sensitive land uses, notify in writing all landowners and occupants of properties adjacent to the construction area of the anticipated construction schedule at least 2 weeks prior to groundbreaking.

NOISE-2: All structural BMPs that employ mechanized stationary equipment that generate noise levels shall comply with the applicable noise standards established by the implementing agency with jurisdiction over the structural BMP site. The equipment shall be designed with noise-attenuating features (e.g., enclosures) and/or located at areas (e.g., belowground) where nearby noise-sensitive land uses would not be exposed to a perceptible noise increase in their noise environment.

Public Services and Recreation

PS-1: The Permittee implementing the EWMP project shall provide reasonable advance notification to service providers such as fire, police, and emergency medical services as well as to local businesses, homeowners, and other residents adjacent to and within areas potentially affected by the proposed EWMP project about the nature, extent, and duration of construction activities. Interim updates should be provided to inform them of the status of the construction activities.

Transportation and Circulation

TRAF-1: For projects that may affect traffic, implementing agencies shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:

- Develop circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.
- To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
- Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.
- Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.

Utilities and Service Systems

UTIL-1: Prior to implementation of BMPs, the implementing agency shall conduct a search for local utilities above and below ground that could be affected by the project. The implementing agencies shall contact each utility potentially affected to address relocation of the utility if necessary to ensure access and services are maintained.

UTIL-3: Implementing agencies shall encourage construction contractors to recycle construction materials and divert inert solids (asphalt, brick, concrete, dirt, fines, rock, sand, soil, and stone) from disposal in a landfill where feasible. Implementing agencies shall incentivize construction contractors with waste minimization goals in bid specifications where feasible.

As part of the design process and to support preparation of this Addendum, several of the PEIR mitigation measures have already been complied with, as shown in Table 3-1, and described in Section 3 of this Addendum.

Table 3-1. Mitigation Measure Status

Mitigation Measure	Status
AIR-1	To be implemented during final plans and specifications.
AIR-2	To be implemented during final plans and specifications.
AIR-3	Completed – See Section 3.2
AIR-4	To be implemented prior to final plans and specifications.
BIO-3	To be implemented prior to ground disturbing activities.
BIO-5	To be implemented prior to construction.
CUL-2	Complete – See Section 3.4.
CUL-3	To be implemented during ground-disturbing activities.
CUL-4	To be implemented during construction.
CUL-5	Complete – See Section 3.4.
CUL-6	To be implemented during construction.
CUL-7	To be implemented during construction.
HAZ-1	To be implemented during final plans and specifications.
HYDRO-1	Complete – See Section 3.5
NOISE-1	To be implemented during construction.
NOISE-2	To be implemented during final plans and specifications; operation.
PS-1	To be implemented prior to and during construction.
TRAF-1	To be implemented during final plans and specifications and during construction.
UTIL-1	Complete – See Section 3.7
UTIL-3	To be implemented during final plans and specifications and during construction.

3.1 Aesthetic Resources

This section addresses the aesthetic and visual quality of the region and potential impacts associated with the implementation of the proposed Project. It includes a description of existing visual conditions and an evaluation of potential effects on aesthetic resources.

3.1.1 Environmental Setting

The Project site is in the Dominguez Channel EWMP, which is highly urbanized and includes the cities of Carson, El Segundo, Hawthorne, Inglewood, Lawndale, Lomita, and Los Angeles.

The proposed Project would be within the northwest corner of the approximately 53-acre Alondra Park. Views within the park are typical of an urban park, with athletic fields, large trees, and tall light poles. The viewshed to the north and west of the Project site consists of an urbanized setting with mixed commercial and single- and multi-family residential development. The viewshed to the east includes views of the adjacent El Camino College, and the viewshed to the south includes views of the adjacent Alondra Golf Course.

3.1.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential to impact aesthetic resources.

I. AESTHETIC RESOURCES

Would the project:		Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a.	Have a substantial adverse effect on a scenic vista?	☐	☒
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☒
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒
d.	Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	☐	☒

Project Impact Discussion

Scenic Vistas

Impact 3.1-1: The proposed Project could create a substantial adverse effect on a scenic vista.

The area surrounding the Project is characterized by urban views that include mixed commercial and residential development, a golf course, and college. The Project site is adjacent to Manhattan Beach Boulevard to the north and Prairie Avenue to the west, which are high-traffic roads. The Park serves as a community recreational resource that is compatible with the surrounding urban landscape. Given the absence of high-quality scenic views in the surrounding area, construction activities within the Project site would not impact any scenic vistas. While construction equipment and materials may be visible from public vantage points outside of the Park, construction activities are not anticipated to extend beyond the approximately 27-month construction schedule, and the

Park's aesthetics and landscaping would be re-established and improved upon completion of construction. Potential construction impacts to scenic vistas would be less than significant.

Modifications to aboveground structures would include removal or relocation of trees and light poles, repaving parking lots, installing bioswales, constructing an access road, and improving existing athletic fields. Any trees removed during construction would be replaced at a minimum 2:1 ratio. Additionally, all stormwater capture components (diversion structures, pretreatment system, underground storage gallery, and discharge treatment pumps) would be located underground. These modifications would be consistent with the existing visual character of the Park and would not contrast with neighboring development or impact a scenic vista. Operational impacts to scenic vistas would be less than significant.

The PEIR concluded that effects on scenic vistas from individual projects could be potentially significant if inappropriately designed or located but would be reduced to a less-than-significant level with implementation of mitigation. The proposed Project's impacts were determined to be less than significant; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

State Scenic Highway

Impact 3.1-2: The proposed Project could substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

The Project site is approximately 0.4-mile northeast of Interstate 405 and approximately 3 miles east of Highway 1, both of which are not Eligible State Scenic Highways along these segments (Caltrans, 2019; LACPW, 2015). Additionally, the Project site is not visible from these highways. Construction of the proposed Project would not damage or adversely affect rock outcroppings or historic buildings (see discussion in Section 3.4, Cultural Resources), and any trees that may be removed would either be relocated or replaced at a minimum 2:1 ratio (Sapphos Environmental, Inc., 2017). Therefore, potential impacts to scenic resources would be less than significant. No aboveground buildings are proposed that would obstruct views from public vantage points. Therefore, construction and operation of the proposed Project would not create a new visual obstruction in the surrounding landscape that would impact a scenic resource and impacts would be less than significant.

The PEIR concluded that effects on designated or eligible scenic highways or historic parkways from individual projects could be potentially significant if inappropriately designed or located but would be reduced to a less-than-significant level with implementation of mitigation. The proposed Project would be less than significant; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Visual Character

Impact 3.1-3: The proposed Project could substantially degrade the existing visual character or quality of the site and its surroundings.

As discussed under Impact 3.1-1 above, the proposed Project would be located within a park that serves as a community recreational resource and is compatible with the surrounding urban landscape. Construction activities, such as the excavation and installation of the diversion structures and underground storage gallery, would temporarily affect the visual character of Alondra Park from public vantage points. However, upon completion of the underground stormwater capture components, the Park's aesthetics would be re-established and improved.

During operation, the majority of the proposed Project's components would be placed underground. The underground components would not be visible once covered. Aboveground improvements such as the repaving of the parking lots, enhancing the landscaping, replacing athletic fields, and installing the access road would improve the views of the Park while enhancing the Park's functions. Given the temporary nature of construction and the restoration of the Project site during operation, impacts to the visual quality and character of the Park would be less than significant.

The PEIR concluded that effects on visual character from individual projects could be potentially significant if inappropriately designed, located, or maintained, but would be reduced to a less-than-significant level with implementation of mitigation. The proposed Project's impacts were determined to be less than significant; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Light and Glare

Impact 3.1-4: The proposed Project could create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Construction of the proposed Project would occur during the daytime hours between 7:00 a.m. and 5:00 p.m. No daytime lighting would be required during construction. To accommodate construction of the underground components, the proposed Project would remove 19 field lights followed by the installation of 15 light poles and light fixtures. The new field lighting would meet lighting requirements for the soccer field and baseball outfield and designed and oriented to minimize spillage beyond Manhattan Beach Boulevard and Prairie Avenue. There would be no change to the existing parking lot lights and poles. As such, construction and operation of the proposed Project would not create a new source of substantial light or glare that could adversely affect residents or other sensitive receptors, and impacts would be less than significant.

The PEIR concluded that light and glare effects from individual projects would be less than significant. The proposed Project would not require daytime lighting, and there would be no new aboveground structures that would create a source of glare. The replacement of field lighting following construction of the proposed Project would have a less-than-significant impact on nighttime lighting; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.2 Air Quality

This section addresses the air quality of the region and potential impacts associated with the implementation of the proposed Project. It includes a description of existing environmental and regulatory conditions and an evaluation of potential effects to air quality.

3.2.1 Environmental Setting

The proposed Project site is in Lawndale in Los Angeles County, within the South Coast Air Basin (SCAB) under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). Emissions from construction and operation of the proposed Project would affect air quality in the immediate Project area and the surrounding region.

The Project area has a climate that is characterized by warm, dry summers and cool winters with a moderate amount of seasonal precipitation that occurs primarily during the winter months. The average summer high temperatures in the Project area range up to approximately 79ºF, and average winter low temperatures range down to approximately 44ºF (WRCC, 2021). The annual

average of maximum temperatures is 73ºF and annual precipitation is approximately 16 inches (CalAdapt, 2021).

The U.S. Environmental Protection Agency (USEPA), California Air Resources Board (ARB), and the local air districts classify an area as attainment, unclassified, or nonattainment depending on whether the monitored ambient air quality data shows compliance, insufficient data available, or non-compliance with the National and California Ambient Air Quality Standards (NAAQS and CAAQS). The SCAB is currently designated as nonattainment of the State and federal ozone (O3) and fine particulate matter (PM2.5) standards, the federal standard for Lead, and the State respirable particulate matter (PM10) standard. The SCAB is designated as attainment or unclassified for all other State and federal standards (CARB, 2021; SCAQMD, 2021a).

3.2.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential to impact air quality.

II. AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**	Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☒
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☒
e. Create objectionable odors affecting a substantial number of people?	☐	☒

Project Impact Discussion

Air Quality Plan

Impact 3.2-1: The proposed Project could conflict with or obstruct implementation of the applicable air quality plan.

SCAQMD and Southern California Association of Governments (SCAG) have developed air quality management plans (AQMPs) to meet the requirements of the Federal Clean Air Act (SCAQMD, 2021b). The focus of the 2003 AQMP was to demonstrate attainment of the federal particulate matter (PM10) standard by 2006 and the federal 1-hour O3 standard by 2010, while making expeditious progress toward attainment of State standards. The 2003 AQMP also includes a nitrogen dioxide (NO2) maintenance plan. The 2007 AQMP was developed for the purposes of demonstrating compliance with the new National Ambient Air Quality Standards (NAAQS) for PM2.5, the NAAQS for PM10, the 8-hour O3 NAAQS, the 1-hour O3 NAAQS, and other air quality planning requirements. The 1-hour O3 standard was revoked by the USEPA, but the SCAQMD is still tracking progress towards attainment of this standard. The SCAQMD

Governing Board adopted the Final 2007 AQMP on June 1, 2007. The AQMD Governing Board approved the 2012 AQMP on December 7, 2012. This plan addresses the 1-hour and 8-hour Ozone Plan inadequacies identified by the USEPA and provides a 24-hour PM2.5 plan. SCAQMD has completed and approved the 2016 AQMP, which has also been approved by CARB; however, that plan has not yet been approved by USEPA (SCAQMD, 2021b).

There are no applicable emissions reduction measures in these plans that are not already part of approved regulations since the proposed Project includes no major stationary emission sources. The proposed Project would comply with all applicable SCAQMD rules and regulations. Additionally, the proposed Project is a stormwater capture project and would not cause new growth. The Project would have limited ongoing operations and maintenance activities. Therefore, the proposed Project would not conflict with or obstruct the applicable air quality plans and impacts would be less than significant.

The PEIR concluded that the structural BMPs are not land use projects and their implementation would not induce any additional growth within the EWMP areas in the County. As such, the proposed program would not conflict with, or obstruct, implementation of the AQMP and impacts would be less than significant. The proposed Project's impacts have been determined to be less than significant; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Air Quality Standards

Impact 3.2-2: The proposed Project could violate any air quality standard or contribute substantially to an existing or projected air quality violation.

The proposed Project's construction and operation air pollutant emissions are well below the magnitude needed to cause an air quality standard violation or contribute substantially to an existing or projected air quality standard violation. Therefore, the proposed Project would not significantly impact ambient air quality and impacts would be less than significant. Please see the regional and localized criteria pollutant emissions analyses provided below under Impacts 3.2-3 and 3.2-4.

The PEIR concluded that the structural BMPs would need to be reviewed on a case-by-case basis, and where necessary the recommended mitigation measures would need to be implemented to reduce potentially significant impacts to a less-than-significant level. The proposed Project's impacts were determined to be less than significant; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Cumulative Impacts

Impact 3.2-3: The proposed Project could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The proposed Project construction activities would create criteria air pollutant emissions, including ozone precursors, from on-road vehicles and off-road equipment and fugitive particulate matter emissions resulting from earthmoving activities and vehicle travel during construction. The stormwater capture components operate passively so no on-site employees are needed on a daily basis, and limited operations and maintenance activities would occur. As such, the operation and maintenance emissions are negligible.

The proposed Project's construction would be completed using one shift per day on weekdays over a 27-month period. The County anticipates that a peak workforce of approximately 36 personnel would be needed for construction, management, and monitoring. This analysis uses the California Emissions Estimator Model (CalEEMod) to derive emissions estimates based on the fleet of off-road equipment types that would be used, the amount of materials that would be hauled to and from the site, and the estimated number of construction employees for each work task. The construction tasks would be phased with several similar tasks overlapping.

The SCAQMD regional emissions significance thresholds for construction are as follows (SCAQMD, 2019):

Nitrogen Oxides (NOx) – 100 lbs/day

Volatile Organic Compounds (VOC) – 75 lbs/day

Carbon Monoxide (CO) – 550 lbs/day

Particulate Matter (PM10) – 150 lbs/day

Fine Particulate Matter (PM2.5) – 55 lbs/day

Sulfur Oxides (SOx) – 150 lbs/day

Manufacturers of off-road equipment and on-road vehicles are subject to emissions standards set by the USEPA and CARB for diesel and gasoline engine. As a result of gradual reductions in these standards and also CARB regulations for fleet average performance and fuel standards regulations, projects can typically avoid creating considerable levels of construction-phase emissions. Specifically, USEPA/CARB off-road equipment engine exhaust standards (Tier 1 effective in 1996 through Tier 4 for model years 2012 or newer) have over time reduced NOx and particulate matter (PM) emissions from off-road diesel engines by up to 90 percent in comparison to pre-regulation engines. Similar reductions in the USEPA/CARB standards for on-road vehicle engines have achieved reductions in NOx and PM emissions from diesel on-road engines and NOx, VOC, and CO emissions from gasoline on-road engines. Analysis of the proposed Project uses the most-recent version of CalEEMod (version 2020.4.0) with Project-specific data to quantify the maximum daily rates of criteria air pollutant emissions.

The emissions estimate of the worst-case daily activity using fleet average emissions factors (which assumes implementation of PMM AIR-1 since Tier III and IV emissions are defaults in CalEEMod) is provided in Table 3.2-1.

Table 3.2-1. Maximum Daily Project Construction Emissions

	VOC	CO	NOx	SOx	PM10	PM2.5
Total Maximum Daily Emissions (lbs/day)	10.90	69.50	71.23	0.19	6.30	3.05
SCAQMD Regional Significance Thresholds (lbs/day)	75	550	100	150	150	55
Exceeds Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Appendix C; SCAQMD, 2019.

Note: PM10 and PM2.5 emissions reflect watering the site three times daily to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction, consistent with dust control measures required by SCAQMD Rule 403, Fugitive Dust.

The daily construction emissions for the proposed Project would be below the SCAQMD regional emissions thresholds of significance with implementation of PMMs AIR-1 and AIR-2, and would not represent a cumulatively considerable net increase of any criteria pollutant; and emissions during operation of the project would be negligible; thus, impacts would be less than significant with mitigation.

PMM AIR-1: Implementing agencies shall require for large regional or centralized BMPs the use of low-emission equipment meeting Tier II emissions standards at a minimum and Tier III and IV emissions standards where available as California Air Resources Board (CARB)-required emissions technologies become readily available to contractors in the region.

PMM AIR-2: For large construction efforts that may result in significant air emissions, implementing agencies shall encourage contractors to use lower-emission equipment through the bidding process where appropriate.

The PEIR concluded that under conditions where multiple structural BMPs are constructed concurrently within the BMP areas, it is anticipated that the total aggregate construction emissions (on a daily basis) would exceed the SCAQMD's significance threshold for criteria pollutants, even with implementation of mitigation measures. As such the program's impacts could be significant and unavoidable and cumulatively considerable, resulting in a significant and unavoidable cumulative impact. This analysis shows that construction and operation of the proposed Project would result in emissions below the significance thresholds with implementation of PMM AIR-1, and this impact would be less than significant with mitigation. The proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Sensitive Receptors

Impact 3.2-4: The proposed Project could expose sensitive receptors to substantial pollutant concentrations.

There are two specific impact issues that have been analyzed with respect to the proposed Project's potential to expose sensitive receptors to substantial pollutant concentrations, as follows:

- Localized short-term criteria pollutant concentration impacts; and
- Health-risk impacts from toxic air contaminant (TAC) emissions.

Localized Criteria Pollutant Impact Analysis

Per PMM AIR-3, a project-specific analysis of SCAQMD Localized Significance Thresholds (LSTs) was completed to determine if the proposed Project could exceed ambient air quality thresholds for nearby sensitive receptors.

PMM AIR-3: For large construction efforts associated with regional or centralized BMPs, implementing agencies shall conduct a project-specific LST analysis where necessary to determine local health impacts to neighboring land uses. Where it is determined that construction emissions would exceed the applicable LSTs or the most stringent applicable federal or state ambient air quality standards, the structural BMP project shall reduce its daily construction intensity (e.g., reducing the amount of equipment used daily, reducing the amount of soil graded/excavated daily) to a level where the structural BMP project's construction emissions would no longer exceed SCAQMD's LSTs or result in pollutant emissions that would cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards.

Unlike comparison with the SCAQMD regional emissions thresholds (Impact 3.2-3), the emissions that are compared to the LSTs are only the on-site emissions, which do not include off-site vehicle trip emissions. The LSTs were established by SCAQMD for each source receptor area (SRA) within SCAQMD jurisdiction and represent on-site emission levels that could cause ambient air quality standard exceedances or substantial contributions to existing exceedances at given distances from the site to nearby receptor locations. SCAQMD identifies Lawndale as being within SRA 3 (Southwest Coastal LA County).

The nearest sensitive receptors for construction activities would be the residences located across Prairie Ave and Manhattan Beach Blvd, with the closest of those receptors being approximately 30 meters from site.

The SCAQMD LST emissions thresholds that are applicable within SRA 3 for a 5-acre construction site with a receptor distance of 25 meters, as this is the shortest distance SCAQMD Localized Significance Threshold, are as follows (SCAQMD, 2009):

NOx – 197 lbs/day @ 25 meters

CO – 1796 lbs/day @ 25 meters

PM10 – 15 lbs/day @ 25 meters

PM2.5 – 8 lbs/day @ 25 meters

Table 3.2-2 compares the maximum daily construction emissions worst-case assumptions for the proposed Project with the SCAQMD's most conservative applicable LSTs. Emissions were calculated based on watering the site three times daily to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction, consistent with dust control measures required by SCAQMD Rule 403, Fugitive Dust (SCAQMD, 2017).

The proposed Project's maximum worst-case daily on-site construction emissions would not exceed the SCAQMD LSTs. Additionally, proposed Project operations would have negligible emissions that would not have the potential to exceed LST thresholds. Therefore, proposed Project construction and operation would not be likely to expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant.

Table 3.2-2. Maximum Localized Daily Project Construction Emissions

	CO	NOx	Exhaust PM10	Exhaust PM2.5	Total PM10	Total PM2.5
25 meters from receptors						
Maximum On-site Construction Emissions (lbs/day)	69.48	71.23	2.07	1.95	6.29	3.05
SCAQMD Localized Significance Thresholds (lbs/day)	1,796	197	-	-	15	8
Exceeds Thresholds?	*No*	*No*	-	-	*No*	*No*

Note: PM10 and PM2.5 emissions reflect watering the site three times daily to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction, consistent with dust control measures required by SCAQMD Rule 403, Fugitive Dust.

The PEIR concluded that the construction emissions generated by a new structural BMP project could potentially cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards at the existing sensitive uses located in the vicinity of that project. For individual structural BMP projects that fit this scenario, mitigation would be applied to reduce impacts to a less-than-significant level. With implementation of PMM AIR-3, the proposed Project's impacts were determined to be less than significant; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Toxic Air Contaminants (TAC) Health Risk Analysis

TAC emissions, primarily in the form of diesel particulate matter, would occur during the short-term construction period, and then intermittently during the limited operations and maintenance activities required for the proposed Project. However, the amount of TAC emissions that would be emitted from the proposed Project's activities is minimal. Table 3.2-2 compares the LSTs to the construction emissions, and the total PM10 and PM2.5 emissions are below the LST. The exhaust specific PM emissions are much lower than the total, therefore, it is concluded that the Project's TAC emissions from construction and operation would cause less than significant health risk impacts.

The PEIR concluded that since off-road heavy-duty diesel equipment would only be used temporarily during construction at each structural BMP site, construction would not expose sensitive receptors to substantial emissions of TACs and impacts would be less than significant. For operations, the PEIR concluded that health risks from TAC emissions would not occur. The proposed Project's impacts were determined to be less than significant; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Objectionable Odors

Impact 3.2-5: The proposed Project could create objectionable odors affecting a substantial number of people.

Per PMM AIR-4, nuisance odors were assessed for the proposed Project. It is anticipated that some objectionable odors may be temporarily created during construction-related activities, such as from diesel exhaust and paving activities. These odors would not affect a substantial number of people and would only occur in localized areas for short periods of time and are consistent with general construction activities and not out of the ordinary. During operations the underground stormwater capture components would passively divert, treat, and discharge runoff, and no substantial odor-generating activities would occur. Therefore, construction and operation impacts related to objectionable odors would be less than significant.

The PEIR concluded that odors from construction equipment would be a temporary source of nuisance to adjacent uses, but because they are temporary and intermittent in nature, would not be considered a significant environmental impact. The proposed Project's impacts were determined to be less than significant; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.3 Biological Resources

This section addresses the biological resources in the region and potential impacts associated with the implementation of the proposed Project. It includes a description of existing environmental conditions and an evaluation of potential effects to biological resources.

3.3.1 Environmental Setting

This section presents a Project-specific description of plant and wildlife communities and special-status species followed by an assessment of potential impacts to these resources from implementation of the proposed Project. A one-day reconnaissance level survey was conducted on August 12, 2020, to document wildlife use of the Project site at Alondra Park, assess the habitat suitability for special-status species, and observe current stormwater flow designs into the Dominguez Channel Watershed, located approximately 0.3 miles east of the Project site and adjacent to the Laguna Dominguez Bike Trail. In addition to information gained from the one-day site visit, readily available data sources from the California Department of Fish and Wildlife (CDFW), California Native Plant Society (CNPS), and other available information were used in preparing this section.

The Project site and surrounding area are completely developed and urbanized, and no natural habitat occurs. The Project site is located within the existing 53-acre Alondra Park, a suburban park located in Los Angeles County within the City of Lawndale. The northwest portion of Alondra Park, where the proposed Project would be implemented, is bordered by Prairie Avenue and Manhattan Beach Boulevard on its western and northern edges, respectively, and the Alondra Golf Course on its southern and eastern edges. Residential neighborhoods surround the park and golf course. An artificial pond is present in the southeastern corner of Alondra Park but proposed Project impacts are not expected within 0.25 miles of this pond. With implementation of the proposed Project, stormwater captured by the Manhattan Beach Boulevard Drain and Alondra Park Drain would be diverted and would no longer flow into Dominguez Channel, which is located east of the Project site and is also surrounded by residential neighborhoods.

The topography of the Project site is generally flat with an elevation of approximately 50 feet above sea level. Vegetation in the Project site consists predominantly of ornamental lawn grass and shade trees consisting of both ornamental (e.g., palm trees, pine trees, etc.) and native species such as western sycamore (*Platanus racemosa*). The trees are primarily situated in the central region of the Project site, with some tracing the borders of the southern fence line, the northern edge, and around the parking lots and existing recreation facilities.

Common Wildlife

Ornamental vegetation typically supports a limited number of resident and migratory wildlife species that have adapted to urban areas, as well as introduced non-native species. Wildlife identified at the Project site during the August 12, 2020 reconnaissance survey, either through direct observation or indirect signs of occurrence, included a limited number of reptile, bird, and mammal species as discussed below.

Amphibians and Reptiles. No amphibians or reptiles were observed during the survey. The Project site is an urban park and provides limited suitable habitat for most of amphibians and reptiles. There is a limited potential for Western fence lizard (*Sceloporus occidentalis*) and other urban tolerant reptile species.

Birds. Nineteen (19) species of common birds were observed on the Project area during the survey with 15 detected within the Project site and four observed off-site at Dominguez Channel. In

addition, it is likely that many other birds use the site either as wintering habitat, for seasonal breeding, or during migration.

Birds were identified by sight and sound and were observed within or flying over the sites. Native species observed include white-throated swift (*Aeronautes saxatalis*), red-tailed hawk (*Buteo jamaicensis*), rock pigeon (*Columba livia*), American crow (*Corvus brachyrhyncos*), snowy egret (*Egretta thula*), American coot (*Fulica americana*), house finch (*Haemorhous mexicanus*), black-necked stilt (*Himantopus mexicanus*), barn swallow (*Hirundo rustica*), western gull (*Larus occidentalis*), Downy woodpecker (*Picoides pubescens*), black phoebe (*Sayornis nigricans*), Allen's hummingbird (*Selasphorus sasin*), western bluebird (*Sialia mexicana*), and Cassin's kingbird (*Tyrannus vociferans*). Introduced species include house sparrow (*Passer domesticus*), Eurasian collared dove (*Streptopelia decaocto*), European starling (*Sturnus vulgaris*), and pin-tailed whydah (*Vidua macroura*).

Mammals. Two species of common mammals were observed within the Project site. Mammals detected in the Project area during the survey included direct observation of individuals and evidence of use, including burrows or other sign. Native mammals or their sign that were detected during the survey include desert cottontail (*Sylvilagus audubonii*). Introduced species include fox squirrel (*Sciurus niger*). Several other mammals have a potential to be present and include California ground squirrel (*Otospermophilus beecheyi*), Botta's pocket gopher (*Thommomys bottae*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

Endangered, Threatened, or Rare Species

Special-status taxa include plant and wildlife species listed as threatened or endangered under the federal or California Endangered Species Acts, taxa proposed for listing, Species of Special Concern, plants considered by the CNPS to be rare, threatened, or endangered in California and beyond, and other taxa that have been identified by the United States Fish and Wildlife Service (USFWS), and CDFW as unique or rare and which have the potential to occur within the Project area.

A record search using the California Natural Diversity Database (CDFW, 2021a) and the CNPS Online Inventory (CNPS, 2021) was performed for special-status plant and wildlife taxa that are known to occur within or near the Project area. No special-status species have been recorded on the Project site.

Special-Status Plant Species. No special-status plants were observed in the Project area. Alondra Park has been maintained as a recreational facility for over 50 years and the vegetation has been landscaped as turf for recreational use since that time. Based on an assessment of the current habitat conditions and the results of the survey, it was determined that no special-status plants have a potential to be present on the Project site.

Special-Status Wildlife. No special-status wildlife species were observed within the Project site. The Project site lacks suitable habitats for all special-status wildlife species known from the area with one exception. Cooper's hawk (*Accipiter cooperii*) is a CDFW Watch List species (CDFW, 2021b). Cooper's hawk forages and nests in a variety of habitats, including urban areas such as parks, schools, residential developments. Although not observed during the survey, Cooper's hawk has a high potential to be present on the Project site and may nest in the large ornamental trees.

3.3.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential to impact biological resources.

III. BIOLOGICAL RESOURCES **Would the project:**	Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan?	☐	☒

Project Impact Discussion

Impact 3.3-1: The proposed Project could have a substantial adverse effect, either directly or through habitat modifications, on any sensitive species identified as special-status in local or regional plans, policies, or regulations or by the CDFW and USFWS.

No special-status plants or wildlife were observed in the Project area during the one-day reconnaissance level survey on August 12, 2020. The Project site provides no suitable habitat for special-status plants or wildlife with the exception of Cooper's hawk, as discussed above. In addition to special-status species, some common urban-adapted birds such as mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), and house finch (*Carpodacus mexicanus*), have the potential to nest within ornamental trees and landscaped areas within the Project site, some of which would be removed during construction.

Although these urban-adapted species do not have any special conservation status, their nests are protected under the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. Construction activities at the Project site could result in direct impacts to active nests or indirect impacts from construction noise, dust, or nighttime lighting to common nesting birds and also to Cooper's hawk. Active nests are those that contain eggs, nestlings, or fledglings that are still dependent on the nest. The MBTA regulates the needless destruction of an active bird nest, and any destruction of active nests or activities that cause an active nest to fail (such as through parental abandonment of an active nest from project-related disturbance) would be considered a significant impact and a violation of the MBTA and Sections 3503, 3503.5, 3505, 3800, and 3801.6 of the California Fish and Game Code.

To reduce potentially significant direct and indirect impacts to nesting birds and Cooper's hawk caused by construction and operation, PMM BIO-3 would be implemented to minimize impacts to special-status species and PMM BIO-5 to minimize impacts to nesting birds. Potential impacts to special-status wildlife and nesting birds would be less than significant with incorporation of these mitigation measures.

PMM BIO-3: If a special-status wildlife species is determined to be present or potentially present within the limits of construction activities, a qualified biologist shall conduct preconstruction surveys of proposed work zones and within an appropriately sized buffer around each area as determined by a qualified biologist within 14 days prior to ground disturbing activities. Any potential habitat capable of supporting a special-status wildlife species shall be flagged for avoidance if feasible.

PMM BIO-5: If construction and vegetation removal is proposed between February 1 and August 31, a qualified biologist shall conduct a pre-construction survey for breeding and nesting birds and raptors within 500-feet of the construction limits to determine and map the location and extent of breeding birds that could be affected by the project. Active nest sites located during the pre-construction surveys shall be avoided until the adults and young are no longer reliant on the nest site for survival as determined by a qualified biologist.

The PEIR concluded that construction of structural BMPs may affect habitats that support special-status wildlife species; however, with implementation of the PMMs impacts would be less than significant. Operational impacts resulting from the combined effects of multiple BMPs limiting dry-weather flows were also determined to be less than significant with implementation of mitigation. The proposed Project's construction and operation impacts were determined to be less than significant with PMMs incorporated and no additional mitigation measures are required; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Riparian Habitat or Other Sensitive Natural Communities

Impact 3.3-2: The proposed Project could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.

The Project site is a developed park bordered by roads, residential, commercial, and recreational development. No native habitat occurs, and there would be no impact to riparian or other sensitive vegetation.

The PEIR concluded that impacts to riparian habitat or other sensitive natural communities would be significant if BMPs occur within or adjacent to Significant Ecological Areas, riparian habitat, or other sensitive natural communities, but would be reduced to a less-than-significant level with mitigation. The proposed Project would have no impact on riparian habitat or other sensitive natural communities; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Wetland Habitats

Impact 3.3-3: The proposed Project could have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

The Project site is a developed park bordered by roads, residential, commercial, and recreational development. No wetlands or other jurisdictional features occur within the Project area, and there would be no impact to state or federally protected wetlands.

The PEIR concluded that impacts to wetland habitats would be significant if projects impact native vegetation within jurisdictional drainages but would be reduced to a less-than-significant level with mitigation. The proposed Project would have no impact on wetlands; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Wildlife Movement

Impact 3.3-4: The proposed Project could 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.

The Project site is a developed park bordered by roads, residential, commercial, and recreational (Alondra Golf Course) development. No native habitat occurs on or adjacent to the site, and there would be no impact to wildlife movement, movement corridors, or native wildlife nursery sites.

The PEIR concluded that the EWMP would not be expected to interfere with wildlife movement or any migratory corridor/linkage, would not be constructed within a native wildlife nursery site, or reduce open water features used by migratory birds, as structural BMPs would primarily be constructed within existing stormwater facilities or disturbed areas. As such, impacts would be less than significant. The proposed Project would have no impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Local Policies or Ordinances

Impact 3.3-5: The proposed Project could conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The Project would result in the removal of several ornamental trees from the existing Alondra Park. Because tree removals would only affect ornamental trees within landscaped areas of the site, the Project would not conflict with the County of Los Angeles Oak Tree Ordinance (22.56.2060). Additionally, any trees removed would be relocated or replaced. The Project would not conflict with any local policies or ordinances protecting biological resources and there would be no impact.

The PEIR concluded that conflicts with local policies or ordinances would occur if oak trees within Los Angeles County were to be impacted but would be reduced to a less-than-significant level with mitigation. The proposed Project would not affect oak trees and would not conflict with tree preservation policies or ordinances, and there would be no impact. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Adopted Habitat Conservation Plans

Impact 3.3-6: The proposed Project could conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

There are no Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or State habitat conservation plans within the general area. No impact would occur.

The PEIR concluded that conflicts with conservation plans are not anticipated and that any projects affecting a Significant Ecological Area must undergo a performance review process for compliance such that impacts would be less than significant. The proposed Project would have no impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.4 Cultural Resources

This section describes the existing cultural and paleontological resources in the Project area and discusses potential impacts associated with the proposed Project. Cultural resources are historic and prehistoric archaeological sites, historic-aged architectural or engineering features and structures, and places of traditional cultural significance to Native Americans and other ethnic groups. Paleontological resources include fossil plants and animals, and other evidence of past life, such as preserved animal tracks and burrows, and can include whole geologic units that are documented as containing sensitive and unique paleontological remains. Data provided by fossils contribute to proper stratigraphic interpretations, paleoenvironmental and paleoclimatic reconstructions, and to a clearer understanding of evolutionary processes. The cultural resources information provided in this section is summarized from DeOliveira and Allan (2021), which is also summarized in the Phase 1 Cultural Resources Assessment provided as Appendix D to this analysis.

3.4.1 Environmental Setting

The Project area is in Alondra Park and encompasses approximately 6.2 acres in the northwest corner of the Park near the City of Lawndale. The proposed Project is bordered by residential houses to the north, the Alondra Golf Course to the south and east, and mixed residential and commercial uses to the west.

Cultural Resources

A summary of the area's cultural setting is provided below and is organized according to Prehistoric, Ethnographic, and Historic Periods. The Prehistoric Period covers the era prior to sustained European contact (AD 1776), while the Historic Period covers the time subsequent to that contact. The Ethnographic Period presents information regarding the Native American inhabitants of the region, as understood through historical accounts and information given to anthropologists by Native Californians during the late 19th and early 20th centuries.

Prehistoric Period. Broadly speaking, the earliest occupation of the region occurred during the Paleo-coastal Tradition, which lasted from about 13,000 to 8,500 years before present (BP). Early occupation of the coast was characterized by low population densities, simple technologies, and high mobility. People subsisted largely on marine food resources with limited terrestrial plant and animal food sources. From 8,500 to 3,200 BP, a period of climatic warming and drying conditions affected much of the western hemisphere, which resulted in changes in local food resource availability. Native American coastal traditions thus reflected a growing pattern of milling stone

tools and although still quite mobile, seasonal plant and animal resource procurement cycles began. Then, from 3,200 to 1,200 BP, the climate became much cooler and moister. The emergence of shell beads, more refined projectile point production, and the continued expansion of milling stone technologies is noted throughout the region. Marked territoriality and the development of more sophisticated forms of trade, exchange, and ritual systems emerge.

Between 1,200 and 180 BP (up to the time of European arrival), the region experienced an overall increase in Native American population, although this increase was marked by severe loss and recovery of those population numbers over time. Meanwhile, the entire California region underwent a series of devastating drought conditions that lasted several hundred years each. It is hypothesized by researchers that these conditions gave rise to the social, economic, political, and religious systems that were witnessed at the time of European arrival. Complex inter-related mechanisms of ethnic identity, linguistic affiliation, kinship, and ritual practices emerged in order to ensure group access to key resources during a time of stressed environmental conditions that limited food supply.

Ethnographic Period. The Project area was historically occupied by the Tongva people. At the time of European contact, the Tongva inhabited a rich coastal and inland region of southern California consisting of roughly 1,500 square miles and included present-day Los Angeles and Orange counties, including San Nicolas, San Clemente, and Santa Catalina islands. Second only to the Chumash, the Tongva were the wealthiest, most populous and most powerful ethnic group in southern California. Settlement pattern studies concluded there is a presence of both primary villages that were occupied year-round and secondary temporary camps inhabited at various times of the season. Both primary and temporary settlements seemed to be located near water sources.

Their culture was very similar to that of the Chumash with a few exceptions in their language, cremation practices, and their ability to make pottery. The Tongva influenced cultures as far north as the San Joaquin Valley Yokuts, as far east as the Colorado River, and south into Baja California.

Historic Period. Early historic occupation of the Project area was associated with the expeditions of the Franciscan administrator Junipero Serra and the Spanish military, under the command of Gaspár de Portola in San Diego in A.D. 1769. These expeditions preceded the Spanish Missionization efforts, which involved the establishment of 21 California Missions whose purpose was to "convert" the Native Californians to Catholicism within a 10-year period, and then return the mission lands to them. The Spanish established the first mission among the Tongva in 1771 at San Gabriel. The recruitment and absorption of the Tongva was relatively quick, and by the early 1800s, the vast majority of Native Americans were either in the mission system or had fled to the Central Valley or mountains. The year 1821 marks the beginning of the Mexican Period and is concurrent with Mexico's independence from Spain. During this period, extensive land grants were established. Landowners largely focused on the cattle industry and devoted large tracts of land to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. Three separate land parcels in the Project area, known as Rancho Sausal-Redondo, were granted to Antonio Ignacio Avila from 1822 to 1846. The original rancho was estimated to be 40,000 acres, but when the U.S. Land Commission officially confirmed the title of the rancho, the land was reduced to about 22,000 acres, encompassing the modern-day cities of Lawndale, Inglewood, Hawthorne, Redondo Beach, Manhattan Beach, and Hermosa Beach.

From the late 1860s to the late 1870s, Rancho Sausal-Redondo was known for its sheep, citrus, eucalyptus, and barley. By the 1880s, a small real estate boom came to the area and most of the new property owners farmed crops and raised livestock. The real estate boom continued as a

direct result of the opening of a seaport in nearby Redondo in 1890. In 1902, the Los Angeles and Redondo Railway arrived in Lawndale along what is currently Hawthorne Boulevard. In 1911, the rail line merged with the Pacific Electric Railway. The land of Alondra Park was originally owned by William Somers, a successful gold miner. He was said to be one of the first non-Native Americans to enter Yosemite Valley in his search for profitable mining claims. Somers eventually found his way back to the San Fernando Valley where he ran a successful wheat farm. In 1868, Somers found himself in Gardena Valley where for $225.00 he purchased the land where Alondra Park, Alondra Golf Course, and El Camino College are now situated. Somers leased the land after the initial purchase, and it was not until 1904 that he returned to the property to start his own dairy farm. Somers lived on the property until his death in 1916. The original 320-acre parcel was purchased by the County in 1927 from the Bank of Italy after Somers died without a will. Adopted by the County Board in 1954, the land was likely a former habitat for the wild meadow lark bird, hence the name “Alondra” which is the Spanish work for lark.

Records Search

Per PMM CUL-2 (see text below), Aspen cultural resources specialists conducted a Phase I cultural resources assessment of the Project area. This background research included obtaining information from the South Central Coastal Information Center (SCCIC), located at California State University Fullerton, concerning previously conducted cultural resources surveys and previously recorded sites in the Project area. The record search included the Project area and a ¼-mile radius around the Project area boundary (study area).

PMM CUL-2: Implementing agencies shall ensure that individual EWMP projects that require ground disturbance shall be subject to a Phase I cultural resources inventory on a project-specific basis prior to the implementing agency’s approval of project plans. The study shall be conducted or supervised by a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for Archaeology, and shall be conducted in consultation with the local Native American representatives expressing interest. The cultural resources inventory shall include a cultural resources records search to be conducted at the South Central Coastal Information Center; scoping with the NAHC and with interested Native Americans identified by the NAHC; a pedestrian archaeological survey where deemed appropriate by the qualified archaeologist; and formal recordation of all identified archaeological resources on California Department of Parks and Recreation 523 forms and significance evaluation of such resources presented in a technical report following the guidelines in *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format*, Department of Parks and Recreation, Office of Historic Preservation, State of California, 1990.

The results of the records search indicate that three previous cultural resources surveys were completed within the study area, one of which overlapped with the Project area and is shown in bold below (see Table 3.4-1). The record search did not identify any previously recorded resources within the ¼-mile search radius or the current Project area.

Table 3.4-1. Previous Surveys Identified within the Project Area and 0.25-mile Radius.

Report No.	Author	Year	Study	Company
LA-02904	Stickel, Gary E.	1993	Draft Report a Phase I Cultural Resources Literature Search for the West Basin Water Reclamation Project	Environmental Research Archaeologists: A Scientific Consortium
LA-03289	Davis, Gene	1990	Mobil M-70 Pipeline Replacement Project Cultural Resource Survey Report for Mobil Corporation	Dames & Moore
LA-06025	Duke, Curt	2002	Cultural Resource Assessment AT & T Wireless Services Facility No. D161a Los Angeles County, California	LSA Associates, Inc.

Additionally, the County provided a historic built environment evaluation report of the Park, which was prepared by Sapphos Environmental Inc. (Sapphos) in 2017 for the Los Angeles Department of Parks and Recreation. This study concluded that Alondra Park qualifies as a historic district that is eligible for California Register of Historical Resources (CRHR), and thus the district qualifies as a historical resource under CEQA. The report identified eight contributing features to the historic district, one of which is the former location (no buildings or structures remain) of a World War II (WWII) barracks that appears to be located within the proposed underground storage gallery footprint.

Tribal Cultural Resources

Aspen cultural resources specialists also requested a search of the Sacred Lands File Database from the Native American Heritage Commission (NAHC), located in Sacramento. The record search of the NAHC Sacred Lands File was completed with negative results (i.e., no records found). However, not all tribal sacred sites are registered with the NAHC. Tribal consultation with local tribes is recommended to identify any possible sacred sites or traditional cultural resources in or near the Project area. On September 23, 2021, the County sent a letter via certified mail to request information on the Project area to the following tribes:

- Mr. Anthony Morales, Chairperson, Gabrieleño/Tongva San Gabriel Band of Mission Indians
- Mr. Andrew Salas, Chairperson, Gabrieleño Band of Mission Indians – Kizh Nation
- Ms. Sandonne Goad, Chairperson, Gabrielino/Tongva Nation
- Mr. Robert Dorame, Chairperson, Gabrielino Tongva Indians of California Tribal Council
- Mr. Charles Alvarez, Gabrielino-Tongva Tribe
- Ms. Lovina Redner, Tribal Chair, Santa Rosa Band of Cahuilla Indians
- Mr. Joseph Ontiveros, Cultural Resource Department, and Mr. Scott Cozart, Chairperson, Soboba Band of Luiseno Indians

No tribes responded with a request to discuss the proposed Project or with any information about the Project area. As such, no tribal cultural resources have been identified on the Project site. Furthermore, the County determined that the analysis for the proposed Project falls within the analysis of the PEIR; and the PEIR has adopted mitigation measures to address the potential effects of the proposed Project on tribal cultural resources.

Pedestrian Survey

On August 27, 2021, Aspen's Cultural Resource Specialist, Albert Knight, conducted an intensive archaeological survey of the Project area, which included transects spaced no more than 30 meters apart. Mr. Knight is qualified under the Secretary of the Interior's Qualification Standards and Guidelines for Archaeology and has in-depth familiarity with the prehistoric and historic period cultural resources of Los Angeles County.

Ground visibility during the survey was poor, averaging about 5 percent due to existing grass fields, landscaping, a paved parking lot, and non-native soils in the baseball diamond areas. The survey did not identify any prehistoric-age or historic-age resources within the Project area.

Paleontology

In compliance with PMM CUL-5 (see text below), Dr. Joe Stewart, principal paleontologist for Aspen Environmental Group, was retained to evaluate the potential of the proposed Project to destroy significant paleontological resources and to make suggestions of how significant impacts can be avoided. Dr. Stewart meets the criteria for a qualified professional paleontologist as defined by the Society of Vertebrate Paleontology (2010) and has published 40 peer-reviewed articles in scientific books and journals. He also has 35 years of experience studying the paleontology of southern California.

The geology of the Project area has been mapped by Dibblee and Minch (2007). Those authors mapped the geology of Alondra Park as older surficial sediments; specifically, slightly elevated and dissected alluvial gravel, sand, and clay of late Pleistocene age. Thus, the sediments are not assignable to any formally named formation, according to these authors. Nonetheless, such sediments have produced many significant paleontological finds in the immediate area, demonstrating that these sediments have a high sensitivity for paleontological resources. PEIR Table 3.4-1 (Paleontologically Sensitive Geologic Units/Formations Within The Program Area) confirms this by listing “Pleistocene (Older) Alluvium” as having a high sensitivity rating.

A vertebrate paleontology records search was requested from the Natural History Museum of Los Angeles County (LACM). That report (Bell, 2020) did not identify any known vertebrate fossil localities directly within the Project area but did find several localities in proximity to the Project area. The most pertinent are LACM 3266 and 3365. Both are less than 4 miles to the northeast. The former produced unspecified vertebrate fossils, while the latter produce a mammoth fossil. A literature search revealed numerous localities in southwestern Los Angeles County producing Pleistocene vertebrate fossils. Jefferson (1991a) mentioned two nearby localities. LACM 1295 produced a pond turtle 4.5 miles to the northeast, and LACM 1023 produced an extinct duck 7 miles to the south. In another publication, Jefferson (1919b) documented a San Bernardino County Museum locality 4.5 miles to the northeast; which produced a ground sloth, a gopher, a mammoth, a horse, and a long-horned bison. The same work documented 12 LACM Pleistocene localities within 8 miles of the proposed Project. These have produced mammoth, sloth, gopher, coyote, horse, deer, bison, and camel.

As mentioned above, the sediments at the Project site are known to be of Pleistocene age. The geotechnical report for the Project site (URS, 2009) indicates that there is zero to 2 feet of artificial fill at the site. Thus, very shallow excavations in the older surficial sediments at the Project site may not uncover any significant vertebrate fossils because of prior disturbance. Deeper excavations (greater than 2 feet) in that unit may well encounter significant fossil vertebrate specimens. The proposed Project is expected to excavate to a depth of approximately 30 feet below current grade (including over-excavation) for a total of approximately 347,304 cubic yards of sediment. While some sediments at or near the surface are old enough to produce significant paleontological resources, the sediments at greater depths are even older, and could produce older significant paleontological resources. Several known finds near the Project site (within approximately 4 to 4.5 miles) include large animals (e.g., mammoth). Smaller fossils are more common than large fossils and are typically recovered through sediment sampling. Current professional guidelines specify that sediment sampling should take place, where sediments can be screened as part of project paleontological resource mitigation efforts (SVP, 2010). Identifiable fossils of small vertebrates are no less significant than those of larger animals. The most likely fossils to be preserved in this sediment type (Pleistocene age terrestrial sediments) are small vertebrate organisms (e.g., fish, amphibians, reptiles, birds, and rodents). Terrestrial snails and freshwater mollusks could also be recovered. These fossils usually are only recognized when sediment samples are wet-screened and the residue sorted, often with the aid of a microscope.

3.4.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential to impact cultural resources.

IV. CULTURAL RESOURCES **Would the project:**	Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒
d. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒

Project Impact Discussion

Historical Resources

Impact 3.4-1: The proposed Project could cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

The location of a former WWII barracks was identified by Sapphos (2017) as a contributing feature to a CRHR eligible historic district and appears to be located within the proposed underground storage gallery footprint. The barracks was demolished in 1955 and no buildings, structures, or remnants of the WWII barracks currently exist at the Park; therefore, the proposed Project would not impact the integrity, or cause a substantial adverse change to a known historical resource. However, it is possible that previously unrecorded historical resources could be discovered and damaged or destroyed during ground disturbing work, which would constitute a significant impact absent mitigation. Implementation of PMMs CUL-3 and CUL-4 (see text below) would evaluate and protect unanticipated discoveries of historical resources thereby reducing this impact to less than significant after mitigation.

PMM CUL-3: The implementing agency shall retain archaeological monitors during ground-disturbing activities that have the potential to impact archaeological resources qualifying as historical resources or unique archaeological resources, as determined by a qualified archaeologist in consultation with the implementing agency, and any local Native American representatives expressing interest in the project. Native American monitors shall be retained for projects that have a high potential to impact sensitive Native American resources, as determined by the implementing agency in coordination with the qualified archaeologist.

PMM CUL-4: During project-level construction, should subsurface archaeological resources be discovered, all activity in the vicinity of the find shall stop and a qualified archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the archaeologist shall determine, in consultation with the implementing agency and any local Native American groups expressing interest, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section

15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, project reroute or redesign, project cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with the implementing agency and any local Native American representatives expressing interest in prehistoric or tribal resources. If an archaeological site does not qualify as an historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.

The PEIR concluded that, if projects impact known or previously unknown historical resources, program-level impacts to historic resources would be significant and unavoidable after mitigation because the degree of impact and the applicability, feasibility, and success of the mitigation measures cannot be accurately predicted for each specific project. The proposed Project's site-specific impacts were determined to be less than significant with PMMs incorporated and no additional mitigation measures are required; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Unique Archaeological Resources

Impact 3.4-2: The proposed Project could cause a substantial adverse change in the significance of unique archaeological resources as defined in Section 15064.5.

No unique archaeological resources have been identified in the Project area as a result of the record search or pedestrian survey. However, it is possible that previously unknown buried archaeological resources could be discovered and damaged or destroyed during ground disturbing work, which would constitute a significant impact absent mitigation. Implementation of PMMs CUL-3 and CUL-4 (text provided under Part (a) above) would evaluate and protect unique archaeological resources that may be discovered during ground disturbing work, thereby reducing this impact to less than significant with mitigation incorporated.

The PEIR concluded that structural BMPs which involve grading, trenching, excavation, vegetation removal, or other forms of ground disturbance could significantly impact archaeological resources but would be reduced to a less-than-significant level with mitigation. The proposed Project's impacts were determined to be less than significant with PMMs incorporated and no additional mitigation measures are required; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Paleontological Resources

Impact 3.4-3: The proposed Project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

As described in Section 3.4.1 (Environmental Setting), the proposed Project has the potential to impact unique paleontological resources or vertebrate fossil localities. Excavations below 2 feet (i.e., any native sediments) at the Project site may encounter previously unknown significant paleontological resources such as fossil vertebrate specimens, where the most likely fossils to be preserved are small vertebrate organisms (e.g., fish, amphibians, reptiles, birds, and mammals) and terrestrial snails and freshwater mollusks. These fossils usually are only recognized when sediment samples are wet-screened and the residue sorted, often with the aid of a microscope.

Reliance on the construction crew to recognize these is unrealistic. Therefore, per PMM CUL-5, a qualified paleontologist has evaluated the Project and recommends the following for this BMP project.

- A paleontological monitor working under the supervision of a qualified professional paleontologist shall monitor excavations, take sediment samples, and process samples per the paleontological resource mitigation program (described below).
- A qualified professional paleontologist shall design a paleontological resource mitigation program (PRMP). This PRMP shall satisfy the guidelines of the Society of Vertebrate Paleontology (2010). It shall include monitoring of the movement of previously undisturbed sediment and include testing of the various exposed sediment horizons for microvertebrate fossils. Such fossils are significant and are usually not visible in the outcrop. The PRMP requirements may include having monitoring begin below depths of 2 feet, whereby a 5-gallon sediment sample shall be sampled and processed from each stratigraphic unit, or from every 2-foot interval of depth, which ever results in a larger number of samples. Any significant paleontological resources recovered shall be prepared, identified, reported, and curated in a repository that meets the qualifications set forth in the guidelines of the Society of Vertebrate Paleontology (2010).

Implementation of PMM CUL-5, which through implementation allows for incorporation of the above recommendations made by a qualified paleontologist, and PMM CUL-6 (see text below) would identify and protect unanticipated discoveries of unique paleontological resources or unique geologic localities, thereby reducing paleontological impacts to less than significant.

PMM CUL-5: For individual structural BMP projects that require ground disturbance, the implementing agency shall evaluate the sensitivity of the project site for paleontological resources. If deemed necessary, the implementing agency shall retain a qualified paleontologist to evaluate the project and provide recommendations regarding additional work, potentially including testing or construction monitoring.

PMM CUL-6: In the event that paleontological resources are discovered during construction, the implementing agency shall notify a qualified paleontologist. The paleontologist will evaluate the potential resource, assess the significance of the find, and recommend further actions to protect the resource.

The PEIR concluded that ground-disturbing construction activities could result in inadvertent discovery of paleontological resources, which could be a significant impact, but would be reduced to a less-than-significant level with mitigation. The proposed Project's impacts were determined to be less than significant with PMMs CUL-5 and CUL-6 incorporated and no additional mitigation measures are required. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Human Remains

Impact 3.4-4: The proposed Project could disturb any human remains, including those interred outside of a formal cemetery.

A review of the record search results, previously completed cultural resources surveys, and the results of the pedestrian survey in the Project area indicates that there are no known human burials or cemeteries located in the Project area. However, it is possible that previously unknown human remains could be discovered and damaged or destroyed during ground disturbance, which would constitute a significant impact absent mitigation. Implementation of PMM CUL-3 (see text under Part (a) above) and PMM CUL-7 (see text below)**,** which requires archaeological monitoring

during ground disturbing activities, as well as evaluation, protection, and appropriate disposition of human remains, would reduce this impact to less than significant with mitigation incorporated.

PMM CUL-3: See text under Impact 3.4-1 above.

PMM CUL-7: The implementing agency shall require that, if human remains are uncovered during project construction, work in the vicinity of the find shall cease and the County Coroner shall be contacted to evaluate the remains, following the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the Coroner will contact the Native American Heritage Commission, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). The NAHC will then designate a Most Likely Descendant of the deceased Native American, who will engage in consultation to determine the disposition of the remains.

The PEIR concluded that ground disturbance during construction could impact human remains which could be inadvertently damaged resulting in a significant impact; however, this impact would be reduced to a less-than-significant level with mitigation. The proposed Project's impacts were determined to be less than significant with PMMs incorporated and no additional mitigation measures are required; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.5 Geologic and Mineral Resources

This section addresses the geologic and mineral resources known to occur in the region and potential impacts associated with the implementation of the proposed Project. It includes a description of existing environmental conditions and an evaluation of potential effects to geologic and mineral resources.

3.5.1 Environmental Setting

Regional and Local Geology

The proposed Project is situated within the northwest margin of the Peninsular Ranges Geomorphic province of southern California. The Peninsular Ranges are a series of ranges separated by northwest trending valleys that are parallel to faults branching from the San Andreas Fault. The topography within these ranges is similar to that of the Coast Ranges. The Peninsular Ranges extend into lower California and are bound on the east by the Colorado Desert. The Los Angeles Basin and the southern Channel Islands are included in this province (DOC, 2002).

Regionally, the Los Angeles Basin is situated at the juncture between the Peninsular Ranges Geomorphic Province and the Transverse Ranges Geomorphic Province. The Los Angeles Basin trends northwest and is filled with sediment that formed its present-day shape in the Late Miocene (about 7 million years ago) by tectonic movement between the Whittier and Palos Verdes faults and the Santa Monica fault system (URS, 2009).

Locally, the Project site is approximately 43 feet above mean sea level and is located west of the Dominguez Channel. The Project site is underlain by a mix of younger and older alluvium. The younger alluvium is an approximately 10- to 20-foot-thick valley deposit consisting of soft to firm clay and clayey sands that overlie older alluvium. The older alluvium generally consists of stiff to hard clay and medium dense to very dense sand, silty sand, and clayey sand (URS, 2009).

Seismicity and Ground Shaking

Southern California is a geologically complex and diverse area, dominated by the compressional forces created as the North American and Pacific tectonic plates slide past one another along a transform fault known as the San Andreas. Regional tectonic compressional forces shorten and thicken the earth's crust, creating and uplifting the local transverse mountain ranges.

Within southern California, several fault types are expressed, including lateral or strike slip faults, vertical (referred to as normal and reverse or thrust faults), and oblique faults accommodating both lateral and vertical offset. Earthquakes are the result of sudden movements along faults, generating ground motion (sometimes violent) as the accumulated stress within the rocks is released as waves of seismic energy.

Seismicity is defined as the geographic and historical distribution of earthquake activity. Seismic activity may result in geologic and seismic hazards, including seismically induced fault displacement and rupture, ground shaking, liquefaction, lateral spreading, landslides, avalanches, and structural hazards. Based on historical seismic activity and fault and seismic hazards mapping, Los Angeles County is considered to have a relatively high potential for seismic activity.

The Project site is located within a seismically active area of southern California, a region that has experienced numerous earthquakes in the past. Four moderately large (5.5 to 6.4 moment magnitude (Mw)) to large (above 6.5 Mw) earthquakes have occurred within 50 miles of the Project site. The epicenters of the 1971 San Fernando earthquake (Mw 6.5), 1987 Whittier Narrows earthquake (Mw 5.9), and 1994 Northridge earthquake (Mw 6.7) are located approximately 36 miles northwest, 19 miles northeast and 25 miles to the northwest of the Project site, respectively (SCEDC, 2021).

The intensity of the seismic shaking, or strong ground motion, during an earthquake is dependent on the distance between the Project site and the epicenter (point at the earth's surface directly above the initial movement of the fault at depth) of the earthquake, the magnitude (seismic energy released) of the earthquake, and the geologic conditions underlying and surrounding the Project area. Earthquakes occurring on faults closest to the Project site would most likely generate the largest ground motion. A commonly used benchmark is peak horizontal ground acceleration (ground shaking) that is provided for a probability of occurrence and is represented as a fraction of the acceleration of gravity (g). In the area of the Project, using the California Department of Conservation (DOC) ground motion interpolator, peak ground accelerations of 0.632 g with a 2 percent probability of being exceeded in 50 years are estimated (DOC, 2021a).

Fault Systems

Faults generally produce damage in two ways: ground shaking and surface rupture. Seismically induced ground shaking covers a wide area and is greatly influenced by the distance of the Project site to the seismic source, soil conditions, and depth to groundwater. Surface rupture is limited to very near the fault. Other hazards associated with seismically induced ground shaking include earthquake-triggered landslides and tsunamis.

There are no fault zones within the Project site. The nearest fault zone is the Newport-Inglewood fault zone, located approximately 3.5 miles to the northeast of the Project site (DOC, 2021b).

Soils

Mapped soils in the Project area consist of Urban land-Centinela-Typic Xerorthents, fine substratum complex, 0 to 2 percent slopes. These soils are well-drained and consist of loam, clay, and clay loam. Depth to bedrock in undisturbed areas is over 80 inches, and the runoff class

ranges from medium to high (NRCS, 2019). The 2009 geotechnical report by URS indicated that the immediate subsurface soils consist of zero to 2 feet of artificial fill consisting of loose poorly graded sand. Underlying the fill to up to 50 feet below ground surface is alluvium consisting of clay with medium plasticity that increases in stiffness as depth increases (URS, 2009).

Liquefaction

Liquefaction is a seismic phenomenon in which loose, saturated, fine-grained granular soil behaves similarly to a fluid when subjected to high-intensity ground shaking. Liquefaction occurs when the following exists: (1) shallow groundwater; (2) low-density, fine, clean sandy soil; and (3) high-intensity ground motion. Liquefaction involves a sudden loss in strength of a saturated soil (predominantly sand) caused by a rapid increase in pressure usually caused by an earthquake. Typically, liquefaction occurs in areas where groundwater is less than 50 to 60 feet from the surface, and where the soil consists predominantly of poorly consolidated sands. The geotechnical report by URS and the DOC Earthquake Zones of Required Investigation map indicate that the Project area is not within a liquefaction zone (URS, 2009; DOC, 2019). Furthermore, subsurface investigation indicates that the site is underlain by mostly stiff clay soil that does not pose a liquefaction hazard (URS, 2009).

Landslides

Landslides, rockfalls, and debris flows may occur continuously on all slopes; some processes act very slowly, while others occur very suddenly, with potentially disastrous results. Areas of land sliding are, in general, confined to the areas of weak or clay bedrock and adverse geologic structure (such as bedding, joints or fracture planes dipping in downslope directions). Landslides can result from certain geologic features, slope steepness, excessive rainfall, earthmoving disturbance, and seismic activity. Events and actions that trigger landslides include seismic ground shaking, over-weighting the slope with either naturally deposited colluviums or artificial fill, decreasing soil cohesiveness by adding water to the materials on the slope, excavation, development, or undercutting a slope through erosive action or human disturbance.

The proposed Project is located in a relatively flat-lying area. Additionally, the DOC Earthquake Zones of Required Investigation map indicates that the Project does not lie within a landslide zone (DOC, 2019).

Subsidence

Land subsidence (i.e., collapse) is normally the result of the extraction of groundwater and/or oil that create subsurface voids, resulting in the sinking of the ground surface due to the removal of subsurface pressure.

According to the DOC Geologic Energy Management Division's Well Finder mapping application, no active oil or gas wells are located within the Project site (DOC, 2020).

Collapsible Soils

Collapsible soils are soils that experience a decrease in volume and associated settlement as a result of a change in soil structure associated with wetting of partially saturated subsoil. Typically, collapsible soils occur predominantly at the base of mountains, where Holocene-age alluvial fan and wash sediments have been deposited during rapid runoff events. Collapsible soil is not present in the Project area, as the Project is located on a relatively flat surface with no nearby hills or mountains.

Minerals

Mineral resources may include metals such as gold, silver, iron and copper, as well as construction aggregate. The Los Angeles County General Plan defines mineral resources as commercially viable aggregate or mineral deposits, such as sand, gravel, and other construction aggregate (County of Los Angeles, 2015a).

The State of California classifies mineral resource areas into Mineral Resource Zones (MRZ). The four zone classifications indicate whether mineral resources (primarily sand and gravel) are known to be present or absent, or whether additional information is necessary. The Mineral Resources Map from the County General Plans Conservation and Natural Resources Element indicates that the Project area is not within any designated MRZs (County of Los Angeles, 2015b).

3.5.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential to impact geologic and mineral resources.

V. GEOLOGIC AND MINERAL RESOURCES **Would the project:**	Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:		
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☒
ii) Strong seismic ground shaking?	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☒
iv) Landslides?	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☒
c. Be located on geologic units 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?	☐	☒
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☒
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?	☐	☒
f. 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?	☐	☒
g. 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?	☐	☒

Project Impact Discussion

Exposure to Seismic-Related Hazards

Impact 3.5-1: The proposed Project could locate new facilities in areas susceptible to seismic impacts such as (1) 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, (2) strong seismic groundshaking, or (3) seismically induced liquefaction or landslides, which could expose people, structures, or habitat to potential risk of loss, damage, injury, or death.

(1) According to the DOC, the proposed Project is not located within an Alquist-Priolo Earthquake Zone (DOC, 2019). Therefore, the proposed Project would have no impact involving an earthquake fault zone.

(2) The proposed Project has the potential to experience seismic ground shaking due to its proximity in a region of known active faults. However, the proposed Project includes the installation of an underground storage gallery and associated infrastructure, along with aboveground landscaping and minor structural improvements and does not include habitable structures. The proposed structures could experience damage as a result of the seismic ground shaking, but would not pose substantial adverse effects, including the risk of loss, injury, or death. Therefore, the proposed Project would have a less-than-significant impact with regard to seismic ground shaking.

(3) The geotechnical report by URS and the DOC Earthquake Zones of Required Investigation map indicate that the Project area is not within a liquefaction zone (URS, 2009; DOC, 2019). Furthermore, subsurface investigation indicates that the site is underlain by mostly stiff clay soil that does not pose a liquefaction hazard (URS, 2009). The proposed Project does not include the construction of large buildings and/or habitable structures. The proposed Project is also located in a relatively flat-lying area with no potential for landslides. The DOC Earthquake Zones of Required Investigation map indicates that the Project does not lie within a landslide zone (DOC, 2019). Therefore, the proposed Project would not contribute to the potential for landslides in the area. The proposed Project would have no impact from seismic-related ground failure including liquefaction and landslides.

The PEIR concluded that the structural BMPs would be designed to minimize or avoid damage from fault rupture and seismic events, resulting in less-than-significant impacts from seismic-related hazards. As discussed above, the proposed Project would have a less-than-significant seismic-related risk; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Soil Erosion or Topsoil Loss

Impact 3.5-2: The proposed Project could result in substantial soil erosion or the loss of topsoil.

The proposed Project would potentially increase the risk of topsoil erosion during excavation for the underground storage gallery, which would be controlled through the use of standard erosion control BMPs (e.g., silt fence, straw waddles), as required by the 2012 MS4 Permit. The proposed Project includes bioswales which would help retain stormwater runoff. Excavated areas would then be revegetated and restored to current elevations following construction with no increase in erosion potential during operation of the proposed Project. Therefore, construction and operation

of the proposed Project would have a less-than-significant impact resulting from erosion or topsoil loss.

The PEIR concluded that structural BMPs would generally serve to slow down or fully retain stormwater runoff, which would minimize soil erosion and loss of topsoil to less-than-significant levels. As discussed above, the proposed Project would also have a less-than-significant impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Soil Stability

Impact 3.5-3. The proposed Project could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on-site or off-site non-seismically induced geologic hazards such as landslides, lateral spreading, subsidence, collapse or sinkholes, settlement, or slope failure.

The proposed Project is not located on geologic units or soils that are unstable, as it would be constructed on a relatively flat surface within the low-lying plain of the Los Angeles Basin (LACPW, 2017). The Project location would not cause hazardous conditions relating to unstable geologic units. An infiltration investigation report was prepared to determine the characteristics of subsurface materials and infiltration rates, which satisfies PMM HYDRO-1 (see text of measure below). The evaluation of the subsurface conditions in the geotechnical report indicate that the soils have poor drainage, and the site is unsuitable for infiltration; thus, runoff would be treated and diverted into an underground storage gallery before being discharged to the storm drain and sanitary sewer (LACPW, 2017). As a result, the Project does not include infiltration as part of its design to avoid adverse effects to neighboring subsurface infrastructure, as required by PMM HYDRO-1. Impacts would be less than significant with mitigation incorporated.

PMM HYDRO-1: Prior to approving an infiltration BMP, the Permittee shall conduct an evaluation of the suitability of the BMP location. Appropriate infiltration BMP sites should avoid areas with low permeability where recharge could adversely affect neighboring subsurface infrastructure.

The PEIR concluded that project-level geotechnical investigations would be required to identify site-specific design criteria to abate geologic hazards. Consistent with PEIR requirements, a geotechnical report was prepared for the proposed Project (PMM HYDRO-1). The proposed Project was determined to have a less-than-significant impact from unstable geologic units or soils with implementation of PMM HYDRO-1. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Expansive Soils

Impact 3.5-4: The proposed Project could be located on expansive soil as defined in 24 CCR 1803.5.3 of the California Building Code (2013), creating substantial risks to life or structures.

Based on the geotechnical report, the entire site is underlain by up to 2 feet of artificial fill soils typically composed of clay, which typically has expansive qualities (LACPW, 2017). The proposed Project does not include any structures that would create a substantial risk to life or property, as no habitable structures would be constructed. Therefore, proposed Project would have no impact associated with expansive soils.

The PEIR concluded that project-level geotechnical investigations would be required to ensure that structural BMPs are constructed in a manner that avoids impacts from expansive soils. As

required by PMM HYDRO-1, a geotechnical report was prepared for the proposed Project. The proposed Project was determined to have no impact related to expansive soils. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

On-Site Wastewater Treatment Systems

Impact 3.5-5: The proposed Project could have soils incapable of adequately supporting the use of a septic tank or alternative wastewater treatment systems where sewers are not available for the disposal systems.

The proposed Project's stormwater capture system would not include the construction of septic tanks or wastewater disposal systems. Therefore, the proposed Project would have no impact with regard to wastewater disposal systems.

The PEIR concluded that none of the structural BMPs would include facilities that require the use of septic systems or alternate wastewater disposal systems where sewers are not available for the disposal of wastewater. As discussed above, the proposed Project would not involve septic tanks or wastewater disposal systems. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Mineral Resources

Impact 3.5-6. The proposed Project could 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 or a locally important mineral resource recovery site delineated on a local General Plan, Specific Plan, or other land use plan.

The Mineral Resources Map from the County General Plans Conservation and Natural Resources Element indicates that the Project area is not within any designated MRZs as mapped by DOC (County of Los Angeles, 2015b). As there are no known mineral resources located within the proposed Project footprint, the construction and operation of the proposed Project would not result in the loss of availability of mineral resources or prevent access to any locally important mineral resource recovery site; no impact would occur.

The PEIR concluded that effects on mineral resources from individual BMPs and effects on oil and gas resources from individual BMPs located within a designated MRZ would be less than significant, given that these projects would need to comply with local and County General Plan zoning restrictions. The proposed Project would not be located within a mapped MRZ and would have no impact to mineral resources. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.6 Greenhouse Gas Emissions

This section addresses the global climate change, existing regulations pertaining to global climate change, and potential greenhouse gas (GHG) emissions resulting from implementation of the proposed Project. It includes a description of existing environmental and regulatory conditions and an evaluation of potential effects relating to GHG emissions.

3.6.1 Environmental Setting

The environmental setting for global climate change includes the existing rates of anthropogenic GHG emissions, which drives numerous indirect effects on the environment and humans. The

area of influence for GHG impacts associated with the proposed Project would be global. However, those cumulative global impacts would also be manifested as impacts on resources and ecosystems in California.

Examples of GHGs that are produced both by natural processes and by industry include carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O). GHGs have varying amounts of global warming potential (GWP). The GWP is the ability of a gas or aerosol to trap heat in the atmosphere. By convention, CO2 is assigned a GWP of 1. In comparison, CH4 per the Intergovernmental Panel on Climate Change (IPCC 's) Fourth Assessment Report has a GWP of 25, which means that it has a global warming effect 25 times greater than CO2 on an equal-mass basis. To account for their GWP, GHG emissions are often reported as CO2e (CO2 equivalent). The CO2e for a source is calculated by multiplying each GHG emission by its GWP, and then adding the results together to produce a single, combined emission rate representing all GHGs (CARB, 2021).

Several legislative actions, plans and policies have been adopted to regulate reduce GHG emissions on a federal, State, and local level. There are a few State and local GHG emissions reduction goals and policies that may apply to the proposed Project; however, there are no federal, State, or local regulations that directly apply to the Project's construction and operation.

3.6.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential impacts to contribute GHG emissions.

VI. GREENHOUSE GAS EMISSIONS **Would the project:**	Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purposes of reducing the emissions of greenhouse gases?	☐	☒

Project Impact Discussion

Project-Generated GHG Emissions

Impact 3.6-1: The proposed Project could generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

The proposed Project would generate GHG emissions through construction activities. The period of construction would be short-term, and construction-phase GHG emissions would occur directly from the off-road equipment used at the Project site and the on-road motor vehicles needed to mobilize crew, equipment, and materials. Maintenance and operations are limited to routine cleaning and inspection, and thus their GHG emissions would be negligible.

The SCAQMD has established a GHG significance threshold of 10,000 metric tons per year (SCAQMD, 2019). This threshold is based on project-life amortized average annual emissions.

The proposed Project's estimated amortized annual emissions are summarized in Table 3.6-1. Appendix C includes the GHG emissions estimate calculations for proposed Project construction.

Table 3.6-1. Greenhouse Gas Emissions	
Emissions Source	GHG Emissions (Metric Tons CO_2e)
Construction Emissions (on-road and off-road)	2,636
Subtotal	2,636
Amortized Annual Construction Emissions [1]	87.9
SCAQMD GHG Emissions Significance Threshold	10,000
Exceeds Thresholds?	No

Source: Appendix D ; SCAQMD, 2019.
1 – Amortized emissions are the construction emissions divided over the project life (30 years for industrial projects per SCAQMD guidance).

Table 3.6-1 shows that the proposed Project's construction would have GHG emissions that are well below the significance criteria; therefore, the proposed Project would have less than significant GHG emissions impacts.

The PEIR concluded that GHG emissions generated by the structural BMPs in the EWMP areas would not exceed SCAQMD's emissions thresholds, and impacts would be less than significant. As discussed above, the proposed Project's impacts were determined to be less than significant; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Consistency with GHG Emissions Reduction Plans or Policies

Impact 3.6-2: The proposed Project could conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

GHG emissions for the proposed Project would be generated from off-road equipment uses and on-road vehicle trips during construction and are expected to be minimal. Operational GHG emissions, as noted above, would be negligible. Estimated GHG emissions of the proposed Project would be well below the threshold of the federal and State mandatory reporting regulation. The proposed Project's GHG emissions would not trigger regulatory action under the federal 40 Code of Federal Regulations (CFR) Part 52 and the State Cap-and-Trade regulations. A summary of the compliance with all potentially applicable GHG plans, policies, and regulations is provided in Table 3.6-2.

The Office of the California Attorney General maintains a website that addresses mitigation for GHGs (OAG, 2017). Specific strategies that could be relevant to the proposed Project have been identified and listed in Table 3.6-3. This table identifies the applicability of each strategy and the proposed Project design feature that is proposed to comply with the applicable strategies.

Table 3.6-2. Project Consistency with Applicable Plans, Policies, and Regulations for GHG Emissions		
Adopted Plan, Policy, or Regulation	Consistency Determination	Proposed Project Consistency
Federal		
40 CFR Part 98. Mandatory Reporting of Greenhouse Gases Rule.	Not Applicable	The Project would not have emissions sources that would be subject to this regulation.
40 CFR Part 52. Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule.	Not Applicable	The Project would not have emissions sources that would be subject to this regulation.
State		
AB 32. Climate Change Scoping Plan	Consistent	The Project would conform with the Scoping Plan Action W-4 (Reuse Urban Runoff) by capturing urban runoff as bioswale irrigation.
AB 32. Annual GHG Emissions Reporting	Not Applicable	The Project does not include emissions sources that would be subject to this regulation.
AB 32. Cap-and-trade	Not Applicable	The project does not include emissions sources that would be subject to this regulation.
Local		
SCAQMD Rules 2701 and 2702	Not Applicable	The Project is not proposing a GHG emissions reduction project.
County of Los Angeles Community Climate Action Plan (County of Los Angeles, 2015)	Consistent	The Project would be designed to include all applicable and feasible actions listed in the County's Climate Action Plan. Project manages stormwater and promotes improved stormwater runoff quality in accordance with Water Conservation and Wastewater measure WAW-2.

Table 3.6-3. California GHG Reduction Strategies	
Strategy	Project Design/Measure to Comply with Strategy
Vehicle Climate Change Standards	These are CARB enforced standards; vehicles accessing the Project site that are required to comply with the standards would comply with these strategies.
Limit Idling Time for Commercial Vehicles	Project vehicles would be required to comply with CARB idling restriction regulations.
Construction and Demolition Waste Reduction	County of Los Angeles Department of Public Works has committed to recycling construction wastes to the extent feasible (see PMM UTIL-3).
Increase Water Use Efficiency	The Project would include native and/or climate-adapted landscaping on site that grows in low-water conditions.
California Solar Initiative	Does not directly apply to this Project, which does not actively use electricity from Independently Owned Utilities. The Project does not currently include installing solar panels on the property.

Source: OPR, 2008; CAPCOA, 2009

In summary, GHG emissions from the proposed Project would be minimal and would conform to State and local GHG emissions reduction/climate change regulations and policies/strategies; therefore, the proposed Project would have less-than-significant impacts.

The PEIR concluded that implementation of structural BMPs in the EWMP areas would not generate substantial amounts of GHG emissions that would hinder the State's ability to achieve its GHG emission reduction goals under AB 32, or conflict with County reduction measures and plans. The proposed Project would also conform to State and County GHG emission reductions measures and policies and impacts from the proposed Project would be less than significant. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.7 Hazards and Hazardous Materials

This section addresses the potential impacts of hazards and hazardous materials associated with the implementation of the proposed Project. It includes a description of existing environmental conditions and an evaluation of potential effects involving hazards and hazardous materials.

3.7.1 Environmental Setting

Hazardous materials are substances which, by their nature and reactivity, have the capacity of causing harm or a health hazard during normal exposure or an accidental release or mishap, and are characterized as being toxic, corrosive, flammable, reactive, an irritant or strong sensitizer. The term "hazardous substances" encompasses chemicals regulated by both the US Department of Transportation's "hazardous materials" regulations and the US Environmental Protection Agency's (USEPA) "hazardous waste" regulations, including emergency response. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment. A designation of "acutely" or "extremely" hazardous refers to specific listed chemicals and quantities.

Hazardous substances are defined by federal and State regulations that aim to protect public health and the environment. Hazardous materials have certain chemical, physical, or infectious properties that cause them to be considered hazardous. Hazardous substances are defined in the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 101(14), and also in the California Code of Regulations (CCR), Title 22, Chapter 11, Article 2, Section 66261, which provides the following definition:

> *A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.*

Activities and operations that use or manage hazardous or potentially hazardous substances could create a hazardous situation if release of these substances occurred. Individual circumstances, including the type of substance, quantity used or managed, and the nature of the activities and operations, affect the probable frequency and severity of consequences from a hazardous situation. Federal, state and local laws regulate the use and management of hazardous or potentially hazardous substances. This section considers the potential for human health hazards or exposure of people to existing sources of potential health hazards from the proposed Project.

Hazardous Materials Sites

The proposed Project would generally be constructed within the northwest corner of Alondra Park near the parking lots located at the intersection of Manhattan Beach Boulevard and Prairie Avenue (refer to Project Description Figure 2, Project Site). The Project site would be the primary location of ground disturbance, with some additional ground disturbing activities occurring within Manhattan Beach Boulevard to the intersection of Doty Avenue to construct the interconnection to the storm drain and sanitary sewer. For this analysis, soil that is excavated from a site containing hazardous materials would be considered to be a hazardous waste if it exceeded specific CCR Title 22 criteria or criteria defined in CERCLA or other relevant federal regulations. Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials occurs; it may also be required if certain other activities occur. Even if soils or groundwater at a contaminated site do not have the characteristics required to be defined as hazardous wastes, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

Sensitive Receptors and Schools

Land uses directly adjacent to the Project site include residential uses to the north and west across Manhattan Beach Boulevard and Prairie Avenue, and recreational use to the south and east (Alondra Golf Course). Four schools are located within one-quarter mile of the Project site.

- El Camino College 0.12 mile (640 feet [to classroom buildings]) east
- Mark Twain Elementary School 0.17 mile (900 feet [to classroom buildings]) north-northeast
- Will Rogers Middle School 0.21 mile (1,090 feet [to classroom buildings) north-northwest
- William Anderson Elementary School 0.22 mile (1,175 feet [to classroom buildings] northwest.

Airports and Airstrips

The nearest airport is Los Angeles International Airport, located approximately 4 miles northwest of the Project site.

Wildfires and Fire Hazard Safety Zones

California law requires the California Department of Forestry and Fire Protection (CAL FIRE) to identify areas (zones) based on the severity of fire hazard that is expected to prevail there. The fire hazard classification system provides three classes (zones) of fire hazards: Moderate, High, and Very High. Wildland fire protection in California is the responsibility of either the State, local government, or the federal government. Local Responsibility Areas (LRAs) include incorporated cities, cultivated agriculture lands, and portions of the desert. LRA fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local governments. The Project site and entire area of Lawndale is located within an LRA, but because it is located within a dense urban area nowhere near open wildlands, it does not contain a CAL FIRE zone designation (meaning wildfire is of no concern to the site or area) (CAL FIRE, 2021).

3.7.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential to impact hazards and hazardous materials.

VII. HAZARDS AND HAZARDOUS MATERIALS Would the project:		Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☒
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☒
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒
h.	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☒

Project Impact Discussion

Routine Hazardous Materials Transport, Storage, Use, and Disposal and Accidental Release of Hazardous Materials Related to Construction and Maintenance

Impact 3.7-1: The proposed Project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or the accidental release during construction and maintenance activities.

Urban runoff may contain sediment, fuel oils, grease, and chemicals from motor vehicles, fertilizers, pesticides, herbicides, bacteria from pet waste, heavy metals, etc. (LACPW, 2015), which would accumulate within the stormwater capture system, generally within the stormwater pre-treatment system. This retention would help to minimize the impact of these materials compared to existing conditions by reducing contaminant loading to receiving waters. Vegetation and microbial activity in soil would work to biodegrade the typical fuels, oil, and grease in local urban runoff (LACPW, 2015).

Construction would involve the use of heavy equipment, which utilizes fuels and lubricants; however, the quantities involved would not create a significant hazard to the public or the

environment. No hazardous materials would be routinely transported or disposed of during construction. Impacts from construction would be less than significant.

Maintenance activities would include periodic removal of accumulated sediment and debris, which may involve heavy equipment utilizing fuel and oil. As such, maintenance activities could result in the release of these materials during routine transport, disposal, or use. The County would be required to comply with all applicable federal, State, and local laws and regulations that pertain to the transport, storage, use, and disposal of hazardous materials and waste. As such, impacts from operation would be less than significant.

The PEIR concluded that impacts associated with hazardous waste would be less than significant given that the implementing agency and its contractor would be required to comply with all relevant and applicable federal, State, and local laws and regulations that pertain to the transport, storage, use, and disposal of hazardous material and waste. This includes CERCLA, all applicable California Environmental Protection Agency (Cal-EPA) regulations, and applicable County health department and fire department regulations pertaining to hazards and hazardous materials. The proposed Project's impacts were determined to be less than significant; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Accumulation of Potentially Hazardous Materials

Impact 3.7-2: The proposed Project could create a significant hazard to the public or the environment through the accumulation of potentially hazardous materials.

The proposed Project would require the use of heavy equipment, such that a potential exists for the release of fuels and/or lubricants during construction and operation. However, the County or its contractor would have an approved Spill Prevention Countermeasure and Control Plan, which is a standard BMP that would be included as a special provision in the construction contract(s), to address any release that may occur. The Spill Prevention Countermeasure Control Plan and BMPs would be included as part of the construction Stormwater Pollution and Prevention Plan (SWPPP), required for construction.

Furthermore, in compliance with applicable laws and regulations, PMM HAZ-1 (see text below) would be implemented which requires preparation of a BMP Maintenance Plan to identify the frequency and procedures for removing and replacing accumulated debris, surface soils, and/or media to ensure constituent concentrations do not represent a hazardous condition or have the potential to migrate further and impact groundwater, and PMM UTIL-1 (see text below), has been completed, which requires that a search for local utilities above and below ground is conducted to ensure all utility conflicts are addressed.

PMM HAZ-1: Implementing agencies shall prepare and implement maintenance practices that include periodic removal and replacement of surface soils and media that may accumulate constituents that could result in further migration of constituents to sub-soils and groundwater. A BMP Maintenance Plan shall be prepared by Implementing Agencies upon approval of the BMP projects, that identifies the frequency and procedures for removal and/or replacement of accumulated debris, surface soils and/or media (to depth where constituent concentrations do not represent a hazardous condition and/or have the potential to migrate further and impact groundwater) to avoid accumulation of hazardous concentrations and the potential to migrate further to sub-soils and groundwater. The BMP Maintenance Plan may consist of a general maintenance guideline that applies to several types of smaller distributed BMPs. For smaller distributed BMPs on private property, these plans may consist of a maintenance covenant that includes requirements to avoid the accumulation of hazardous concentrations in these BMPs that

may impact underlying subsoils and groundwater. Structural BMPs shall be designed to prevent migration of constituents that may impact groundwater.

PMM UTIL-1: Prior to implementation of BMPs, the implementing agency shall conduct a search for local utilities above and below ground that could be affected by the project. The implementing agencies shall contact each utility potentially affected to address relocation of the utility if necessary to ensure access and services are maintained.

Therefore, the proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Impacts would be less than significant with mitigation incorporated.

The PEIR concluded that contaminants in the runoff water or as discrete concentrated spills could accumulate in the soils and vegetation of structural BMPs. Potential impacts from spills or contaminant accumulation would be reduced to a less-than-significant level with implementation of mitigation. Conflicts with local utilities from the siting and construction of BMPs would also be avoided with mitigation. The proposed Project's impacts have been determined to be less than significant with PMMs incorporated, and no additional mitigation measures are required. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Hazardous Materials Near Schools

Impact 3.7-3: The proposed Project could emit hazardous emission or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing school.

The proposed Project is located within 0.25 mile of El Camino College, Mark Twain Elementary School, Will Rodgers Middle School, and William Anderson Elementary School. The proposed Project would not require the use of hazardous materials or acutely hazardous materials, other than fuel and lubricants associated with operation of typical construction equipment. The County or its contractor would have an approved Spill Prevention Countermeasure and Control Plan, which is a standard BMP and would be required as a special provision in all construction contracts, to address any releases that may occur during construction or operation activities. Furthermore, in compliance with applicable laws and regulations, PMM HAZ-1 (see text under Impact 3.7-2 above), requires preparation of a BMP Maintenance Plan to identify the frequency and procedures for removing and replacing accumulated debris, surface soils, and/or media to ensure constituent concentrations do not represent a hazardous condition or have the potential to migrate further and impact groundwater. Therefore, the proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste that could impact the school sites.

PMM HAZ-1: See text under Impact 3.7-2 above.

The PEIR concluded that individual BMP projects would be required to comply with regulations that would avoid or minimize the potential for releases of hazardous materials, and the potential impacts to nearby schools would be less than significant with implementation of PMM HAZ-1. As discussed above, the proposed Project would have a less-than-significant impact to schools with the incorporation of PMM HAZ-1, and no additional mitigation measures are required. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Hazardous Materials Sites

Impact 3.7-4: The proposed Project could 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, could create a significant hazard to the public or the environment.

The proposed Project is not a listed hazardous materials site pursuant Government Code §65962.5 (Cortese List), and none of the proposed improvements would cause the Project site to be listed as a hazardous materials site. However, it is possible there could be an unknown hazardous materials site not yet included in the databases. However, such a disturbance is highly unlikely given that a recent Geotechnical Investigation for the Alondra Park Improvements Project found no presence of such historic uses or other potentially hazardous subsurface conditions within the proposed Project site up to 51.5 feet underground (URS, 2009). As such, no impact from existing contamination would occur.

The PEIR concluded that exposure to hazardous materials could be potentially significant if a BMP were to be located on a hazardous materials site, but implementation of mitigation would reduce this impact to a less-than-significant level. The proposed Project would have no impact associated with existing contamination; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Hazards near Public or Private Airports and Airstrips

Impact 3.7-5: If the proposed Project is 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, or within the vicinity of a private airstrip, the Project could result in a safety hazard for people residing or working in the Project area.

As discussed in Section 2.4.5 (Aboveground Improvements), the Project improvements to be installed above ground height would primarily be replacement trees and light fixtures. Since these trees and light fixtures replace existing trees and light fixtures, would not be of substantial heights that obstruct airspace, and the nearest airport (Los Angeles International Airport) is located four miles away, the proposed Project would not impact public airports nor subject construction workers or persons using the park to safety hazards from this airport. All other proposed Project elements are located underground. No impacts would occur.

The PEIR concluded that the location of some structural BMPs, such as detention basins, could increase hazards to aircraft if they attract wildlife on or near airports. The PEIR also concluded that none of the proposed structural BMPs would create a significant impact to an airport due to the height or glare of the structures. The proposed Project was determined to have no such impacts as the nearest airport (Los Angeles International Airport) is located four miles away. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Emergency Response Plans and Emergency Evacuation Plans

Impact 3.7-6: The proposed Project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The proposed Project would not cause any changes that would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed Project would generally be constructed within the northwest corner of Alondra Park near the parking lots located at the intersection of Manhattan Beach Boulevard and Prairie

Avenue. Some elements of the proposed Project would also be constructed underground within Manhattan Beach Boulevard to the intersection of Doty Avenue (as shown in Figure 2). Therefore, some construction activities could temporarily impact normal traffic conditions on Manhattan Beach Boulevard, Prairie Avenue, and Doty Avenue which may result in temporary lane closures or slowing of emergency response and could result in a significant impact that would be reduced to less than significant with PMM TRAF-1. Maintenance and operations would consist of routine cleaning and inspection within the park boundaries and would not require road closures, and impacts would be less than significant.

As required by the adopted PMM TRAF-1 (see text below), LACPW's Traffic Safety and Mobility Division would prepare a construction traffic control plan to reduce any impact to emergency access to a less-than-significant level.

PMM TRAF-1: For projects that may affect traffic, implementing agencies shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:

- Develop circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.
- To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
- Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.
- Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.

The PEIR concluded that effects on emergency response from temporary lane or roadway closures and blocked access to driveways could be significant but would be reduced to a less-than-significant level with implementation of mitigation. The proposed Project's impacts were determined to be less than significant with PMMs incorporated, and no additional mitigation measures are required. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Wildland Fires

Impact 3.7-7: The proposed Project could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

The Project site and entire area of Lawndale is located within an LRA, but because it is located within a dense urban area nowhere near open wildlands, it does not contain a CAL FIRE zone designation, meaning wildfire is of no concern to the site or area (CAL FIRE, 2021). The proposed Project would comply with federal and State regulations for construction fire safety, such as California Department of Transportation and California Vehicle Code requirements for spark arrestors on vehicles to minimize the risk of fire during construction. No impact would occur.

The PEIR concluded that effects on wildfire from BMP construction would be reduced to a less-than-significant level with adherence to California Department of Transportation and California Vehicle Code requirements for spark arrestors on vehicles. The proposed Project would adhere to these requirements and would not be located within a CAL FIRE fire hazard severity zone or within or near wildlands; thus, no impact would occur. Therefore, the proposed Project would not

create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.8 Hydrology and Water Quality

This section describes the existing hydrology and water quality conditions within the Project area and evaluates whether the proposed Project would result in significant hydrology or water quality impacts.

3.8.1 Environmental Setting

Climate and Hydrology. The proposed Project is within the California Climate Zone 8 that is influenced by marine air, resulting in a mild climate (CEC, 2021; PG&E, 2021). Average temperatures range from mid-50 to mid-70 degrees Fahrenheit (PG&E, 2021). The proposed Project is located within the South Coast Hydrologic Region. The highly urbanized Dominguez Channel Watershed and Project area's local drainage consists of stormwater infrastructure such as sewer lines and storm drains. The total drainage area for the proposed Project is nearly 5,000 acres and includes the DCWMA cities of Lawndale, El Segundo, Hawthorne, and unincorporated Los Angeles County, and portions of the cities of Manhattan Beach and Redondo Beach.

Floodplains. The Project site is located within a Federal Emergency Management Agency (FEMA) area mapped Zone X (Area of Minimal Flood Hazard) and is outside any designated floodplain (FEMA, 2008).

Water Quality. The Project area is within the jurisdiction of the LARWQCB. The LARWQCB assesses surface water quality and, under Section 303(d) of the Clean Water Act (CWA), prepares a list of waters (the 303(d) list of water quality limited segments) considered to be impaired. Impairment may result from both point-source and non-point source pollutants. See the regulatory setting below for additional information on the CWA.

The only watercourse within the Project area is the Dominguez Channel, which is listed by the LARWQCB as impaired under Section 303(d) of the Clean Water Act (CWA) (SWRCB, 2011).

The LARWQCB has developed a basin plan designating water quality standards and beneficial uses of surface waters (LARWQCB, 2021). Existing beneficial uses for Dominguez Channel include Commercial and Sport Fishing (COMM), Estuarine Habitat (EST), Marine Habitat (MAR), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction and/or Early Development (SPWN). Navigation (NAV) is a potential beneficial use (LARWQCB, 2014).

Groundwater. The Project site is in the South Coast Hydrologic region, which covers a region supporting a population of over 20 million people. The South Coast Hydrologic region is the fourth largest user of groundwater in California. Groundwater accounts for one-third of the region's water supply and is primarily used to meet urban water demands. Within the South Coast Hydrologic region, the proposed Project is within the Coastal Plain of Los Angeles Groundwater Basin (DWR, 2020). There are no groundwater subbasins identified beneath the Project site. The three nearest identified subbasins include Santa Monica Subbasin (4-11.01) located to the northwest, Long Beach Subbasin (4-11.03) located to the southeast, and Los Angeles Subbasin (4-11.02) located to the north (DWR, 2015).

According to the Infiltration Investigation Report, the historic high groundwater level in the northwest part of the Project site has been mapped at a depth of about 20 to 30 feet. Subsurface explorations, groundwater was encountered in most soil borings at depths of approximately 30 feet (LACPW, 2017).

3.8.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential to impact hydrology and water quality.

VIII. HYDROLOGY AND WATER QUALITY **Would the project:**		Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a.	Violate any water quality standards or waste discharge requirements?	☐	☒
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☒
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite?	☐	☒
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite?	☐	☒
e.	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☒
f.	Otherwise substantially degrade water quality?	☐	☒
g.	Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☒
h.	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☒
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☒
j.	Cause inundation by seiche, tsunami, or mudflow?	☐	☒

Project Impact Discussion

Water Quality Standards, Waste Discharge Requirements, and Further Degradation of Water Quality

Impact 3.8-1: The proposed Project would violate water quality standards or waste discharge requirements or further degrade water quality.

Water pollutants could be generated including soil sediment and petroleum-based fuels or lubricants associated with equipment used during Project construction. Project construction would result in temporary excavation and grading. If not properly addressed, stormwater pollution and erosion may occur, which could affect surface water quality during construction. Impacts to water quality during construction would be minimized through implementation of standard erosion control measures (e.g., silt fence, straw waddles) per the MS4 Permit, the SWPPP, and implementation of a Spill Prevention Countermeasure and Control Plan, which is a standard BMP that would be included as a special provision.

The proposed Project design includes features to reduce the potential for water quality impacts, including porous pavement, permeable pavers, and bioswales to enhance drainage. Regular maintenance and inspections of each stormwater enhancement component would occur to maintain proper drainage and identify necessary maintenance for the diversion structures, underground storage gallery, pretreatment system, and discharge treatment pump and filter system.

Potential water pollutants could be generated by the collection of urban runoff and stormwater prior to discharge to the storm drain or sanitary sewer. The flows would be collected into the underground storage gallery for pretreatment and storage before subsequent discharge. As described in Section 2.4.2 (Stormwater Pretreatment System), the stormwater pretreatment system would remove the majority of solids such as metals, sediment, nutrients, trash, and debris that would otherwise pollute receiving waters. The water would then flow into the underground storage gallery, be pumped through a filter system, and would be released to the storm drain or sanitary sewer depending on storm conditions and the sewer system's peak hours.

The primary benefit of the proposed Project is improved water quality to contribute to compliance with the 2012 MS4 Permit for Los Angeles County. The stormwater pretreatment system, underground storage gallery, and discharge treatment pump and filter system would reduce the amount of metals, sediment, nutrients, trash, and debris being discharged into Dominguez Channel, by intercepting and treating 40 AF and up to 56 AF of the 85th percentile 24-hour stormwater runoff volume of 223 AF from the approximately 4,945-acre drainage area that covers DCWMA cities (see Project Description Figure 1). As described in the Project Description, Project design features as well as site inspections and maintenance would effectively minimize potential erosion or siltation. Through proper implementation, the proposed Project would ultimately improve water quality in the region. Adverse impacts to State and federal water quality standards/requirements resulting from the operation of the proposed Project are not expected, as the Project would improve water quality. With proper implementation and maintenance, the proposed Project would not violate any water quality standards or waste discharge requirements. This impact would be less than significant. The long-term impact to water quality would be beneficial.

The PEIR concluded that the structural BMPs would improve water quality of detained stormwater and reduce potential sources of polluted runoff, and implementation of mitigation would ensure compliance with water quality standards and waste discharge requirements. The proposed Project would have a less-than-significant impact associated with water quality standards and

discharge requirements, and the overall impact to water quality would be beneficial. No additional mitigation measures are required. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Groundwater

Impact 3.8-2: The proposed Project would result in higher groundwater levels and could potentially affect groundwater quality.

The proposed Project would not infiltrate flows to allow for groundwater recharge and as such, would have no impact on increasing groundwater levels and affecting groundwater quality. The proposed Project would require temporary construction dewatering for excavation for the underground storage gallery. It is anticipated that groundwater would be directed by gravity to a sump location within the excavation area and pumped to the Alondra Drain for discharge in compliance with the NPDES dewatering permit. The County would comply with requirements of Order No. R4-2018-0125, General NPDES Permit No. CAG994004, Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties. Dewatering is not expected to substantially deplete groundwater supplies or interfere substantially with groundwater recharge compared to the overall use of groundwater in the South Coast Hydrologic region. Any effect to aquifer volume and the local groundwater table level would be negligible. Therefore, impacts would be less than significant.

The PEIR concluded that adverse effects from groundwater recharge in areas with limited permeability could be potentially significant if BMPs are inappropriately located or managed but would be reduced to a less-than-significant level with implementation of mitigation. As discussed above, the proposed Project would not infiltrate water but would require temporary groundwater dewatering, resulting in less-than-significant impacts to groundwater. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Drainage Pattern Alteration Resulting in Erosion or Siltation

Impact 3.8-3: The proposed Project could substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site.

The proposed Project would be constructed below grade. After installation of the below grade portions of the proposed Project, the site would be returned to existing conditions as a recreational park, with essentially no changes to the existing topography. The proposed Project would install bioswales that would reduce the amount of stormwater runoff during operations. The aboveground improvements would be similar to existing conditions and would not substantially alter the drainage pattern currently present on site, and substantial erosion or siltation resulting from the alteration of drainage patters would not occur. No alteration of the course of a stream or river is proposed. Impacts would be less than significant.

The PEIR concluded that erosion impacts resulting from the alteration of existing drainage patterns from individual projects would be less than significant. The proposed Project would have less-than-significant impacts on drainage patterns; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Drainage Pattern Alteration Resulting in Flooding

Impact 3.8-4: The proposed Project could substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or, by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.

As described under Impact 3.8-3, the Project site would be returned to existing conditions as a recreational park after installation of the below grade portions of the proposed Project. The aboveground improvements would not substantially alter the drainage pattern currently present on site, such that no increase in the rate or amount of surface runoff would occur. The proposed Project would reduce the amount of surface runoff by installing porous pavement or permeable pavers and bioswales that would have a beneficial impact. Additionally, no alteration of the course of a stream or river is proposed. Impacts would be less than significant.

The PEIR concluded that runoff and flooding impacts resulting from the alteration of existing drainage patterns from individual projects would be less than significant. The proposed Project would have less-than-significant impacts on drainage patterns; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Stormwater Drainage Systems

Impact 3.8-5: The proposed Project could 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.

The proposed Project would include a system designed to treat, capture and temporarily store dry weather flows and a portion of wet weather flows within an underground storage gallery before discharging to the sewer system or storm drain. Pumps would pump water from the underground storage gallery to the sanitary sewer or storm drain depending on flow conditions. During the sewer system's peak hours or during major storm events, water in the storage gallery would be filtered by cartridge filters or up-flow media filters and released back into the Manhattan Beach Boulevard Drain. The Project would comply with requirements of the Industrial Waste Discharge Permit to ensure flows do not exceed the Los Angeles County Sanitation Districts' capacity. Standard erosion control BMPs (e.g., silt fence, straw waddles, etc.) would be applied during construction at the Project site as needed to minimize potential erosion or siltation impacts as required by the 2012 MS4 Permit. With implementation of Project design features, compliance with the Industrial Waste Discharge Permit, and implementation of BMPs, runoff characteristics of the Project would not exceed the capacity of planned stormwater drainage systems, nor would it substantially provide substantial additional sources of polluted runoff. Impacts would be less than significant.

The PEIR concluded that impacts to stormwater drainage systems from individual projects would be less than significant. The proposed Project would have a less-than-significant impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Flood Hazards: Housing

Impact 3.8-6: The proposed Project could place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map.

FEMA administers the National Flood Insurance Program, which subsidizes flood insurance to communities that limit development in floodplains. As part of this program, FEMA maps all United States areas that fall within a 100-year floodplain (i.e., areas with a greater than 1% annual probability of flooding). The proposed Project is in Zone X (outside the FEMA 100-year flood hazard area) and does not include construction of housing (FEMA, 2008). As such, there would be no impact.

The PEIR concluded that the structural BMPs would have no impact related to the placement of housing in a flood hazard area. The proposed Project would also have no impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Flood Hazards: Structures

Impact 3.8-7: The proposed Project could place within a 100-year flood hazard area structures that would impede or redirect flood flows.

The proposed Project includes below grade infrastructure improvements within an existing recreational facility that is outside the FEMA 100-year flood hazard area (FEMA, 2008). The proposed aboveground improvements are not large enough to impede or redirect potential flood flows. No impact would occur.

The PEIR concluded that the construction of structural BMPs within a flood hazard area would have a less-than-significant impact to flood flows. The proposed Project would have no impact associated with impeding or redirecting flood flows. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Flood Hazards: Levee or Dam Failure

Impact 3.8-8: The proposed Project could expose structures to a significant risk of loss, including flooding as a result of the failure of a levee or dam.

There are no levees or dams in the vicinity of the proposed Project that could experience failure or cause flooding as a result of the proposed Project. The nearest dams (Walteria and Palos Verdes Reservoir) to the Project site are in Rancho Palos Verdes, more than six miles to the south (DWR, 2021). As such, construction and operation of the proposed Project would not result in adverse effects on people or structures from the failure of a dam or levee and there would be no impacts.

The PEIR concluded that the risk to structural BMPs from a levee or dam failure would be less than significant. The proposed Project would have no impact associated with levees or dams; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Tsunami, Seiche, or Mudflow

Impact 3.8-9: The proposed Project could place structures in areas subject to inundation by seiche, tsunami, or mudflow.

The proposed Project is located approximately 4 miles inland from the Pacific Ocean and would not cause inundation by seiche, tsunami, or mudflow. As such, there would be no impact.

The PEIR concluded that the risk to structural BMPs from a seiche, tsunami, or mudflow would be less than significant. The proposed Project would have no impact associated with seiche, tsunami, or mudflow. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.9 Land Use and Agriculture

This section addresses the potential impacts to land use and agriculture associated with the implementation of the proposed Project. It includes a description of existing environmental conditions and an evaluation of potential effects to land use and agriculture.

3.9.1 Environmental Setting

The proposed Project would be in the unincorporated area of El Camino Village in the County of Los Angeles, within the South Bay Planning Area and Alondra Park Opportunity Area (County of Los Angeles, 2015). The Project site would be subject to the policies and ordinances of the Los Angeles County 2035 General Plan and the County's Zoning Ordinance (Title 22 of the Los Angeles County Code). No adopted habitat conservation plans are applicable to the Project site (LACPW, 2015).

DOC established a soil and land use classification system that combines technical soil ratings and current land use to identify categories of Important Farmland. Currently, nearly 98 percent of the State's private lands have been surveyed by DOC to determine the status of agricultural resources (DOC, 2020a). DOC also regulates the Land Conservation Act, which enables local governments (counties and cities) to enter into Williamson Act contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market value (DOC, 2020b) No Important Farmland or Williamson Act contracts are located in the vicinity of the Project site.

3.9.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential to impact land use and agriculture.

IX. LAND USE AND AGRICULTURE Would the project:		Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a.	Physically divide an established community?	☐	☒
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☒
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☒
d.	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?	☐	☒
e.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☒
f.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☒
g.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☒
h.	Involve other changes in the existing environment that, 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?	☐	☒

Project Impact Discussion

Division of an Established Community

Impact 3.9-1: The proposed Project could physically divide an established community.

A community may be divided if a project were to introduce a physical barrier through that community. The proposed Project would construct and operate an underground storage gallery within an existing park, with components of the Project extending underground into the adjacent Manhattan Beach Boulevard. While the proposed Project would require lane closures on Manhattan Beach Boulevard during the 27-month construction period, none of the proposed Project components would create a permanent barrier during operation that could divide the surrounding community; no impact would occur.

The PEIR concluded that the structural BMPs would not physically divide an established community and there would be no impacts. Similarly, the proposed Project would not create a barrier that could divide the surrounding community and no impacts would occur. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Land Use Plan, Policy, or Regulation Confliction

Impact 3.9-2: The proposed Project could conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the program (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

As described above, the proposed Project would be subject to the policies and ordinances of the Los Angeles County 2035 General Plan and the County's Zoning Ordinance. According to the Department of Regional Planning's GIS-Net zoning application, the proposed Project would be located within Zone A-1 (Light Agricultural) (County of Los Angeles, 2020). The County has designed the proposed Project, including the location of its components, to complement with the Los Angeles County's Low Impact Development (LID) Ordinance. The EWMP Program would implement LID techniques in the proposed Project to improve stormwater quality and dry-weather flows (e.g., implementing bioswales and porous pavement or permeable pavers to enhance drainage) (LACPW, 2015). Additionally, as noted in Section 2.5 (Anticipated Permits and Other Approvals), coordination with several regulatory State and County agencies would be required to allow for construction, operation, and maintenance of the proposed improvements within the Park. Therefore, the proposed Project would not conflict with applicable land use plans, policies, or regulations, and no impact would occur.

The PEIR concluded that each structural BMP would be subject to land use zoning and General Plan designations adopted by the local municipality, and that these BMPs would complement the Los Angeles County's land use goals and policies; no impact related to conflicts with land use plan, policy, or regulation would occur. As described above, the proposed Project would not conflict with applicable County land use plans, policies, or regulations, and no impact would occur. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Habitat Conservation Plan or Natural Community Conservation Plan Conflict

Impact 3.9-3: The proposed Project could conflict with any applicable habitat conservation plan or natural community conservation plan.

The proposed Project would not be located within a habitat conservation plan or natural community conservation plan (LACPW, 2015). No impact would occur.

The PEIR concluded that only one Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) (within the City of Rancho Palos Verdes NCCP Subarea Plan) has been adopted within the EWMP areas, and BMPs proposed within this HCP/NCCP would be required to comply with the adopted plan. The proposed Project would not be located within the identified HCP/NCCP and would have no impact. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Agricultural and Forestry Resources

Impact 3.9-4: The proposed Project could 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. The proposed Project could involve other changes in the existing environment which, due to their location or nature, could result in conversion of agricultural land to non-agricultural use or conversion of forest land to non-forest use.

According to the DOC California Important Farmland Finder mapping tool, the Project site is mapped on Urban and Built-Up Land (DOC, 2016). The Project site is not located within the vicinity of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. No DOC-designated Farmland would be converted by the proposed Project, and no impact would occur.

The PEIR concluded that the structural BMPs would not convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses because the BMPs would be located primarily in high-density urban, commercial, industrial, and transportation areas, and would result in no impact. Similarly, the proposed Project would have no impact on DOC-designated Farmland; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Existing Agricultural Zoning or Williamson Act Contract Conflict

Impact 3.9-5: The proposed Project could conflict with existing zoning for agricultural use, or a Williamson Act contract.

As described under Impact 3.9-4, the proposed Project would be located on Urban and Built-Up Land (DOC, 2016). Because the Project site would not be located on agricultural land, it would not be located on land enrolled in a Williamson Act contract. The Project site includes land that is zoned A-1 (Light Agricultural), which permits uses such as single-family residences, crops, green houses, and cattle, horse, and sheep raising (County of Los Angeles, 2020; DRP, 2019). However, the Project site is currently used as a recreation area and is surrounded by a highly urbanized area with residential, commercial, recreational, and education uses. This area is not located on Williamson Act contract land, and the proposed Project would not change the current use of the site. Neither proposed Project construction nor operation would conflict with a Williamson Act contract or with zoning for agricultural use, and no impact would occur.

The PEIR concluded that the structural BMPs would not conflict with existing land zoned for agricultural use as the structural BMPs would be constructed on urbanized land, primarily streets, sidewalks, and in parks or other city-owned lands, and there would be no impacts. The proposed Project would also have no impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Forest Land Conflict

Impact 3.9-6: The proposed Project could conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). The proposed Project could result in the loss of forest land or conversion of forest land to non-forest use.

The proposed Project involves construction of an underground storage gallery within an existing park with diversion structures, pretreatment devices, and a pump and filter system to be constructed underground. The Project site is zoned A-1 and is not located on land that is zoned for forest land or timberland, and neither construction nor operation of the proposed Project would conflict with existing zoning at the site. The proposed Project would not contribute to the loss of forest land, nor would the proposed Project activities convert forest land to non-forest use. Therefore, no impact would occur.

The PEIR concluded that the structural BMPs would not conflict with existing land zoned for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production as there is no land within the EWMP groups zoned as forest land or timberland and there would be no

impacts. The structural BMPs would be constructed on urbanized land, primarily streets, sidewalks, and in parks or other city-owned lands. The proposed Project would also have no impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.10 Noise

This section addresses the potential impacts associated with the implementation of the proposed Project. It includes a description of existing noise conditions and an evaluation of potential noise effects.

3.10.1 Principles of Noise and Vibration

General Information on Noise

A brief background on the fundamentals of environmental acoustics is helpful in understanding how humans perceive various sound levels. Although extremely loud noises can cause temporary or permanent damage, the primary environmental impact of noise is annoyance. The objectionable characteristic of noise often refers to its loudness. Loudness represents the intensity of the sound wave, or the amplitude of the sound wave height measured in decibels (dB). Decibels are calculated on a logarithmic scale; thus, a 10-dB increase represents a 10-fold increase in acoustic energy or intensity, while a 20 dB increase represents a 100-fold increase in intensity. Decibels are the preferred measurement of environmental sound because of the direct relationship between a sound's intensity and the subjective "noisiness" of it. The A-weighted decibel system (dBA) is a convenient sound measurement technique that weights selected frequencies based on how well humans can perceive them.

Noise Effects on Humans. The range of human hearing spans from the minimal threshold of hearing (approximately 3 dBA) to that level of noise that is past the threshold of pain (approximately 120 dBA). In general, human sound perception is such that a change in sound level of 3 dB is just barely noticeable, while a change of 5 dB is clearly noticeable. A change of 10 dB is perceived as a doubling (or halving) of sound level. Noise levels are generally considered low when they are below 45 dBA, moderate in the 45 to 60 dBA range, and high above 60 dBA. Noise levels greater than 85 dBA can cause temporary or permanent hearing loss if exposure is sustained.

Ambient environmental noise levels can be characterized by several different descriptors. Energy Equivalent or Energy Average Level (Leq) describes the average or mean noise level over a specified period of time. Leq provides a useful measure of the impact of fluctuating noise levels on sensitive receptors over a period of time. Other descriptors of noise incorporate a weighting system that accounts for human's susceptibility to noise irritations at night. Community Noise Equivalent Level (CNEL) is a measure of cumulative noise exposure over a 24-hour period, where a 5 dB penalty is added to evening hours (7:00 p.m. to 10:00 p.m.) and a 10 dB penalty is added to night hours (10:00 p.m. to 7:00 a.m.). Day/Night Average Noise Level (Ldn) is essentially the same as CNEL, with the exception that the evening penalty is dropped.

Noise Propagation. In air, sound from a point source radiates according to inverse square laws either spherically or hemispherically from the source, depending upon whether the noise source is near a reflecting surface such as the ground. Consequently, sound will decrease at a rate of 6 dB per doubling of distance from a point source. Additional decreases will occur due to sound absorption in the air, interaction with the ground, and shielding by intervening obstacles such as terrain (hills), wall, or buildings. A noise source which is relatively long, such as a constant stream

of traffic, is called a line source, and the sound spreads cylindrically, at a rate of 3 dB per doubling of distance.

General Information on Vibration

Vibration from objects in contact with the ground will propagate energy through the ground and can be perceptible by humans and animals in the form of perceptible movement or in the form of rumbling sound caused by the vibration of room surfaces. The latter is described as ground-borne noise. High levels of vibration can result in architectural damage and structural damage depending upon the amplitude of the vibration and the fragileness of the building or structure.

Vibration is an oscillatory motion through a solid medium, in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. When assessing damage potential, vibration is often measured and reported in terms of peak particle velocity (PPV). For evaluating human response, the accepted manner to measure and report vibration is in terms of the root mean square amplitude. Like noise, vibration is normally expressed in terms of decibels (VdB) with a reference velocity of $1x10^{-6}$ inches per second (in/sec).

3.10.2 Environmental Setting

The Project site is generally located within the northwest corner of Alondra Park. Adjacent land uses include residential development to the north and west, educational/recreational (El Camino College) to the east, and the remainder of the Park to the south (extending to Redondo Beach Boulevard). The dominant noise sources include traffic along Manhattan Beach Boulevard and Prairie Avenue. To quantify the existing noise conditions of the Project area, short-term (15 minute) noise measurements were taken using a sound level meter Type 2 (Quest Technologies PL-2) at five locations surrounding the Project site at the closest residential receptors and educational institutions. Figure 3.10-1 provides the locations where sound measurements were taken. Table 3.10-1 provides the recorded ambient noise conditions in the Project area. As demonstrated in Table 3.10-1, the existing average ambient noise levels in the Project area range between 65 and 81 dBA Leq.

Figure 3.10-1. Sound Measurement Locations

Table 3.10-1. Ambient Noise Levels Representative of the Project Area (dBA)

	Location	Time & Duration	Leq	Lmax[1]	Lmin	Noted Sources
1	15903 Prairie Ave. Lawndale, CA Closest residence across from Alondra Park (west)	1:10 p.m. 15 minutes	77.8	96.0	49.4	Traffic on Prairie Ave, airplane, pedestrians, car honking, motorcycle, music from vehicles
2	3933 Manhattan Beach Blvd. Lawndale, CA Closest residence across from Alondra Park (north)	11:34 a.m. 15 minutes	74.3	94.4	48.5	Traffic on Manhattan Beach Blvd., leaves rustling, birds chirping, motorcycle, squirrel, airplane, truck loading
3	Will Rogers Middle School, 4110 W 154th Street Lawndale, CA	3:13 p.m. 15 minutes	71.4	97.8	48.8	Airplane, distant traffic, leaves rustling, wind, birds, resident moving garbage can
4	Mark Twain Elementary School, 3728 W. 154th Street	2:30 p.m. 15 minutes	64.9	86.7	48.0	Vehicles, residents and pedestrians, motorcycle
5	Alondra Park parking lot across from El Camino College & Schauerman Library, 16007 Crenshaw Blvd., Torrance, CA	1:44 p.m. 15 minutes	80.7	98.3	49.5	Traffic on Manhattan Beach Blvd., pedestrians, bicyclists

Source: Aspen, 2020.

[1]The noise meter used to conduct noise measurements resulted in unusually sensitive readings for Lmax measurements. As a result, Lmax measurements are not an accurate representation of ambient maximum noise levels.

Note: All measurements are in dBA and were taken on August 12, 2020.

Sensitive Receptors

Land uses considered to be noise sensitive generally include residential, educational and health facilities, research institutions, certain recreational and entertainment facilities (typically, indoor theaters and parks for passive activities), and churches. The closest sensitive receptors to the Project site include recreationists utilizing Alondra Park; residences along Manhattan Beach Boulevard (approximately 155 feet north) and Prairie Avenue (approximately 100 feet east), across the street from the Park; and students and faculty at the nearby schools including, El Camino College (approximately 640 feet east [to classroom buildings]), Mark Twain Elementary School (approximately 900 feet north-northeast [to classroom buildings]), Will Rogers Middle School (approximately 1,090 feet north-northwest [to classroom buildings]), and William Anderson Elementary School (approximately 1,175 feet [to classroom buildings]).

3.10.3 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential noise impacts.

X. NOISE **Would the project:**		Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a.	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?	☐	☒
b.	Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	☐	☒
c.	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒
d.	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☒
f.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☒

Project Impact Discussion

Noise Levels Standard Exceedance

Impact 3.10-1: The proposed Project could result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

The proposed Project is located within Los Angeles County. Limitation on noise from construction and operation are dictated in the Los Angeles County Code of Ordinances, Title 12 – Environmental Protection, Chapter 12.08 – Noise Control (County of Los Angeles, 2021).

Construction. Noise Ordinance Section 12.08.440, Construction Noise, prohibits the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or anytime on Sundays or holidays, if the sound creates a noise disturbance across a residential or commercial real-property line, except for emergency work of public service utilities or by variance issued by the health officer. The maximum noise during construction at residential structures shall not exceed the levels listed in Table 3.10-2. For business structures, the mobile equipment limit is 85 dBA daily, including Sunday and legal holidays (County of Los Angeles, 2021).

Table 3.10-2. Residential Structure Construction Noise Limits

Equipment Type	Single-Family Residential	Multi-Family Residential	Semiresidential / Commercial
Mobile Equipment [1]			
Daytime (7 a.m. – 8 p.m.), except Sun. & holidays	75 dBA	80 dBA	85 dBA
Nighttime (8 p.m. – 7 a.m.), all day Sun. & holidays	60 dBA	64 dBA	70 dBA
Stationary Equipment			
Daytime (7 a.m. – 8 p.m.), except Sun. & holidays	60 dBA	65 dBA	70 dBA
Nighttime (8 p.m. – 7 a.m.), all day Sun. & holidays	50 dBA	55 dBA	60 dBA

Source: County of Los Angeles, 2021.

1 – Mobile Equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment.

2 – Stationary Equipment. Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment.

Section 12.08.440, Part C, states that all mobile or stationary internal-combustion-engine powered equipment or machinery shall be equipped with suitable exhaust and air-intake silencers in proper working order. Additionally, Section 12.08.510 – Stationary nonemergency signaling devices, states that the sounding or permitting the sounding of any electronically amplified signal from any stationary bell, chime, siren, whistle, or similar device intended primarily for nonemergency purposes, from any place, for more than 10 consecutive seconds in any hourly period is prohibited. Warning devices necessary for the protection of public safety are exempted (Section 12.08.570, Activities exempt from chapter restrictions).

However, additional exemptions to the noise ordinance are described under Section 12.08.570. Per Section 12.09.570, Part H, public health and safety activities are exempt, including all transportation, flood control, and utility company maintenance and construction operations at any time on public right-of-way, and those situations which may occur on private real property deemed necessary to serve the best interest of the public and to protect the public's health and well-being, including but not limited to street sweeping, debris and limb removal, removal of downed wires, restoring electrical service, repairing traffic signals, unplugging sewers, snow removal, house moving, vacuuming catch basins, removal of damaged poles and vehicles, repair of water hydrants and mains, gas lines, oil lines, sewers, etc. The proposed Project would therefore be exempt from the County's noise ordinances.

Furthermore, construction of the proposed Project would occur Monday through Friday from 7:00 a.m. to 5:00 p.m. during the 27-month construction period. These days and hours of construction comply with the requirements of Noise Ordinance Section 12.08.440. As such, construction impacts would be less than significant.

Operation. Noise Ordinance Section 12.08.390 provides the exterior noise standards that shall apply to all receptor properties within a designated noise zone, as shown in Table 3.10-3. Additional cumulative noise limits are identified in Section 12.08.390, Part B of the County ordinance (County of Los Angeles, 2021).

Table 3.10-3. Exterior Noise Limits

Noise Zone	Land Use (Receptor Property)	Time Interval	Exterior Noise Level (dB)
I	Noise-sensitive area	Anytime	45
II	Residential properties	Nighttime (10 p.m. – 7 a.m.) Daytime (7 a.m. – 10 p.m.)	45 50
III	Commercial properties	Nighttime (10 p.m. – 7 a.m.) Daytime (7 a.m. – 10 p.m.)	55 60
IV	Industrial properties	Anytime	70

Source: County of Los Angeles, 2021.

As shown in Table 3.10-3, the most stringent (daytime) exterior noise limit is 50 dB for residential properties (Noise Zone II). Permanent new noise sources associated with operation of the proposed Project are limited to the pumps associated with the underground storage gallery which will only be operated intermittently. A total of four pumps (2 35-HP pumps, 2 5-HP pumps) would be installed. These pumps would be housed in two pump station vaults located underground within the Park near Manhattan Beach Boulevard. This is consistent with PMM NOISE-2 (see text below), which requires mechanized stationary equipment that generates noise levels to comply with applicable noise standards and to be designed with noise-attenuating features and/or located in areas (e.g., belowground) where nearby noise-sensitive land uses would not be exposed to a perceptible increase in the ambient noise levels of the area. Placement of the proposed Project's pumps in underground vaults reduces any operational noise impacts to a less-than-significant level with mitigation incorporated.

Other changes in operations would be associated with maintenance of the new underground storage gallery including, inspections, removal of debris and vacuum cleaning of diversion structures, stormwater pretreatment system, underground storage gallery, discharge treatment pump and filter system. These activities would occur periodically during daytime hours, would be of limited duration, and would not involve heavy large construction equipment, and would otherwise be exempt per noise ordinance Section 12.09.570, Part H, public health and safety activities.

Aboveground improvements to the Park would enhance existing recreation facilities and landscaping, and include removing a softball diamond and replacing it with a multi-use turf area and installation of a soccer field, but general Park uses would essentially remain unchanged. The existing DPR maintenance yard south of the Manhattan Beach Boulevard parking lot and the existing multi-purpose building and DPR offices would remain unchanged.

As such, operation of the proposed Project would not expose persons to or generate noise levels in excess of established noise standards and impacts would be less-than-significant with mitigation incorporated.

PMM NOISE-2: All structural BMPs that employ mechanized stationary equipment that generate noise levels shall comply with the applicable noise standards established by the implementing agency with jurisdiction over the structural BMP site. The equipment shall be designed with noise-attenuating features (e.g., enclosures) and/or located at areas (e.g., belowground) where nearby noise-sensitive land uses would not be exposed to a perceptible noise increase in their noise environment.

The PEIR concluded that ambient noise levels from the long-term operation of irrigation pumps could be potentially significant but would be reduced to a less-than-significant level with implementation of mitigation. The proposed Project's impacts were determined to be less than

significant with mitigation measure PMM NOISE-2; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Groundborne Vibration

Impact 3.10-2: The proposed Project could result in exposure of persons to, or generation of, excessive groundborne vibration.

Los Angeles County Code of Ordinances Section 12.08.560 – Vibration, prohibits the operation of any device that creates vibration that is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet from the source if on a public space or public right-of-way. The perception threshold is stated as a motion velocity of 0.01 in/sec over the range of 1 to 100 Hertz. (County of Los Angeles, 2021)

As documented in the PEIR, the thresholds for groundborne vibration are based on guidelines developed by the California Department of Transportation (Caltrans) in the "Transportation and Construction Vibration Guidance Manual" (September 2013). This manual was updated in 2020 (Caltrans, 2020). Tables 3.10-4 and 3.10-5 present the thresholds applied to the proposed Project. Transient sources include a single isolated event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, vibratory pile drivers, and vibratory compaction equipment.

Table 3.10-4. Guideline Vibration Damage Potential Threshold Criteria

	Maximum Peak Particle Velocity (PPV) (in/sec)	
Structures and Condition	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans, 2020 – Table 19.

Table 3.10-5. Guideline Vibration Annoyance Potential Threshold Criteria

	Maximum Peak Particle Velocity (PPV) (in/sec)	
Human Response	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible (begin to annoy people)	0.9	0.10
Severe	2.0	0.4

Source: Caltrans, 2020 – Table 20.

Vibration-sensitive land uses include high-precision manufacturing facilities or research facilities with optical and electron microscopes. None of these occur in the Project area. Therefore, the significance threshold for "excessive groundborne vibration" depends on whether a nuisance, annoyance, or physical damage to any structure could occur.

California Department of Transportation (Caltrans) guidance (see Table 3.10-4) states the vibration damage potential threshold for continuous/frequent intermittent sources (e.g., vibratory compaction equipment) is 0.3 in/sec PPV for older residential structures and 0.5 in/sec for new residential structures. With respect to vibration annoyance potential, maximum PPV of 0.01 in/sec is barely perceptible, 0.04 is distinctly perceptible, 0.10 is strongly perceptible (begin to annoy people), and 0.4 would result in a severe human response (see Table 3.10-5). As described in Project Description Section 2.4.6 (Construction), construction equipment would include use of dozers, excavators, cranes, backhoes, vibratory plate compactors, and various trucks that would generate ground-borne vibration. Operation of a vibratory roller would result in construction vibration levels of 0.210 in/sec PPV at 25 feet (FTA, 2018 – Table 7-4). Loaded trucks result in vibration levels of 0.076 in/sec PPV at 25 feet. These vibration levels would be below the vibration damage potential threshold for older residential structures (0.3 in/sec PPV). With residences located 125 feet away vibration levels would be on the order of 0.035 in/sec PPV (vibratory roller, assuming "n" value of 1.3 for competent soils as defined in Caltrans, 2020 – Table 17 for use with Eq. 12), which would be below the distinctly perceptible threshold and therefore not excessive. Operations and maintenance activities would require various trucks and would only occur periodically. Therefore, the proposed Project impacts on exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels from construction and operations would be less than significant.

The PEIR concluded that vibration impacts from individual projects would be less than significant. The proposed Project would also have a less-than-significant impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Permanent Ambient Noise Levels Increase

Impact 3.10-3: The proposed Project could result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.

As discussed above in Impact 3.10-1, adherence to PMM NOISE-2 (see text above) ensures that final design and placement of the pumps would not generate noise that could exceed the performance standards within Noise Ordinance Section 12.08.390 (as presented in Table 3.10-3). Additionally, maintenance and repairs would only occur intermittently. As such, implementation of the proposed Project would not result in a substantial permanent increase in ambient noise levels in the Project vicinity and less-than-significant impacts would occur.

PMM NOISE-2: See text under Impact 3.10-1 above.

The PEIR concluded that ambient noise levels from the long-term operation of pumps could be potentially significant but would be reduced to a less-than-significant level with implementation of PMM NOISE-1 and NOISE-2. The proposed Project's impacts were determined to be less than significant with implementation of PMM NOISE-2; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Temporary Ambient Noise Levels Increase

Impact 3.10-4: The proposed Project could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the Project.

Construction activities have the potential to temporarily increase noise levels in the Project area. There would be intermittent high-noise levels throughout construction. Noise levels would fluctuate depending on the construction activity, equipment type, duration of use, and the distance between the noise source and receiver.

Table 3.10-6 provides the estimated noise levels of construction equipment, similar to what may be required to construct the proposed Project based on the Federal Highway Administration (FHWA) Roadway Construction Noise Model. Equipment and operation noise levels in this inventory are expressed in terms of Lmax noise levels and are accompanied by a usage factor value to assume for modeling purposes. The usage factor estimates the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during construction operations.

Table 3.10-6. Noise Levels and Usage Factors for Construction Equipment

Equipment	Acoustical Usage Factor (%)	Measured Lmax, dBA (at 50 feet)	Average Noise Level, dBA Leq (at 50 feet)*
Backhoe	40	78	74
Compactor (Ground)	20	83	76
Crane	16	81	73
Dozer	40	82	78
Dump Truck	40	76	73
Excavator	40	81	77
Flat Bed Truck	40	74	70
Paver	50	77	74
Pickup Truck	40	75	71
Roller	20	80	73
Vacuum Street Sweeper	40	85	72

Source: FHWA, 2006.
Notes: Lmax – maximum A-weighted sound level (dBA, slow).
*Average noise levels calculated from the maximum noise levels using the usage factors.

As shown in Table 3.10-6, maximum noise levels associated with these individual pieces of equipment range from 74 to 85 dBA Lmax at 50 feet. Intermittent temporary noise levels at the Park during construction are expected to result in similar intermittent levels or slightly higher if more than one piece of equipment is operating at a given time. These maximum construction-related noise levels would attenuate at an average rate of 6 dBA every doubling of distance for stationary sources depending on adjacent surfaces and noise spreading (FHWA, 2006). The nearest residential receptor to the Project work areas would be approximately 100 feet from the parking lot on Prairie Avenue. At this distance, peak unmitigated Lmax noise levels would intermittently range between 64 to 75 dBA. Intermittent temporary noise levels at the work areas would likely generate similar intermittent levels or slightly higher if more than one piece of equipment is operating at a given time.

Ambient noise levels in the Project area range from 65 to 81 dbA (see Table 3.10-1) such that the noise generated from construction (64-75 dBA) may not be perceptible or result in elevate ambient noise levels. The exception may be when multiple pieces of equipment are operating at the north and west edges of the Park along Manhattan Beach Boulevard and Prairie Avenue closest to the residences or when constructing the pipelines within Manhattan Beach Boulevard to Doty Avenue.

Implementation of PMM NOISE-1 (below) would reduce construction noise levels, such that predicted noise levels are anticipated to be consistent with general construction noise (not prolonged or unnatural or unusual in their use, time, or place as to cause physical discomfort to local receptors). As such, potential impacts related to substantial temporary or periodic increases in ambient noise levels would be less than significant with mitigation incorporated.

PMM NOISE-1: The implementing agencies shall implement the following measures during construction, as needed:

- Include design measure necessary to reduce the construction noise levels, including noise barriers, curtains, or shields.
- Place noise-generating construction activities (e.g., operation of compressors and generators, cement mixing, general truck idling) as far as possible from the nearest noise-sensitive land uses.
- Locate stationary construction noise sources as far from adjacent noise-sensitive receptors as possible.
- If construction occurs near a school, the construction contractor shall coordinate with the school administration to limit disturbance to the campus. Efforts to limit construction activities to non-school days shall be encouraged.
- For the centralized and regional BMP projects (i.e., proposed Project) located adjacent to noise-sensitive land uses (schools, residences), identify a liaison for these off-site sensitive receptors, such as residents and property owners, to contact with concerns regarding construction noise and vibration. The liaison's telephone number(s) shall be prominently displayed at construction locations.
- For the centralized and regional BMP projects located adjacent to noise-sensitive land uses, notify in writing all landowners and occupants of properties adjacent to the construction area of the anticipated construction schedule at least two weeks prior to groundbreaking.

The PEIR concluded that temporary ambient noise levels may be significant if a structural BMP were to be located within 25 feet of an existing noise-sensitive land use. The proposed Project is not located within 25 feet of any noise-sensitive land uses and was found to have less than significant construction noise impacts with PMM NOISE-1 incorporated; no additional mitigation measures are required. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Exposure of Excessive Airport Noise Levels

Impact 3.10-5: For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within 2 miles of a public airport or public use airport, implementation of the proposed Project could expose people residing or working in the area to excessive noise levels.

The Project site is not located within an airport land use plan or within two miles of a public airport or public use airport. The nearest airport, Los Angeles International Airport, is located approximately 4 miles away. Therefore, the proposed Project would not expose temporary

construction workers to excessive noise levels associated with airport operations. No impact would occur.

The PEIR concluded that the structural BMPs would not expose people to excessive airport-related noise levels; the impact is less than significant. The proposed Project would have no impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Exposure of Persons to Excessive Private Airstrip Noise Levels

Impact 3.10-6: For a project located in the vicinity of a private airstrip, the proposed Project could expose people residing or working in the Project area to excessive noise levels.

The Project site is not located in the vicinity of a private airstrip and would not expose the construction workers to excessive noise levels associated with airstrip operations. The nearest airport, Los Angeles International Airport, is located approximately 4 miles away. No impact would occur.

The PEIR concluded that the structural BMPs would not expose people to excessive noise levels associated with an airstrip; the impact is less than significant. The proposed Project would have no impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.11 Population and Housing and Environmental Justice

This section addresses potential impacts to population and housing and environmental justice associated with the implementation of the proposed Project. It includes a description of existing population and housing and environmental justice conditions and an evaluation of potential effects to these factors.

3.11.1 Environmental Setting

The population and housing study area for the proposed Project includes the City of Lawndale and Angeles County. Table 3.11-1 provides U.S. Census Bureau data for population, housing, and employment for the County of Los Angeles, as the U.S. Census Bureau does not provide sufficient recent housing and employment data for the City of Lawndale.

Table 3.11-1. Population, Housing, and Employment

Location	Population	Housing Units		Employment[1]	
		Total Units	Vacancy Percentage	Total Employed	In Construction
Los Angeles County	10,098,052	3,524,321	6.2%	4,869,658	284,152

Source: U.S. Census Bureau, 2018a and 2018b

1 – Civilians employed, 16 years of age or over.

3.11.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential to impact population and housing and environmental justice.

XI. POPULATION AND HOUSING AND ENVIRONMENTAL JUSTICE Would the project:	Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☒
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☒
c. Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	☐	☒
d. Affect the health or environment of minority or low-income populations disproportionately?	☐	☒

Project Impact Discussion

Induce Substantial Population Growth

Impact 3.11-1: Implementation of the proposed Project could induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

Construction activities resulting from Project implementation are anticipated to last for approximately 27 months. Los Angeles County contains a considerable construction workforce (284,152 paid employees in construction per Table 3.11-1). The proposed Project would require up to 36 personnel at peak construction periods, with less personnel needed for most construction workdays. It is assumed that these construction personnel would come from within Los Angeles County or adjacent areas and would not generate a permanent increase in population levels or decrease available housing.

The proposed Project includes a stormwater capture system designed to capture and treat urban runoff and stormwater. It would not include the construction of new homes or businesses that would introduce a new population to the area. The proposed Project would also not indirectly introduce new housing or population to the area with the construction of the proposed stormwater capture system and recreational amenity improvements. No impacts to existing or future population growth levels would occur from construction of the proposed Project.

Operation of the proposed Project would not require new employees. Maintenance of the proposed facility would be completed by existing County personnel. Because no new homes or businesses would be constructed and the proposed Project would not require workers to relocate from outside the area, the proposed Project would generate no direct increase in the permanent population of the area, and no impact would occur.

The PEIR concluded that the structural BMPs would not impact population growth. The proposed Project would also have no impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Displace Existing Housing

Impact 3.11-2: Implementation of the proposed Project could displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

The proposed Project would not remove existing housing units from the available supply. As no housing is being removed, no displacement could occur which could otherwise require the construction of replacement housing. As such, there would be no impact.

The PEIR concluded that the structural BMPs would not impact housing or necessitate construction of additional housing, and there would be no impact. The proposed Project would also have no impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Displace Substantial Numbers of People

Impact 3.11-3: Implementation of the proposed Project could displace substantial numbers of people necessitating the construction of replacement housing elsewhere.

As discussed above, the proposed Project would not remove any existing housing units or displace any current or future residents. The proposed Project would not result in new housing or removal of existing housing in the Project area. Therefore, the proposed Project would have no impact on the displacement of persons or the need for replacement housing.

The PEIR concluded that the structural BMPs would not displace any housing or people and there would be no impact. The proposed Project would also have no impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Adverse Effects to Minority or Low-Income Populations

Impact 3.11-4: Implementation of the proposed Project could affect the health or environment of minority or low-income populations disproportionately.

The proposed Project would improve existing recreational amenities at Alondra Park and improve stormwater quality in the Dominguez Channel. Although construction activities may result in temporary impacts to the environment such as noise and air quality, mitigation would reduce those impacts to a less-than-significant level, and the proposed Project would be within a public park that would not disproportionally impact a particular demographic. Upgrading existing recreational amenities at Alondra Park would provide long-term benefits to local residents and visitors of all socioeconomic backgrounds. Improving water quality in the Dominguez Channel would also reduce adverse health effects in people who may be exposed to poor water quality in the region. Therefore, the proposed Project would result in a less-than-significant impact on the health or environment of minority or low-income populations.

The PEIR concluded that the structural BMPs would not disproportionately affect the health or environment of minority or low-income populations, and impacts would be less than significant. The proposed Project would also have less-than-significant impacts; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.12 Public Services and Recreation

This section addresses the potential impacts to public services and recreation associated with the implementation of the proposed Project. It includes a description of existing conditions of local public services and recreational facilities and an evaluation of potential effects to these resources.

3.12.1 Environmental Setting

Fire protection in the region is provided by the Los Angeles County Fire Department (LACFD). The nearest fire station to the Project site is LACFD Station #21, which is approximately 0.9-mile northwest of the Project site (4312 West 147th Street, Lawndale). The LACFD operates out of 174 fire stations. In 2018, LACFD responded to a total of 392,872 incidents, 330,059 of which were requests for emergency medical services (LACFD, 2020).

The Los Angeles County Sheriff's Department (LACSD) provides law enforcement services to the County's unincorporated communities as well as to 42 contract cities (LACSD, 2017). The Project area is served by the Central Patrol Division, South Los Angeles Sheriff's Station (1310 West Imperial Highway, Los Angeles), approximately 4 miles northeast of the Project site (LACSD, 2013).

The nearest school to the Project site is El Camino College (16007 Crenshaw Blvd, Torrance) located adjacent to the Alondra Golf Course, approximately 640 feet (to classroom buildings) east of the Project site. Mark Twain Elementary School (3728 West 154th Street, Lawndale) is approximately 900 feet (to classroom buildings) north-northeast of the Project site; Will Rogers Middle School (4110 West 154th Street, Lawndale) and William Anderson Elementary School (4130 West 154th Street, Lawndale), which are adjacent to each other and include Roger Anderson Park, are approximately 1,090 feet and 1,175 feet northwest of the Project site, respectively.

The proposed Project would be constructed within the northwest portion of Alondra Park, which is owned and operated by the County. The Park includes many amenities that are utilized by the surrounding community including two parking lots adjacent to Prairie Avenue and Manhattan Beach Boulevard, two baseball diamonds, one softball diamond, an open field, picnic areas, athletic courts, splash pad, fishing lake, exercise equipment, children's playground equipment, and public restrooms.

3.12.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential to impact public services and recreation.

XII. PUBLIC SERVICES AND RECREATION Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a) Fire protection?	☐	☒
b) Police protection?	☐	☒
c) Schools?	☐	☒
d) Parks?	☐	☒
e) Other public facilities?	☐	☒
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?	☐	☒
b. Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☒

Project Impact Discussion

Fire Protection Services

Impact 3.12-1: The proposed Project could result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services.

The proposed Project is designed to improve water quality in the Project's drainage area by constructing an underground stormwater capture system. Construction and operation of the proposed Project would not affect the area's population, and as such the proposed Project would not create a need for new or altered fire protection facilities. However, temporary lane closures and traffic detours along Manhattan Beach Boulevard could adversely affect emergency service and response times during Project construction. Potential impacts to fire protection would be reduced through implementation of adopted PMM PS-1 (see text below), which requires the County to provide reasonable advance notice to service providers such as fire, police, and emergency medical services as well as to local businesses, homeowners, and other residents adjacent to and within areas potentially affected by a proposed Project about the nature, extent, and duration of construction activities (LACPW, 2015). Interim updates would be provided to inform service providers and adjacent land uses of the status of the construction activities (LACPW, 2015). Therefore, the proposed Project would have a less-than-significant impact after mitigation on fire protection services and would not require the need for an increase in services to the Project area.

PMM PS-1: The Permittee implementing the EWMP project shall provide reasonable advance notification to service providers such as fire, police, and emergency medical services as well as to local businesses, homeowners, and other residents adjacent to and within areas potentially affected by the proposed EWMP project about the nature, extent, and duration of construction

activities. Interim updates should be provided to inform them of the status of the construction activities.

The PEIR concluded that individual BMP projects could potentially disrupt the provision of fire services during construction activities, but impacts would be reduced to a less-than-significant level with implementation of mitigation. The proposed Project's impacts were determined to be less than significant with PMMs incorporated; no additional mitigation measures are required. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Police Protection Services

Impact 3.12-2: The proposed Project could result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services.

As discussed under Impact 3.12-1, construction and operation of the proposed Project would not affect the area's population, and as such the proposed Project would not create a need for new or altered police or sheriff facilities. The proposed Project consists of an underground stormwater capture system and does not include any structures that would require police protection services. Any needed security (i.e., locks) would be part of the design of the system. Therefore, the proposed Project would have a less-than-significant impact on police or sheriff protection services and would not require the need for an increase in services to the Project area.

The PEIR concluded that the structural BMPs would not significantly affect police protection services. The proposed Project would also have a less-than-significant impact. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Schools

Impact 3.12-3: The proposed Project could result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.

The proposed Project consists of an underground stormwater capture system that would not directly affect operations at El Camino College, Mark Twain Elementary, Will Rogers Middle School, and William Anderson Elementary, or create a new demand for school services. Impacts related to access of the school during construction (i.e., performance of the circulation system) are addressed under Section 3.13 (Transportation and Traffic).

The PEIR concluded that for structural BMPs located on school sites, construction activities would not significantly affect the operation of existing school facilities, new or physically altered facilities would not be required, and impacts would be less than significant. Similarly, the proposed Project would not significantly affect school operations or create a need for new or altered school facilities and impacts would be less than significant. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Increased Use of Recreational Facilities

Impact 3.12-4: The proposed Project could 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.

Alondra Park would remain open during the approximate 27-month construction period, with only the active construction area in the northwest portion of the Park being fenced off. To maintain Park access during trenching within Manhattan Beach Boulevard or within the Park's parking lots, traffic cones and steel plates would be utilized. Further, construction personnel would park within the fenced Project site and would not utilize the Park's parking lot. Construction within the two parking lots would not occur simultaneously, such that at least one lot would be available to the general public for parking and to provide continued access to the open portions of the Park. Construction staging as well as the installation of components such as the underground storage gallery, access road, and maintenance driveway would occur within the northwest area of the Park, which would be fenced off, thereby preventing informal recreational use of the Park's open grass area. However, following construction, the ground surface would be restored to current elevations, fencing would be removed, and the aboveground improvements and modifications would enhance the Park's recreational functions. Impacts to Alondra Park would be short-term during the temporary construction period and would not prevent use of the majority of the Park's developed recreational facilities. Upon completion of construction, the baseball diamonds would be improved, and a new multi-use turf area and soccer field would be installed, offering improved recreational opportunities at the Park. No new park facilities or substantial modifications to existing park facilities would be needed to accommodate construction of the proposed Project. Furthermore, construction and operation of the proposed Project would not affect the area's population; consequently, the proposed Project would not contribute to physical deterioration of a recreational facility due to increased usership. Minor modifications would include relocation of existing Park trees and two light poles. Impacts to parks would be less than significant.

The PEIR concluded that the structural BMPs would not significantly affect existing parks or recreational facilities and impacts would be less than significant. The proposed Project would also have a less-than-significant impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Inclusion of Recreational Facilities

Impact 3.12-5: The proposed Project could include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Construction and operation of the proposed Project would not affect the area's population, and thus would not increase the demand for other public facilities. Further, there are no additional public facilities located within the Project area, other than those discussed in Impacts 3.12-1 through 3.12-4 above, that could be negatively affected by the construction or operation of the proposed Project. The proposed Project would not impact other existing public facilities, nor require the construction of new public facilities.

The proposed Project primarily involves construction of an underground stormwater capture system that would be located exclusively within the northwest portion of Alondra Park. The ground surface above the underground storage gallery would be restored to the current elevations and would require the relocation of several trees and the replacement of light poles and light fixtures. The new locations for these Park features would be determined through coordination with DPR

and would be placed within the existing Park boundaries. No other Park facilities would require relocation or expansion of the Park. Other aboveground modifications such as improvements to the baseball diamonds, installation of a new soccer field and turf area, and access road would enhance recreational activities within the Park. Construction and operation of the proposed Project within the Park would not create a substantial adverse physical effect on the environment. Impacts would be less than significant.

The PEIR concluded that structural BMPs would not result in the construction or expansion of recreational facilities, and no significant impacts would occur. The proposed Project would not impact public services or require the construction of new recreation facilities outside of the existing Park and would also have a less-than-significant impact. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.13 Transportation and Circulation

Since certification of the EWMP PEIR, CEQA was revised in accordance with the passing of Senate Bill (SB) 743, and delay-based metrics, including levels of service, are no longer required. Instead, CEQA now requires that vehicle miles traveled (VMT) be the primary metric for evaluating transportation impacts. Los Angeles County Public Works prepared the Transportation Impact Analysis Guidelines (LACPW, 2020), which provides guidance and steps to screen projects and the process to prepare a transportation impact analysis if needed.

This section addresses the potential impacts to transportation and circulation associated with the implementation of the proposed Project. It includes a description of existing traffic conditions and an evaluation of potential effects on transportation and circulation.

3.13.1 Environmental Setting

The proposed Project would generally be constructed within the northwest corner of Alondra Park near the parking lots located on Manhattan Beach Boulevard and Prairie Avenue. Some elements of the proposed Project would also be constructed underground within Manhattan Beach Boulevard to the intersection of Doty Avenue (as shown in Project Description Figure 2, Project site). Regional access to the Project site would primarily occur via Manhattan Beach Boulevard and Redondo Beach Boulevard, both of which connect Alondra Park to Interstate 405 (I-405 Freeway), which is located within approximately 0.7 miles west of the Park. Local roadways directly accessing the site include Manhattan Beach Boulevard, Redondo Beach Boulevard, and Prairie Avenue. Temporary construction activities would directly affect the following street segments:

- Manhattan Beach Boulevard (between Prairie Avenue and Doty Avenue): 4-lane divided (median) roadway providing east-west access.
- Prairie Avenue (between Manhattan Beach Boulevard and 160th Street): 4-lane divided (median) roadway providing north-south access.
- Doty Avenue (at intersection with Manhattan Beach Boulevard): 2-lane residential street with a signalized intersection at Manhattan Beach Boulevard.

3.13.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential to impact transportation and circulation.

Project Trips

Construction. For the purposes of this discussion, a trip is a one-direction trip to or from the Project site. During the 27-month construction period, workers would drive to and from the site each day. Trips would also be generated during construction for delivery/removal of equipment and materials. To evaluate a worst-case construction scenario for this assessment, a maximum number of 152 daily one-way trips may occur during peak construction (72 passenger vehicles and 80 truck trips during construction). These maximum daily trip assumptions are consistent with the peak workforce estimate of 36 workers and a worst-case assumption of 80 daily truck trips generated for the proposed Project (refer to Appendix B, Detailed Construction Information).

Operations. Operations and maintenance activities would require a limited number of personnel and trips per year. To evaluate a worst-case scenario for this assessment, a maximum number of 20 daily trips may occur during operations (10 passenger vehicles and 10 truck trips during operations), with these trips anticipated to only occur for several days per year. Operation trips would utilize the same local roadways as construction trips.

XIII. TRANSPORTATION AND CIRCULATION

Would the project:		Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a.	Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, freeways, pedestrian and bicycle paths, and mass transit?	☐	☒
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☒
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☒
d.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒
e.	Result in inadequate emergency access?	☐	☒
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☒

Project Impact Discussion

Effects on Performance of the Traffic Circulation System

Impact 3.13-1: The proposed Project could intermittently and temporarily increase traffic levels and traffic delays due to vehicle trips generated by construction workers and construction vehicles on area roadways.

Construction. As discussed in CEQA Guidelines Section 15064.3(b.3), a qualitative analysis of construction traffic VMT is appropriate. Temporary construction worker commute trips are assumed to come from the local area or from the greater Los Angeles area. Some truck trips associated with delivery of materials and equipment could originate from longer distances. While these few construction truck trips may require high VMT to access the Project site, they would be temporary trips and only in limited volumes necessary to deliver equipment and materials to the site. Such construction trips, including construction worker commute trips, are not considered to be transit-friendly trips that could reduce overall VMT of Project construction (construction workers typically travel with their own tools and safety equipment). Upon completion of construction, worker commute trips and truck trips would cease. Therefore, the worst-case daily contribution of 152 daily one-way construction trips (72 passenger vehicles and 80 truck trips during construction) are not considered to generate a substantial or permanent increase in VMT compared to regional averages for construction projects of a similar scale, nor would they conflict with plans and policies related to the reduction of VMT. Construction VMT impacts would be less than significant.

Operations. With respect to long-term permanent trips generated during Project operations, the California Office of Planning and Research has developed screening thresholds to indicate when a detailed VMT analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy or general plan, projects that generate or attract fewer than 110 trips per day during long-term operations generally may be assumed to cause a less-than-significant transportation impact (OPR, 2018). As discussed, operation of the proposed Project would only generate a maximum of 20 daily trips (10 passenger vehicles and 10 truck trips during operations), which would only occur a few days per year. Therefore, the proposed Project would not exceed the operations threshold that requires a VMT study and no long-term VMT impacts would occur from the proposed Project. Operational VMT impacts would be less than significant.

As discussed, construction of the proposed Project could temporarily interfere with existing traffic flows on Manhattan Beach Boulevard, Prairie Avenue, and Doty Avenue during the workday (Monday through Friday from 7:00 a.m. to 5:00 p.m., during the 27-month construction period). During construction, temporary impacts would occur from any necessary short-term traffic disruptions and/or lane blockages. A traffic control plan would be prepared by LACPW's Traffic Safety and Mobility Division, during the final design phase, as required by PMM TRAF-1 (see text below). The County would coordinate with the City of Lawndale to minimize traffic impacts. Adherence to adopted PMM TRAF-1 would ensure temporary roadway and traffic flow disruptions during proposed Project construction would not conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Impacts would be less than significant with mitigation incorporated.

PMM TRAF-1: For projects that may affect traffic, implementing agencies shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:

- Develop circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.
- To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
- Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.
- Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.

The PEIR concluded that construction traffic associated with structural BMPs would be reduced to a less-than-significant level with mitigation incorporated. The proposed Project's impacts were also determined to be less than significant with PMM TRAF-1 incorporated, and no additional mitigation measures are required. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Traffic Safety Hazards

Impact 3.13-2: Construction of the proposed Project could potentially cause traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways, and could increase traffic hazards due to possible road wear.

As discussed, construction of the proposed Project could temporarily interfere with existing traffic flows on Manhattan Beach Boulevard, Prairie Avenue, and Doty Avenue during the workday (Monday through Friday from 7:00 a.m. to 5:00 p.m., during the 27-month construction period). During construction, short-term traffic disruptions, lane blockages, and/or disruptions to sidewalks could impact motorists, bicyclists, and pedestrians. A traffic control plan would be prepared by LACPW's Traffic Safety and Mobility Division, during the final design phase, as required by PMM TRAF-1 (see text under Impact 3.13-1). Adherence to adopted PMM TRAF-1 would ensure temporary roadway and traffic flow disruptions during proposed Project construction would not conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Impacts would be less than significant with mitigation.

The PEIR concluded that traffic safety hazards for vehicles, bicyclists, and pedestrians from individual projects would be less than significant without mitigation. The proposed Project would have a less-than-significant impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR. Impacts would be less than significant.

Inadequate Emergency Access

Impact 3.13-3: The proposed Project could result in inadequate emergency access during construction.

The temporary disruption to travel lanes during construction of the proposed Project would potentially increase the response times for emergency vehicles (e.g., police, fire, and ambulance/paramedic units) or disrupt access to the residences along Manhattan Beach

Boulevard. The impacts would be significant if the construction activities would restrict access to or from adjacent areas with no suitable alternative access or if the construction activities would restrict the movements of emergency vehicles and there would be no reasonable alternative access routes available. The County would coordinate with the City of Lawndale to minimize potential impacts to the circulation system along impacted street segments, including coordinating with emergency service providers and ensuring access is provided to all properties along the work area. Impacts to the circulation network related to disrupting emergency vehicle response times and access due to temporary lane closure and intersection disruptions would be less than significant with mitigation.

The PEIR concluded that impacts associated with inadequate emergency access would be less than significant. The proposed Project's impacts were also determined to be less than significant with PMMs incorporated, and no additional mitigation measures are required. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.14 Utilities, Service Systems, and Energy

This section addresses the potential impacts to utilities, service systems, and energy associated with the implementation of the proposed Project. It includes a description of existing conditions and an evaluation of potential effects on utilities, service systems, and energy.

3.14.1 Environmental Setting

The proposed Project is in southern Los Angeles County. Surface and groundwater quality in the Project area is under the jurisdiction of the LARWQCB, while the Los Angeles County Flood Control District manages the majority of the County's drainage infrastructure. Water supply for the County includes local surface and groundwater, imported surface water, captured and recharged stormwater, and recycled water. West Basin Municipal Water District is the primary water agency for the Project area (LACPW, 2015; West Basin, 2021).

The County is also served by various landfills and recycling centers that are operated by incorporated cities, the County itself, and private facility operators. Waste Management provides trash collection and recycling services to the Project area under a franchise agreement with the County (LACPW, 2021).

3.14.2 Impact Analysis

The proposed Project's potential impacts were assessed using the impact criteria and thresholds of significance from the 2015 PEIR. The following sections discuss the key issues with respect to the proposed Project's potential to impact utilities, service systems, and energy.

XIV. UTILITIES, SERVICE SYSTEMS, AND ENERGY **Would the project:**	Subsequent/ Supplemental EIR: New Significant Effects or Substantially More Severe Effects	Addendum: None of the Conditions in State CEQA Guidelines Section 15162 Would Occur
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☒
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☒
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☒
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☒
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☒
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☒
g. Comply with federal, State, and local statutes and regulations related to solid waste?	☐	☒
h. Cause a substantial increase in overall or per capita energy consumption or cause wasteful or unnecessary consumption of energy?	☐	☒
i. Require construction of new sources of energy supplies or additional energy infrastructure capacity, the construction of which could cause significant environmental effects? j. Conflict with applicable energy efficiency policies or standards?	☐	☒

Project Impact Discussion

Wastewater Treatment

Impact 3.14-1: Implementation of the proposed Project could exceed wastewater treatment requirements of the applicable RWQCB or result in the construction of new treatment facilities or expansion of existing facilities if the wastewater treatment provider has inadequate capacity to serve the proposed Project.

The proposed Project would be constructed and operated in compliance with the existing MS4 Permit for Los Angeles County (Order No. R4-2012-0175), which contains requirements to reduce the discharge of pollutants in stormwater runoff to the maximum extent practicable and achieve water quality standards (LACPW, 2015). The MS4 Permit allows the County to implement the requirements of the Permit on a watershed scale through customized strategies, control measures, and BMPs such as the proposed Project. As the County would be required to comply with existing discharge permit limitations, implementation of the proposed Project would be consistent with RWQCB discharge requirements (LACPW, 2015). The proposed Project would

pretreat and discharge runoff to the sanitary sewer or treat and release runoff to the storm drain, thereby improving water quality. The proposed Project would also comply with the requirements of the Industrial Waste Discharge Permit for stormwater discharge to a Los Angeles Sanitation Districts facility. Neither construction nor operation of the proposed Project would create additional demand on the wastewater treatment provider for the Project area. Impacts would be less than significant.

The PEIR concluded that impacts to wastewater infrastructure and treatment from individual projects would be less than significant. The proposed Project was also found to have a less-than-significant impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Stormwater Facilities

Impact 3.14-2: The proposed Project could require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

The main function of the proposed Project would be to divert, treat, and discharge runoff to the sanitary sewer and/or storm drain to reduce TMDLs. As described in Impact 3.14-1, the proposed Project would comply with the requirements of the Industrial Waste Discharge Permit for stormwater discharge to a Los Angeles Sanitation District facility, and the proposed Project would not require the construction of new or expanded stormwater drainage facilities. Furthermore, the underground storage gallery would be designed to meet wastewater treatment requirements of the RWQCB permit (LACPW, 2015). Impacts would be less than significant.

The PEIR EWMP program would not involve changes to wastewater treatment facilities, and therefore the PEIR concluded that impacts to wastewater infrastructure would be less than significant. The proposed Project was also found to have a less-than-significant impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Water Supply

Impact 3.14-3: The proposed Project could require new or expanded water supply resources or entitlements or require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

The proposed Project consists of an underground stormwater treatment and capture system. The proposed Project would pretreat and discharge runoff to the sanitary sewer or treat and release runoff to the storm drain, thereby improving water quality. The proposed Project would also comply with the requirements of the Industrial Waste Discharge Permit for stormwater discharge to a Los Angeles Sanitation Districts facility. Construction may cause short-term effects on the environment, which are discussed throughout this document. No additional, new stormwater drainage facilities or expansion of existing facilities would be required for the Project. Although construction may require some minor water usage (e.g., dust control), construction would be temporary and completed in approximately 27 months. As such, water demand during construction is not expected to be substantial enough to require new or expanded water supply resources. Construction and operation of the proposed Project would not permanently increase water demands. The proposed Project would result in no impacts regarding the need for new or expanded water supply resources and less-than-significant impacts related to new or expanded water supply resources or entitlements.

The EWMP program would not increase water demand or involve changes to entitlements, and therefore the PEIR concluded that impacts to water supply would be less than significant. The proposed Project was found to have no adverse impact on water supply and would have a less-than-significant impact; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

The PEIR also concluded that individual projects would improve existing storm drainage facilities and impacts from construction would be less than significant. The proposed Project would not adversely impact stormwater drainage facilities, and impacts would be less than significant; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Solid Waste

Impact 3.14-4: The proposed Project could be served by a landfill with insufficient permitted capacity to accommodate the project solid waste disposal needs or the project could not comply with federal, state, and local statutes and regulations related to solid waste.

Construction activities associated with the proposed Project would include excavation and trenching, which would require the import and export of materials as listed in Appendix B, Table B-4. The largest potential source of solid waste during construction would be excavated soil to accommodate the underground storage gallery. Although it is anticipated that most clean soil would be reused onsite to cover the underground storage gallery, approximately 188,804 cubic yards would be hauled offsite for disposal. Waste Management provides trash collection and recycling services to the Project area under a franchise agreement with the County (LACPW, 2021). Within Los Angeles County, Waste Management operates Antelope Valley Recycling and Disposal Facility, Azusa Land Reclamation, and Lancaster Landfill and Recycling Center. As of 2019, the remaining capacities at these landfills are approximately 10.9 million tons, 58.8 million tons, and 9.9 million tons, respectively (Los Angeles Almanac, 2019). The anticipated quantities would not exceed the permitted capacity of these landfills. Impacts related to insufficient landfill capacity would be less than significant. Furthermore, potential impacts associated with solid waste would be reduced through implementation of adopted PMM UTIL-3 (see text below), which requires the County to encourage construction contractors to recycle construction materials and divert inert solids (e.g., asphalt, brick, concrete, dirt, fines, rock, sand, soil, and stone) from disposal in a landfill, where feasible (LACPW, 2015). Construction impacts would be less than significant with mitigation incorporated.

PMM UTIL-3: Implementing agencies shall encourage construction contractors to recycle construction materials and divert inert solids (asphalt, brick, concrete, dirt, fines, rock, sand, soil, and stone) from disposal in a landfill where feasible. Implementing agencies shall incentivize construction contractors with waste minimization goals in bid specifications where feasible.

The proposed Project would comply with all federal, State, and local statutes and regulations related to solid waste, including the Los Angeles County Construction and Demolition Debris Recycling and Reuse Program (LACPW, 2015). Impacts regarding noncompliance with solid waste regulations would not occur. Impacts would be less than significant with mitigation incorporated.

The PEIR concluded that construction of individual BMPs would comply with all federal, State, and local statutes and regulations related to solid waste and that impacts associated with solid waste disposal during construction of individual projects would be reduced to a level of less than significant with implementation of PMMs. The proposed Project would also comply with relevant

statues and regulations and would be less than significant with PMM UTIL-3; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Energy

Impact 3.14-5: Construction and operation of the proposed Project would require additional energy use that could result in wasteful consumption, affect local and regional energy supplies, or conflict with applicable energy efficiency policies or standards.

Construction of the proposed Project would require the use of energy in the form of gasoline and diesel for equipment and transportation of materials. However, the use of fuel for construction would not be at such a large scale that it would be wasteful or affect local or regional energy supplies. Energy used for short-term construction activities would improve water quality in the Dominguez Channel as well as improve recreational amenities at Alondra Park. As such, construction impacts would be less than significant.

Operation of the proposed Project would require the use of electricity for pumps and light fixtures. The use of electricity would be relatively minimal compared to the overall use of electricity in the County of Los Angeles and would not be considered wasteful, as the proposed Project would ensure compliance with the MS4 Permit by improving the Dominguez Channel water quality to meet compliance towards TMDLs. Operation impacts would be less than significant.

The PEIR concluded that individual BMPs would include the use of energy efficient equipment to support water conservation efforts and water quality requirements of the MS4 Permit, and that impacts to energy supplies would be less than significant. The proposed Project would also comply with the MS4 Permit by improving the Dominguez Channel water quality to meet compliance towards TMDLs, and impacts would be less than significant; therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

3.15 Wildfire

Since certification of the EWMP PEIR, the CEQA Guidelines were amended in 2019 to evaluate impacts on wildfire hazards and focuses on whether projects located in or near state responsibility areas or lands classified as very high fire severity zones by local agencies. This section addresses the potential impacts related to wildfire hazards associated with the implementation of the proposed Project. It includes a description of existing conditions and an evaluation of potential effects regarding wildfire.

3.15.1 Environmental Setting

As described in Section 3.7 (Hazards and Hazardous Materials), wildfires present a substantial threat in the state and may be started by natural processes, primarily lightning, or by human activities. CAL FIRE has established a fire hazard severity classification system to assess wildland fire potential. The fire hazard severity classification system identifies fire hazard severity zones (FHSZ), depicted on CAL FIRE maps, which consider potential fire intensity and speed, production and spread of embers, fuel loading, topography, and climate (e.g., temperature and potential for strong winds) (CAL FIRE, 2021a).

The fire hazard classification system provides three classes of FHSZ: Moderate, High, and Very High. Refer to Section 3.7 (Hazards and Hazardous Materials) for a description of State, local, and federal responsibility areas. The proposed Project is not located within any of the three

classes of FHSZ and would be located within an LRA. As such, LACFD would provide fire protection services for the Project (CAL FIRE, 2021b).

As described in Section 3.12 (Public Services and Recreation), fire protection in the region is provided by LACFD. The nearest fire station to the Project site is LACFD Station #21, which is approximately 0.9 mile northwest of the Project site (4312 West 147th Street, Lawndale). The LACFD operates out of 174 fire stations. In 2018, LACFD responded to a total of 392,872 incidents, 330,059 of which were requests for emergency medical services (LACFD, 2020).

3.15.2 Impact Analysis

The proposed Project's potential impacts to wildfire were not assessed using the impact criteria and thresholds of significance from the 2015 PEIR since wildfire was subsequently added to the CEQA Guidelines in 2019. The following sections discuss the key issues with respect to the proposed Project's potential wildfire impacts using the updated CEQA Appendix G checklist questions.

XV. WILDFIRE

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

Project Impact Discussion

Emergency Plans

Impact 3.15-1: Implementation of the proposed Project could impair an adopted emergency response plan or emergency evacuation plan.

As described under Impact 3.7-6, the proposed Project would not cause any changes that would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. During construction, temporary lane closures would be required along Manhattan Beach Boulevard between Prairie Avenue and Doty Avenue. Construction activities on public roads may block emergency access. However, all lane closures would be partial and temporary, lasting approximately three weeks at each location. Construction would comply with requirements of an encroachment permit. Traffic control plans would be prepared in accordance with PMM TRAF-1 (see Impact 3.7-6 for the full text), and the County would hold community meetings to discuss the impacts of lane closures and potential traffic detours with nearby residents and businesses. The County would also coordinate with the City of Lawndale and the LACPW Traffic Safety and Mobility Division to minimize traffic impacts on Manhattan Beach Boulevard. After installation of the underground components, the streets would be restored to pre-construction conditions. No lane closures would be necessary during operations. Impacts would be less than significant with mitigation incorporated.

The PEIR concluded that effects on emergency response from temporary lane or roadway closures and blocked access to driveways could be significant but would be reduced to a less-than-significant level with implementation of mitigation. The proposed Project's impacts were determined to be less than significant with PMM TRAF-1 incorporated, and no additional mitigation measures are required. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Exposure to Pollutants

Impact 3.15-2: The proposed Project could exacerbate wildfire risks, exposing people to pollutant concentrations from a wildfire.

The proposed Project is in a highly urbanized setting that is relatively flat and not near any wildlands or within the wildland-urban interface. It is also not located within a moderate, high, or very high FHSZ and is located almost 6 miles north of the nearest very high FHSZ in Rancho Palos Verdes (CAL FIRE, 2021b). Although construction would include equipment and vehicles that could ignite dry vegetation, the Project would comply with federal and State regulations for construction fire safety, such as requiring spark arrester protection in vehicles to reduce the potential of ignition (LACPW, 2015). Furthermore, the nearest fire station, LACFD Station #21, is less than 1 mile away from the Project site (4312 West 147th Street, Lawndale) and would provide sufficient fire protection services in the event of a fire during construction or operation. Once operational, the Park would have improved recreational facilities such as enhanced landscaping, new turf area, lighting, and sports fields, none of which would pose a substantial risk of fire. The proposed Project would not introduce a new risk of fire hazards, as open flames, dry vegetation, or other flammable materials would not be present on-site during operations. The Project area is highly unlikely to support favorable conditions for a wildfire. Therefore, the Project would have a less-than-significant impact on exacerbating wildfire risks and exposing people to pollutants from a wildfire.

The PEIR concluded that effects on wildfire from BMP construction would be reduced to a less-than-significant level with adherence to California Department of Transportation and California

Vehicle Code requirements for spark arrestors on vehicles. The proposed Project would adhere to these requirements, and impacts were determined to be less than significant. Therefore, the proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Exacerbation of Fire Risk

Impact 3.15-3: The proposed Project would require the installation of infrastructure that could exacerbate the risk of fire.

The proposed Project would install underground stormwater capture and treatment infrastructure that would not exacerbate the risk of fire. Construction activities would occur in existing streets and an irrigated park within an urbanized area, and the Project would comply with federal and State regulations for construction fire safety. As described under Impact 3.15-2, the aboveground improvements would not pose a risk of fire hazards. Regular maintenance of the stormwater capture components would include the use of maintenance trucks within paved roads and would not exacerbate the risk of fire. As a result, impacts would be less than significant. The proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

Post-fire Risks

Impact 3.15-4: The proposed Project would expose people and structures to downslope flooding or landslides as a result of runoff-post-fire slope instability, and drainage changes.

The proposed Project is not located within a moderate, high, or very high FHSZ and is almost 6 miles north of the nearest very high FHSZ in Rancho Palos Verdes (CAL FIRE, 2021b). As such, the Project area is an urban setting and not vulnerable to wildfire hazards and post-wildfire topographical instability. As discussed in Section 3.5 (Geologic and Mineral Resources), the Project area is located on relatively flat terrain with no nearby hills or mountains and is neither within a DOC-designated landslide zone nor susceptible to collapsible soils. The site is surrounded by paved streets, a golf course, and developed park. Therefore, the Project would have no impact on exposing people and structures to downslope flooding or landslides as a result of post-fire slope instability and drainage changes. No impact would occur. The proposed Project would not create a new significant impact not discussed in the PEIR or result in substantially more severe impacts than shown in the PEIR.

4. References

Introduction

DCWMA (Dominguez Channel Watershed Management Area Group). 2016. Enhanced Watershed Management Program for the Dominguez Channel Watershed Management Area Group. Final Report. Submitted by: Dominguez Channel Watershed Management Area Group, City of Los Angeles, County of Los Angeles, Los Angeles County Flood Control District, City of Hawthorne, City of Inglewood, City of El Segundo, City of Lomita, City of Carson, and City of Lawndale. February. Accessed August 21, 2020. [Online]: https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/dominguez_channel/DCWMG_EWMP_2-25-15.pdf.

LACPW (Los Angeles County Department of Public Works). 2015. Los Angeles County Flood Control District Enhanced Watershed Management Programs Draft Environmental Impact Report. Prepared by ESA. January.

Project Description

DCWMA (Dominguez Channel Watershed Management Area Group). 2016. Enhanced Watershed Management Program for the Dominguez Channel Watershed Management Area Group. Final Report. Submitted by: Dominguez Channel Watershed Management Area Group, City of Los Angeles, County of Los Angeles, Los Angeles County Flood Control District, City of Hawthorne, City of Inglewood, City of El Segundo, City of Lomita, City of Carson, and City of Lawndale. February. Accessed August 21, 2020. [Online]: https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/dominguez_channel/DCWMG_EWMP_2-25-15.pdf.

LACPW (Los Angeles County Department of Public Works). 2015. Los Angeles County Flood Control District Enhanced Watershed Management Programs Draft Environmental Impact Report. Prepared by ESA. January.

_____. 2019. Alondra Park Multi-Benefit Stormwater Capture Project, Preliminary Design Concept Report. Prepared by Tetra Tech, Inc. January 16.

Aesthetics

Caltrans (California Department of Transportation). 2019. List of Eligible and Officially Designated State Scenic Highways. Microsoft Excel digital file. Obtained from: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed September 1, 2020.

LACPW (Los Angeles County Department of Public Works). 2015. Los Angeles County Flood Control District Enhanced Watershed Management Programs Draft Environmental Impact Report. Prepared by ESA. January.

Sapphos Environmental, Inc. 2017. Historic Resource Evaluation for Alondra Community Regional Park. Prepared for County of Los Angeles Department of Parks and Recreation. April.

Air Quality

CARB (California Air Resources Board). 2021. Federal and State area designation maps. [Online]: http://www.arb.ca.gov/desig/adm/adm.htm. Accessed September 2021.

CalAdapt. 2021. Annual averages for Lawndale, California. [Online]: https://cal-adapt.org/tools/annual-averages/. Accessed September 2021.

SCAQMD (South Coast Air Quality Management District). 2009. Air Quality Analysis Guidance Handbook, Localized Significance Thresholds – Appendix C – Mass rate Look-up Table. [Online]: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2. Accessed August 2021.

_____. 2017. South Coast Air Quality Management District Rules and Regulations. [Online]: http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book. Accessed September 2021.

_____. 2019. SCAQMD Air Quality Significance Thresholds. April 2019. [Online]: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. Accessed August 2021.

_____. 2021a. NAAQS and CAAQS Attainment Status for South Coast Air Basin. [Online]: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf. Accessed September 2021.

_____. 2021b. SCAQMD Clean Air Plans Webpage. [Online]: http://www.aqmd.gov/home/air-quality/clean-air-plans. Accessed September 2021.

WRCC. 2021. Climate summaries. [Online]: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca8973. Accessed September 2021.

Biological Resources

CDFW (California Department of Fish and Wildlife). 2021a. RAREFIND database. Electronic database managed by the Natural Diversity Data Base, Wildlife Data and Habitat Analysis Branch, California Department of Fish and Game. Sacramento, CA.

_____. 2021b. Special Animals List. CDFW, Sacramento. [Online]: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline Accessed September 2021.

CNPS (California Native Plant Society). 2021. Electronic inventory of rare and endangered vascular plants of California). CNPS, Sacramento, California. [Online]: http://www.rareplants.cnps.org/.

Cultural Resources and Paleontology

Bell, A. 2020. Paleontological Resources for the Alondra Stormwater Capture Project, 3440.010. Letter report Prepared For: Aspen Environmental Group, 5020 Chesebro Road, Agoura Hills, CA 91301. Prepared By: Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007. 2p.

DeOliveira, Lauren and James Allan. 2021. Phase 1 Cultural Resources Assessment for the Alondra Park Multi-Benefit Multi Capture Project. Provided as Appendix D.

Dibblee, T. W., and J. A. Minch. 2007. Geologic Map of the Venice and Inglewood Quadrangles, Los Angeles County, California. Dibblee Foundation Map DF-322. Scale 1:24,000.

Jefferson, G. T. 1991a. A catalogue of Late Quaternary Vertebrates from California, Part One, Nonmarine.

Lower Vertebrate and Avian taxa. Natural History Museum of Los Angeles County Technical Reports no. 5. 60 p.

_____. 1991b. A catalogue of Late Quaternary Vertebrates from California, Part Two, Mammals.

Natural History Museum of Los Angeles County Technical Reports, no. 7. 129 p.

Sapphos Environmental, Inc. 2017. Historic Resource Evaluation for Alondra Community Regional Park. Prepared for County of Los Angeles Department of Parks and Recreation.

Society of Vertebrate Paleontologists (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. 11 pp. [Online]: https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines-1.pdf. Accessed September 2021.

URS. 2009. Geotechnical Investigations: Alondra Park Improvements, 3580 W. Manhattan Beach Blvd., Lawndale, California for LACPW. p. 24.

Geologic and Mineral Resources

County of Los Angeles. 2015a. Los Angeles County General Plan. [Online]: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan.pdf. Accessed September 2, 2020.

_____. 2015b. Figure 9.6, Mineral Resources. [Online]: http://planning.lacounty.gov/assets/upl/project/gp_2035_2014-FIG_9-6_mineral_resources.pdf. Accessed September 2, 2020.

DOC (California Department of Conservation). 2002. California Geomorphic Provinces, Note 36. [Online]: https://www.conservation.ca.gov/cgs/Documents/Publications/CGS-Notes/CGS-Note-36.pdf. Accessed September 3, 2020.

_____. 2019. Earthquake Zones of Required Investigation. [Online]: https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed September 3, 2020.

_____. 2020. Well Finder. [Online]: https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-118.33810/33.88375/15. Accessed September 3, 2020.

_____. 2021a. Ground Motion Interpolator. [Online]: https://www.conservation.ca.gov/cgs/ground-motion-interpolator. Accessed September 7, 2021.

_____. 2021b. Earthquake Zones of Required Investigation. [Online]: https://maps.conservation.ca.gov/cgs/EQZApp/. Accessed September 8, 2021.

LACPW (Los Angeles County Department of Public Works). 2017. Infiltration Investigation Report, Alondra Community Regional Park. PDF.

NRCS (Natural Resources Conservation Service). 2019. Web Soil Survey. [Online]: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed September 3, 2020.

SCEDC (Southern California Earthquake Data Center). 2021. Significant Earthquakes and Faults. [Online]: http://scedc.caltech.edu/significant/chron-index.html. Accessed September 7, 2021.

URS. 2009. Report, Geotechnical Investigation, Alondra Park Improvements, 3580 W. Manhattan Beach Blvd, Lawndale, California. Prepared for LACPW.

Greenhouse Gas Emissions

CAPCOA (California Air Pollution Control Officers Association). 2009. Model Policies for Greenhouse Gases in General Plans. [Online]: http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-ModelPolicies-6-12-09-915am.pdf. June 2009. Accessed September 2021.

CARB (California Air Resources Board). 2008. Climate Change Scoping Plan. December. [Online]: https://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed September 2021.

CARB (California Air Resources Board). 2021. Global Warming Potentials. September. [Online]: https://ww2.arb.ca.gov/ghg-gwps. Accessed September 2021.

County of Los Angeles. 2015. Final Unincorporated Los Angeles County Community Climate Action Plan 2020. August. [Online]: http://planning.lacounty.gov/assets/upl/project/ccap_final-august2015.pdf. Accessed September 2021.

OAG (California Office of the Attorney General). 2017. Mitigation for Greenhouse Gas Emissions. [Online]: https://oag.ca.gov/environment/ceqa/measures. Accessed September 2021.

OPR (Governor's Office of Planning and Research). 2008. Technical Advisory, CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review. [Online]: http://opr.ca.gov/docs/june08-ceqa.pdf. June 19, 2008. Accessed September 2021.

SCAQMD. 2019. SCAQMD Air Quality Significance Thresholds. April 2019. [Online]: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2. Accessed August 2021.

Hazards and Hazardous Materials

CAL FIRE (California Department of Forestry and Fire Protection). 2021. Fire Hazard Severity Zones Maps. [online]: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/. Accessed September.

LACPW (County of Los Angeles Department of Public Works). 2015. Los Angeles County Flood Control District Enhanced Watershed Management Programs Draft Environmental Impact Report. Prepared by ESA. January.

URS. 2009. Report Geotechnical Investigation Alondra Park Improvements 3580 W. Manhattan Beach Blvd. Lawndale, California for LACPW. January 12

Hydrology and Water Quality

CEC (California Energy Commission). 2021. EZ Building Climate Zone Search. [Online]: https://caenergy.maps.arcgis.com/apps/webappviewer/index.html?id=4831772c00eb4f729924167244bbca22. Accessed September 9, 2021.

DWR (California Department of Water Resources). 2015. California's Groundwater Update 2013, A Compilation of Enhanced Content for California Water Plan Update 2013. [Online]: https://cawaterlibrary.net/wp-content/uploads/2017/05/GWU2013_Ch6_SouthCoast_Final.pdf. Accessed September 10, 2021.

_____. 2020. Draft California's Groundwater, Chapter 7, Groundwater at a Glance: Hydrologic Region Summaries.

_____. 2021. Dam Breach Inundation Map Web Publisher. [Online]: https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2. Accessed September 10, 2021.

FEMA (Federal Emergency Management Agency). 2008. National Flood Hazard Layer FIRMette. [Online]: https://msc.fema.gov/arcgis/rest/directories/arcgisjobs/nfhl_print/mscprintb_gpserver/j7f185e54cebe4b25a0d298b09a270f75/scratch/FIRMETTE_68c5a3c2-6632-4631-afa2-4a36aec2b01e.pdf. Accessed September 10, 2021.

LACPW (Los Angeles County Department of Public Works). 2017. Infiltration Investigation Report, Alondra Community Regional Park. PDF.

LARWQCB (Los Angeles Regional Water Quality Control Board). 2014. Table 2-1. Beneficial Uses of Inland Surface Waters. [Online]: https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/2020/Chapter_2/Chapter_2_Table_2-1/Chapter_2_-_Table_2-1.pdf. Accessed September 9, 2021.

PG&E (Pacific Gas & Electric). 2021. California Climate Zone 8. [Online]: https://www.pge.com/includes/docs/pdfs/about/edusafety/training/pec/toolbox/arch/climate/california_climate_zone_08.pdf. Accessed September 9, 2021.

SWRCB (California State Water Resources Control Board). 2011. 2010 Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report) - 303(d) List. [Online]: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml. Accessed September 9, 2021.

Land Use and Agriculture

County of Los Angeles. 2015. Los Angeles County General Plan. [Online]: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan.pdf. Accessed September 14, 2021.

_____. 2020. GIS-NET Public. [Online]: http://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=GISNET_Public.GIS-NET_Public. Accessed September 2, 2020.

DOC (California Department of Conservation). 2016. California Important Farmland Finder. [Online]: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed September 2, 2020.

_____. 2020a. Program Overview. [Online]: https://www.conservation.ca.gov/dlrp/fmmp/Pages/Program_Overview.aspx. Accessed September 2, 2020.

_____. 2020b. Williamson Act Program. [Online]: http://www.conservation.ca.gov/dlrp/lca. Accessed September 2, 2020.

DRP (Los Angeles Department of Regional Planning). 2019. Zoning Ordinance Summary – Agricultural Zones. [Online]: http://planning.lacounty.gov/luz/summary/category/agricultural_zones. Accessed September 2, 2020.

LACPW (Los Angeles County Department of Public Works). 2015. Los Angeles County Flood Control District Enhanced Watershed Management Programs Draft Environmental Impact Report. Prepared by ESA. January.

Noise

Aspen (Aspen Environmental Group). 2020. Noise measurements conducted on August 12, 2020 by Lisa Blewitt and Stephanie Tang.

Caltrans (California Department of Transportation). 2020. Transportation and Construction Vibration Guidance Manual. April. [Online]: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf. Accessed August 30, 2021.

County of Los Angeles. 2021. Code of Ordinances, Title 12 – Environmental Protection, Chapter 12.08 – Noise Control. [Online]: https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT12ENPR_CH12.08NOCO. August 27, 2021.

FHWA (Federal Highway Administration). 2006. FHWA Highway Construction Noise Handbook. Final Report. August 2006. [Online]: https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/. Accessed August 30, 2021.

FTA (Federal Transit Administration). 2018. United States of America, Department of Transportation, Federal Transit Administration, Office of Planning and Environment. Transit Noise and Vibration Impact Assessment Manual. FTA Report No. 0123. [Online]: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed August 30, 2021.

Population and Housing and Environmental Justice

U.S. Census Bureau. 2018a. 2018 American Community Survey 5-Year Estimates, Selected Housing Characteristics. [Online]: https://data.census.gov/cedsci/table?q=ACSDP5Y2018.DP04%20Los%20Angeles%20County,%20California&g=0500000US06037&y=2018&tid=ACSDP5Y2018.DP04&moe=false&hidePreview=true. Accessed September 2, 2020.

_____. 2018b. 2018 American Community Survey 5-Year Estimates, Selected Economic Characteristics. [Online]: https://data.census.gov/cedsci/table?q=ACSDP5Y2018.DP03%20Los%20Angeles%20County,%20California&g=0500000US06037&y=2018&tid=ACSDP5Y2018.DP03&moe=false&hidePreview=true. Accessed September 2, 2020.

Public Services and Recreation

LACFD (Los Angeles County Fire Department). 2020. Los Angeles County Fire Department. [Online]: https://fire.lacounty.gov/wp-content/uploads/2020/02/Department-Overview-Booklet_Final_Sm.pdf. Accessed September 2, 2020.

LACPW (Los Angeles County Department of Public Works). 2015. Los Angeles County Flood Control District Enhanced Watershed Management Programs Draft Environmental Impact Report. Prepared by ESA. January.

LACSD (Los Angeles Count y Sheriff's Department). 2013 LASD Patrol Divisions. [Online]: http://shq.lasdnews.net/content/uoa/EPC/LASD_Jurisdiction.pdf. Accessed September 2, 2020.

_____. 2017. About the Los Angeles County Sheriff's Department. [Online]: https://www.lasd.org/about_us.html. Accessed September 2, 2020.

Transportation and Traffic

LACPW (Los Angeles County Public Works). 2020. Los Angeles County Public Works Transportation Impact Analysis Guidelines. July 23. [Online]: https://www.ladpw.org/traffic/docs/Transportation-Impact-Analysis-Guidelines-July-2020-v1.1.pdf. Accessed September 2021.

OPR (California Office of Planning and Research). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December. [Online]: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed September 8, 2021.

Utilities, Service Systems, and Energy

Los Angeles Almanac. 2019. Solid Waste Disposal Los Angeles County. [Online]: http://www.laalmanac.com/environment/ev04.php#:~:text=According%20to%20the%20Los%20Angeles,recycled%20or%20diverted%20from%20landfills. Accessed September 14, 2021.

LACPW (Los Angeles County Department of Public Works). 2015. Los Angeles County Flood Control District Enhanced Watershed Management Programs Draft Environmental Impact Report. Prepared by ESA. January.

_____. 2021. Residential Franchise System. [Online]: https://dpw.lacounty.gov/epd/swims/residents/franchise.aspx?id=ZE1FaW02bmRnbFFFenJIOTB5c2hSQT09&name=eDFJYmZ6dXo2YlNWQUM5U1gzMnFQQ2ZmSTFpOTFIemVLSzdNdnozSS8waGpRTTk1ODFPb3BaMDRiakh3V2JJVG5SdmwzbUtGb3A3N1k3VFNPb1VVdCtwTnhYRHNLRWhhQW9NMTBBSlB6Nk5CMDJreHVLZ1IwOWVPZTZGSzdRMHM2ZkpCZWtUdC9sR2lleXJ5ZmZndUd3PT0=. Accessed September 9, 2021.

West Basin, 2021. Service Area. [Online]: https://www.westbasin.org/about-us/what-we-do/service-area/. Accessed September 8, 2021.

Wildfire

CAL FIRE (California Department of Forestry and Fire Protection). 2021a. California's Fire Hazard Severity Zones. [Online]: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildfire-prevention-engineering/fire-hazard-severity-zones/#:~:text=California%20law%20requires%20CAL%20FIRE,medium%2C%20high%20and%20very%20high. Accessed September 10, 2021.

_____. 2021b. FHSZ Viewer. [Online]: https://egis.fire.ca.gov/FHSZ/. Accessed September 10, 2021.

LACFD (Los Angeles County Fire Department). 2020. Los Angeles County Fire Department. [Online]: https://fire.lacounty.gov/wp-content/uploads/2020/02/Department-Overview-Booklet_Final_Sm.pdf. Accessed September 2, 2020.

5. Comment Letters and Responses

The Alondra Park Multi-Benefit Stormwater Capture Project Addendum was circulated for review by agencies and organizations from January 14, 2022 to February 13, 2022 (32 days). The 2015 Los Angeles County Flood Control District Enhanced Watershed Management Programs Final Environmental Impact Report Program EIR, or PEIR, and the Addendum were made available on the County's website during the review period.

This section presents the comment letters received during the comment period and responses to those comments. The County received three (3) comment letters as follows:

1) Letty Arellano
2) Nancy Talcott
3) Christoph Luty

Each comment letter is presented below with individual comments numbered within each letter; responses immediately follow the comment letter.

None of the comments received on the Addendum have resulted in revisions to the document.

Comment Set 1

Letty Arellano

From: Letty Arellano <letty9651@aol.com>
Date: Thursday, January 20, 2022 at 4:16 PM
To: Grace Komjakraphan <GKomjakraphan@dpw.lacounty.gov>
Subject: Alondra park

CAUTION: External Email. Proceed Responsibly.

What impact will this project have on the surrounding neighborhood? 1-1
Irma

Sent from the all new AOL app for iOS

From: Grace Komjakraphan
To: Letty Arellano
Subject: Re: Alondra park

Good morning Letty,

Thank you for reaching out about the Alondra Park Multi-Benefit Stormwater Capture Project. The project will capture and treat stormwater, and will also include recreation improvements with drought tolerant plants, educational signage, and restoration of park amenities including the soccer field.

The environmental review of potential impacts to resources such as air quality, biological resources, cultural resources, noise, public services, and traffic, etc. is available in the Draft Addendum available here: https://dpw.lacounty.gov/wmd/stwq/files/AP/Alondra%20Addendum.pdf. No significant impacts were identified in the Addendum.

More details about the project are available on the website https://dpw.lacounty.gov/wmd/stwq/AlondraPark.aspx. In addition, the project team will also send out notice about future community meetings for this project. Thank you.

Sincerely,
Grace

Grace Komjakraphan-Tek
Pronouns: she/her
Supervising Environmental Engineering Specialist
Los Angeles County Public Works
(626) 458-4330

Response to Comment Set 1

Letty Arellano

1-1 Thank you for your question regarding the Alondra Park Multi-Benefit Stormwater Capture Project (proposed Project). The County responded directly to your question as indicated above.

The proposed Project was identified as a high-priority regional project in the Enhanced Watershed Management Program for the Dominguez Channel Watershed and was considered as part of the 2015 PEIR. The Addendum evaluated all Project-specific impacts and determined that the proposed Project would not result in any significant impacts with implementation of the mitigation measures approved as part of the 2015 PEIR. Furthermore, the Addendum concluded that the proposed Project would not create any new significant impacts not discussed in the 2015 PEIR or result in substantially more severe impacts than disclosed in the PEIR, and therefore an Addendum is the appropriate document to prepare to meet the requirements of the California Environmental Quality Act (CEQA).

Comment Set 2

Nancy Luty

From: Nancy Talcott <ntalcott@hotmail.com>
Date: Monday, February 7, 2022 at 3:50 PM
To: Grace Komjakraphan <GKomjakraphan@dpw.lacounty.gov>
Subject: Alondra Park Stormwater Capture: Use to rewater park,not go down the storm drain

CAUTION: External Email. Proceed Responsibly.

I appreciate wanting to do something with the stormwater.
You almost have it right.
Instead of cleaning the water and sending it down the storm drain, **use the stored water to water the park and the golf course.**
Here's an opportunity to save us from using our drinking water.

OR if you don't want to do that, why don't you **GIVE THE NEIGHBORS RAIN BARRELS & SHOW US HOW TO SET THEM UP.**
That way we'll take care of the runoff. We can use it on our yards. And once we get the hang of it, we'll get another couple of barrels.

WE NEED TO SAVE WATER, NOT WASTE IT!

2-1

Thank you,
Nancy Luty
Cordary Ave

Response to Comment Set 2

Nancy Luty

2-1 Thank you for your comments regarding the Alondra Park Multi-Benefit Stormwater Capture Project. Alondra Park and the Alondra Golf Course currently use reclaimed water. The proposed Project would install a new irrigation system and connect to a reclaimed water line (West Basin Municipal Water District) and meter at Prairie Avenue. As such, potable water would not be used for irrigation of the park or golf course following Project implementation.

Using the captured water as reclaimed irrigation water was not proposed by the County as there would be minimal cost-benefit due to the higher construction and maintenance costs for on-site treatment/re-use in an area that is already irrigated by reclaimed water. The County (Los Angeles County Public Works [LACPW]) also completed an infiltration investigation report to determine the characteristics of subsurface materials and infiltration rates, which indicated that the soils at Alondra Park have poor drainage, and the site is unsuitable for infiltration. As such, the Project was designed to have runoff treated and diverted into an underground storage gallery before being discharged to the storm drain and sanitary sewer (LACPW, 2017).

Additionally, the water diverted to the sanitary sewer will be treated and reused as reclaimed water by the Los Angeles County Sanitation Districts.

Regarding providing rain barrels, SoCal Water Smart is a rebate program through Metropolitan Water District which offers rebates to customers in Los Angeles. For more information on this program and tips for setting up rain barrels, please visit:

https://socalwatersmart.com/en/residential/rebates/available-rebates/rain-barrels-cisterns/

Comment Set 3

Christoph Luty

On 2/12/22, 11:57 AM, "Christoph Luty" <lutys@earthlink.net> wrote:

CAUTION: External Email. Proceed Responsibly.

Dear Ms. Komjakraphan-Tek,

Thank you for sending out the informational mailer about this project.

Just wondering—it seems like a waste to discharge the water back into the sewer or storm drain. Is there any way for the captured water to be used for another purpose, such as irrigation water for the park? 3-1

Thank you,
Christoph Luty

Response to Comment Set 3

Christoph Luty

3-1 Thank you for your question regarding the Alondra Park Multi-Benefit Stormwater Capture Project. Alondra Park and the Alondra Golf Course currently use reclaimed water. The proposed Project would install a new irrigation system and connect to a reclaimed water line (West Basin Municipal Water District) and meter at Prairie Avenue. As such, potable water would not be used for irrigation of the park or golf course following Project implementation.

Using the captured water as reclaimed irrigation water was not proposed by the County as there would be minimal cost-benefit due to the higher construction and maintenance costs for on-site treatment/re-use in an area that is already irrigated by reclaimed water. The County (Los Angeles County Public Works [LACPW]) also completed an infiltration investigation report to determine the characteristics of subsurface materials and infiltration rates, which indicated that the soils at Alondra Park have poor drainage, and the site is unsuitable for infiltration. As such, the Project was designed to have runoff treated and diverted into an underground storage gallery before being discharged to the storm drain and sanitary sewer (LACPW, 2017).

Additionally, the water diverted to the sanitary sewer will be treated and reused as reclaimed water by the Los Angeles County Sanitation Districts.

Appendix A

List of Preparers

List of Preparers

A consultant team headed by Aspen Environmental Group prepared this document under the direction of the County of Los Angeles Public Works. The preparers and technical reviewers of this document are presented below.

Lead Agency

County of Los Angeles, Department of Public Works

Grace Komjakraphan, Supervising Environmental Engineering Specialist, Project Manager — Lead Agency Contact

Project Management and Document Production

Aspen Environmental Group – Prime Contractor

Lisa Blewitt, Senior Associate	Project Manager, Noise
Brewster Birdsall, PE, Senior Engineer	Air Quality, Greenhouse Gas Emissions, Energy
Rachael Dal Porto, Environmental Engineer	Air Quality, Greenhouse Gas Emissions, Energy
Jacob Aragon, MS, Wildlife Biologist	Biological Resources
Brigit Harvey, MS, Wildlife Biologist	Biological Resources
Lauren DeOliveira, MS, Cultural Resources Specialist	Cultural Resources
Elliot D'Antin, Cultural Resources Specialist	Cultural Resources
Joe Stewart	Paleontological Resources
Scott Debauche, CEP, Environmental Planner	Hazards and Hazardous Materials, Transportation and Circulation
Tatiana Inouye, Environmental Planner	Aesthetics, Agriculture and Forestry Resources, Land Use and Planning, Population and Housing and Environmental Justice
Stephanie Tang, Environmental Scientist	Aesthetics; Agriculture and Forestry Resources; Geologic and Mineral Resources; Hydrology and Water Quality; Land Use and Planning; Population and Housing and Environmental Justice; Public Services and Recreation; Utilities, Service Systems, and Energy; Wildfire

Appendix B

Detailed Construction Information

Table B-1. Detailed Construction Schedule for the Alondra Park Multi-Benefit Stormwater Capture Project

Task	Start Date	End Date	Jan.		Feb.		Mar.		Apr.		May		Jun.		Jul.		Aug.		Sep.		Oct.		Nov.		Dec.	
Mobilization and Staging	Sept. 2022	Sept. 2022																								
Clear and Grub	Sept. 2022	Sept. 2022																								
Underground Storage Gallery and connector Pipes	Oct. 2022	Jul. 2023																								
Underground Pump Vaults, Manholes, and Pre/post-treatment Systems	Jul. 2023	Oct. 2023																								
Diversion Structures and Storm and Sewer Pipes	Oct. 2023	Jan. 2024																								
Aboveground Design Components	Jan. 2024	Aug. 2024																								
Irrigation Lines	Jan. 2024	Feb. 2024																								
Electrical/Lighting	Feb. 2024	Mar. 2024																								
Control Systems	Mar. 2024	Apr. 2024																								
Biofiltration Swales	Apr. 2024	May 2024																								
Access Roads	May 2024	Jun. 2024																								
Parking Lots	Jun. 2024	Jul. 2024																								
Landscaping	Jul. 2024	Aug. 2024																								
Demobilization	Aug. 2024	Aug. 2024																								

Information above is for estimating purposes only and are subject to change.

2022 activities
2023 activities
2024 activities

Table B-2. Off-Road Construction Equipment Use				
Task/Equipment Type	**Horsepower**	**Number**	**Hours / Day**	**# Days**
Mobilization and Staging				
Forklift	110	1	6	1
Clear and Grub				
Dozer – D6	215	1	8	3
Loader – 926M	153	1	4	3
Chipper	50	1	4	3
Chainsaw	6	1	6	3
Underground Storage Vaults and Connector Pipes				
Dozer – D6	215	2	8	150
Loader – 926M	153	2	8	170
Excavator - M317F	150	2	8	20
Vibratory soil compactor - C774B	174	1	6	20
Vibratory Plate Compactor - small	6	1	4	15
Vibratory Plate Compactor - large	16	1	4	15
Telescopic Boom Crane - large	330	1	6	75
Boom Lift	80	2	6	10
Air Compressor	50	2	8	194
Generator	100	2	8	194
Underground Pump Vaults and Pre-Post Stormwater Treatment Systems				
Backhoe JD 710	115	1	6	30
Excavator M317F	150	1	6	30
Vibratory Plate Compactor - large	16	1	4	10
Vibratory Plate Compactor - small	6	1	4	10
Crane - small	150	1	4	10
Boom Lift	80	1	6	5
Air compressor	50	1	8	60
Generator	100	1	8	60
Diversion Structures and Pipes				
Sawcutter	15	1	6	5
Backhoe JD 710	115	1	6	40
Excavator - CAT M317F	150	1	6	40
Vibratory Plate Compactor - small	6	1	4	20
AC Paving Equipment	142	1	4	5
Roller	100	1	4	5
Air Compressor	50	1	8	58
Generator	100	1	8	58
Construction Dewatering				
Honda WB20XT4A - 164 GPM (2") Water Pump	3.2	1	24	180
Above Ground Design Components				
- Irrigation Lines				
Bobcat S550	61	2	8	10
Air compressor	50	1	8	20

Table B-2. Off-Road Construction Equipment Use				
Task/Equipment Type	**Horsepower**	**Number**	**Hours / Day**	**# Days**
- Electrical/Lighting				
Bobcat S550	61	1	8	15
Boom Lift	80	1	8	15
Generator	100	1	8	30
Air Compressor	50	1	8	30
- Control Systems				
Bobcat S550	61	1	8	5
Crane - small	150	1	4	2
Generator	100	1	8	20
Air compressor	50	1	8	20
- Biofiltration Swales				
Backhoe JD 710	115	1	8	5
Bobcat S550	61	1	8	5
Sawcutter	15	1	4	5
Generator	100	1	8	15
Air compressor	50	1	8	15
- Access Roads				
Backhoe JD 710	115	1	8	5
Bobcat S550	61	1	8	25
Roller	100	1	4	5
- Parking Lots				
Backhoe JD 710	115	1	8	5
Bobcat S550	61	1	8	20
AC Paving Machine	142	1	8	2
Roller	100	1	4	2
Vibratory Plate Compactor - small	6	1	4	5
- Landscaping				
Backhoe JD 710	115	1	4	10
Boom Lift	80	1	8	10
Bobcat S550	61	2	8	20
Demobilization				
Forklift	110	1	4	2
Bobcat S550	61	1	8	5

Information above is for estimating purposes only and are subject to change.

Table B-3. Field Personnel by Task	
Task	**Personnel**
Mobilization	12
Clear and Grub	12
Underground Storage Vaults and Connector Pipes	36
Underground Pump Vaults, Manholes, and Pre/post-Treatment Systems	22
Diversion Structures and Storm and Sewer Pipes	22
Aboveground Design Components	
Irrigation Lines	12
Electrical/Lighting	12
Control Systems	8
Bioswales	8
Access Roads	12
Parking Lots	12
Landscaping	16
Demobilization	8

Note: Estimated peak workforce is anticipated to be approximately 36.
Information above is for estimating purposes only and are subject to change.

Table B-4. Materials Required for the Proposed Project		
Item Description	Unit	Quantity
Temporary Construction Fencing		
Erosion/Sediment Control Materials		
Shoring materials	CY	4,430
¾" crushed rock base	CY	8,845
Concrete for storage gallery base	CY	8,845
Pre-cast storage gallery	CY	115,000
Structure backfill	CY	4,444
Connector pipes	CY	42
Shoring materials	CY	4,430
Pre-cast storage gallery, manholes, treatment systems	CY	1,000
Trench bedding and structure backfill	CY	500
Pipes	CY	20
Concrete/rebar	CY	40
Precast manhole vault (Alondra Drain)	CY	100
Sampling vault	CY	40
Sewer manholes	CY	35
Trench bedding and structure backfill	CY	220
Pipes	CY	67
AC pavement	CY	150
Irrigation pipes, valve boxes, sprinklers, fittings	CY	10
15 new light poles and fixtures	CY	75
Conduit/conductor wire	CY	5
Pre-cast concrete pole foundations	CY	884
Control boxes	CY	18.5
Concrete for pad	CY	8
Gravel	CY	267
Biosoil	CY	400
Mulch	CY	88
Grasspave/gravelpave plastic material	CY	520
Porous asphalt	CY	445
Asphalt	CY	171
Aggregate	CY	890
Tree rootballs	CY	185
Ballfield dirt	CY	575
Concrete	CY	10

Information above is for estimating purposes only and are subject to change.

Appendix C

Air Quality Calculations

Attachment 1

AQ/GHG Emissions Inventory

Construction Emissions in accordance with Rule 403 Site Watering

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
2023	6.8579	71.4548	65.3168	0.1564	5.7657	2.0657	6.2941	1.7383	1.9496	3.0469	0	15,572.55	15,572.55	3.1489	0.6661	15849.78
2024	5.9137	60.5021	61.6609	0.1407	4.029	1.6751	5.7041	1.0974	1.582	2.6794	0	13938.57	13938.575	2.9085	0.5231	14167.16
2025	5.4972	55.6243	61.0707	0.1399	0.6148	1.871	2.4858	0.163	1.787	1.95	0	13868.69	13868.688	2.9033	0.6341	14094.25
Maximum	**6.8579**	**71.4548**	**65.3168**	**0.1564**	**5.7657**	**2.0657**	**6.2941**	**1.7383**	**1.9496**	**3.0469**	**0**	**15572.55**	**15572.552**	**3.1489**	**0.1534**	**15849.78**

	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	MT/yr					
	0	582.12	582.12	0.0664	0.0593	601.4538
	0	1322.997	1322.9966	0.1603	0.1209	1363.043
	0	668.3229	668.3229	0.1398	0.00068	672.021
Total (MT)	**0**	**2573.438**	**2573.4382**	**0.3665**	**0.18088**	**2636.518**

Attachment 2

CalEEMod Output

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Alondra Stormwater Capture

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 Heavy Industry	290.00	1000sqft	6.66	290,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Description: Project Level Evaluation, September 2021.
- Work occurs 5 days a week. 1 month = 20 work days

Land Use -

Construction Phase - Based on project description schedule

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Off-road Equipment - dozer, loader, excavator, vibratory soil compactor, vibratory plate compactors (small and large), telescopic boom crane; boom lift, air compressor, generator

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Off-road Equipment -

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Trips and VMT - 37,760 haul trips to remove 188,804 CY of excavated material - two trips per haul out and back
Personnel from table b-3 multiplied by two to get round trip totals

Grading - 188804 total cubic yards of excavated material hauled

Architectural Coating - approximately 42,000 sqft for both parking lots

Vehicle Trips - no operational phase

Consumer Products - No operational phase

Area Coating - no operational phase

Landscape Equipment - no operational phase

Energy Use - no operational phase

Water And Wastewater - no operational phase

Solid Waste - no operational phase

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	145,000.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	435,000.00	0.00
tblArchitecturalCoating	ConstArea_Parking	0.00	42,000.00
tblAreaCoating	Area_Nonresidential_Exterior	145000	0
tblAreaCoating	Area_Nonresidential_Interior	435000	0
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	230.00	205.00
tblConstructionPhase	NumDays	230.00	67.00
tblConstructionPhase	NumDays	230.00	175.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	78.00
tblConstructionPhase	NumDays	10.00	12.00
tblConsumerProducts	ROG_EF	1.98E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblGrading	AcresOfGrading	5.00	56.00
tblGrading	MaterialExported	0.00	188,804.00
tblLandscapeEquipment	NumberSummerDays	250	0
tblOffRoadEquipment	HorsePower	231.00	330.00
tblOffRoadEquipment	HorsePower	231.00	150.00
tblOffRoadEquipment	HorsePower	231.00	150.00
tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	89.00	6.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	247.00	215.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	153.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	81.00	15.00
tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	89.00	110.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	172.00	30.00
tblOffRoadEquipment	HorsePower	172.00	15.00
tblOffRoadEquipment	HorsePower	132.00	142.00
tblOffRoadEquipment	HorsePower	132.00	142.00
tblOffRoadEquipment	HorsePower	8.00	174.00
tblOffRoadEquipment	HorsePower	8.00	6.00
tblOffRoadEquipment	HorsePower	8.00	16.00
tblOffRoadEquipment	HorsePower	8.00	16.00
tblOffRoadEquipment	HorsePower	8.00	6.00
tblOffRoadEquipment	HorsePower	8.00	6.00
tblOffRoadEquipment	HorsePower	8.00	6.00
tblOffRoadEquipment	HorsePower	80.00	100.00
tblOffRoadEquipment	HorsePower	80.00	100.00
tblOffRoadEquipment	HorsePower	80.00	100.00
tblOffRoadEquipment	HorsePower	247.00	215.00
tblOffRoadEquipment	HorsePower	203.00	153.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	61.00

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	115.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblSolidWaste	SolidWasteGenerationRate	359.60	0.00
tblTripsAndVMT	HaulingTripNumber	23,601.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	37,760.00
tblTripsAndVMT	VendorTripNumber	48.00	0.00
tblTripsAndVMT	VendorTripNumber	48.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	VendorTripNumber	48.00	0.00
tblTripsAndVMT	VendorTripNumber	48.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	24.00
tblTripsAndVMT	WorkerTripNumber	10.00	24.00
tblTripsAndVMT	WorkerTripNumber	122.00	72.00
tblTripsAndVMT	WorkerTripNumber	122.00	24.00
tblTripsAndVMT	WorkerTripNumber	122.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	24.00
tblTripsAndVMT	WorkerTripNumber	122.00	31.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	WD_TR	3.93	0.00
tblWater	IndoorWaterUseRate	67,062,500.00	0.00

2.0 Emissions Summary

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.4078	71.2286	46.6908	0.1867	14.3643	2.0657	14.8927	4.3460	1.9496	4.8321	0.0000	19,441.5965	19,441.5965	2.1812	2.0095	20,094.9457
2023	4.4405	59.0058	44.4902	0.1799	4.0290	1.6751	5.7041	1.0974	1.5820	2.6794	0.0000	18,729.4120	18,729.4120	2.1548	1.8996	19,349.3488
2024	10.8986	45.7482	69.4827	0.1102	0.6148	1.8710	2.4858	0.1630	1.7870	1.9500	0.0000	10,390.0043	10,390.0043	2.1052	0.0126	10,446.3890
Maximum	**10.8986**	**71.2286**	**69.4827**	**0.1867**	**14.3643**	**2.0657**	**14.8927**	**4.3460**	**1.9496**	**4.8321**	**0.0000**	**19,441.5965**	**19,441.5965**	**2.1812**	**2.0095**	**20,094.9457**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.4078	71.2286	46.6908	0.1867	5.7657	2.0657	6.2941	1.7383	1.9496	3.0469	0.0000	19,441.5965	19,441.5965	2.1812	2.0095	20,094.9457
2023	4.4405	59.0058	44.4902	0.1799	4.0290	1.6751	5.7041	1.0974	1.5820	2.6794	0.0000	18,729.4120	18,729.4120	2.1548	1.8996	19,349.3488
2024	10.8986	45.7482	69.4827	0.1102	0.6148	1.8710	2.4858	0.1630	1.7870	1.9500	0.0000	10,390.0043	10,390.0043	2.1052	0.0126	10,446.3890
Maximum	**10.8986**	**71.2286**	**69.4827**	**0.1867**	**5.7657**	**2.0657**	**6.2941**	**1.7383**	**1.9496**	**3.0469**	**0.0000**	**19,441.5965**	**19,441.5965**	**2.1812**	**2.0095**	**20,094.9457**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**45.24**	**0.00**	**37.25**	**46.51**	**0.00**	**18.87**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.7300e-003	2.7000e-004	0.0296	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0635	0.0635	1.7000e-004		0.0676
Energy	0.1539	1.3990	1.1751	8.3900e-003		0.1063	0.1063		0.1063	0.1063		1,678.7752	1,678.7752	0.0322	0.0308	1,688.7513
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1566**	**1.3993**	**1.2047**	**8.3900e-003**	**0.0000**	**0.1064**	**0.1064**	**0.0000**	**0.1064**	**0.1064**		**1,678.8387**	**1,678.8387**	**0.0324**	**0.0308**	**1,688.8189**

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	2.7300e-003	2.7000e-004	0.0296	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0635	0.0635	1.7000e-004		0.0676
Energy	0.1539	1.3990	1.1751	8.3900e-003		0.1063	0.1063		0.1063	0.1063		1,678.7752	1,678.7752	0.0322	0.0308	1,688.7513
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1566**	**1.3993**	**1.2047**	**8.3900e-003**	**0.0000**	**0.1064**	**0.1064**	**0.0000**	**0.1064**	**0.1064**		**1,678.8387**	**1,678.8387**	**0.0324**	**0.0308**	**1,688.8189**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mobilization and Staging	Site Preparation	9/1/2022	9/16/2022	5	12	
2	Clear and Grub	Grading	9/19/2022	9/30/2022	5	10	
3	Underground Storage Gallery and Connector Pipes	Building Construction	10/3/2022	7/14/2023	5	205	
4	Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Building Construction	7/31/2023	10/31/2023	5	67	
5	Diversion Lines and Structures	Grading	10/2/2023	1/17/2024	5	78	
6	Above Ground Design Components	Building Construction	1/1/2024	8/30/2024	5	175	
7	Parking lot paving	Architectural Coating	6/10/2024	7/19/2024	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 56

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 42,000 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization and Staging	Forklifts	1	6.00	110	0.20
Clear and Grub	Other Construction Equipment	2	5.00	30	0.42
Clear and Grub	Rubber Tired Dozers	1	8.00	215	0.40

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Clear and Grub	Tractors/Loaders/Backhoes	1	6.00	153	0.37
Underground Storage Gallery and Connector Pipes	Aerial Lifts	2	6.00	80	0.31
Underground Storage Gallery and Connector Pipes	Air Compressors	2	8.00	50	0.48
Underground Storage Gallery and Connector Pipes	Cranes	1	6.00	330	0.29
Underground Storage Gallery and Connector Pipes	Excavators	2	8.00	150	0.38
Underground Storage Gallery and Connector Pipes	Generator Sets	2	8.00	100	0.74
Underground Storage Gallery and Connector Pipes	Plate Compactors	1	6.00	174	0.43
Underground Storage Gallery and Connector Pipes	Plate Compactors	1	4.00	6	0.43
Underground Storage Gallery and Connector Pipes	Plate Compactors	1	4.00	16	0.43
Underground Storage Gallery and Connector Pipes	Rubber Tired Dozers	2	8.00	215	0.40
Underground Storage Gallery and Connector Pipes	Rubber Tired Loaders	2	8.00	153	0.36
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Aerial Lifts	1	6.00	80	0.31
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Air Compressors	1	8.00	50	0.48
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Cranes	1	4.00	150	0.29
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Excavators	1	6.00	150	0.38
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Generator Sets	1	8.00	100	0.74
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Plate Compactors	1	4.00	16	0.43
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Plate Compactors	1	4.00	6	0.43
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Tractors/Loaders/Backhoes	1	6.00	115	0.37
Diversion Lines and Structures	Air Compressors	1	8.00	50	0.48
Diversion Lines and Structures	Excavators	1	6.00	150	0.38
Diversion Lines and Structures	Generator Sets	1	8.00	100	0.74
Diversion Lines and Structures	Other Construction Equipment	1	6.00	15	0.42
Diversion Lines and Structures	Paving Equipment	1	4.00	142	0.36
Diversion Lines and Structures	Plate Compactors	1	4.00	6	0.43

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Diversion Lines and Structures	Rollers	1	4.00	100	0.38
Diversion Lines and Structures	Tractors/Loaders/Backhoes	1	6.00	115	0.37
Above Ground Design Components	Aerial Lifts	1	8.00	80	0.31
Above Ground Design Components	Aerial Lifts	1	8.00	80	0.31
Above Ground Design Components	Air Compressors	1	8.00	50	0.48
Above Ground Design Components	Air Compressors	1	8.00	50	0.48
Above Ground Design Components	Air Compressors	1	8.00	50	0.48
Above Ground Design Components	Air Compressors	1	8.00	50	0.48
Above Ground Design Components	Concrete/Industrial Saws	1	4.00	15	0.73
Above Ground Design Components	Cranes	1	4.00	150	0.29
Above Ground Design Components	Forklifts	1	4.00	6	0.20
Above Ground Design Components	Generator Sets	1	8.00	100	0.74
Above Ground Design Components	Generator Sets	1	8.00	100	0.74
Above Ground Design Components	Generator Sets	1	8.00	100	0.74
Above Ground Design Components	Paving Equipment	1	8.00	142	0.36
Above Ground Design Components	Plate Compactors	1	4.00	6	0.43
Above Ground Design Components	Rollers	1	4.00	100	0.38
Above Ground Design Components	Rollers	1	4.00	100	0.38
Above Ground Design Components	Skid Steer Loaders	2	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	2	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	115	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Tractors/Loaders/Backhoes	1	8.00	115	0.37
Above Ground Design Components	Tractors/Loaders/Backhoes	1	8.00	115	0.37
Above Ground Design Components	Tractors/Loaders/Backhoes	1	4.00	115	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Above Ground Design Components	Tractors/Loaders/Backhoes	1	8.00	115	0.37
Parking lot paving	Pavers	1	8.00	130	0.42

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
Mobilization and Staging	1	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Clear and Grub	4	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Underground Storage Gallery and Connector	16	72.00	0.00	37,760.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Underground Pump Vaults, Manholes, and	8	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Underground Pump Vaults, Manholes, and	8	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Diversion Lines and Structures	8	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Above Ground Design Components	30	31.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Parking lot paving	1	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Mobilization and Staging - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1053	0.9779	1.0695	1.4200e-003		0.0648	0.0648		0.0596	0.0596		137.2196	137.2196	0.0444		138.3291
Total	**0.1053**	**0.9779**	**1.0695**	**1.4200e-003**	**0.0000**	**0.0648**	**0.0648**	**0.0000**	**0.0596**	**0.0596**		**137.2196**	**137.2196**	**0.0444**		**138.3291**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0889	0.0670	0.8685	2.3200e-003	0.2683	1.7200e-003	0.2700	0.0711	1.5800e-003	0.0727		236.4320	236.4320	6.8400e-003	6.4200e-003	238.5152
Total	**0.0889**	**0.0670**	**0.8685**	**2.3200e-003**	**0.2683**	**1.7200e-003**	**0.2700**	**0.0711**	**1.5800e-003**	**0.0727**		**236.4320**	**236.4320**	**6.8400e-003**	**6.4200e-003**	**238.5152**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Mobilization and Staging - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1053	0.9779	1.0695	1.4200e-003		0.0648	0.0648		0.0596	0.0596	0.0000	137.2196	137.2196	0.0444		138.3291
Total	**0.1053**	**0.9779**	**1.0695**	**1.4200e-003**	**0.0000**	**0.0648**	**0.0648**	**0.0000**	**0.0596**	**0.0596**	**0.0000**	**137.2196**	**137.2196**	**0.0444**		**138.3291**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0889	0.0670	0.8685	2.3200e-003	0.2683	1.7200e-003	0.2700	0.0711	1.5800e-003	0.0727		236.4320	236.4320	6.8400e-003	6.4200e-003	238.5152
Total	**0.0889**	**0.0670**	**0.8685**	**2.3200e-003**	**0.2683**	**1.7200e-003**	**0.2700**	**0.0711**	**1.5800e-003**	**0.0727**		**236.4320**	**236.4320**	**6.8400e-003**	**6.4200e-003**	**238.5152**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Clear and Grub - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.0961	0.0000	14.0961	4.2748	0.0000	4.2748			0.0000			0.0000
Off-Road	1.1338	10.2839	6.8593	0.0126		0.5267	0.5267		0.4845	0.4845		1,217.1860	1,217.1860	0.3937		1,227.0276
Total	**1.1338**	**10.2839**	**6.8593**	**0.0126**	**14.0961**	**0.5267**	**14.6227**	**4.2748**	**0.4845**	**4.7594**		**1,217.1860**	**1,217.1860**	**0.3937**		**1,227.0276**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0889	0.0670	0.8685	2.3200e-003	0.2683	1.7200e-003	0.2700	0.0711	1.5800e-003	0.0727		236.4320	236.4320	6.8400e-003	6.4200e-003	238.5152
Total	**0.0889**	**0.0670**	**0.8685**	**2.3200e-003**	**0.2683**	**1.7200e-003**	**0.2700**	**0.0711**	**1.5800e-003**	**0.0727**		**236.4320**	**236.4320**	**6.8400e-003**	**6.4200e-003**	**238.5152**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Clear and Grub - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4975	0.0000	5.4975	1.6672	0.0000	1.6672			0.0000			0.0000
Off-Road	1.1338	10.2839	6.8593	0.0126		0.5267	0.5267		0.4845	0.4845	0.0000	1,217.1860	1,217.1860	0.3937		1,227.0276
Total	**1.1338**	**10.2839**	**6.8593**	**0.0126**	**5.4975**	**0.5267**	**6.0241**	**1.6672**	**0.4845**	**2.1517**	**0.0000**	**1,217.1860**	**1,217.1860**	**0.3937**		**1,227.0276**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0889	0.0670	0.8685	2.3200e-003	0.2683	1.7200e-003	0.2700	0.0711	1.5800e-003	0.0727		236.4320	236.4320	6.8400e-003	6.4200e-003	238.5152
Total	**0.0889**	**0.0670**	**0.8685**	**2.3200e-003**	**0.2683**	**1.7200e-003**	**0.2700**	**0.0711**	**1.5800e-003**	**0.0727**		**236.4320**	**236.4320**	**6.8400e-003**	**6.4200e-003**	**238.5152**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Storage Gallery and Connector Pipes - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.3035	38.8368	36.7454	0.0653		1.8302	1.8302		1.7245	1.7245		6,189.0703	6,189.0703	1.4957		6,226.4638
Total	**4.3035**	**38.8368**	**36.7454**	**0.0653**		**1.8302**	**1.8302**		**1.7245**	**1.7245**		**6,189.0703**	**6,189.0703**	**1.4957**		**6,226.4638**

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	0.8375	32.1907	7.3399	0.1145	3.2241	0.2303	3.4544	0.8839	0.2203	1.1043		12,543.2304	12,543.2304	0.6649	1.9902	13,152.9362
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2668	0.2010	2.6055	6.9700e-003	0.8048	5.1600e-003	0.8100	0.2134	4.7500e-003	0.2182		709.2959	709.2959	0.0205	0.0193	715.5457
Total	**1.1043**	**32.3918**	**9.9454**	**0.1215**	**4.0289**	**0.2355**	**4.2644**	**1.0974**	**0.2251**	**1.3225**		**13,252.5262**	**13,252.5262**	**0.6854**	**2.0095**	**13,868.4819**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Storage Gallery and Connector Pipes - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.3035	38.8368	36.7454	0.0653		1.8302	1.8302		1.7245	1.7245	0.0000	6,189.0703	6,189.0703	1.4957		6,226.4638
Total	**4.3035**	**38.8368**	**36.7454**	**0.0653**		**1.8302**	**1.8302**		**1.7245**	**1.7245**	**0.0000**	**6,189.0703**	**6,189.0703**	**1.4957**		**6,226.4638**

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	0.8375	32.1907	7.3399	0.1145	3.2241	0.2303	3.4544	0.8839	0.2203	1.1043		12,543.2304	12,543.2304	0.6649	1.9902	13,152.9362
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2668	0.2010	2.6055	6.9700e-003	0.8048	5.1600e-003	0.8100	0.2134	4.7500e-003	0.2182		709.2959	709.2959	0.0205	0.0193	715.5457
Total	**1.1043**	**32.3918**	**9.9454**	**0.1215**	**4.0289**	**0.2355**	**4.2644**	**1.0974**	**0.2251**	**1.3225**		**13,252.5262**	**13,252.5262**	**0.6854**	**2.0095**	**13,868.4819**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Storage Gallery and Connector Pipes - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.8191	33.7331	35.5886	0.0653		1.5183	1.5183		1.4321	1.4321		6,188.8058	6,188.8058	1.4854		6,225.9397
Total	**3.8191**	**33.7331**	**35.5886**	**0.0653**		**1.5183**	**1.5183**		**1.4321**	**1.4321**		**6,188.8058**	**6,188.8058**	**1.4854**		**6,225.9397**

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	0.3737	25.0952	6.5035	0.1078	3.2242	0.1520	3.3762	0.8840	0.1454	1.0294		11,849.9630	11,849.9630	0.6510	1.8818	12,427.0164
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2477	0.1776	2.3982	6.7500e-003	0.8048	4.8600e-003	0.8097	0.2134	4.4700e-003	0.2179		690.6432	690.6432	0.0184	0.0178	696.3927
Total	**0.6214**	**25.2728**	**8.9016**	**0.1146**	**4.0290**	**0.1569**	**4.1859**	**1.0974**	**0.1499**	**1.2473**		**12,540.6062**	**12,540.6062**	**0.6694**	**1.8996**	**13,123.4091**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Storage Gallery and Connector Pipes - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.8191	33.7331	35.5886	0.0653		1.5183	1.5183		1.4321	1.4321	0.0000	6,188.8058	6,188.8058	1.4854		6,225.9397
Total	**3.8191**	**33.7331**	**35.5886**	**0.0653**		**1.5183**	**1.5183**		**1.4321**	**1.4321**	**0.0000**	**6,188.8058**	**6,188.8058**	**1.4854**		**6,225.9397**

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	0.3737	25.0952	6.5035	0.1078	3.2242	0.1520	3.3762	0.8840	0.1454	1.0294		11,849.9630	11,849.9630	0.6510	1.8818	12,427.0164
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2477	0.1776	2.3982	6.7500e-003	0.8048	4.8600e-003	0.8097	0.2134	4.4700e-003	0.2179		690.6432	690.6432	0.0184	0.0178	696.3927
Total	**0.6214**	**25.2728**	**8.9016**	**0.1146**	**4.0290**	**0.1569**	**4.1859**	**1.0974**	**0.1499**	**1.2473**		**12,540.6062**	**12,540.6062**	**0.6694**	**1.8996**	**13,123.4091**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Underground Pump Vaults, Manholes, and Pre/post-treatment systems - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1622	9.6051	13.1912	0.0209		0.4384	0.4384		0.4211	0.4211		1,956.3665	1,956.3665	0.3732		1,965.6963
Total	**1.1622**	**9.6051**	**13.1912**	**0.0209**		**0.4384**	**0.4384**		**0.4211**	**0.4211**		**1,956.3665**	**1,956.3665**	**0.3732**		**1,965.6963**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0826	0.0592	0.7994	2.2500e-003	0.5015	1.6200e-003	0.5031	0.1284	1.4900e-003	0.1299		230.2144	230.2144	6.1400e-003	5.9200e-003	232.1309
Total	**0.0826**	**0.0592**	**0.7994**	**2.2500e-003**	**0.5015**	**1.6200e-003**	**0.5031**	**0.1284**	**1.4900e-003**	**0.1299**		**230.2144**	**230.2144**	**6.1400e-003**	**5.9200e-003**	**232.1309**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Underground Pump Vaults, Manholes, and Pre/post-treatment systems - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1622	9.6051	13.1912	0.0209		0.4384	0.4384		0.4211	0.4211	0.0000	1,956.3665	1,956.3665	0.3732		1,965.6963
Total	**1.1622**	**9.6051**	**13.1912**	**0.0209**		**0.4384**	**0.4384**		**0.4211**	**0.4211**	**0.0000**	**1,956.3665**	**1,956.3665**	**0.3732**		**1,965.6963**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0826	0.0592	0.7994	2.2500e-003	0.5015	1.6200e-003	0.5031	0.1284	1.4900e-003	0.1299		230.2144	230.2144	6.1400e-003	5.9200e-003	232.1309
Total	**0.0826**	**0.0592**	**0.7994**	**2.2500e-003**	**0.5015**	**1.6200e-003**	**0.5031**	**0.1284**	**1.4900e-003**	**0.1299**		**230.2144**	**230.2144**	**6.1400e-003**	**5.9200e-003**	**232.1309**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Diversion Lines and Structures - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.2269	9.7292	13.7862	0.0217		0.4679	0.4679		0.4482	0.4482		2,034.5388	2,034.5388	0.3985		2,044.5007
Total	**1.2269**	**9.7292**	**13.7862**	**0.0217**	**0.0000**	**0.4679**	**0.4679**	**0.0000**	**0.4482**	**0.4482**		**2,034.5388**	**2,034.5388**	**0.3985**		**2,044.5007**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0826	0.0592	0.7994	2.2500e-003	0.2683	1.6200e-003	0.2699	0.0711	1.4900e-003	0.0726		230.2144	230.2144	6.1400e-003	5.9200e-003	232.1309
Total	**0.0826**	**0.0592**	**0.7994**	**2.2500e-003**	**0.2683**	**1.6200e-003**	**0.2699**	**0.0711**	**1.4900e-003**	**0.0726**		**230.2144**	**230.2144**	**6.1400e-003**	**5.9200e-003**	**232.1309**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Diversion Lines and Structures - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.2269	9.7292	13.7862	0.0217		0.4679	0.4679		0.4482	0.4482	0.0000	2,034.5388	2,034.5388	0.3985		2,044.5007
Total	**1.2269**	**9.7292**	**13.7862**	**0.0217**	**0.0000**	**0.4679**	**0.4679**	**0.0000**	**0.4482**	**0.4482**	**0.0000**	**2,034.5388**	**2,034.5388**	**0.3985**		**2,044.5007**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0826	0.0592	0.7994	2.2500e-003	0.2683	1.6200e-003	0.2699	0.0711	1.4900e-003	0.0726		230.2144	230.2144	6.1400e-003	5.9200e-003	232.1309
Total	**0.0826**	**0.0592**	**0.7994**	**2.2500e-003**	**0.2683**	**1.6200e-003**	**0.2699**	**0.0711**	**1.4900e-003**	**0.0726**		**230.2144**	**230.2144**	**6.1400e-003**	**5.9200e-003**	**232.1309**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Diversion Lines and Structures - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.1565	9.1789	13.7768	0.0217		0.4156	0.4156		0.3978	0.3978		2,034.8339	2,034.8339	0.3943		2,044.6907
Total	**1.1565**	**9.1789**	**13.7768**	**0.0217**	**0.0000**	**0.4156**	**0.4156**	**0.0000**	**0.3978**	**0.3978**		**2,034.8339**	**2,034.8339**	**0.3943**		**2,044.6907**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0772	0.0528	0.7447	2.1900e-003	0.2683	1.5500e-003	0.2698	0.0711	1.4300e-003	0.0726		225.4896	225.4896	5.5600e-003	5.5000e-003	227.2676
Total	**0.0772**	**0.0528**	**0.7447**	**2.1900e-003**	**0.2683**	**1.5500e-003**	**0.2698**	**0.0711**	**1.4300e-003**	**0.0726**		**225.4896**	**225.4896**	**5.5600e-003**	**5.5000e-003**	**227.2676**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Diversion Lines and Structures - 2024

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.1565	9.1789	13.7768	0.0217		0.4156	0.4156		0.3978	0.3978	0.0000	2,034.8339	2,034.8339	0.3943		2,044.6907
Total	**1.1565**	**9.1789**	**13.7768**	**0.0217**	**0.0000**	**0.4156**	**0.4156**	**0.0000**	**0.3978**	**0.3978**	**0.0000**	**2,034.8339**	**2,034.8339**	**0.3943**		**2,044.6907**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0772	0.0528	0.7447	2.1900e-003	0.2683	1.5500e-003	0.2698	0.0711	1.4300e-003	0.0726		225.4896	225.4896	5.5600e-003	5.5000e-003	227.2676
Total	**0.0772**	**0.0528**	**0.7447**	**2.1900e-003**	**0.2683**	**1.5500e-003**	**0.2698**	**0.0711**	**1.4300e-003**	**0.0726**		**225.4896**	**225.4896**	**5.5600e-003**	**5.5000e-003**	**227.2676**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Above Ground Design Components - 2024

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	4.0490	36.4482	53.9992	0.0835		1.4519	1.4519		1.3859	1.3859		7,838.4234	7,838.4234	1.6981		7,880.8769
Total	**4.0490**	**36.4482**	**53.9992**	**0.0835**		**1.4519**	**1.4519**		**1.3859**	**1.3859**		**7,838.4234**	**7,838.4234**	**1.6981**		**7,880.8769**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0997	0.0683	0.9620	2.8200e-003	0.3465	2.0100e-003	0.3485	0.0919	1.8500e-003	0.0937		291.2574	291.2574	7.1800e-003	7.1000e-003	293.5539
Total	**0.0997**	**0.0683**	**0.9620**	**2.8200e-003**	**0.3465**	**2.0100e-003**	**0.3485**	**0.0919**	**1.8500e-003**	**0.0937**		**291.2574**	**291.2574**	**7.1800e-003**	**7.1000e-003**	**293.5539**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Above Ground Design Components - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0490	36.4482	53.9992	0.0835		1.4519	1.4519		1.3859	1.3859	0.0000	7,838.4234	7,838.4234	1.6981		7,880.8769
Total	**4.0490**	**36.4482**	**53.9992**	**0.0835**		**1.4519**	**1.4519**		**1.3859**	**1.3859**	**0.0000**	**7,838.4234**	**7,838.4234**	**1.6981**		**7,880.8769**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0997	0.0683	0.9620	2.8200e-003	0.3465	2.0100e-003	0.3485	0.0919	1.8500e-003	0.0937		291.2574	291.2574	7.1800e-003	7.1000e-003	293.5539
Total	**0.0997**	**0.0683**	**0.9620**	**2.8200e-003**	**0.3465**	**2.0100e-003**	**0.3485**	**0.0919**	**1.8500e-003**	**0.0937**		**291.2574**	**291.2574**	**7.1800e-003**	**7.1000e-003**	**293.5539**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Parking lot paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.4890					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1836	1.7419	2.8930	4.7000e-003		0.0813	0.0813		0.0748	0.0748		455.1622	455.1622	0.1472		458.8424
Total	**6.6726**	**1.7419**	**2.8930**	**4.7000e-003**		**0.0813**	**0.0813**		**0.0748**	**0.0748**		**455.1622**	**455.1622**	**0.1472**		**458.8424**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0772	0.0528	0.7447	2.1900e-003	0.2683	1.5500e-003	0.2698	0.0711	1.4300e-003	0.0726		225.4896	225.4896	5.5600e-003	5.5000e-003	227.2676
Total	**0.0772**	**0.0528**	**0.7447**	**2.1900e-003**	**0.2683**	**1.5500e-003**	**0.2698**	**0.0711**	**1.4300e-003**	**0.0726**		**225.4896**	**225.4896**	**5.5600e-003**	**5.5000e-003**	**227.2676**

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Parking lot paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.4890					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1836	1.7419	2.8930	4.7000e-003		0.0813	0.0813		0.0748	0.0748	0.0000	455.1622	455.1622	0.1472		458.8424
Total	**6.6726**	**1.7419**	**2.8930**	**4.7000e-003**		**0.0813**	**0.0813**		**0.0748**	**0.0748**	**0.0000**	**455.1622**	**455.1622**	**0.1472**		**458.8424**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0772	0.0528	0.7447	2.1900e-003	0.2683	1.5500e-003	0.2698	0.0711	1.4300e-003	0.0726		225.4896	225.4896	5.5600e-003	5.5000e-003	227.2676
Total	**0.0772**	**0.0528**	**0.7447**	**2.1900e-003**	**0.2683**	**1.5500e-003**	**0.2698**	**0.0711**	**1.4300e-003**	**0.0726**		**225.4896**	**225.4896**	**5.5600e-003**	**5.5000e-003**	**227.2676**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	0.00	0.00	0.00	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 Heavy Industry	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1539	1.3990	1.1751	8.3900e-003		0.1063	0.1063		0.1063	0.1063		1,678.7752	1,678.7752	0.0322	0.0308	1,688.7513
NaturalGas Unmitigated	0.1539	1.3990	1.1751	8.3900e-003		0.1063	0.1063		0.1063	0.1063		1,678.7752	1,678.7752	0.0322	0.0308	1,688.7513

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 Heavy Industry	14269.6	0.1539	1.3990	1.1751	8.3900e-003		0.1063	0.1063		0.1063	0.1063		1,678.7752	1,678.7752	0.0322	0.0308	1,688.7513
Total		**0.1539**	**1.3990**	**1.1751**	**8.3900e-003**		**0.1063**	**0.1063**		**0.1063**	**0.1063**		**1,678.7752**	**1,678.7752**	**0.0322**	**0.0308**	**1,688.7513**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	14.2696	0.1539	1.3990	1.1751	8.3900e-003		0.1063	0.1063		0.1063	0.1063		1,678.7752	1,678.7752	0.0322	0.0308	1,688.7513
Total		**0.1539**	**1.3990**	**1.1751**	**8.3900e-003**		**0.1063**	**0.1063**		**0.1063**	**0.1063**		**1,678.7752**	**1,678.7752**	**0.0322**	**0.0308**	**1,688.7513**

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	2.7300e-003	2.7000e-004	0.0296	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0635	0.0635	1.7000e-004		0.0676
Unmitigated	2.7300e-003	2.7000e-004	0.0296	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0635	0.0635	1.7000e-004		0.0676

Alondra Stormwater Capture - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7300e-003	2.7000e-004	0.0296	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0635	0.0635	1.7000e-004		0.0676
Total	**2.7300e-003**	**2.7000e-004**	**0.0296**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0635**	**0.0635**	**1.7000e-004**		**0.0676**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7300e-003	2.7000e-004	0.0296	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0635	0.0635	1.7000e-004		0.0676
Total	**2.7300e-003**	**2.7000e-004**	**0.0296**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0635**	**0.0635**	**1.7000e-004**		**0.0676**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Alondra Stormwater Capture

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 Heavy Industry	290.00	1000sqft	6.66	290,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Description: Project Level Evaluation, September 2021.
- Work occurs 5 days a week. 1 month = 20 work days

Land Use -

Construction Phase - Based on project description schedule

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Off-road Equipment - dozer, loader, excavator, vibratory soil compactor, vibratory plate compactors (small and large), telescopic boom crane; boom lift, air compressor, generator

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Off-road Equipment -

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Trips and VMT - 37,760 haul trips to remove 188,804 CY of excavated material - two trips per haul out and back
Personnel from table b-3 multiplied by two to get round trip totals

Grading - 188804 total cubic yards of excavated material hauled

Architectural Coating - approximately 42,000 sqft for both parking lots

Vehicle Trips - no operational phase

Consumer Products - No operational phase

Area Coating - no operational phase

Landscape Equipment - no operational phase

Energy Use - no operational phase

Water And Wastewater - no operational phase

Solid Waste - no operational phase

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	145,000.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	435,000.00	0.00
tblArchitecturalCoating	ConstArea_Parking	0.00	42,000.00
tblAreaCoating	Area_Nonresidential_Exterior	145000	0
tblAreaCoating	Area_Nonresidential_Interior	435000	0
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	230.00	205.00
tblConstructionPhase	NumDays	230.00	67.00
tblConstructionPhase	NumDays	230.00	175.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	78.00
tblConstructionPhase	NumDays	10.00	12.00
tblConsumerProducts	ROG_EF	1.98E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblGrading	AcresOfGrading	5.00	56.00
tblGrading	MaterialExported	0.00	188,804.00
tblLandscapeEquipment	NumberSummerDays	250	0
tblOffRoadEquipment	HorsePower	231.00	330.00
tblOffRoadEquipment	HorsePower	231.00	150.00
tblOffRoadEquipment	HorsePower	231.00	150.00
tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	89.00	6.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	247.00	215.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	153.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	81.00	15.00
tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	89.00	110.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	172.00	30.00
tblOffRoadEquipment	HorsePower	172.00	15.00
tblOffRoadEquipment	HorsePower	132.00	142.00
tblOffRoadEquipment	HorsePower	132.00	142.00
tblOffRoadEquipment	HorsePower	8.00	174.00
tblOffRoadEquipment	HorsePower	8.00	6.00
tblOffRoadEquipment	HorsePower	8.00	16.00
tblOffRoadEquipment	HorsePower	8.00	16.00
tblOffRoadEquipment	HorsePower	8.00	6.00
tblOffRoadEquipment	HorsePower	8.00	6.00
tblOffRoadEquipment	HorsePower	8.00	6.00
tblOffRoadEquipment	HorsePower	80.00	100.00
tblOffRoadEquipment	HorsePower	80.00	100.00
tblOffRoadEquipment	HorsePower	80.00	100.00
tblOffRoadEquipment	HorsePower	247.00	215.00
tblOffRoadEquipment	HorsePower	203.00	153.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	61.00

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	115.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblSolidWaste	SolidWasteGenerationRate	359.60	0.00
tblTripsAndVMT	HaulingTripNumber	23,601.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	37,760.00
tblTripsAndVMT	VendorTripNumber	48.00	0.00
tblTripsAndVMT	VendorTripNumber	48.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	VendorTripNumber	48.00	0.00
tblTripsAndVMT	VendorTripNumber	48.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	24.00
tblTripsAndVMT	WorkerTripNumber	10.00	24.00
tblTripsAndVMT	WorkerTripNumber	122.00	72.00
tblTripsAndVMT	WorkerTripNumber	122.00	24.00
tblTripsAndVMT	WorkerTripNumber	122.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	24.00
tblTripsAndVMT	WorkerTripNumber	122.00	31.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	WD_TR	3.93	0.00
tblWater	IndoorWaterUseRate	67,062,500.00	0.00

2.0 Emissions Summary

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.4108	69.9541	46.7961	0.1871	14.3643	2.0652	14.8927	4.3460	1.9491	4.8321	0.0000	19,477.5161	19,477.5161	2.1820	2.0076	20,130.3255
2023	4.4491	57.9294	44.6129	0.1801	4.0290	1.6747	5.7037	1.0974	1.5816	2.6790	0.0000	18,755.3726	18,755.3726	2.1559	1.8964	19,374.3949
2024	10.8857	45.7368	69.6312	0.1105	0.6148	1.8710	2.4858	0.1630	1.7870	1.9500	0.0000	10,418.7138	10,418.7138	2.1050	0.0118	10,474.8555
Maximum	**10.8857**	**69.9541**	**69.6312**	**0.1871**	**14.3643**	**2.0652**	**14.8927**	**4.3460**	**1.9491**	**4.8321**	**0.0000**	**19,477.5161**	**19,477.5161**	**2.1820**	**2.0076**	**20,130.3255**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	5.4108	69.9541	46.7961	0.1871	5.7657	2.0652	6.2941	1.7383	1.9491	3.0465	0.0000	19,477.5161	19,477.5161	2.1820	2.0076	20,130.3255
2023	4.4491	57.9294	44.6129	0.1801	4.0290	1.6747	5.7037	1.0974	1.5816	2.6790	0.0000	18,755.3726	18,755.3726	2.1559	1.8964	19,374.3949
2024	10.8857	45.7368	69.6312	0.1105	0.6148	1.8710	2.4858	0.1630	1.7870	1.9500	0.0000	10,418.7138	10,418.7138	2.1050	0.0118	10,474.8555
Maximum	**10.8857**	**69.9541**	**69.6312**	**0.1871**	**5.7657**	**2.0652**	**6.2941**	**1.7383**	**1.9491**	**3.0465**	**0.0000**	**19,477.5161**	**19,477.5161**	**2.1820**	**2.0076**	**20,130.3255**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	45.24	0.00	37.25	46.51	0.00	18.87	0.00	0.00	0.00	0.00	0.00	0.00

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.7300e-003	2.7000e-004	0.0296	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0635	0.0635	1.7000e-004		0.0676
Energy	0.1539	1.3990	1.1751	8.3900e-003		0.1063	0.1063		0.1063	0.1063		1,678.7752	1,678.7752	0.0322	0.0308	1,688.7513
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1566**	**1.3993**	**1.2047**	**8.3900e-003**	**0.0000**	**0.1064**	**0.1064**	**0.0000**	**0.1064**	**0.1064**		**1,678.8387**	**1,678.8387**	**0.0324**	**0.0308**	**1,688.8189**

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	2.7300e-003	2.7000e-004	0.0296	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0635	0.0635	1.7000e-004		0.0676
Energy	0.1539	1.3990	1.1751	8.3900e-003		0.1063	0.1063		0.1063	0.1063		1,678.7752	1,678.7752	0.0322	0.0308	1,688.7513
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1566**	**1.3993**	**1.2047**	**8.3900e-003**	**0.0000**	**0.1064**	**0.1064**	**0.0000**	**0.1064**	**0.1064**		**1,678.8387**	**1,678.8387**	**0.0324**	**0.0308**	**1,688.8189**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mobilization and Staging	Site Preparation	9/1/2022	9/16/2022	5	12	
2	Clear and Grub	Grading	9/19/2022	9/30/2022	5	10	
3	Underground Storage Gallery and Connector Pipes	Building Construction	10/3/2022	7/14/2023	5	205	
4	Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Building Construction	7/31/2023	10/31/2023	5	67	
5	Diversion Lines and Structures	Grading	10/2/2023	1/17/2024	5	78	
6	Above Ground Design Components	Building Construction	1/1/2024	8/30/2024	5	175	
7	Parking lot paving	Architectural Coating	6/10/2024	7/19/2024	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 56

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 42,000 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization and Staging	Forklifts	1	6.00	110	0.20
Clear and Grub	Other Construction Equipment	2	5.00	30	0.42
Clear and Grub	Rubber Tired Dozers	1	8.00	215	0.40

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Clear and Grub	Tractors/Loaders/Backhoes	1	6.00	153	0.37
Underground Storage Gallery and Connector Pipes	Aerial Lifts	2	6.00	80	0.31
Underground Storage Gallery and Connector Pipes	Air Compressors	2	8.00	50	0.48
Underground Storage Gallery and Connector Pipes	Cranes	1	6.00	330	0.29
Underground Storage Gallery and Connector Pipes	Excavators	2	8.00	150	0.38
Underground Storage Gallery and Connector Pipes	Generator Sets	2	8.00	100	0.74
Underground Storage Gallery and Connector Pipes	Plate Compactors	1	6.00	174	0.43
Underground Storage Gallery and Connector Pipes	Plate Compactors	1	4.00	6	0.43
Underground Storage Gallery and Connector Pipes	Plate Compactors	1	4.00	16	0.43
Underground Storage Gallery and Connector Pipes	Rubber Tired Dozers	2	8.00	215	0.40
Underground Storage Gallery and Connector Pipes	Rubber Tired Loaders	2	8.00	153	0.36
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Aerial Lifts	1	6.00	80	0.31
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Air Compressors	1	8.00	50	0.48
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Cranes	1	4.00	150	0.29
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Excavators	1	6.00	150	0.38
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Generator Sets	1	8.00	100	0.74
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Plate Compactors	1	4.00	16	0.43
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Plate Compactors	1	4.00	6	0.43
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Tractors/Loaders/Backhoes	1	6.00	115	0.37
Diversion Lines and Structures	Air Compressors	1	8.00	50	0.48
Diversion Lines and Structures	Excavators	1	6.00	150	0.38
Diversion Lines and Structures	Generator Sets	1	8.00	100	0.74
Diversion Lines and Structures	Other Construction Equipment	1	6.00	15	0.42
Diversion Lines and Structures	Paving Equipment	1	4.00	142	0.36
Diversion Lines and Structures	Plate Compactors	1	4.00	6	0.43

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Diversion Lines and Structures	Rollers	1	4.00	100	0.38
Diversion Lines and Structures	Tractors/Loaders/Backhoes	1	6.00	115	0.37
Above Ground Design Components	Aerial Lifts	1	8.00	80	0.31
Above Ground Design Components	Aerial Lifts	1	8.00	80	0.31
Above Ground Design Components	Air Compressors	1	8.00	50	0.48
Above Ground Design Components	Air Compressors	1	8.00	50	0.48
Above Ground Design Components	Air Compressors	1	8.00	50	0.48
Above Ground Design Components	Air Compressors	1	8.00	50	0.48
Above Ground Design Components	Concrete/Industrial Saws	1	4.00	15	0.73
Above Ground Design Components	Cranes	1	4.00	150	0.29
Above Ground Design Components	Forklifts	1	4.00	6	0.20
Above Ground Design Components	Generator Sets	1	8.00	100	0.74
Above Ground Design Components	Generator Sets	1	8.00	100	0.74
Above Ground Design Components	Generator Sets	1	8.00	100	0.74
Above Ground Design Components	Paving Equipment	1	8.00	142	0.36
Above Ground Design Components	Plate Compactors	1	4.00	6	0.43
Above Ground Design Components	Rollers	1	4.00	100	0.38
Above Ground Design Components	Rollers	1	4.00	100	0.38
Above Ground Design Components	Skid Steer Loaders	2	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	2	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	115	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Tractors/Loaders/Backhoes	1	8.00	115	0.37
Above Ground Design Components	Tractors/Loaders/Backhoes	1	8.00	115	0.37
Above Ground Design Components	Tractors/Loaders/Backhoes	1	4.00	115	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Above Ground Design Components	Tractors/Loaders/Backhoes	1	8.00	115	0.37
Parking lot paving	Pavers	1	8.00	130	0.42

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
Mobilization and Staging	1	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Clear and Grub	4	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Underground Storage Gallery and Connector	16	72.00	0.00	37,760.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Underground Pump Vaults, Manholes, and	8	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Underground Pump Vaults, Manholes, and	8	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Diversion Lines and Structures	8	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Above Ground Design Components	30	31.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Parking lot paving	1	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Mobilization and Staging - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1053	0.9779	1.0695	1.4200e-003		0.0648	0.0648		0.0596	0.0596		137.2196	137.2196	0.0444		138.3291
Total	**0.1053**	**0.9779**	**1.0695**	**1.4200e-003**	**0.0000**	**0.0648**	**0.0648**	**0.0000**	**0.0596**	**0.0596**		**137.2196**	**137.2196**	**0.0444**		**138.3291**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0831	0.0606	0.9459	2.4500e-003	0.2683	1.7200e-003	0.2700	0.0711	1.5800e-003	0.0727		249.6305	249.6305	6.7600e-003	6.0100e-003	251.5891
Total	**0.0831**	**0.0606**	**0.9459**	**2.4500e-003**	**0.2683**	**1.7200e-003**	**0.2700**	**0.0711**	**1.5800e-003**	**0.0727**		**249.6305**	**249.6305**	**6.7600e-003**	**6.0100e-003**	**251.5891**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Mobilization and Staging - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1053	0.9779	1.0695	1.4200e-003		0.0648	0.0648		0.0596	0.0596	0.0000	137.2196	137.2196	0.0444		138.3291
Total	**0.1053**	**0.9779**	**1.0695**	**1.4200e-003**	**0.0000**	**0.0648**	**0.0648**	**0.0000**	**0.0596**	**0.0596**	**0.0000**	**137.2196**	**137.2196**	**0.0444**		**138.3291**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0831	0.0606	0.9459	2.4500e-003	0.2683	1.7200e-003	0.2700	0.0711	1.5800e-003	0.0727		249.6305	249.6305	6.7600e-003	6.0100e-003	251.5891
Total	**0.0831**	**0.0606**	**0.9459**	**2.4500e-003**	**0.2683**	**1.7200e-003**	**0.2700**	**0.0711**	**1.5800e-003**	**0.0727**		**249.6305**	**249.6305**	**6.7600e-003**	**6.0100e-003**	**251.5891**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Clear and Grub - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					14.0961	0.0000	14.0961	4.2748	0.0000	4.2748			0.0000			0.0000
Off-Road	1.1338	10.2839	6.8593	0.0126		0.5267	0.5267		0.4845	0.4845		1,217.1860	1,217.1860	0.3937		1,227.0276
Total	**1.1338**	**10.2839**	**6.8593**	**0.0126**	**14.0961**	**0.5267**	**14.6227**	**4.2748**	**0.4845**	**4.7594**		**1,217.1860**	**1,217.1860**	**0.3937**		**1,227.0276**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0831	0.0606	0.9459	2.4500e-003	0.2683	1.7200e-003	0.2700	0.0711	1.5800e-003	0.0727		249.6305	249.6305	6.7600e-003	6.0100e-003	251.5891
Total	**0.0831**	**0.0606**	**0.9459**	**2.4500e-003**	**0.2683**	**1.7200e-003**	**0.2700**	**0.0711**	**1.5800e-003**	**0.0727**		**249.6305**	**249.6305**	**6.7600e-003**	**6.0100e-003**	**251.5891**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Clear and Grub - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4975	0.0000	5.4975	1.6672	0.0000	1.6672			0.0000			0.0000
Off-Road	1.1338	10.2839	6.8593	0.0126		0.5267	0.5267		0.4845	0.4845	0.0000	1,217.1860	1,217.1860	0.3937		1,227.0276
Total	**1.1338**	**10.2839**	**6.8593**	**0.0126**	**5.4975**	**0.5267**	**6.0241**	**1.6672**	**0.4845**	**2.1517**	**0.0000**	**1,217.1860**	**1,217.1860**	**0.3937**		**1,227.0276**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0831	0.0606	0.9459	2.4500e-003	0.2683	1.7200e-003	0.2700	0.0711	1.5800e-003	0.0727		249.6305	249.6305	6.7600e-003	6.0100e-003	251.5891
Total	**0.0831**	**0.0606**	**0.9459**	**2.4500e-003**	**0.2683**	**1.7200e-003**	**0.2700**	**0.0711**	**1.5800e-003**	**0.0727**		**249.6305**	**249.6305**	**6.7600e-003**	**6.0100e-003**	**251.5891**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Storage Gallery and Connector Pipes - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.3035	38.8368	36.7454	0.0653		1.8302	1.8302		1.7245	1.7245		6,189.0703	6,189.0703	1.4957		6,226.4638
Total	**4.3035**	**38.8368**	**36.7454**	**0.0653**		**1.8302**	**1.8302**		**1.7245**	**1.7245**		**6,189.0703**	**6,189.0703**	**1.4957**		**6,226.4638**

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	0.8582	30.9354	7.2130	0.1145	3.2241	0.2298	3.4539	0.8839	0.2199	1.1038		12,539.5544	12,539.5544	0.6660	1.9896	13,149.0945
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2492	0.1819	2.8378	7.3600e-003	0.8048	5.1600e-003	0.8100	0.2134	4.7500e-003	0.2182		748.8915	748.8915	0.0203	0.0180	754.7672
Total	**1.1073**	**31.1173**	**10.0507**	**0.1218**	**4.0289**	**0.2350**	**4.2639**	**1.0974**	**0.2246**	**1.3220**		**13,288.4459**	**13,288.4459**	**0.6863**	**2.0076**	**13,903.8617**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Storage Gallery and Connector Pipes - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.3035	38.8368	36.7454	0.0653		1.8302	1.8302		1.7245	1.7245	0.0000	6,189.0703	6,189.0703	1.4957		6,226.4638
Total	**4.3035**	**38.8368**	**36.7454**	**0.0653**		**1.8302**	**1.8302**		**1.7245**	**1.7245**	**0.0000**	**6,189.0703**	**6,189.0703**	**1.4957**		**6,226.4638**

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	0.8582	30.9354	7.2130	0.1145	3.2241	0.2298	3.4539	0.8839	0.2199	1.1038		12,539.5544	12,539.5544	0.6660	1.9896	13,149.0945
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2492	0.1819	2.8378	7.3600e-003	0.8048	5.1600e-003	0.8100	0.2134	4.7500e-003	0.2182		748.8915	748.8915	0.0203	0.0180	754.7672
Total	**1.1073**	**31.1173**	**10.0507**	**0.1218**	**4.0289**	**0.2350**	**4.2639**	**1.0974**	**0.2246**	**1.3220**		**13,288.4459**	**13,288.4459**	**0.6863**	**2.0076**	**13,903.8617**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Storage Gallery and Connector Pipes - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.8191	33.7331	35.5886	0.0653		1.5183	1.5183		1.4321	1.4321		6,188.8058	6,188.8058	1.4854		6,225.9397
Total	**3.8191**	**33.7331**	**35.5886**	**0.0653**		**1.5183**	**1.5183**		**1.4321**	**1.4321**		**6,188.8058**	**6,188.8058**	**1.4854**		**6,225.9397**

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	0.3995	24.0356	6.4153	0.1077	3.2242	0.1516	3.3758	0.8840	0.1451	1.0290		11,837.4856	11,837.4856	0.6524	1.8798	12,413.9682
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2306	0.1607	2.6091	7.1200e-003	0.8048	4.8600e-003	0.8097	0.2134	4.4700e-003	0.2179		729.0812	729.0812	0.0182	0.0166	734.4870
Total	**0.6300**	**24.1963**	**9.0244**	**0.1148**	**4.0290**	**0.1565**	**4.1855**	**1.0974**	**0.1495**	**1.2469**		**12,566.5668**	**12,566.5668**	**0.6706**	**1.8964**	**13,148.4553**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Storage Gallery and Connector Pipes - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.8191	33.7331	35.5886	0.0653		1.5183	1.5183		1.4321	1.4321	0.0000	6,188.8058	6,188.8058	1.4854		6,225.9397
Total	**3.8191**	**33.7331**	**35.5886**	**0.0653**		**1.5183**	**1.5183**		**1.4321**	**1.4321**	**0.0000**	**6,188.8058**	**6,188.8058**	**1.4854**		**6,225.9397**

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	0.3995	24.0356	6.4153	0.1077	3.2242	0.1516	3.3758	0.8840	0.1451	1.0290		11,837.4856	11,837.4856	0.6524	1.8798	12,413.9682
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2306	0.1607	2.6091	7.1200e-003	0.8048	4.8600e-003	0.8097	0.2134	4.4700e-003	0.2179		729.0812	729.0812	0.0182	0.0166	734.4870
Total	**0.6300**	**24.1963**	**9.0244**	**0.1148**	**4.0290**	**0.1565**	**4.1855**	**1.0974**	**0.1495**	**1.2469**		**12,566.5668**	**12,566.5668**	**0.6706**	**1.8964**	**13,148.4553**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Underground Pump Vaults, Manholes, and Pre/post-treatment systems - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1622	9.6051	13.1912	0.0209		0.4384	0.4384		0.4211	0.4211		1,956.3665	1,956.3665	0.3732		1,965.6963
Total	**1.1622**	**9.6051**	**13.1912**	**0.0209**		**0.4384**	**0.4384**		**0.4211**	**0.4211**		**1,956.3665**	**1,956.3665**	**0.3732**		**1,965.6963**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0769	0.0536	0.8697	2.3700e-003	0.5015	1.6200e-003	0.5031	0.1284	1.4900e-003	0.1299		243.0271	243.0271	6.0500e-003	5.5400e-003	244.8290
Total	**0.0769**	**0.0536**	**0.8697**	**2.3700e-003**	**0.5015**	**1.6200e-003**	**0.5031**	**0.1284**	**1.4900e-003**	**0.1299**		**243.0271**	**243.0271**	**6.0500e-003**	**5.5400e-003**	**244.8290**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Underground Pump Vaults, Manholes, and Pre/post-treatment systems - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1622	9.6051	13.1912	0.0209		0.4384	0.4384		0.4211	0.4211	0.0000	1,956.3665	1,956.3665	0.3732		1,965.6963
Total	**1.1622**	**9.6051**	**13.1912**	**0.0209**		**0.4384**	**0.4384**		**0.4211**	**0.4211**	**0.0000**	**1,956.3665**	**1,956.3665**	**0.3732**		**1,965.6963**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0769	0.0536	0.8697	2.3700e-003	0.5015	1.6200e-003	0.5031	0.1284	1.4900e-003	0.1299		243.0271	243.0271	6.0500e-003	5.5400e-003	244.8290
Total	**0.0769**	**0.0536**	**0.8697**	**2.3700e-003**	**0.5015**	**1.6200e-003**	**0.5031**	**0.1284**	**1.4900e-003**	**0.1299**		**243.0271**	**243.0271**	**6.0500e-003**	**5.5400e-003**	**244.8290**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Diversion Lines and Structures - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.2269	9.7292	13.7862	0.0217		0.4679	0.4679		0.4482	0.4482		2,034.5388	2,034.5388	0.3985		2,044.5007
Total	**1.2269**	**9.7292**	**13.7862**	**0.0217**	**0.0000**	**0.4679**	**0.4679**	**0.0000**	**0.4482**	**0.4482**		**2,034.5388**	**2,034.5388**	**0.3985**		**2,044.5007**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0769	0.0536	0.8697	2.3700e-003	0.2683	1.6200e-003	0.2699	0.0711	1.4900e-003	0.0726		243.0271	243.0271	6.0500e-003	5.5400e-003	244.8290
Total	**0.0769**	**0.0536**	**0.8697**	**2.3700e-003**	**0.2683**	**1.6200e-003**	**0.2699**	**0.0711**	**1.4900e-003**	**0.0726**		**243.0271**	**243.0271**	**6.0500e-003**	**5.5400e-003**	**244.8290**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Diversion Lines and Structures - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.2269	9.7292	13.7862	0.0217		0.4679	0.4679		0.4482	0.4482	0.0000	2,034.5388	2,034.5388	0.3985		2,044.5007
Total	**1.2269**	**9.7292**	**13.7862**	**0.0217**	**0.0000**	**0.4679**	**0.4679**	**0.0000**	**0.4482**	**0.4482**	**0.0000**	**2,034.5388**	**2,034.5388**	**0.3985**		**2,044.5007**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0769	0.0536	0.8697	2.3700e-003	0.2683	1.6200e-003	0.2699	0.0711	1.4900e-003	0.0726		243.0271	243.0271	6.0500e-003	5.5400e-003	244.8290
Total	**0.0769**	**0.0536**	**0.8697**	**2.3700e-003**	**0.2683**	**1.6200e-003**	**0.2699**	**0.0711**	**1.4900e-003**	**0.0726**		**243.0271**	**243.0271**	**6.0500e-003**	**5.5400e-003**	**244.8290**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Diversion Lines and Structures - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.1565	9.1789	13.7768	0.0217		0.4156	0.4156		0.3978	0.3978		2,034.8339	2,034.8339	0.3943		2,044.6907
Total	**1.1565**	**9.1789**	**13.7768**	**0.0217**	**0.0000**	**0.4156**	**0.4156**	**0.0000**	**0.3978**	**0.3978**		**2,034.8339**	**2,034.8339**	**0.3943**		**2,044.6907**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0716	0.0479	0.8095	2.3100e-003	0.2683	1.5500e-003	0.2698	0.0711	1.4300e-003	0.0726		238.0174	238.0174	5.4800e-003	5.1500e-003	239.6893
Total	**0.0716**	**0.0479**	**0.8095**	**2.3100e-003**	**0.2683**	**1.5500e-003**	**0.2698**	**0.0711**	**1.4300e-003**	**0.0726**		**238.0174**	**238.0174**	**5.4800e-003**	**5.1500e-003**	**239.6893**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Diversion Lines and Structures - 2024

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.1565	9.1789	13.7768	0.0217		0.4156	0.4156		0.3978	0.3978	0.0000	2,034.8339	2,034.8339	0.3943		2,044.6907
Total	**1.1565**	**9.1789**	**13.7768**	**0.0217**	**0.0000**	**0.4156**	**0.4156**	**0.0000**	**0.3978**	**0.3978**	**0.0000**	**2,034.8339**	**2,034.8339**	**0.3943**		**2,044.6907**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0716	0.0479	0.8095	2.3100e-003	0.2683	1.5500e-003	0.2698	0.0711	1.4300e-003	0.0726		238.0174	238.0174	5.4800e-003	5.1500e-003	239.6893
Total	**0.0716**	**0.0479**	**0.8095**	**2.3100e-003**	**0.2683**	**1.5500e-003**	**0.2698**	**0.0711**	**1.4300e-003**	**0.0726**		**238.0174**	**238.0174**	**5.4800e-003**	**5.1500e-003**	**239.6893**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Above Ground Design Components - 2024

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	4.0490	36.4482	53.9992	0.0835		1.4519	1.4519		1.3859	1.3859		7,838.4234	7,838.4234	1.6981		7,880.8769
Total	**4.0490**	**36.4482**	**53.9992**	**0.0835**		**1.4519**	**1.4519**		**1.3859**	**1.3859**		**7,838.4234**	**7,838.4234**	**1.6981**		**7,880.8769**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0925	0.0618	1.0456	2.9800e-003	0.3465	2.0100e-003	0.3485	0.0919	1.8500e-003	0.0937		307.4391	307.4391	7.0700e-003	6.6500e-003	309.5987
Total	**0.0925**	**0.0618**	**1.0456**	**2.9800e-003**	**0.3465**	**2.0100e-003**	**0.3485**	**0.0919**	**1.8500e-003**	**0.0937**		**307.4391**	**307.4391**	**7.0700e-003**	**6.6500e-003**	**309.5987**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Above Ground Design Components - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.0490	36.4482	53.9992	0.0835		1.4519	1.4519		1.3859	1.3859	0.0000	7,838.4234	7,838.4234	1.6981		7,880.8769
Total	**4.0490**	**36.4482**	**53.9992**	**0.0835**		**1.4519**	**1.4519**		**1.3859**	**1.3859**	**0.0000**	**7,838.4234**	**7,838.4234**	**1.6981**		**7,880.8769**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0925	0.0618	1.0456	2.9800e-003	0.3465	2.0100e-003	0.3485	0.0919	1.8500e-003	0.0937		307.4391	307.4391	7.0700e-003	6.6500e-003	309.5987
Total	**0.0925**	**0.0618**	**1.0456**	**2.9800e-003**	**0.3465**	**2.0100e-003**	**0.3485**	**0.0919**	**1.8500e-003**	**0.0937**		**307.4391**	**307.4391**	**7.0700e-003**	**6.6500e-003**	**309.5987**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Parking lot paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.4890					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1836	1.7419	2.8930	4.7000e-003		0.0813	0.0813		0.0748	0.0748		455.1622	455.1622	0.1472		458.8424
Total	**6.6726**	**1.7419**	**2.8930**	**4.7000e-003**		**0.0813**	**0.0813**		**0.0748**	**0.0748**		**455.1622**	**455.1622**	**0.1472**		**458.8424**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0716	0.0479	0.8095	2.3100e-003	0.2683	1.5500e-003	0.2698	0.0711	1.4300e-003	0.0726		238.0174	238.0174	5.4800e-003	5.1500e-003	239.6893
Total	**0.0716**	**0.0479**	**0.8095**	**2.3100e-003**	**0.2683**	**1.5500e-003**	**0.2698**	**0.0711**	**1.4300e-003**	**0.0726**		**238.0174**	**238.0174**	**5.4800e-003**	**5.1500e-003**	**239.6893**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Parking lot paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.4890					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1836	1.7419	2.8930	4.7000e-003		0.0813	0.0813		0.0748	0.0748	0.0000	455.1622	455.1622	0.1472		458.8424
Total	**6.6726**	**1.7419**	**2.8930**	**4.7000e-003**		**0.0813**	**0.0813**		**0.0748**	**0.0748**	**0.0000**	**455.1622**	**455.1622**	**0.1472**		**458.8424**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0716	0.0479	0.8095	2.3100e-003	0.2683	1.5500e-003	0.2698	0.0711	1.4300e-003	0.0726		238.0174	238.0174	5.4800e-003	5.1500e-003	239.6893
Total	**0.0716**	**0.0479**	**0.8095**	**2.3100e-003**	**0.2683**	**1.5500e-003**	**0.2698**	**0.0711**	**1.4300e-003**	**0.0726**		**238.0174**	**238.0174**	**5.4800e-003**	**5.1500e-003**	**239.6893**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	0.00	0.00	0.00	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 Heavy Industry	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1539	1.3990	1.1751	8.3900e-003		0.1063	0.1063		0.1063	0.1063		1,678.7752	1,678.7752	0.0322	0.0308	1,688.7513
NaturalGas Unmitigated	0.1539	1.3990	1.1751	8.3900e-003		0.1063	0.1063		0.1063	0.1063		1,678.7752	1,678.7752	0.0322	0.0308	1,688.7513

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 Heavy Industry	14269.6	0.1539	1.3990	1.1751	8.3900e-003		0.1063	0.1063		0.1063	0.1063		1,678.7752	1,678.7752	0.0322	0.0308	1,688.7513
Total		**0.1539**	**1.3990**	**1.1751**	**8.3900e-003**		**0.1063**	**0.1063**		**0.1063**	**0.1063**		**1,678.7752**	**1,678.7752**	**0.0322**	**0.0308**	**1,688.7513**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	14.2696	0.1539	1.3990	1.1751	8.3900e-003		0.1063	0.1063		0.1063	0.1063		1,678.7752	1,678.7752	0.0322	0.0308	1,688.7513
Total		**0.1539**	**1.3990**	**1.1751**	**8.3900e-003**		**0.1063**	**0.1063**		**0.1063**	**0.1063**		**1,678.7752**	**1,678.7752**	**0.0322**	**0.0308**	**1,688.7513**

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	2.7300e-003	2.7000e-004	0.0296	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0635	0.0635	1.7000e-004		0.0676
Unmitigated	2.7300e-003	2.7000e-004	0.0296	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0635	0.0635	1.7000e-004		0.0676

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7300e-003	2.7000e-004	0.0296	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0635	0.0635	1.7000e-004		0.0676
Total	**2.7300e-003**	**2.7000e-004**	**0.0296**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0635**	**0.0635**	**1.7000e-004**		**0.0676**

Alondra Stormwater Capture - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.7300e-003	2.7000e-004	0.0296	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0635	0.0635	1.7000e-004		0.0676
Total	**2.7300e-003**	**2.7000e-004**	**0.0296**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0635**	**0.0635**	**1.7000e-004**		**0.0676**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Alondra Stormwater Capture - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Alondra Stormwater Capture

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 Heavy Industry	290.00	1000sqft	6.66	290,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Description: Project Level Evaluation, September 2021.
- Work occurs 5 days a week. 1 month = 20 work days

Land Use -

Construction Phase - Based on project description schedule

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Off-road Equipment - dozer, loader, excavator, vibratory soil compactor, vibratory plate compactors (small and large), telescopic boom crane; boom lift, air compressor, generator

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Off-road Equipment -

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Alondra Stormwater Capture - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Deviations from default according to table B-2 in appendix B

Trips and VMT - 37,760 haul trips to remove 188,804 CY of excavated material - two trips per haul out and back
Personnel from table b-3 multiplied by two to get round trip totals

Grading - 188804 total cubic yards of excavated material hauled

Architectural Coating - approximately 42,000 sqft for both parking lots

Vehicle Trips - no operational phase

Consumer Products - No operational phase

Area Coating - no operational phase

Landscape Equipment - no operational phase

Energy Use - no operational phase

Water And Wastewater - no operational phase

Solid Waste - no operational phase

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	145,000.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	435,000.00	0.00
tblArchitecturalCoating	ConstArea_Parking	0.00	42,000.00
tblAreaCoating	Area_Nonresidential_Exterior	145000	0
tblAreaCoating	Area_Nonresidential_Interior	435000	0
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	230.00	205.00
tblConstructionPhase	NumDays	230.00	67.00
tblConstructionPhase	NumDays	230.00	175.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	78.00
tblConstructionPhase	NumDays	10.00	12.00
tblConsumerProducts	ROG_EF	1.98E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0

Alondra Stormwater Capture - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblGrading	AcresOfGrading	5.00	56.00
tblGrading	MaterialExported	0.00	188,804.00
tblLandscapeEquipment	NumberSummerDays	250	0
tblOffRoadEquipment	HorsePower	231.00	330.00
tblOffRoadEquipment	HorsePower	231.00	150.00
tblOffRoadEquipment	HorsePower	231.00	150.00
tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	89.00	6.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	247.00	215.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	97.00	153.00
tblOffRoadEquipment	HorsePower	97.00	115.00
tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	63.00	80.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00

Alondra Stormwater Capture - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	78.00	50.00
tblOffRoadEquipment	HorsePower	81.00	15.00
tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	158.00	150.00
tblOffRoadEquipment	HorsePower	89.00	110.00
tblOffRoadEquipment	HorsePower	84.00	100.00
tblOffRoadEquipment	HorsePower	172.00	30.00
tblOffRoadEquipment	HorsePower	172.00	15.00
tblOffRoadEquipment	HorsePower	132.00	142.00
tblOffRoadEquipment	HorsePower	132.00	142.00
tblOffRoadEquipment	HorsePower	8.00	174.00
tblOffRoadEquipment	HorsePower	8.00	6.00
tblOffRoadEquipment	HorsePower	8.00	16.00
tblOffRoadEquipment	HorsePower	8.00	16.00
tblOffRoadEquipment	HorsePower	8.00	6.00
tblOffRoadEquipment	HorsePower	8.00	6.00
tblOffRoadEquipment	HorsePower	8.00	6.00
tblOffRoadEquipment	HorsePower	80.00	100.00
tblOffRoadEquipment	HorsePower	80.00	100.00
tblOffRoadEquipment	HorsePower	80.00	100.00
tblOffRoadEquipment	HorsePower	247.00	215.00
tblOffRoadEquipment	HorsePower	203.00	153.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	61.00

Alondra Stormwater Capture - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	HorsePower	65.00	115.00
tblOffRoadEquipment	HorsePower	65.00	61.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblSolidWaste	SolidWasteGenerationRate	359.60	0.00
tblTripsAndVMT	HaulingTripNumber	23,601.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	37,760.00
tblTripsAndVMT	VendorTripNumber	48.00	0.00
tblTripsAndVMT	VendorTripNumber	48.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	VendorTripNumber	48.00	0.00
tblTripsAndVMT	VendorTripNumber	48.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	24.00
tblTripsAndVMT	WorkerTripNumber	10.00	24.00
tblTripsAndVMT	WorkerTripNumber	122.00	72.00
tblTripsAndVMT	WorkerTripNumber	122.00	24.00
tblTripsAndVMT	WorkerTripNumber	122.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	24.00
tblTripsAndVMT	WorkerTripNumber	122.00	31.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	WD_TR	3.93	0.00
tblWater	IndoorWaterUseRate	67,062,500.00	0.00

2.0 Emissions Summary

Alondra Stormwater Capture - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1827	2.3858	1.5677	6.1700e-003	0.2020	0.0702	0.2722	0.0572	0.0662	0.1234	0.0000	582.1190	582.1190	0.0664	0.0593	601.4540
2023	0.3944	4.7890	4.0590	0.0142	0.3021	0.1472	0.4493	0.0821	0.1395	0.2216	0.0000	1,322.9972	1,322.9972	0.1603	0.1209	1,363.0438
2024	0.4715	3.2823	4.9606	7.8100e-003	0.0354	0.1312	0.1666	9.4000e-003	0.1252	0.1346	0.0000	668.3236	668.3236	0.1398	6.8000e-004	672.0217
Maximum	**0.4715**	**4.7890**	**4.9606**	**0.0142**	**0.3021**	**0.1472**	**0.4493**	**0.0821**	**0.1395**	**0.2216**	**0.0000**	**1,322.9972**	**1,322.9972**	**0.1603**	**0.1209**	**1,363.0438**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1827	2.3858	1.5677	6.1700e-003	0.1590	0.0702	0.2292	0.0442	0.0662	0.1104	0.0000	582.1187	582.1187	0.0664	0.0593	601.4538
2023	0.3944	4.7890	4.0590	0.0142	0.3021	0.1472	0.4493	0.0821	0.1395	0.2216	0.0000	1,322.9966	1,322.9966	0.1603	0.1209	1,363.0432
2024	0.4715	3.2823	4.9606	7.8100e-003	0.0354	0.1312	0.1666	9.4000e-003	0.1252	0.1346	0.0000	668.3229	668.3229	0.1398	6.8000e-004	672.0210
Maximum	**0.4715**	**4.7890**	**4.9606**	**0.0142**	**0.3021**	**0.1472**	**0.4493**	**0.0821**	**0.1395**	**0.2216**	**0.0000**	**1,322.9966**	**1,322.9966**	**0.1603**	**0.1209**	**1,363.0432**

Alondra Stormwater Capture - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**7.97**	**0.00**	**4.84**	**8.77**	**0.00**	**2.72**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**8-1-2022**	**10-31-2022**	0.8503	0.8503
2	**11-1-2022**	**1-31-2023**	2.3720	2.3720
3	**2-1-2023**	**4-30-2023**	2.0052	2.0052
4	**5-1-2023**	**7-31-2023**	1.6747	1.6747
5	**8-1-2023**	**10-31-2023**	0.4771	0.4771
6	**11-1-2023**	**1-31-2024**	0.7555	0.7555
7	**2-1-2024**	**4-30-2024**	1.3069	1.3069
8	**5-1-2024**	**7-31-2024**	1.4576	1.4576
9	**8-1-2024**	**9-30-2024**	0.4356	0.4356
		Highest	2.3720	2.3720

Alondra Stormwater Capture - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0281	0.2553	0.2145	1.5300e-003		0.0194	0.0194		0.0194	0.0194	0.0000	836.4721	836.4721	0.0525	0.0108	841.0052
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0281**	**0.2553**	**0.2145**	**1.5300e-003**	**0.0000**	**0.0194**	**0.0194**	**0.0000**	**0.0194**	**0.0194**	**0.0000**	**836.4721**	**836.4721**	**0.0525**	**0.0108**	**841.0052**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0281	0.2553	0.2145	1.5300e-003		0.0194	0.0194		0.0194	0.0194	0.0000	836.4721	836.4721	0.0525	0.0108	841.0052
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0281**	**0.2553**	**0.2145**	**1.5300e-003**	**0.0000**	**0.0194**	**0.0194**	**0.0000**	**0.0194**	**0.0194**	**0.0000**	**836.4721**	**836.4721**	**0.0525**	**0.0108**	**841.0052**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mobilization and Staging	Site Preparation	9/1/2022	9/16/2022	5	12	
2	Clear and Grub	Grading	9/19/2022	9/30/2022	5	10	
3	Underground Storage Gallery and Connector Pipes	Building Construction	10/3/2022	7/14/2023	5	205	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Building Construction	7/31/2023	10/31/2023	5	67	
5	Diversion Lines and Structures	Grading	10/2/2023	1/17/2024	5	78	
6	Above Ground Design Components	Building Construction	1/1/2024	8/30/2024	5	175	
7	Parking lot paving	Architectural Coating	6/10/2024	7/19/2024	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 56

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 42,000 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization and Staging	Forklifts	1	6.00	110	0.20
Clear and Grub	Other Construction Equipment	2	5.00	30	0.42
Clear and Grub	Rubber Tired Dozers	1	8.00	215	0.40
Clear and Grub	Tractors/Loaders/Backhoes	1	6.00	153	0.37
Underground Storage Gallery and Connector Pipes	Aerial Lifts	2	6.00	80	0.31
Underground Storage Gallery and Connector Pipes	Air Compressors	2	8.00	50	0.48
Underground Storage Gallery and Connector Pipes	Cranes	1	6.00	330	0.29
Underground Storage Gallery and Connector Pipes	Excavators	2	8.00	150	0.38
Underground Storage Gallery and Connector Pipes	Generator Sets	2	8.00	100	0.74
Underground Storage Gallery and Connector Pipes	Plate Compactors	1	6.00	174	0.43
Underground Storage Gallery and Connector Pipes	Plate Compactors	1	4.00	6	0.43
Underground Storage Gallery and Connector Pipes	Plate Compactors	1	4.00	16	0.43
Underground Storage Gallery and Connector Pipes	Rubber Tired Dozers	2	8.00	215	0.40

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Underground Storage Gallery and Connector Pipes	Rubber Tired Loaders	2	8.00	153	0.36
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Aerial Lifts	1	6.00	80	0.31
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Air Compressors	1	8.00	50	0.48
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Cranes	1	4.00	150	0.29
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Excavators	1	6.00	150	0.38
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Generator Sets	1	8.00	100	0.74
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Plate Compactors	1	4.00	16	0.43
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Plate Compactors	1	4.00	6	0.43
Underground Pump Vaults, Manholes, and Pre/post-treatment systems	Tractors/Loaders/Backhoes	1	6.00	115	0.37
Diversion Lines and Structures	Air Compressors	1	8.00	50	0.48
Diversion Lines and Structures	Excavators	1	6.00	150	0.38
Diversion Lines and Structures	Generator Sets	1	8.00	100	0.74
Diversion Lines and Structures	Other Construction Equipment	1	6.00	15	0.42
Diversion Lines and Structures	Paving Equipment	1	4.00	142	0.36
Diversion Lines and Structures	Plate Compactors	1	4.00	6	0.43
Diversion Lines and Structures	Rollers	1	4.00	100	0.38
Diversion Lines and Structures	Tractors/Loaders/Backhoes	1	6.00	115	0.37
Above Ground Design Components	Aerial Lifts	1	8.00	80	0.31
Above Ground Design Components	Aerial Lifts	1	8.00	80	0.31
Above Ground Design Components	Air Compressors	1	8.00	50	0.48
Above Ground Design Components	Air Compressors	1	8.00	50	0.48
Above Ground Design Components	Air Compressors	1	8.00	50	0.48
Above Ground Design Components	Air Compressors	1	8.00	50	0.48
Above Ground Design Components	Concrete/Industrial Saws	1	4.00	15	0.73
Above Ground Design Components	Cranes	1	4.00	150	0.29
Above Ground Design Components	Forklifts	1	4.00	6	0.20
Above Ground Design Components	Generator Sets	1	8.00	100	0.74

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Above Ground Design Components	Generator Sets	1	8.00	100	0.74
Above Ground Design Components	Generator Sets	1	8.00	100	0.74
Above Ground Design Components	Paving Equipment	1	8.00	142	0.36
Above Ground Design Components	Plate Compactors	1	4.00	6	0.43
Above Ground Design Components	Rollers	1	4.00	100	0.38
Above Ground Design Components	Rollers	1	4.00	100	0.38
Above Ground Design Components	Skid Steer Loaders	2	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	2	8.00	61	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	115	0.37
Above Ground Design Components	Skid Steer Loaders	1	8.00	61	0.37
Above Ground Design Components	Tractors/Loaders/Backhoes	1	8.00	115	0.37
Above Ground Design Components	Tractors/Loaders/Backhoes	1	8.00	115	0.37
Above Ground Design Components	Tractors/Loaders/Backhoes	1	4.00	115	0.37
Above Ground Design Components	Tractors/Loaders/Backhoes	1	8.00	115	0.37
Parking lot paving	Pavers	1	8.00	130	0.42

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
Mobilization and Staging	1	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Clear and Grub	4	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Underground Storage Gallery and Connector	16	72.00	0.00	37,760.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Underground Pump Vaults, Manholes, and	8	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Underground Pump Vaults, Manholes, and	8	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Diversion Lines and Structures	8	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Above Ground Design Components	30	31.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Parking lot paving	1	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Mobilization and Staging - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3000e-004	5.8700e-003	6.4200e-003	1.0000e-005		3.9000e-004	3.9000e-004		3.6000e-004	3.6000e-004	0.0000	0.7469	0.7469	2.4000e-004	0.0000	0.7529
Total	**6.3000e-004**	**5.8700e-003**	**6.4200e-003**	**1.0000e-005**	**0.0000**	**3.9000e-004**	**3.9000e-004**	**0.0000**	**3.6000e-004**	**3.6000e-004**	**0.0000**	**0.7469**	**0.7469**	**2.4000e-004**	**0.0000**	**0.7529**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Mobilization and Staging - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.9000e-004	4.1000e-004	5.3500e-003	1.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3062	1.3062	4.0000e-005	4.0000e-005	1.3177
Total	**4.9000e-004**	**4.1000e-004**	**5.3500e-003**	**1.0000e-005**	**1.5800e-003**	**1.0000e-005**	**1.5900e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.3062**	**1.3062**	**4.0000e-005**	**4.0000e-005**	**1.3177**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.3000e-004	5.8700e-003	6.4200e-003	1.0000e-005		3.9000e-004	3.9000e-004		3.6000e-004	3.6000e-004	0.0000	0.7469	0.7469	2.4000e-004	0.0000	0.7529
Total	**6.3000e-004**	**5.8700e-003**	**6.4200e-003**	**1.0000e-005**	**0.0000**	**3.9000e-004**	**3.9000e-004**	**0.0000**	**3.6000e-004**	**3.6000e-004**	**0.0000**	**0.7469**	**0.7469**	**2.4000e-004**	**0.0000**	**0.7529**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Mobilization and Staging - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.9000e-004	4.1000e-004	5.3500e-003	1.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3062	1.3062	4.0000e-005	4.0000e-005	1.3177
Total	**4.9000e-004**	**4.1000e-004**	**5.3500e-003**	**1.0000e-005**	**1.5800e-003**	**1.0000e-005**	**1.5900e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.3062**	**1.3062**	**4.0000e-005**	**4.0000e-005**	**1.3177**

3.3 Clear and Grub - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0705	0.0000	0.0705	0.0214	0.0000	0.0214	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6700e-003	0.0514	0.0343	6.0000e-005		2.6300e-003	2.6300e-003		2.4200e-003	2.4200e-003	0.0000	5.5211	5.5211	1.7900e-003	0.0000	5.5657
Total	**5.6700e-003**	**0.0514**	**0.0343**	**6.0000e-005**	**0.0705**	**2.6300e-003**	**0.0731**	**0.0214**	**2.4200e-003**	**0.0238**	**0.0000**	**5.5211**	**5.5211**	**1.7900e-003**	**0.0000**	**5.5657**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Clear and Grub - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.1000e-004	3.4000e-004	4.4500e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0885	1.0885	3.0000e-005	3.0000e-005	1.0981
Total	**4.1000e-004**	**3.4000e-004**	**4.4500e-003**	**1.0000e-005**	**1.3100e-003**	**1.0000e-005**	**1.3200e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.0885**	**1.0885**	**3.0000e-005**	**3.0000e-005**	**1.0981**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0275	0.0000	0.0275	8.3400e-003	0.0000	8.3400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.6700e-003	0.0514	0.0343	6.0000e-005		2.6300e-003	2.6300e-003		2.4200e-003	2.4200e-003	0.0000	5.5211	5.5211	1.7900e-003	0.0000	5.5657
Total	**5.6700e-003**	**0.0514**	**0.0343**	**6.0000e-005**	**0.0275**	**2.6300e-003**	**0.0301**	**8.3400e-003**	**2.4200e-003**	**0.0108**	**0.0000**	**5.5211**	**5.5211**	**1.7900e-003**	**0.0000**	**5.5657**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Clear and Grub - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.1000e-004	3.4000e-004	4.4500e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0885	1.0885	3.0000e-005	3.0000e-005	1.0981
Total	**4.1000e-004**	**3.4000e-004**	**4.4500e-003**	**1.0000e-005**	**1.3100e-003**	**1.0000e-005**	**1.3200e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.0885**	**1.0885**	**3.0000e-005**	**3.0000e-005**	**1.0981**

3.4 Underground Storage Gallery and Connector Pipes - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1399	1.2622	1.1942	2.1200e-003		0.0595	0.0595		0.0561	0.0561	0.0000	182.4755	182.4755	0.0441	0.0000	183.5780
Total	**0.1399**	**1.2622**	**1.1942**	**2.1200e-003**		**0.0595**	**0.0595**		**0.0561**	**0.0561**	**0.0000**	**182.4755**	**182.4755**	**0.0441**	**0.0000**	**183.5780**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Storage Gallery and Connector Pipes - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0276	1.0589	0.2361	3.7200e-003	0.1030	7.4800e-003	0.1105	0.0283	7.1500e-003	0.0354	0.0000	369.7554	369.7554	0.0196	0.0587	387.7294
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	8.0200e-003	6.6800e-003	0.0869	2.3000e-004	0.0256	1.7000e-004	0.0258	6.8100e-003	1.5000e-004	6.9600e-003	0.0000	21.2254	21.2254	6.1000e-004	5.8000e-004	21.4123
Total	**0.0356**	**1.0656**	**0.3230**	**3.9500e-003**	**0.1286**	**7.6500e-003**	**0.1363**	**0.0351**	**7.3000e-003**	**0.0424**	**0.0000**	**390.9808**	**390.9808**	**0.0202**	**0.0593**	**409.1417**

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	0.1399	1.2622	1.1942	2.1200e-003		0.0595	0.0595		0.0561	0.0561	0.0000	182.4753	182.4753	0.0441	0.0000	183.5778
Total	**0.1399**	**1.2622**	**1.1942**	**2.1200e-003**		**0.0595**	**0.0595**		**0.0561**	**0.0561**	**0.0000**	**182.4753**	**182.4753**	**0.0441**	**0.0000**	**183.5778**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Storage Gallery and Connector Pipes - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0276	1.0589	0.2361	3.7200e-003	0.1030	7.4800e-003	0.1105	0.0283	7.1500e-003	0.0354	0.0000	369.7554	369.7554	0.0196	0.0587	387.7294
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	8.0200e-003	6.6800e-003	0.0869	2.3000e-004	0.0256	1.7000e-004	0.0258	6.8100e-003	1.5000e-004	6.9600e-003	0.0000	21.2254	21.2254	6.1000e-004	5.8000e-004	21.4123
Total	**0.0356**	**1.0656**	**0.3230**	**3.9500e-003**	**0.1286**	**7.6500e-003**	**0.1363**	**0.0351**	**7.3000e-003**	**0.0424**	**0.0000**	**390.9808**	**390.9808**	**0.0202**	**0.0593**	**409.1417**

3.4 Underground Storage Gallery and Connector Pipes - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2673	2.3613	2.4912	4.5700e-003		0.1063	0.1063		0.1003	0.1003	0.0000	393.0073	393.0073	0.0943	0.0000	395.3654
Total	**0.2673**	**2.3613**	**2.4912**	**4.5700e-003**		**0.1063**	**0.1063**		**0.1003**	**0.1003**	**0.0000**	**393.0073**	**393.0073**	**0.0943**	**0.0000**	**395.3654**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Storage Gallery and Connector Pipes - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0272	1.7730	0.4515	7.5400e-003	0.2218	0.0106	0.2325	0.0609	0.0102	0.0711	0.0000	752.0476	752.0476	0.0414	0.1194	788.6722
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	0.0160	0.0127	0.1722	4.8000e-004	0.0552	3.4000e-004	0.0556	0.0147	3.1000e-004	0.0150	0.0000	44.5121	44.5121	1.1700e-003	1.1400e-003	44.8823
Total	**0.0432**	**1.7857**	**0.6237**	**8.0200e-003**	**0.2771**	**0.0110**	**0.2880**	**0.0756**	**0.0105**	**0.0861**	**0.0000**	**796.5597**	**796.5597**	**0.0426**	**0.1206**	**833.5546**

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	0.2673	2.3613	2.4912	4.5700e-003		0.1063	0.1063		0.1003	0.1003	0.0000	393.0068	393.0068	0.0943	0.0000	395.3650
Total	**0.2673**	**2.3613**	**2.4912**	**4.5700e-003**		**0.1063**	**0.1063**		**0.1003**	**0.1003**	**0.0000**	**393.0068**	**393.0068**	**0.0943**	**0.0000**	**395.3650**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Storage Gallery and Connector Pipes - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0272	1.7730	0.4515	7.5400e-003	0.2218	0.0106	0.2325	0.0609	0.0102	0.0711	0.0000	752.0476	752.0476	0.0414	0.1194	788.6722
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	0.0160	0.0127	0.1722	4.8000e-004	0.0552	3.4000e-004	0.0556	0.0147	3.1000e-004	0.0150	0.0000	44.5121	44.5121	1.1700e-003	1.1400e-003	44.8823
Total	**0.0432**	**1.7857**	**0.6237**	**8.0200e-003**	**0.2771**	**0.0110**	**0.2880**	**0.0756**	**0.0105**	**0.0861**	**0.0000**	**796.5597**	**796.5597**	**0.0426**	**0.1206**	**833.5546**

3.5 Underground Pump Vaults, Manholes, and Pre/post-treatment systems - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0389	0.3218	0.4419	7.0000e-004		0.0147	0.0147		0.0141	0.0141	0.0000	59.4553	59.4553	0.0113	0.0000	59.7389
Total	**0.0389**	**0.3218**	**0.4419**	**7.0000e-004**		**0.0147**	**0.0147**		**0.0141**	**0.0141**	**0.0000**	**59.4553**	**59.4553**	**0.0113**	**0.0000**	**59.7389**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Underground Pump Vaults, Manholes, and Pre/post-treatment systems - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5500e-003	2.0300e-003	0.0275	8.0000e-005	0.0165	5.0000e-005	0.0165	4.2100e-003	5.0000e-005	4.2600e-003	0.0000	7.1007	7.1007	1.9000e-004	1.8000e-004	7.1598
Total	**2.5500e-003**	**2.0300e-003**	**0.0275**	**8.0000e-005**	**0.0165**	**5.0000e-005**	**0.0165**	**4.2100e-003**	**5.0000e-005**	**4.2600e-003**	**0.0000**	**7.1007**	**7.1007**	**1.9000e-004**	**1.8000e-004**	**7.1598**

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	0.0389	0.3218	0.4419	7.0000e-004		0.0147	0.0147		0.0141	0.0141	0.0000	59.4553	59.4553	0.0113	0.0000	59.7388
Total	**0.0389**	**0.3218**	**0.4419**	**7.0000e-004**		**0.0147**	**0.0147**		**0.0141**	**0.0141**	**0.0000**	**59.4553**	**59.4553**	**0.0113**	**0.0000**	**59.7388**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Underground Pump Vaults, Manholes, and Pre/post-treatment systems - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5500e-003	2.0300e-003	0.0275	8.0000e-005	0.0165	5.0000e-005	0.0165	4.2100e-003	5.0000e-005	4.2600e-003	0.0000	7.1007	7.1007	1.9000e-004	1.8000e-004	7.1598
Total	**2.5500e-003**	**2.0300e-003**	**0.0275**	**8.0000e-005**	**0.0165**	**5.0000e-005**	**0.0165**	**4.2100e-003**	**5.0000e-005**	**4.2600e-003**	**0.0000**	**7.1007**	**7.1007**	**1.9000e-004**	**1.8000e-004**	**7.1598**

3.6 Diversion Lines and Structures - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.3162	0.4481	7.1000e-004		0.0152	0.0152		0.0146	0.0146	0.0000	59.9853	59.9853	0.0118	0.0000	60.2790
Total	**0.0399**	**0.3162**	**0.4481**	**7.1000e-004**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**0.0146**	**0.0146**	**0.0000**	**59.9853**	**59.9853**	**0.0118**	**0.0000**	**60.2790**

Alondra Stormwater Capture - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Diversion Lines and Structures - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4800e-003	1.9700e-003	0.0267	7.0000e-005	8.5500e-003	5.0000e-005	8.6000e-003	2.2700e-003	5.0000e-005	2.3200e-003	0.0000	6.8888	6.8888	1.8000e-004	1.8000e-004	6.9461
Total	**2.4800e-003**	**1.9700e-003**	**0.0267**	**7.0000e-005**	**8.5500e-003**	**5.0000e-005**	**8.6000e-003**	**2.2700e-003**	**5.0000e-005**	**2.3200e-003**	**0.0000**	**6.8888**	**6.8888**	**1.8000e-004**	**1.8000e-004**	**6.9461**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.3162	0.4481	7.1000e-004		0.0152	0.0152		0.0146	0.0146	0.0000	59.9853	59.9853	0.0118	0.0000	60.2790
Total	**0.0399**	**0.3162**	**0.4481**	**7.1000e-004**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**0.0146**	**0.0146**	**0.0000**	**59.9853**	**59.9853**	**0.0118**	**0.0000**	**60.2790**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Diversion Lines and Structures - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4800e-003	1.9700e-003	0.0267	7.0000e-005	8.5500e-003	5.0000e-005	8.6000e-003	2.2700e-003	5.0000e-005	2.3200e-003	0.0000	6.8888	6.8888	1.8000e-004	1.8000e-004	6.9461
Total	**2.4800e-003**	**1.9700e-003**	**0.0267**	**7.0000e-005**	**8.5500e-003**	**5.0000e-005**	**8.6000e-003**	**2.2700e-003**	**5.0000e-005**	**2.3200e-003**	**0.0000**	**6.8888**	**6.8888**	**1.8000e-004**	**1.8000e-004**	**6.9461**

3.6 Diversion Lines and Structures - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5200e-003	0.0597	0.0896	1.4000e-004		2.7000e-003	2.7000e-003		2.5900e-003	2.5900e-003	0.0000	11.9988	11.9988	2.3200e-003	0.0000	12.0569
Total	**7.5200e-003**	**0.0597**	**0.0896**	**1.4000e-004**	**0.0000**	**2.7000e-003**	**2.7000e-003**	**0.0000**	**2.5900e-003**	**2.5900e-003**	**0.0000**	**11.9988**	**11.9988**	**2.3200e-003**	**0.0000**	**12.0569**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Diversion Lines and Structures - 2024

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	4.6000e-004	3.5000e-004	4.9600e-003	1.0000e-005	1.7100e-003	1.0000e-005	1.7200e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.3495	1.3495	3.0000e-005	3.0000e-005	1.3601
Total	**4.6000e-004**	**3.5000e-004**	**4.9600e-003**	**1.0000e-005**	**1.7100e-003**	**1.0000e-005**	**1.7200e-003**	**4.5000e-004**	**1.0000e-005**	**4.6000e-004**	**0.0000**	**1.3495**	**1.3495**	**3.0000e-005**	**3.0000e-005**	**1.3601**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5200e-003	0.0597	0.0896	1.4000e-004		2.7000e-003	2.7000e-003		2.5900e-003	2.5900e-003	0.0000	11.9988	11.9988	2.3200e-003	0.0000	12.0569
Total	**7.5200e-003**	**0.0597**	**0.0896**	**1.4000e-004**	**0.0000**	**2.7000e-003**	**2.7000e-003**	**0.0000**	**2.5900e-003**	**2.5900e-003**	**0.0000**	**11.9988**	**11.9988**	**2.3200e-003**	**0.0000**	**12.0569**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Diversion Lines and Structures - 2024

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	4.6000e-004	3.5000e-004	4.9600e-003	1.0000e-005	1.7100e-003	1.0000e-005	1.7200e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.3495	1.3495	3.0000e-005	3.0000e-005	1.3601
Total	**4.6000e-004**	**3.5000e-004**	**4.9600e-003**	**1.0000e-005**	**1.7100e-003**	**1.0000e-005**	**1.7200e-003**	**4.5000e-004**	**1.0000e-005**	**4.6000e-004**	**0.0000**	**1.3495**	**1.3495**	**3.0000e-005**	**3.0000e-005**	**1.3601**

3.7 Above Ground Design Components - 2024

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	0.3543	3.1892	4.7249	7.3000e-003		0.1270	0.1270		0.1213	0.1213	0.0000	622.2036	622.2036	0.1348	0.0000	625.5735
Total	**0.3543**	**3.1892**	**4.7249**	**7.3000e-003**		**0.1270**	**0.1270**		**0.1213**	**0.1213**	**0.0000**	**622.2036**	**622.2036**	**0.1348**	**0.0000**	**625.5735**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Above Ground Design Components - 2024

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	8.0400e-003	6.1000e-003	0.0863	2.5000e-004	0.0297	1.8000e-004	0.0299	7.8900e-003	1.6000e-004	8.0600e-003	0.0000	23.4639	23.4639	5.7000e-004	5.7000e-004	23.6488
Total	**8.0400e-003**	**6.1000e-003**	**0.0863**	**2.5000e-004**	**0.0297**	**1.8000e-004**	**0.0299**	**7.8900e-003**	**1.6000e-004**	**8.0600e-003**	**0.0000**	**23.4639**	**23.4639**	**5.7000e-004**	**5.7000e-004**	**23.6488**

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	0.3543	3.1892	4.7249	7.3000e-003		0.1270	0.1270		0.1213	0.1213	0.0000	622.2029	622.2029	0.1348	0.0000	625.5727
Total	**0.3543**	**3.1892**	**4.7249**	**7.3000e-003**		**0.1270**	**0.1270**		**0.1213**	**0.1213**	**0.0000**	**622.2029**	**622.2029**	**0.1348**	**0.0000**	**625.5727**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Above Ground Design Components - 2024

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	8.0400e-003	6.1000e-003	0.0863	2.5000e-004	0.0297	1.8000e-004	0.0299	7.8900e-003	1.6000e-004	8.0600e-003	0.0000	23.4639	23.4639	5.7000e-004	5.7000e-004	23.6488
Total	**8.0400e-003**	**6.1000e-003**	**0.0863**	**2.5000e-004**	**0.0297**	**1.8000e-004**	**0.0299**	**7.8900e-003**	**1.6000e-004**	**8.0600e-003**	**0.0000**	**23.4639**	**23.4639**	**5.7000e-004**	**5.7000e-004**	**23.6488**

3.8 Parking lot paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0973					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7500e-003	0.0261	0.0434	7.0000e-005		1.2200e-003	1.2200e-003		1.1200e-003	1.1200e-003	0.0000	6.1937	6.1937	2.0000e-003	0.0000	6.2438
Total	**0.1001**	**0.0261**	**0.0434**	**7.0000e-005**		**1.2200e-003**	**1.2200e-003**		**1.1200e-003**	**1.1200e-003**	**0.0000**	**6.1937**	**6.1937**	**2.0000e-003**	**0.0000**	**6.2438**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Parking lot paving - 2024

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	1.0700e-003	8.1000e-004	0.0115	3.0000e-005	3.9400e-003	2.0000e-005	3.9700e-003	1.0500e-003	2.0000e-005	1.0700e-003	0.0000	3.1141	3.1141	8.0000e-005	8.0000e-005	3.1386
Total	**1.0700e-003**	**8.1000e-004**	**0.0115**	**3.0000e-005**	**3.9400e-003**	**2.0000e-005**	**3.9700e-003**	**1.0500e-003**	**2.0000e-005**	**1.0700e-003**	**0.0000**	**3.1141**	**3.1141**	**8.0000e-005**	**8.0000e-005**	**3.1386**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0973					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7500e-003	0.0261	0.0434	7.0000e-005		1.2200e-003	1.2200e-003		1.1200e-003	1.1200e-003	0.0000	6.1937	6.1937	2.0000e-003	0.0000	6.2438
Total	**0.1001**	**0.0261**	**0.0434**	**7.0000e-005**		**1.2200e-003**	**1.2200e-003**		**1.1200e-003**	**1.1200e-003**	**0.0000**	**6.1937**	**6.1937**	**2.0000e-003**	**0.0000**	**6.2438**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Parking lot paving - 2024

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	1.0700e-003	8.1000e-004	0.0115	3.0000e-005	3.9400e-003	2.0000e-005	3.9700e-003	1.0500e-003	2.0000e-005	1.0700e-003	0.0000	3.1141	3.1141	8.0000e-005	8.0000e-005	3.1386
Total	**1.0700e-003**	**8.1000e-004**	**0.0115**	**3.0000e-005**	**3.9400e-003**	**2.0000e-005**	**3.9700e-003**	**1.0500e-003**	**2.0000e-005**	**1.0700e-003**	**0.0000**	**3.1141**	**3.1141**	**8.0000e-005**	**8.0000e-005**	**3.1386**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	0.00	0.00	0.00	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 Heavy Industry	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	558.5321	558.5321	0.0471	5.7100e-003	561.4134
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	558.5321	558.5321	0.0471	5.7100e-003	561.4134
NaturalGas Mitigated	0.0281	0.2553	0.2145	1.5300e-003		0.0194	0.0194		0.0194	0.0194	0.0000	277.9401	277.9401	5.3300e-003	5.1000e-003	279.5917
NaturalGas Unmitigated	0.0281	0.2553	0.2145	1.5300e-003		0.0194	0.0194		0.0194	0.0194	0.0000	277.9401	277.9401	5.3300e-003	5.1000e-003	279.5917

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	5.2084e+006	0.0281	0.2553	0.2145	1.5300e-003		0.0194	0.0194		0.0194	0.0194	0.0000	277.9401	277.9401	5.3300e-003	5.1000e-003	279.5917
Total		**0.0281**	**0.2553**	**0.2145**	**1.5300e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**277.9401**	**277.9401**	**5.3300e-003**	**5.1000e-003**	**279.5917**

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 Heavy Industry	5.2084e+006	0.0281	0.2553	0.2145	1.5300e-003		0.0194	0.0194		0.0194	0.0194	0.0000	277.9401	277.9401	5.3300e-003	5.1000e-003	279.5917
Total		**0.0281**	**0.2553**	**0.2145**	**1.5300e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**277.9401**	**277.9401**	**5.3300e-003**	**5.1000e-003**	**279.5917**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	3.1494e+006	558.5321	0.0471	5.7100e-003	561.4134
Total		**558.5321**	**0.0471**	**5.7100e-003**	**561.4134**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	3.1494e+006	558.5321	0.0471	5.7100e-003	561.4134
Total		**558.5321**	**0.0471**	**5.7100e-003**	**561.4134**

6.0 Area Detail

6.1 Mitigation Measures Area

Alondra Stormwater Capture - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

6.2 Area by SubCategory

Unmitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

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

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix D

Phase I Cultural Resources Assessment

Alondra Park Multi-Benefit Stormwater Capture Project
Los Angeles County, California

PHASE 1 CULTURAL RESOURCES ASSESSMENT

Prepared for:

Los Angeles County Public Works
Stormwater Quality Division
900 South Fremont Avenue
Alhambra, CA 91783

Prepared by:

Lauren DeOliveira, M.S., RPA
James Allan, Ph.D., RPA

Aspen environmental group

5020 Chesebro Road, Suite 200
Agoura Hills, CA 91301

September 2021

NATIONAL ARCHAEOLOGICAL DATABASE INFORMATION

Authors: Lauren DeOliveira, M.S., RPA
James M. Allan Ph.D., RPA
Aspen Environmental Group
5020 Chesebro Road, Suite 200, Agoura Hills, CA 91301

Date: September 2021

Title: Alondra Park Multi-Benefit Stormwater Capture Project
Los Angeles County, California

Submitted by: Aspen Environmental Group
5020 Chesebro Road, Suite 200
Agoura Hills, CA 91301

Submitted to: Los Angeles County Public Works
South Central Coastal Information Center

This document contains sensitive information regarding the location of archaeological sites, which should not be disclosed to the public or other unauthorized persons. Archaeological and other heritage resources can be damaged or destroyed through uncontrolled public disclosure of information regarding their location.

Therefore, information regarding the location, character, or ownership of archaeological or other heritage resources is exempt from the Freedom of Information Act pursuant to the National Historic Preservation Act (16 USC Section 340), the Archaeological Resources Protection Act (16 USC Section 9(a)), Executive Order 13007, and Section 6254.10 of the California State Government Code. This report and records that relate to archaeological site information are exempt from the California Public Records Act (Government Code Section 6250 et seq.). In addition, Government Code Section 6254.19(r) explicitly authorizes public agencies to withhold information from the public relating to Native American graves, cemeteries, sacred places, and records of Native American places, features, and objects maintained by the Native American Heritage Commission pursuant to Sections 5097.9 and 5097.993 of the Public Resources Code and Section 296.18 of the Code of Federal Regulations.

Contents

Tables

Figures

Appendices

Introduction

At the request of the Los Angeles County Public Works Department (LACPW), Aspen Environmental Group (Aspen) performed a cultural resources records search and pedestrian survey for the proposed Alondra Park Multi-Benefit Stormwater Capture Project (Project), focusing on prehistoric and historic-age resources. A separate report written by Sapphos Environmental Inc. in 2017, focuses on historic-period built environment resources.

To identify any cultural or tribal cultural resources eligible for the California Register of Historical Resources (CRHR), Aspen requested the California Historical Resources Information System (CHRIS), South Central Coastal Information Center (SCCIC), at California State University, Fullerton to conduct a cultural resources records search on behalf of the Project. Following receipt of the records search results, Aspen reviewed the archaeological site records, ethnographic literature; completed historical background research; and conducted a pedestrian survey of the Project area.

The following report is a full account of the methods and results of research, the conclusions of the study, and recommendations for the treatment of cultural resources potentially affected by the Project.

Project Description

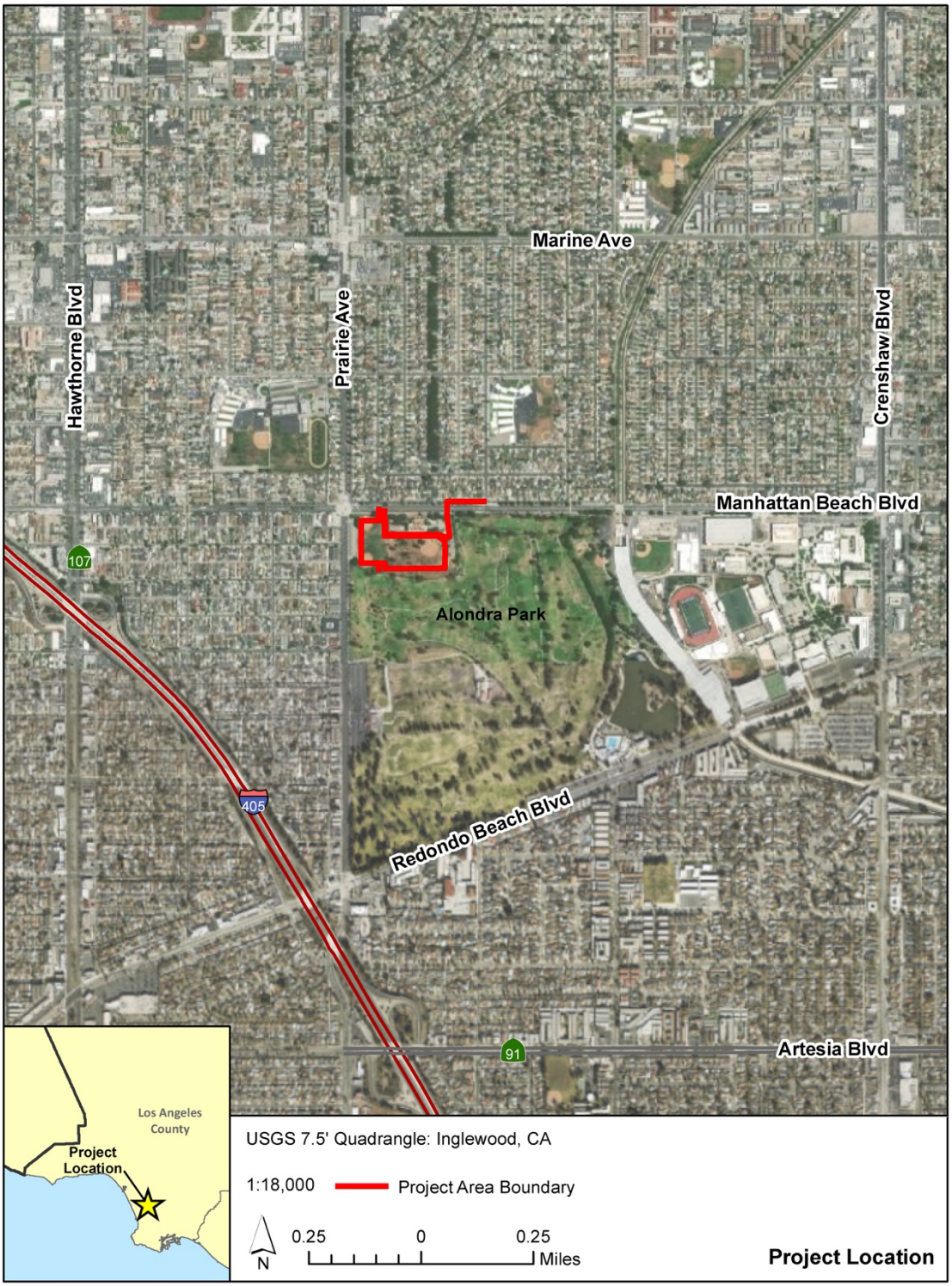
LACPW proposes to construct the Project at the approximately 53-acre Alondra Community Regional Park (Alondra Park or Park), which is located in the unincorporated area of El Camino Village at 3850 Manhattan Beach Boulevard, Lawndale, California 90260. The Park is owned and operated by the County of Los Angeles (County) and provides recreational benefits to the surrounding community. Amenities include baseball and softball fields, an open field, picnic areas, splash pad, fishing lake, children's playground equipment, skate park, basketball courts, public restrooms, and parking lots. The proposed Project includes construction of an underground storage gallery that would capture rainwater runoff from the Manhattan Beach Boulevard Drain and the Alondra Park Drain. Two diversion structures would be located at these two drains to divert runoff into the underground storage gallery.

The proposed Project would be constructed in the northwest corner of Alondra Park near the parking lots located at the intersection of Manhattan Beach Boulevard and Prairie Avenue. Some elements of the proposed Project would also be constructed underground within Manhattan Beach Boulevard to the intersection of Doty Avenue. The proposed Project would also provide enhancements within the Park through aboveground improvements to the parking lots, recreational amenities, lighting, and landscaping.

Project Location

The Project area encompasses approximately 6.2 acres and is located in the northwest corner of Alondra Park near the City of Lawndale. The proposed Project is bordered by residential houses to the north, the Alondra Golf Course to the south and east, and mixed residential and commercial uses to the west. Specifically, the Project location is depicted on the United States Geologic Survey (USGS) *Inglewood* 7.5-minute quadrangle (Figure 1).

Figure 1. Project Area Location



Regulatory Framework

Numerous laws, ordinances, regulations, and standards on federal, state, and local levels seek to protect and manage cultural resources. The primary state regulation governing significant cultural resources is California Environmental Quality Act. Additional State of California regulations include the Public Resources Code (PRC) Sections 21000 et seq., Section 5024, Section 5024.5; California Code of Regulations (CCR) Title 14, Chapter 3, Sections 15000 et seq.). These are discussed in more detail below.

California Environmental Quality Act (1970) (PRC Sections 21000 et seq., Section 5024, Section 5024.5; CCR Title 14, Chapter 3, Sections 15000 et seq.) establishes that historical and archaeological resources must be afforded consideration and protection by the CEQA (14 CCR Section 21083.2, 14 CCR Section 15064). CEQA Guidelines define significant cultural resources under three regulatory designations: historical resources, unique archaeological resources, and tribal cultural resources. The latter is discussed separately below (see AB 52).

A historical resource is a "resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR;" or "a resource listed in a local register of historical resources or identified as significant in a historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code;" or "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the agency's determination is supported by substantial evidence in light of the whole record" (14 CCR Section 15064.5[a][3]).

Historical resources automatically listed in the California Register include California cultural resources listed in or formally determined eligible for the National Register and California Historical Landmarks list from No. 770 onward (PRC 5024.1[d]). Locally listed resources are entitled to a presumption of significance unless a preponderance of evidence in the record indicates otherwise.

Under CEQA, a resource is generally considered historically significant if it meets the criteria for listing in the CRHR. A resource must meet at least one of the following criteria (PRC 5024.1; 14 CCR Section 15064.5[a][3]):

1. *Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. Title 14, CCR Section 4852(b)(1) adds, "is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States."*
2. *Is associated with the lives of persons important in our past. Title 14, CCR Section 4852(b)(2) adds, "is associated with the lives of persons important to local, California, or national history."*
3. *Embodies the distinctive characteristics of a type, period, region, or method of construction; or represents the work of an important creative individual; or possesses high artistic values. Title 14, CCR 4852(b)(3) allows a resource to be CRHR eligible if it represents the work of a master.*
4. *Has yielded, or may be likely to yield, information important in prehistory or history. Title 14, CCR 4852(b)(4) specifies that importance in prehistory or history can be defined at the scale of "the local area, California, or the nation."*

Historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association (14 CCR 4852[c]).

An archaeological artifact, object, or site can meet CEQA's definition of a unique archaeological resource even if it does not qualify as a historical resource (PRC 21083.2[g]; 14 CCR 15064.5[c][3]). An archaeological artifact, object, or site is considered a unique archaeological resource if "it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria (PRC 21083.2[g]):

- *Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;*
- *Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,*
- *Is directly associated with a scientifically recognized important prehistoric or historic event or person."*

Environmental Setting

In general, Alondra Park is entirely man made and encompasses approximately 53 acres in total. It is designed to mimic a rural landscape and prairie-type setting.

Alondra Park is separated into three areas. The first is located along the eastern border of the Park, which contains a lake, pool, children's play area, comfort stations, and other types of minor recreation equipment. The second area is the Alondra Golf Course, which takes up most of the Park property. The third area is in the northwest corner of the Park, the same as the Project area, and contains all the athletic fields and ball courts.

Cultural Setting

Prehistoric Overview

Various archaeologists have developed temporal chronologies for the prehistory of southern California. This section is based on observed patterns of cultural behavior as reported by Glassow (1996) and Morrato (1984) but most importantly King (1990). The chronology is organized into five broad cultural time periods. Time is presented throughout this section as calibrated years before present (BP).

Paleocoastal Period (13,000 - 8,500 BP)

The term "Paleocoastal" refers to the time period of the earliest migrations into North America, which appear to have occurred through a corridor that followed the coastline and its wealth of marine resources. Native peoples are known to have been in North America from coast to coast as represented by the Clovis culture (12,500-13,500 BP).

There are no mainland coastal sites of this age, and for good reason. At 13,000 BP the sea levels of southern California were over 300 feet lower than today. As the Pleistocene epoch was coming to a close beginning around 18,000 years ago, the massive Arctic and Antarctic ice sheets, and the glaciers covering much of North America, began a slow melting process, and sea levels rose. Rising sea levels were accompanied with more rapid coastal erosion and retreating marine terraces where coastal sites would have been located. So, coastal sites on the mainland would have suffered destruction from both inundation and wave erosion.

It is not until approximately 10,000 BP that sites of human occupation become evident on the mainland. The Paleocoastal Period has been described as a time of very low population density, expedient stone tool

technology, and high mobility. People living in coastal and coastal riparian ecological niches appear to have subsisted largely on plants, shellfish, and vertebrate species that included land and marine mammals. The Paleocoastal artifact assemblage emphasized flaked stone tools. Stone milling implements were not in use during this period (Glassow et al. 2007). In comparison to more recent time periods, relatively few Paleocoastal sites have been identified.

Early Period (8,500 - 3,200 BP)

Cultural changes during the Early Period are thought to have resulted from environmental shifts, rising sea levels, which finally stabilized near present levels at 6,000 BP, and an increase in population size. Around 8,000 BP, California experienced an extended warm and dry period, often referred to as the Altithermal. This climactic event drastically altered the environmental resources available to prehistoric inhabitants, thus changing their subsistence efforts to focus on the procurement of plant foods supplemented with small animals. The response to these changes by people of this period is evidenced by sites that appear more settled, but not permanent, with an increase in specialized sites for resource procurement activities such as hunting, fishing, and plant material processing. As a result of increased population, trade between regions expanded, as evidenced by the presence of exotic shell beads and obsidian materials. This period is also defined by a prevalence of handstones and milling slabs, indicating a reliance on seeds and other plant foods. Toward the end of the period, mortars and pestles appear, possibly indicating systematic exploitation of acorns and other nut resources. Improvements to maritime technology led to greater commerce between the mainland and the Channel Islands, with shell beads and ornaments moving from the island to the mainland, and terrestrial land mammal goods, such as hair pins made from deer bone, being transported to island groups. Greater emphasis on status differentiation begins to emerge, as indicated in cemeteries where items of wealth are differentially spread across the population (Glassow et al. 2007).

Middle Period (3,200 - 1200 BP)

The Middle Period is defined by continued specialization in resource exploitation and increased technological complexity that led to an increase in the number and size of archaeological sites. This expansion of settlements occurred in part due to major changes in the subsistence economy, which led to changes in the organization and distribution of settlements. Fish and acorns became dominant food sources during the Middle Period, with a greater use of seasonal resources and the first indications of food storage. A stronger emphasis on fishing and sea mammal hunting is attributed to the introduction of circular shell fishhooks at about 2600 BP and use of barbed harpoons and plank canoes after 1500 BP, the latter evidenced by canoe drills and asphaltum plugs. Higher degrees of sedentism are inferred from the discovery of semi-subterranean houses and ceremonial structures, as well as more formalized cemeteries. It has also been proposed that demographic changes along the coast resulted in more intensive occupation of the interior mountain areas, and that interior settlements quickly engaged in a series of sophisticated trade networks designed to move seed resources to the coast in exchange for a variety of marine foods and other goods. Communication and transport of goods along natural waterways and rivers may have played a part in the social and economic development of this period.

Middle-Late Period Transition (1200 - 900 BP)

The Middle to Late Period Transition generally characterized environmental factors occurring in the Santa Barbara Channel region and southern California coast as published by Pisias (1978) and Kennett and Kennett (2000). Although there is disagreement about the severity of sea surface temperature fluctuations, and while its possible effect on ancient human populations is not yet fully understood, both

studies postulate a general cooling of sea surface temperature and reduced productivity of marine food resources during this time. On the mainland, the impact of environmental changes included a rise in temperatures, potentially increased frequency of wildfires and insect pest populations, and fluctuations in the availability of terrestrial mammal and nut/seed food resources. These changes may have influenced social, economic, and possibly spiritual practices (Raab and Larson 1997).

Late Period (900 BP to Missionization)

Maritime adaptations continued to intensify along the southern California coastline during the Late Period, leading to the development of large permanent coastal villages and further development of the trade network between the Channel Islands, mainland coast, and interior regions. Island people, particularly those on Santa Cruz Island, were in an excellent position to specialize in bead money production because the necessary raw materials (i.e., high quality chert for drills, Olivella shells for beads) were only available in appreciable amounts in the shallow, sandy-bottom waters surrounding the Island. By the Late Period, local Native American cultures were probably very similar to what the Spanish observed upon arrival in the region. Artifact assemblages from the Late Period are incredibly diverse. In addition to the common functional classes such as arrow points, bedrock mortars, hopper mortars, and numerous bead styles, artifacts include a wide range of bone and shell items used in personal adornment.

Ethnographic Overview

The Project area was historically occupied by the Tongva people. Below is a brief ethnographic and archaeological overview of the Tongva.

Tongva

The Shoshonean migration marks the arrival of the Uto-Aztecan speakers to southern California. The Tongva, a branch of Shoshonean, arrived around 500 B.C. Their language has been identified as Cupon, which is part of the larger Uto-Aztecan (Johnston 1962).

At the time of Spanish contact, the Tongva inhabited a rich coastal and inland region of southern California consisting of roughly 1,500 square miles and included present-day Los Angeles and Orange counties, including San Nicolas, San Clemente, and Santa Catalina islands (Bean and Smith 1978). Second only to the Chumash, the Tongva were the wealthiest, most populous and most powerful ethnic group in southern California (Moratto 1984). Settlement pattern studies concluded there is a presence of both primary villages that were occupied year-round and secondary temporary camps inhabited at various times of the season. Both primary and temporary settlements seemed to be located near water sources (Bean and Smith 1978; McCawley 1996).

Their culture was very similar to that of the Chumash with a few exceptions in their language, cremation practices, and their ability to make pottery. The Tongva influenced cultures as far north as the San Joaquin Valley Yokuts, as far east as the Colorado River, and south into Baja California.

The majority of Tongva artifacts reflect ornate craftsmanship with everyday use items often decorated with asphaltum and inlaid shell, paintings and rare minerals. The Tongva established a successful economic system focusing on trading goods, food reserves, and distributing resources. The Tongva quarried steatite from Santa Catalina Island and often traded with neighboring tribes. The best-known items manufactured by the Tongva were made of steatite. Steatite was used to make pipes, animal carvings, cooking vessels, and ornaments. Shell beads, baskets, wooden paddles, bone tools, flint weapon

and drills, fishhooks and mortar and pestles are common types used to describe Tongva culture (Bean and Smith 1978; McCawley 1996).

A typical Tongva village contained a variety of structures used for religious, recreational, and residential use. Tongva houses were circular structures thatched with tule, fern, or carrizo. Some houses were recorded as being up to 60 ft in diameter. Sweathouses, menstrual huts, and dancing grounds were other common structures found in villages. Larger communities often had a sacred enclosure at the center surrounded by elite members of the community. Surrounding these structures were smaller houses occupied by the rest of the community members. (Bean and Smith 1978; McCawley 1996).

Historic Overview

This review of the Project area's regional and local history can be organized into three significant cultural themes: the Spanish Era (1769 to 1821), the Mexican Period (1821-1847), and the American Period (1847 to present). The calendrical reference "A.D." that precedes dates has been dropped in this section to accommodate common usage.

Spanish Colonization Period (1769 - 1821)

In 1542, Spanish exploration of the California coast began with the expedition of Juan Rodríguez Cabrillo, whose crew first came ashore at the present-day harbor of San Diego. Cabrillo's expedition then sailed north to the Los Angeles area, passing San Pedro Bay (Chartkoff and Chartkoff 1984; Kielbasa 1997). Cabrillo visited Santa Catalina Island during this time and made peaceful contact with the native inhabitants present there. In 1602, another Spanish expedition led by Sebastián Vizcaíno also had a peaceful encounter with the Tongva on Catalina Island (Bean and Smith 1978). While these and other early Spanish expeditions made initial contact with the local Native Californians and facilitated trade networks, Spanish colonization did not fully commence until 1769 with the expeditions of the Franciscan administrator Junipero Serra and the Spanish military, under the command of Gaspár de Portola (Chartkoff and Chartkoff 1984; Laylander 2000). The encounters continued to be peaceful, but conflicts would arise soon after (Bean and Smith 1978).

These expeditions preceded the Spanish missionization efforts, which involved the establishment of the California Missions, whose purpose was to "convert" the Native Californians to Catholicism within 10 years, and then return the mission lands to them (Chartkoff and Chartkoff 1984; Laylander 2000). To support the Spanish settlements, missions used Native Californians to work on the local farms and ranches. The Spanish established the first mission among the Tongva in 1771 at San Gabriel. The recruitment and absorption of the Tongva was relatively quick, and by the early 1800s, the vast majority of Native Americans were either in the mission system or had fled to the Central Valley or mountains. The Spanish eventually established 21 Missions in Alta (upper) California (Mourkas and Braun 2016). This period saw the development of the "Pueblos" around the missions and also the petitioning by retired soldiers for lands they could settle and improve.

Mexican Period (1821 - 1847)

The year 1821 marks the beginning of the Mexican Period and is concurrent with Mexico's independence from Spain. Mexico became California's new ruling government, and at first little changed for California Native Americans. The Franciscan missions continued to utilize the unpaid labor of the natives, despite the Mexican Republic's 1824 Constitution that declared Indians to be Mexican citizens. This monopoly of Native American labor by a system that accounted for nearly one-sixth of the land in the state, angered the newly granted land-holding colonial citizens (Castillo 1998). During this period, extensive land grants

were established. Landowners largely focused on the cattle industry and devoted large tracts of land to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of non-native inhabitants increased during this period because of the influx of explorers, trappers, and ranchers (Chartkoff and Chartkoff 1984; Castillo 1998). Independence from Spain in 1821 also brought an end to the ban on foreign trade in California. This brought merchants and immigrants to the state, and whaling became an important industry in southern California. Three separate land parcels in the Project area, known as Rancho Sausal-Redondo, were granted to Antonio Ignacio Avila from 1822 to 1846. The original rancho was estimated to be 40,000 acres, but when the U.S. Land Commission officially confirmed the title of the rancho, the land was reduced to about 22,000 acres, encompassing the modern day cities of Lawndale, Inglewood, Hawthorne, Redondo Beach, Manhattan Beach, and Hermosa Beach.

During the Mexican-American War of 1846 to 1848, the Mexican army defeated U.S. forces at the Battle of the Old Woman's Gun in Dominguez Hills, the Battle of Chino, and the Siege of Los Angeles. But hope of a Mexican victory faded, and California forces surrendered in exchange for pardons at Cahuenga in January 1847. This ended the resistance to U.S. takeover of the territory and ushered in the American Period.

American Period (1847 - Present)

In February 1848 California became a U.S. holding with the signing of the Treaty of Guadalupe Hidalgo. This treaty ended the Mexican American War and ceded much of the southwest (California, Nevada, Utah, and portions of Arizona, New Mexico, Colorado, and Wyoming) to the United States.

In 1848 gold was discovered at Sutter's Mill near Coloma on the south fork of the American River. By 1849 the rush to California's gold had begun. The southern route to reach California came by way of Santa Fe or Salt Lake City, and essentially followed the Old Spanish Trail to cross the Mojave Desert and enter the southern California valley through Cajon Pass. This trail had previously been used to trade goods from Santa Fe and Mexican horses and mules from Los Angeles (Latta 1932).

From the late 1860s to the late 1870s, Rancho Sausal-Redondo was known for its sheep, citrus, eucalyptus, and barley. By the 1880s, a small real estate boom came to the area and most of the new property owners farmed crops and raised livestock. The real estate boom continued as a direct result of the opening of a seaport in nearby Redondo in 1890. In 1902, the Los Angeles and Redondo Railway arrived in Lawndale along what is currently Hawthorne Boulevard. In 1911, the rail line merged with the Pacific Electric Railway (City of Lawndale 2021).

In 1905, Charles B. Hopper, a real estate developer, founded the town of Lawndale. It took almost a year for Lawndale to see its first settlers, but by 1910, the US Census recorded 142 residents in Lawndale.

The population of Lawndale did not increase during the World War II (WWII) era and did not begin to pick up until about 10 years after the end of the war. This growth was attributed to the development of housing for veterans and the construction of the Harbor Freeway, and by 1959, the City of Lawndale was formed (City of Lawndale 2021).

History of Alondra Park

The land of Alondra Park was originally owned by William Somers, a successful gold miner. He was said to be one of the first non-Native Americans to enter Yosemite Valley in his search for profitable mining claims. Somers eventually found his way back to the San Fernando Valley where he ran a successful wheat farm. In 1868, Somers found himself in Gardena Valley where for $225.00 he purchased the land where

Alondra Park, Alondra Golf Course, and El Camino College are now situated. Somers leased the land after the initial purchase, and it was not until 1904 that he returned to the property to start his own dairy farm. Somers lived on the property until his death in 1916 (Sapphos 2017).

The original 320-acre parcel was purchased by the County in 1927 from the Bank of Italy after Somers died without a will. Adopted by the County Board in 1954, the land was likely a former habitat for the wild meadow lark bird, hence the name "Alondra" which is the Spanish work for lark (Sapphos 2017).

Background Research Methods and Results

On October 8, 2020, Aspen received the results of a records search conducted by the staff at the SCCIC, which included the review of previously recorded resources and reports within the Project area and a surrounding 0.25-mile record search area.

The record search did not identify any previously recorded cultural resources within the Project area or within the 0.25-mile records search area. The records search did identify three previous studies within the 0.25-mile record search area, one of which intersects a portion of the Project area. Details of these studies can be found in Table 1 below.

Table 1. Previous Cultural Resource Studies Conducted within 0.25 Miles of the Project Area

Report #	Authors	Year	Report Title	Company
LA-02904	**Stickel, Gary E.**	**1993**	**Draft Report a Phase I Cultural Resources Literature Search for the West Basin Water Reclamation Project**	**Environmental Research Archaeologists: A Scientific Consortium**
LA-03289	Davis, Gene	1990	Mobil M-70 Pipeline Replacement Project Cultural Resource Survey Report for Mobil Corporation	Dames & Moore
LA-06025	Duke, Curt	2002	Cultural Resource Assessment AT & T Wireless Services Facility No. D161a Los Angeles County, California	LSA Associates, Inc.

* Reports in bold are within Project area.

Native American Heritage Commission Sacred Lands File Search

On September 24, 2020, Aspen requested that the Native American Heritage Commission (NAHC) complete a search of its Sacred Lands Files to determine if resources significant to Native Americans have been recorded within the Project footprint. On October 2, 2020, Aspen received a response from the NAHC stating that the search of its Sacred Lands File was negative for the presence of resources within the Project footprint (Appendix 1). The NAHC also provided its contact list of Native American tribal governments to contact for additional information regarding resources in the area. All necessary tribal outreach was conducted by LACPW.

Survey Methods and Results

Methods

On August 27, 2021, Aspen's Cultural Resource Specialist Albert Knight conducted an intensive archaeological survey of the Project area, which included transects spaced no more than 30 meters apart. Mr. Knight is qualified under the Secretary of the Interior's Qualification Standards and Guidelines for Archaeology and has in-depth familiarity with the prehistoric and historic period cultural resources of Los Angeles County.

For prehistoric resources, the surveyor visually examined the ground surface, searching for evidence that would suggest the presence of prehistoric deposits. Such evidence would typically include lithic fragments of economically important stone materials for cutting and hunting tools, stone tools used for grinding/ pounding plants or animals (e.g., metates, manos, pestles, bedrock milling surfaces), and remains of dietary materials that may have been consumed in the past (e.g., fragments of bone). The ground surfaces surveyed were also inspected for elements of historic uses, including barbed wire fencing, standing or fallen wooden posts, markers, structural remains of buildings, and metal or tin debris (e.g., tin cans, abandoned machinery or vehicles).

Results

Ground visibility during the survey was poor, averaging about 5 percent due to existing grass fields, landscaping, a paved parking lot, and non-native soils in the baseball diamond areas. Overview photographs of the Project area are provided in Appendix 2.

The survey did not identify any prehistoric-age or historic-age resources within the Project area.

Summary and Recommendations

Aspen conducted archaeological literature reviews and record searches, as well as an intensive field survey in support of the Project in August 2021. The main goal of this archaeological investigation was to gather and analyze the information needed to determine if cultural resources are present within the Project area.

The record search and archival research did not reveal any previously documented resources within the Project area. Additionally, the record search revealed that one cultural resource investigation has been conducted previously that encompassed all or a portion of the Project area, but did not identify any resources within the Project area. Also, the NAHC sent results of its Sacred Lands File search on October 2, 2021, which were negative. Lastly, Aspen completed a field survey of the Project area on August 27, 2021, that determined there are no new prehistoric-age or historic-age resources in the Project area. Therefore, no further cultural resources investigations are recommended at this time.

In the event cultural materials are encountered during future Project construction, Aspen recommends the following:

1. **Inadvertent Discovery of Cultural Resources.** A professional archaeologist meeting the Secretary of Interior qualifications shall be available on-call to identify and evaluate previously unidentified cultural resources discovered during construction activities. Upon inadvertent discovery of a potential resource, avoidance measures shall be implemented by construction crews. These should include halting construction work within 50-feet of the find and directing construction away from the discovery until the archaeologist assesses the significance of the resource. The archaeologist will consult with the appropriate responsible public agency regarding necessary plans for treatment of the find(s), and for the evaluation and mitigation of impacts if the finds are thought to be potentially eligible for the California Register of Historical Resources or may qualify as a unique archaeological resource under CEQA Section 21083.2.
2. **Inadvertent Discovery of Human Remains.** In the event that human remains, or potential human remains are discovered, construction activities within 100-feet of the find shall be immediately halted. The construction Project Manager shall immediately notify the appropriate responsible public agency

and the County Coroner. The County Coroner will make a determination as to the origin of the remains and, if determined to be of Native American origin, will contact the Native American Heritage Commission (NAHC) by telephone within 24 hours. Once contacted by the County Coroner, the NAHC shall immediately identify and notify the Most Likely Descendant (MLD). The MLD has 48 hours to make recommendations to the landowner for treatment or disposition of the human remains. If the descendant does not make recommendations within 48 hours, the appropriate responsible public agency shall reinter the remains in an area of the property secure from further disturbance. If the responsible public agency does not accept the descendant's recommendations, the appropriate responsible public agency or the descendant may request mediation by the NAHC. Construction may continue once compliance with all relevant sections of the California Health and Safety Code have been addressed and authorization to proceed is issued by the County Coroner and the responsible public agency. If the remains are not of Native American origin, the County Coroner will make a determination as to the disposition of the remains.

References Cited

Bean Lowell J., and Charles R. Smith.
1978. Gabrielino. In *Handbook of North American Indians* Vol.8, William G. Sturtevent, general editor, Smithsonian Institute, Washington D.C.

Castillo, Edward D.
1998. Short Overview of California Indian History. California Native American Heritage.

Chartkoff, Joseph and Kerry K. Chartkoff.
1984. *The Archaeology of California.* Standford University Press, Palo Alto, CA.

City of Lawndale
2021. History of Lawndale. https://www.lawndalecity.org/community/history. Accessed September 3, 2021.

Glassow, Michael A.
1996. Purisimeño Chumash Prehistory: Maritime Adaptations along the Southern California Coast. Case Studies in Archaeology. Jeffrey Quilter, series editor. Harcourt Brace College Publishers, San Diego

Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell.
2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In California Prehistory: Colonization, Culture, and Complexity. Terry L. Jones and Kathryn A. Klar, eds. Pp. 191-213. Lanham, M.D.: Alta Mira Press.

Johnston, B.E.
1962. *California's Gabrielino Indians.* Southwest Museum. Los Angeles, California.

Kennett, D. and D. Kennett.
2000. Competitive and Cooperative Responses to Climatic Instability in Coastal Southern California. American Antiquity 65:379-395.

Kielbasas, John R.
1997. Historic Adobes of Los Angeles County. Dorrance Publishing Company. Pittsburg, Pennsylvania.

King, C.
1990. Evolution of Chumash Society: A Comparative Study of Artifacts Used for Social System Maintenance in the Santa Barbara Channel Region before A. D. 1804. The Evolution of North American Indians. Edited by David Hurst Thomas. American Museum of Natural History. Garland Publishing.

Latta, F.F.
1932. El Camino Viejo. Tulare Daily Times. Tulare, CA.

Laylander, Don.
2000. *Early Ethography of the Californians: 1533-1825.* Coyote Press Archives of California Prehistory, No. 47.

McCawley, W.
1996. *The First Angelinos: The Gabrielino Indians of Los Angeles.* Malki Press, Banning California and Ballena Press, Novato, California.

Morrato, M. J.
1984. California Archaeology. Academic Press, Orlando.

Mourkas, Melissa and Matt Braun.
2016. Cultural Resources. Puente Power Plant Preliminary Staff Assessment. California Energy Commission. Sacramento California.

Pisias, N. G.
1978. Paleoceanography of the Santa Barbara Basin during the Last 8,000 Years. Quaternary Research 10:366-384.

Raab, L. M. and D. O. Larson.
1997. Medieval Climatic Anomaly and Punctuated Cultural Evolution in Coastal Southern California. American Antiquity 62:319-336.

Sapphos Environmental Inc.
2017. Historic Resource Evaluation for Alondra Regional Community Park. Prepared for County of Los Angeles Department of Parks and Recreation.

Appendix 1

NAHC Sacred Lands File Results

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

October 2, 2020

Lauren DeOliveira
Aspen Environmental Group

Via Email to: ldeoliveira@aspeneg.com

Re: Alondra Stormwater Project, Los Angeles County

Dear Ms. DeOliveira:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Los Angeles County
10/2/2020

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 — Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street — Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Santa Rosa Band of Cahuilla Indians
Lovina Redner, Tribal Chair
P.O. Box 391820 — Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosacahuilla-nsn.gov

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 — Cahuilla, Luiseno
San Jacinto, CA, 92581
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Soboba Band of Luiseno Indians
Scott Cozart, Chairperson
P. O. Box 487 — Cahuilla, Luiseno
San Jacinto, CA, 92583
Phone: (951) 654 - 2765
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Alondra Stormwater Project, Los Angeles County.

Appendix 2

Project Area Photographs

Facing northeast. Overview of northwest portion of Project area.

Facing east. Overview of southern portion of Project area.

Facing north. Overview of western portion of Project area.

Facing north. Overview of central portion of Project area.

Facing north. Overview of the eastern portion of Project area.

Facing north. Overview of eastern portion of Project area.

Facing west. Overview of southern portion of Project area.

Facing west. Overview of northern portion of Project area.

Facing north. Overview of parking lot area on east side of Project area.