Appendix H.1

Air Quality and Greenhouse Gas Technical Study

Starlight Solar, LLC

May 2024

Prepared by:

Yorke ENGINEERING, LLC
www.YorkeEngr.com

Office Locations:
Los Angeles, Long Beach, Orange County, Riverside, Ventura, San Diego, Fresno, Berkeley, Bakersfield

Tel: (949) 248-8490
Fax: (949) 248-8499

Starlight Solar
Air Quality and Greenhouse Gas
Technical Study

Starlight Solar
Air Quality and Greenhouse Gas Technical Study

Prepared for:

Starlight Solar, LLC

May 2024

Starlight Solar
Air Quality and Greenhouse Gas Technical Study

Air Quality Technical Report Preparer:

Julie Mitchell
Principal Scientist

Yorke Engineering, LLC
31726 Rancho Viejo Road, Suite 218
San Juan Capistrano, CA 92675

Project Applicant:
Starlight Solar, LLC.

May 2024

Table of Contents

Table of Appendices

List of Figures

List of Tables

List of Acronyms and Abbreviations

AB	Assembly Bill
AB 2588	Assembly Bill 2588, Air Toxics "Hot Spots" Act
AB 32	Assembly Bill 32, Global Warming Solutions Act
AC	Alternating Current
AQIA	Air Quality Impact Assessment
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
BESS	Battery Energy Storage System
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Cal/EPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CO	Carbon Monoxide
DC	Direct Current
DPM	Diesel Particulate Matter
EIR	Environmental Impact Report
EMFAC	On-Road Motor Vehicle Emission Inventory Model
EPA	[United States] Environmental Protection Agency
GW	Gigawatt
GWh	Gigawatt-hour
g	Gram
GHG(s)	Greenhouse Gas(es)
H_2S	Hydrogen Sulfide
HAP	Hazardous Air Pollutant
hr	Hour
HRA	Health Risk Assessment
km	Kilometer
lb(s)	Pound(s)
LTS	Less Than Significant
mg/m^3	Milligrams per Cubic Meter
MUP	Major Use Permit
MW	Megawatt
MWh	Megawatt-hour
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NH_3	Ammonia
NO_x	Oxides of Nitrogen

NO_2	Nitrogen Dioxide
O_3	Ozone
Pb	Lead
PM	Particulate Matter
$PM_{2.5}$	Fine Particulate Matter (Less Than 2.5 Microns in Size)
PM_{10}	Respirable Particulate Matter (Less Than 10 Microns in Size)
ppm	Parts per Million
RACT	Reasonably Achievable Control Technology
RAQS	Regional Air Quality Strategy
ROG	Reactive Organic Gas
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SIP	State Implementation Plan
SLT	Screening-Level Threshold
SO_x	Sulfur Oxides
SO_2	Sulfur Dioxide
TAC	Toxic Air Contaminant
T-BACT	Toxics Best Available Control Technology
$\mu g/m^3$	Microgram per Cubic Meter
VOC	Volatile Organic Compound
VRP	Visibility Reducing Particle
yr	Year

Starlight Solar Air Quality and Greenhouse Gas Technical Study

EXECUTIVE SUMMARY

This report presents an assessment of potential air quality and greenhouse gas (GHG) impacts associated with the proposed Starlight Solar Project (Project). This evaluation addresses the potential impacts of criteria pollutant, toxic air contaminant (TAC), and GHG emissions associated with the construction, operation, and future decommissioning of the proposed Project.

Starlight Solar, LLC (Applicant) is requesting a Major Use Permit from San Diego County to develop, finance, construct, and operate an unoccupied renewable energy solar and battery storage project in southeastern San Diego County (County) and within the San Diego County Air Pollution Control District (SDAPCD).

The County's General Plan designates the project site as Rural Lands 80 (RL-80) and the County's Zoning Ordinance identifies the site as General Rural (S92). The County's General Regulation states that solar power plant projects are considered Major Impact Service and Utility in all zones and thus require the approval of a Major Use Permit.

The Starlight Solar Project (Project) would utilize photovoltaic (PV) arrays and large inverter technology to produce up to 100 megawatts (MW) of utility-scale alternating current (AC) electric power. The project would also include 217.4 megawatt-hours (MWh) of direct current (DC) battery storage. The project site encompasses approximately 592 noncontiguous acres (0.925 square mile) within the Mountain Empire Subregional Plan area in unincorporated San Diego County.

Construction and Operation

The project would be constructed in two phases across the 592-acre site. The project includes the MUP project site of approximately 585 acres, an off-site generation tie-line (gen-tie) area of 7 acres, and an off-site vehicle turnaround area of 0.06 acre. The project would be constructed in two separate phases. Phase I encompasses approximately 115 acres and includes the development of a PV system capable of generating up to 20 MW of solar energy and providing 17.4 MWh of battery storage. Phase II encompasses approximately 470 acres and includes the development of a PV system capable of generating up to 80 MW of solar energy and providing 200 MWh of battery storage.

Construction of Phase I would occur over approximately 12 months (Fall 2024 through Fall 2025) and Phase II would occur over approximately 18 months (Spring 2026 through Winter 2027). It is anticipated there would be approximately a one-year gap between construction of Phase I and Phase II. Construction emissions of criteria pollutants, TACs, and GHGs are expected to be nominal and would be dispersed over a wide geographic area. Operational emissions would be minimal, limited to the occasional use of onroad vehicles, e.g., maintenance pickup trucks, and as-needed use of small and portable equipment, e.g., portable utility generators.

This study determined that the Project's construction and operational activities would be considered ***Less Than Significant*** with regard to air quality and greenhouse gas emissions.

Future Decommissioning

The aboveground (detachable) equipment and structures would be disassembled and removed from the site when the facility reaches the end of its useful economic life, assumed to be 30 years in service. Fencing, substation, and aboveground conductors on the transmission facilities would be removed next. Underground collector and transmission components would then be removed. Most of these materials would be recycled or reclaimed. Remaining materials that cannot be recycled or reclaimed would be limited and would be contained and disposed of offsite, consistent with the County of San Diego Construction Demolition and Debris Management Plan. It is expected that the air quality and GHG impacts from decommissioning the solar facility would be substantially less than that for construction because no substantial earthmoving would be necessary. Thus, the potential air quality and GHG impacts from the Project's decommissioning activities would also be considered ***Less Than Significant***.

1.0 INTRODUCTION

1.1 Purpose of the Report

This Air Quality and GHG Technical Study was prepared to evaluate the potential environmental impact to air quality from the Project, specifically answering the six questions contained in California Environmental Quality Act (CEQA) Guidelines, Appendix G Environmental Checklist Form, Section III, Air Quality and Section VII, Greenhouse Gas Emissions. This report was prepared in accordance with the County Guidelines for Determining Significance (County 2007).

1.2 Project Location and Description

Starlight Solar is requesting a Major Use Permit from San Diego County to develop, finance, construct, and operate an unoccupied renewable energy solar and battery storage project in southeastern San Diego County.

The Project would utilize PV electric generation system and large inverter technology to produce up to 100 MW of AC solar energy at the utility-scale. The project would also include a 217.4 MWh battery energy storage system (BESS) and a collector substation. Additionally, the project would include the creation of a biological conservation easement within portions or all of assessor parcel numbers (APNs) 659-130-03, 659-140-01, and 659-140-02.

The project site encompasses approximately 592 acres within the Mountain Empire Subregional Plan area in unincorporated San Diego County (see Figure 1-1). The project includes the MUP project site of approximately 585 acres, an off-site generation tie-line (gen-tie) area of 7 acres, and an off-site vehicle turnaround area of 0.06 acre (2,600 square feet). The project would be constructed in two phases. Phase I encompasses approximately 115 acres and includes the development of a PV system capable of generating up to 20 MW of solar energy and providing 17.4 MWh of battery storage. Phase II encompasses approximately 470 acres and includes the development of a PV system capable of generating up to 80 MW of solar energy and providing 200 MWh of battery storage.

Phase I and Phase II of the project would be constructed separately. Construction of Phase I would occur over approximately 12 months (Fall 2024 through Fall 2025) and Phase II would occur over approximately 18 months (Spring 2026 through Winter 2027). It is anticipated there would be approximately a one-year gap between construction of Phase I and Phase II. With the exception of

the substation, which would be constructed during Phase I, construction of both phases of the project would include the following construction activities:

- Site mobilization
- Site preparation (including access driveways and staging areas), grading, and stormwater protections
- Fence installation
- Substation installation
- Pile driving
- Blasting (if needed)
- Tracker and PV module installation
- DC electrical
- Underground medium AC voltage electrical
- Inverter/Transformer platform installation
- BESS installation
- Commissioning
- Use of the existing decommissioned airstrip as a construction laydown area

Blasting activities may be required to facilitate siting of array foundations and the gen-tie if surface or subsurface rock prevents mechanical excavation. The Applicant would obtain a blasting permit from the County prior to initiating any blasting activities. Blasting activities would typically involve drilling multiple 2-inch-diameter holes into a boulder or bedrock to a depth of approximately 40 inches. Charges, typically weighing between 2.5 and 5 pounds each, would then be inserted into each drilled hole and detonated sequentially. The necessity and extent of blasting would not be known until surface clearing is completed. However, it is preliminarily estimated that approximately 5,000 cubic yards of rock could be blasted during the early stages of excavation and mass grading for Phase I. Blasting would occur at 2- to 3-day intervals, with no more than one blast per day.

The project site encompasses approximately 592 acres in unincorporated San Diego County, south of the unincorporated community of Boulevard and approximately 0.93 mile north of the United States border (Figure 1-2). The project site is located south of Interstate 8 (I-8) and Old Highway 80, and east of Tierra Del Sol Road. Regional access to the project site would be provided by two highways, State Route 94 and I-8. Local access to the project site would be provided by Jewel Valley Road, which connects to Old Highway 80 in the unincorporated community of Boulevard. Additional emergency fire access would be provided via Tule Jim Lane, which connects to Old Highway 80 in Boulevard.

As shown in Figure 1-3, Starlight Solar Site Plan, the project site would be divided into eight solar array areas totaling approximately 585 acres. A largely underground generation gen-tie line would be located on the east side of Tule Jim Lane and connect into the southwestern corner of the SDG&E Boulevard Substation.

Figure 1-1: Regional Location Map

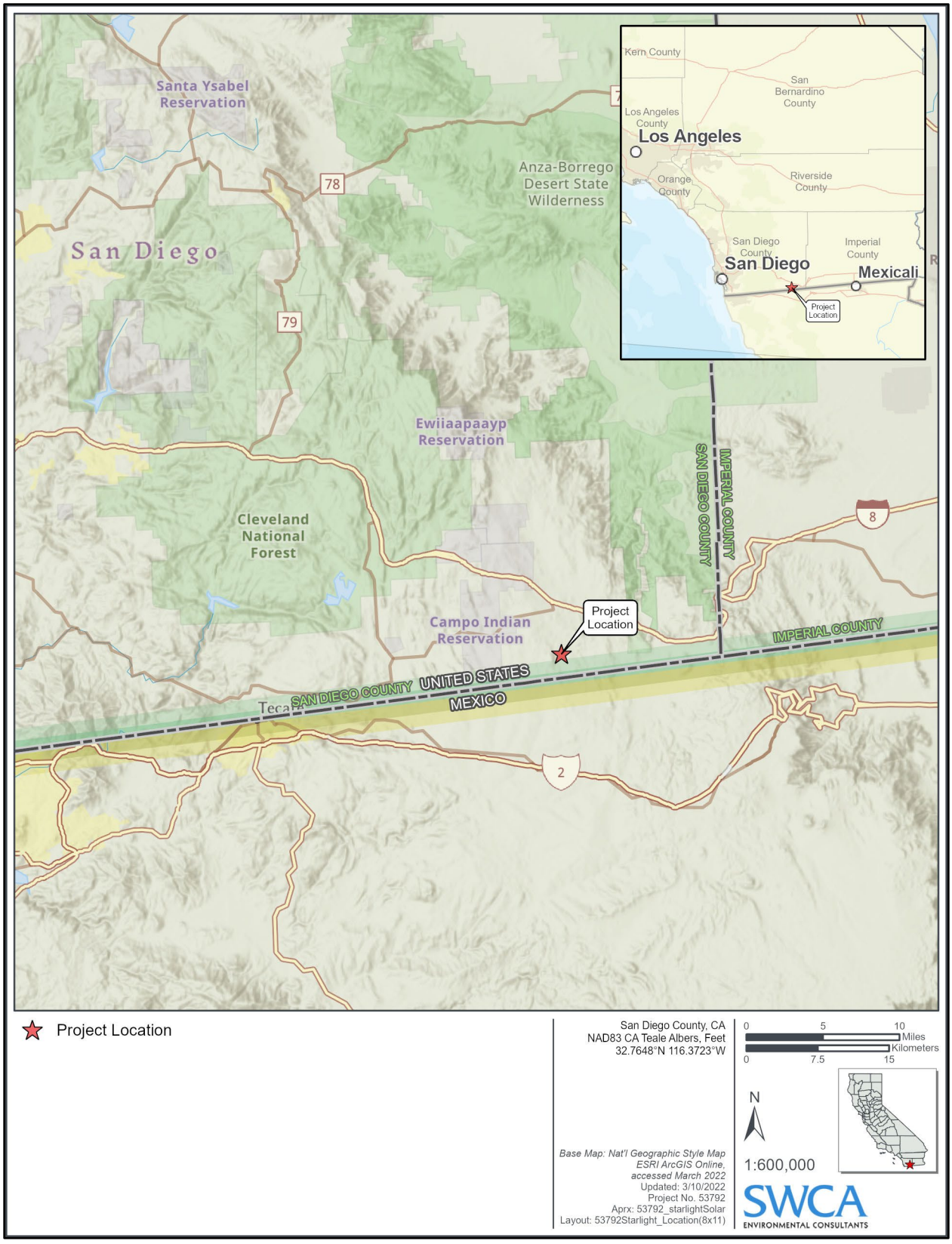


Figure 1-2: Vicinity Map

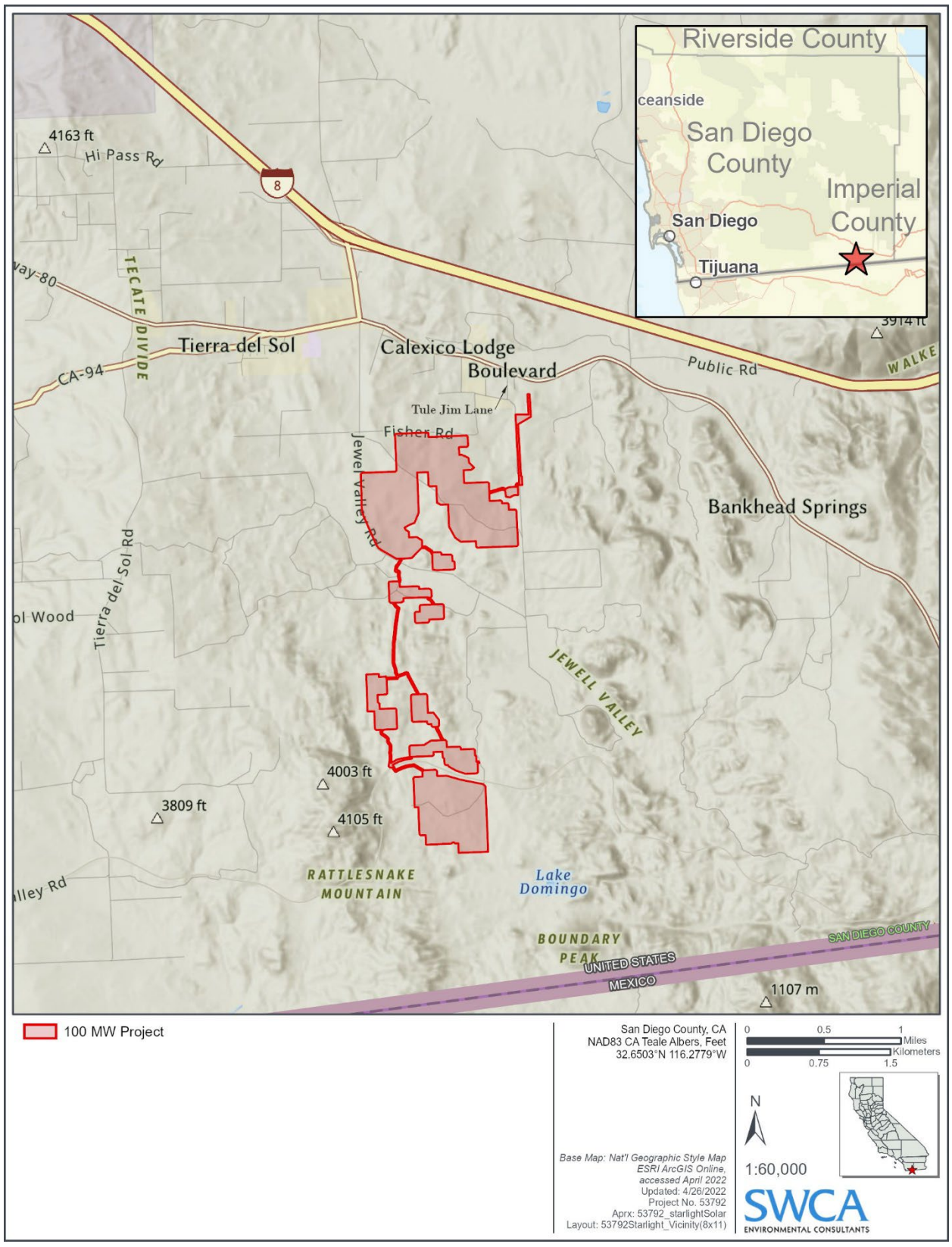
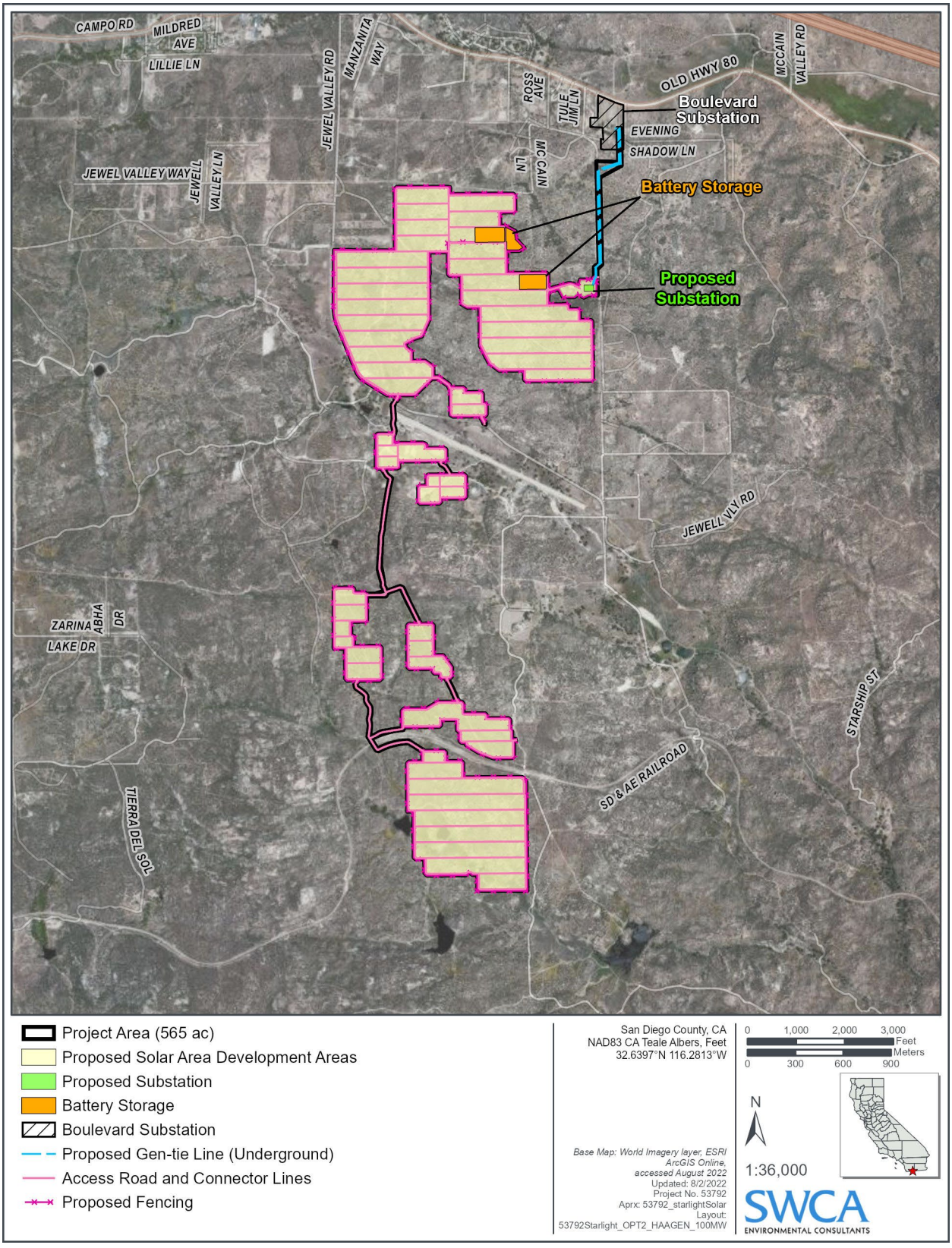


Figure 1-3: Starlight Solar Site Plan



2.0 EXISTING CONDITIONS

2.1 Existing Setting

The Project site is in San Diego County located south of I-8 and Old Highway 80, and east of Tierra Del Sol Road. Regional access to the project site would be provided by two highways, State Route 94 and I-8. Local access to the project site would be provided by Jewel Valley Road and in emergencies, Tule Jim Lane, which each connect to Old Highway 80 in the unincorporated community of Boulevard. All Project construction activity would occur on the site property within the County's jurisdiction. Additionally, all Project-related traffic would pass through the County.

The Project site is within the San Diego Air Basin (SDAB), which encompasses the County. The Project site and its surrounding areas are vacant. SDG&E's Boulevard substation is to the north of the Project site.

2.2 Climate and Meteorology

The boundaries of the SDAB are contiguous with the political boundaries of the County. The climate of the SDAB, as with all of Southern California, is largely dominated by the strength and position of the semi-permanent high-pressure system over the Pacific Ocean, known as the Pacific High. This high-pressure ridge over the West Coast often creates a pattern of late-night and early-morning low clouds, hazy afternoon sunshine, daytime onshore breezes, and little temperature variation year-round. The climatic classification for the County is a Mediterranean climate with warm, dry summers and mild, normally wet winters. Average annual precipitation ranges from approximately 10 inches on the coast to over 30 inches in the mountains to the east (the desert regions of the County generally receive between 4-6 inches per year). However, recent drought conditions have resulted in below normal rainfall throughout the region.

The Mediterranean climate of the County also works to create air pollution problems. Sinking or subsiding air from the Pacific high pressure creates a temperature inversion, known as a subsidence inversion, which acts as a lid to inhibit vertical dispersion of pollutants. Weak summertime pressure gradients further limit horizontal dispersion of pollutants in the mixed layer below the subsidence inversion. Poorly dispersed anthropogenic emissions of nitrogen oxides (NO_X) and volatile organic compounds (VOC) combined with strong sunshine (ultraviolet light) leads to photochemical reactions, which result in the formation of ozone (O_3), nitrogen dioxide (NO_2), and other photochemical oxidants at this surface layer.

Daytime onshore flow (i.e., sea breeze) and nighttime offshore flow (i.e., land breeze) are quite common in Southern California. The sea breeze helps to moderate daytime temperatures in the western portion of the County, which greatly adds to the climatic draw of the region. This also leads to emissions being blown out to sea at night and returning to land the following day. Under certain conditions, this diurnal atmospheric oscillation results in the offshore transport of air from the Los Angeles region to the County, which often results in high O_3 concentrations being measured at ambient air monitoring stations operated by the County. Transport of air pollutants from Los Angeles to San Diego has also been shown to occur aloft within the stable layer of the elevated subsidence inversion. In this layer, removed from fresh emissions of NO_X (which would scavenge and reduce O_3 concentrations), high levels of O_3 are transported into the County.

2.3 Background Air Quality

The federal standards, established by the U.S. Environmental Protection Agency (EPA) pursuant to the federal Clean Air Act (CAA) and subsequent amendments, are termed the National Ambient Air Quality Standards (NAAQS). The NAAQS, other than for O_3 and those based on annual averages, are maximum acceptable concentrations not to be exceeded more than once per year. The annual NAAQS may never be exceeded. (The O_3 standard is not to be exceeded more than three times in three years.) The state standards, established by the California Air Resources Board (CARB), are termed the California Ambient Air Quality Standards (CAAQS). The CAAQS are defined as the maximum acceptable pollutant concentrations that are not to be equaled or exceeded, depending on the specific pollutant.

NAAQS have been established for seven pollutants, specifically O_3, respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), lead (Pb), and sulfur dioxide (SO_2). These pollutants are commonly known as "criteria" pollutants because their standards are based on certain "criteria" regarding impacts to health and human welfare. In addition, CAAQS have been established for sulfates, hydrogen sulfide (H_2S), vinyl chloride, and visibility reducing particles (VRPs). Table 2-1 below contains a listing of typical sources of each of the criteria pollutants, the recognized health effects, and typical controls applied for each. Relevant to the Project location, Valley Fever (AKA Coccidioidomycosis, or San Joaquin Valley Fever) is also summarized in Table 2-1.

Table 2-1 also provides a general description of TACs, a category of pollutants for which specific federal or state ambient air quality standards have not been established. TACs include pollutants known or suspected to cause cancer or other adverse health effects, whether chronic or acute, such as respiratory irritation or reproductive effects. The regulatory structure for TACs is different than for criteria pollutants. Regulatory standards for most TACs involve the levels of public health risk from calculated exposures rather than specific concentrations of the pollutants. Refer to Section 2.4 for more details.

Table 2-1: Criteria and Pollutants of Concern, Sources, Health Effects, and Controls

Pollutant	Sources	Health Effects	Typical Controls
O_3	Formed when VOCs and NO_x react in the presence of sunlight. VOC sources include any source that burns fuels (e.g., gasoline, natural gas, wood, oil), solvents, coatings, petroleum processing, and storage.	Breathing difficulties, lung tissue damage, vegetation damage, and damage to rubber and some plastics.	Reduce motor vehicle VOC and NO_x emissions through emission standards, reformulated fuels, inspections programs, and reduced vehicle use. Limit VOC emissions from commercial operations, gasoline refueling facilities, and consumer products. Limit VOC and NO_x emissions from industrial sources such as power plants and manufacturing facilities.

Pollutant	Sources	Health Effects	Typical Controls
PM_{10}	Road dust, windblown dust, agriculture and construction, fireplaces. Also formed from other pollutants [NO_x, sulfur oxides (SO_x), and organics]. Incomplete combustion.	Increases respiratory disease, lung damage, cancer, and premature death, as well as reduced visibility and surface soiling. Particles can aggravate heart diseases, such as congestive heart failure and coronary artery disease.	Control dust sources, industrial particulate emissions, wood burning stoves and fireplaces. Reduce secondary pollutants that react to form PM_{10}. Conserve energy.
$PM_{2.5}$	Fuel combustion in motor vehicles, equipment, and industrial sources, as well as residential and agricultural burning. Also formed from reaction of other pollutants [NO_x, SO_x, organics, and ammonia (NH_3)].	Increases respiratory disease, lung damage, cancer, and premature death, as well as reduced visibility and surface soiling. Particles can aggravate heart diseases, such as congestive heart failure and coronary artery disease.	Reduce combustion emissions from motor vehicles, equipment, industries, and agricultural and residential burning. Precursor controls, like those for O_3, reduce fine particle formation in the atmosphere.
CO	Any source that burns fuel such as automobiles, trucks, heavy construction and farming equipment, and residential heating.	Chest pain in heart patients, headaches, reduced mental alertness.	Control motor vehicle and industrial emissions. Use oxygenated gasoline during winter months. Conserve energy.
NO_2	See CO.	Lung irritation and damage. Reacts in the atmosphere to form O_3 and acid rain.	Control motor vehicles and industrial combustion emissions. Conserve energy.
Pb	Metal smelters, resource recovery, leaded gasoline, deterioration of Pb paint.	Learning disabilities, brain and kidney damage.	Control metal smelters. No Pb in gasoline or paint.

Pollutant	Sources	Health Effects	Typical Controls
SO_2	Coal or oil burning power plants and industries, refineries, and diesel engines.	Increases lung disease and breathing problems for asthmatics. Reacts in the atmosphere to form acid rain.	Reduce use of high-sulfur fuels (e.g., use low sulfur reformulated diesel or natural gas). Conserve energy.
Sulfates	Produced by reaction in the air of SO_2, (see SO_2 sources), a component of acid rain.	Breathing difficulties, aggravates asthma, reduced visibility.	See SO_2.
H_2S	Geothermal power plants, petroleum production and refining, sewer gas.	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations).	Control emissions from geothermal power plants, petroleum production and refining, sewers, and sewage treatment plants.
Valley Fever (AKA Coccidioidomycosis, or San Joaquin Valley Fever)	Valley Fever varies with the season and most commonly affects people who live in hot dry areas with alkaline soil. This disease affects both humans and animals and is caused by inhalation of arthroconidia (spores) of the fungus Coccidioides immitis (CI). CI spores are found in the top few inches of soil and the existence of the fungus in most soil areas is temporary. The cocci fungus lives as a saprophyte (an organism, especially a fungus or bacterium, which grows on and derives its nourishment from dead or decaying organic matter) in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus "blooms" and forms many tiny spores that lie dormant in the soil	Most people exposed to the CI spores will not develop the disease. Of 100 persons who are infected, approximately 40 will exhibit some symptoms and 2 to 4 will have the more serious disseminated forms of the disease. After recovery, nearly all, including the asymptomatic, develop a life-long immunity to the disease[2]. African-Americans, Asians, women in the 3rd trimester of pregnancy, and persons whose immunity is compromised are most likely to	Compliance with SDAPCD Rule 55 – Fugitive Dust Control, will ensure that the proposed Project would not result in a substantial increase in wind entrained fungal spores that cause Valley Fever above existing background levels and impacts related to Valley Fever during construction would be less than significant. During operation, travel would be on paved and graveled areas, so fugitive dust will be minimized. and impacts related to Valley Fever during operation would be less than significant.

[2] Guevara 2014

Pollutant	Sources	Health Effects	Typical Controls
	until they are entrained by wind, vehicles, excavation, or other ground disturbing activities and become airborne. Agricultural workers, construction workers, and other people who are outdoors and are exposed to wind, dust, and disturbed topsoil are at an elevated risk of contracting Valley Fever.[1]	develop the most severe form of the disease[3]. In addition to humans, a total of 70 different animal species are known to be susceptible to Valley Fever infections, including dogs, cats, and horses; with dogs being the most susceptible[4].	
VRPs	See $PM_{2.5}$.	Reduced visibility (e.g., obscures mountains and other scenery), reduced airport safety.	See $PM_{2.5}$.
Vinyl Chloride	Exhaust gases from factories that manufacture or process vinyl chloride (construction, packaging, and transportation industries)	Central nervous system effects (e.g., dizziness, drowsiness, headaches), kidney irritation, liver damage, liver cancer.	Control emissions from plants that manufacture or process vinyl chloride, installation of monitoring systems.
TACs	Combustion engines (stationary and mobile), diesel combustion, storage and use of TAC-containing substances (i.e., gasoline, lead smelting, etc.)	Depends on TAC, but may include cancer, mutagenic and/or teratogenic effects, other acute or chronic health effects.	Toxic Best Available Control Technology (T-BACT), limit emissions from known sources.

The SDAPCD is responsible for enforcing the rules and regulations protecting air quality. As part of this responsibility, the SDAPCD has created a strategy that lays out a program for attaining the standards for O_3. The strategy, called the County Regional Air Quality Strategy (RAQS), outlines the SDAPCD's plans, and control measures designed to attain the CAAQS for O_3.

The 2022 RAQS contains strategies to continue directly reducing emissions of ozone precursors in San Diego County and assist in reducing PM_{10} and $PM_{2.5}$ and GHGs as a co-benefit. Consistent

[1] California Department of Public Health [CDPH] 2013
[3] Centers for Disease Control [CDC] 2013
[4] Los Angeles County Public Health [LACPH] 2007

with the District's recent reorganization pursuant to Assembly Bill (AB) 423, the 2022 RAQS also proposes to expand the District's involvement as a regional agency within its regulatory authority, by including commitments to support research and innovation opportunities, developing new partnerships with public and private entities, convening more opportunities for engagement and education with stakeholders, and integrating environmental justice and equity into all District actions (County 2022a).

In addition, the SDAPCD's federally-enforceable control measures for O_3 precursors are included in the State Implementation Plan (SIP), which is adopted by CARB to ensure attainment of the O_3 NAAQS. These plans accommodate emissions from all sources, including natural sources. Through the implementation of control measures on stationary sources, as well as through the control measures applied to mobile sources by CARB and EPA, these plans focus on attaining the standards for the SDAB. However, the RAQS and the SIP do not address impacts from sources of PM_{10} or $PM_{2.5}$, although the SIP does include control measures (rules) to regulate stationary source emissions of those pollutants.

The 2023 RAQS relies on mobile source (vehicular) information from the San Diego Association of Governments (SANDAG), as well as information regarding projected growth in the County, to determine what strategies are necessary for the reduction of stationary source emissions through regulatory controls. Since the SDAPCD only regulates non-mobile (stationary) sources, only the stationary source control measures identified in the RAQS and SIP have been incorporated by the SDAPCD into regulations. The stationary source rules are developed to set limits on the amounts of emissions from various types of industrial and commercial sources and/or require specific emission control technologies. Following rule adoption, a permit system is used to require air pollution controls on non-exempt new and modified stationary sources and to ensure compliance with regulations by prescribing specific operating conditions, monitoring, recordkeeping, reporting, emissions testing, etc. Stationary sources are inspected by the SDAPCD on a regular basis to ensure compliance with all emissions, maintenance, and operating requirements.

2.3.1 Criteria Pollutants

The EPA designates all areas of the United States as having air quality better than or meeting the NAAQS ("attainment"), worse than the NAAQS ("nonattainment"), or ("unclassified") in areas where insufficient data exist. A nonattainment designation means that a primary NAAQS has been exceeded in a given area pursuant to a designated schedule depending on the pollutant. Pollutants in an area are often designated as unclassified when there is insufficient ambient air monitoring data for the EPA to statistically determine attainment status. Just as the EPA designates air basins as being in attainment or nonattainment of the NAAQS, CARB designates areas of the state as either in attainment or nonattainment of the CAAQS. An area is deemed as being in nonattainment if a primary NAAQS or CAAQS has been exceeded in a given area per a designated schedule depending on the pollutant, as determined from monitoring data.

The County is presently designated a moderate nonattainment area for the NAAQS for O_3. The County is also a nonattainment area for the CAAQS for O_3, PM_{10}, and $PM_{2.5}$. As such, the greatest concern involving criteria pollutants is whether a project would result in a cumulatively considerable net increase of PM_{10} or $PM_{2.5}$ or exceed screening-level criteria thresholds for O_3 precursors (NO_X and VOCs).

The SDAPCD currently operates eight ambient air monitoring stations located throughout the region to measure concentrations of criteria pollutants to determine whether the ambient air quality meets NAAQS and CAAQS. The ambient air monitoring sites and target criteria pollutants measured are (County 2022b,c):

- Camp Pendleton (CMP) – O_3, NO_2
- Rancho Carmel Drive (RCD) – NO_2, CO, $PM_{2.5}$
- Kearny Villa Road (KVR) – O_3, NO_2, $PM_{2.5}$
- Alpine (ALP) – O_3, NO_2
- Lexington Elementary School (LES) – O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$
- Sherman Elementary School (SES) – O_3, NO_2, $PM_{2.5}$
- Chula Vista (CVA) – O_3, NO_2, PM_{10}, $PM_{2.5}$
- Donovan (DVN) – O_3, NO_2, PM_{10}

Ambient concentrations of target criteria pollutants measured in 2022 at these SDAPCD monitoring stations are presented in Table 2-2. A complete listing of the current attainment status by pollutant for the San Diego County Air Basin is shown in Table 2-3, and the NAAQS/CAAQS are provided in Table 2-4.

Table 2-2: San Diego County Local Ambient Air Quality Data for 2022

Unit	Averaging Time	AAQS	Monitoring Station							
			CMP	RCD	KVR	ALP	LES	SES	CVA	DVN
Ozone (O_3)										
ppm	Maximum 1 hour concentration	State: 0.09	0.08	–	0.10	0.10	0.10	0.09	0.08	0.11
ppm	Maximum 8-hour concentration	State: 0.070 Federal: 0.070	0.067	–	0.083	0.088	0.088	0.063	0.066	0.076
Nitrogen Dioxide (NO_2)										
ppm	Maximum 1-hour concentration	State: 0.18 Federal: 0.100	0.050	0.056	0.051	0.030	0.036	0.053	0.052	0.064
ppm	Annual concentration (average)	State: 0.030 Federal: 0.053	0.005	0.015	0.008	0.003	0.008	0.010	0.009	0.007
Carbon Monoxide (CO)										
ppm	Maximum 1-hour concentration	State: 20 Federal: 35	–	2.2	–	–	1.5	–	–	–
ppm	Maximum 8-hour concentration	State: 9.0 Federal: 9	–	1.2	–	–	1.1	–	–	–
Sulfur Dioxide (SO_2)										
ppm	Maximum 1-hour concentration	Federal: 0.075	–	–	–	–	0.001	–	–	–
ppm	Maximum 24-hour concentration	Federal: 0.140	–	–	–	–	0.000	–	–	–
ppm	Annual concentration (average)	Federal: 0.030	–	–	–	–	0.000	–	–	–
Coarse Particulate Matter (PM_{10})										
µg/m^3	Maximum 24-hour concentration	State: 50 Federal: 150	–	–	–	–	44	–	38	243
µg/m^3	Annual concentration (average)	State: 20	–	–	–	–	22.0	–	22.9	52.4
Fine Particulate Matter ($PM_{2.5}$)										
µg/m^3	Maximum 24-hour concentration	Federal: 35	–	14.9	13.9	–	26.4	18.1	16.2	–
µg/m^3	Annual concentration (average)	State: 12 Federal: 12.0	–	7.69	6.76	–	8.97	8.63	8.44	–

Sources: County 2022b,c
Notes:
1-hour O3 concentrations are from the 5-Year Air Quality Summary Annual Report
– = not available or applicable; µg/m3 = micrograms per cubic meter; ppm = parts per million
CMP = Camp Pendleton; RCD = Rancho Carmel Drive; KVR = Kearny Villa Road; ALP = Alpine; LES = Lexington Elementary School; SES = Sherman Elementary School; CVA = Chula Vista; DVN = Donovan
Data taken from CARB iADAM (http://www.arb.ca.gov/adam) and EPA AirData (http://www.epa.gov/airdata/) represent the highest concentrations experienced over a given year.
There is no federal standard for 1-hour O_3, annual PM_{10}, or 24-hour SO_2, nor is there a state 24-hour standard for $PM_{2.5}$.
NAAQS comparison requires Design Value (DV) calculations. Annual values are not comparable to the NAAQS.

Table 2-3: San Diego County Air Basin Attainment Status by Pollutant

Pollutant	California Standards	Federal Standards
O_3 1-Hour Standard	Nonattainment	Attainment[1]
O_3 8-Hour Standard	Nonattainment	Nonattainment (Moderate)
PM_{10}	Nonattainment	Unclassified[1]
$PM_{2.5}$	Nonattainment	Attainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Pb	Attainment	Attainment
Sulfates	Attainment	No Federal Standard
H_2S	Unclassified	No Federal Standard
VRPs	Unclassified	No Federal Standard

Source: County 2023

Notes:

1. The federal 1-hour standard of 12 pphm (0.12 ppm; 120 ppb) was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.
2. Unclassified; indicates data are not sufficient for determining attainment or nonattainment.

Table 2-4: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary	Secondary
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	Same as Primary Standard
	8 Hours	0.070 ppm (137 µg/m^3)	0.08 ppm (157 µg/m^3)	
PM_{10}	Annual Arithmetic Mean	20 µg/m^3	–	Same as Primary Standard
	24 Hours	50 µg/m^3	150 µg/m^3	
$PM_{2.5}$	24 Hours	–	35 µg/m^3	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	15 µg/m^3
CO	8 Hours	9.0 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)	–
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
NO_2	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary Standard
	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	–
SO_2	Annual Arithmetic Mean	–	0.030 ppm (80 µg/m^3)	–
	24 Hours	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	–
	3 Hours	–	–	0.5 ppm (1,300 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	–
Lead (Pb)	30-Day Average	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary Standard
	Rolling 3-Month Average	–	0.15 µg/m^3	
Sulfates	24 Hours	25 µg/m^3	No Federal Standards	
H_2S	1 Hour	0.03 ppm (42 µg/m^3)		
VRPs	8 Hours (10 AM to 6 PM, PST)	Footnote 1		
Vinyl Chloride	24 Hours	0.01 ppm (26 µg/m^3)		

Source: CARB 2016

Notes:

mg/m^3 = milligrams per cubic meter

Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more due to particles when relative humidity is less than 70%. Method: Beta attenuation and transmittance through filter tape.

2.3.2 GHGs

A summary of the various sectors that contributed GHG emissions in the County for the year 2014 (County 2018a) is provided in Table 2-5. In 2014, total GHG emissions in the County were estimated to be 3.21 million metric tons (MMT) of carbon dioxide equivalent (CO_2e). For context, the statewide GHG inventory for 2014 was approximately 428 MMT CO_2e (CARB 2017, 2022). Thus, San Diego County accounted for about 0.75% of the statewide GHG inventory in 2014.

Table 2-5: San Diego County GHG Emissions by Sector (2014)

Emissions Sector	Emissions (million MT CO_2e)	Percent
On-Road Transportation	1.46	45%
Electricity Generation	0.76	24%
Solid Waste Disposal	0.34	11%
Natural Gas Combustion	0.29	9%
Agriculture	0.16	5%
Water Supply	0.13	4%
Off-Road Transportation	0.04	1%
Wastewater Treatment	0.02	1%
Propane Combustion	0.01	<1%
Total	**3.21**	**100%**

Source: County 2018a

2.4 Regulatory Setting

All levels of government have some responsibility for the protection of air quality and each level (federal, state, and regional/local) has specific responsibilities relating to air quality regulation. Due to the extensive nature of air pollution regulation, this regulatory framework provides only a brief overview of the pertinent air quality regulations and standards.

2.4.1 Federal Regulations and Standards

2.4.1.1 Federal Clean Air Act

At the federal level, the EPA has been charged with implementing the national air quality programs. The backbone of the EPA's air quality mandate is the federal Clean Air Act (CAA) signed into law in 1970 by President Richard M. Nixon, and the subsequent Clean Air Act Amendments (CAAA) became effective in 1977 and 1990. Although the EPA deals primarily with international, national, and interstate air pollution, the CAA and CAAA grant authority to the EPA to regulate air pollution on many levels. On the state level, the EPA is responsible for oversight of a state's air quality programs. In addition, the EPA sets federal vehicle and stationary source emission standards and provides research and guidance for state and regional/local air quality programs.

Under the CAA and CAAA, the EPA established NAAQS for O_3, CO, NO_2, SO_2, lead, and PM_{10} and $PM_{2.5}$. The NAAQS represent the allowable atmospheric concentrations at which the public health and welfare are protected and include a reasonable margin of safety to protect the more sensitive receptors in the population. Since the elimination of lead (Pb) from motor gasoline in the mid-1970s, lead concentrations in ambient air have substantially decreased in most areas. However, elevated lead concentrations can persist in the vicinity of industrial sources, e.g., lead-acid battery recycling and manufacturing, and near general aviation airports because lead is still used to formulate high-octane aviation gasoline for piston engines.

In addition, the CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP) that defines how NAAQS will be attained, maintained, and significant deterioration prevented. The CAAA of 1990 requires states containing areas that violate the NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution with the goal of attainment.

2.4.1.2 Federal GHG

On April 2, 2007, in Massachusetts v. EPA, 549 U.S. 497 (2007), the Supreme Court found that GHGs are air pollutants covered by the CAA. The Court held that the Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the Administrator is required to follow the language of section 202(a) of the CAA. The Supreme Court decision resulted from a petition for rulemaking under Section 202(a) filed by more than a dozen environmental, renewable energy, and other organizations.

In 2009, EPA determined that GHG emissions threaten the public health and welfare of current and future generations. This allowed for EPA oversight in the regulation of GHGs for Prevention of Significant Deterioration (PSD) and Title V sources, which are typically large industrial facilities (e.g., oil refineries, power plants, primary metals production), and the Mandatory Reporting of Greenhouse Gases Rule. The EPA has also implemented GHG emission standards for light-duty vehicles via Corporate Average Fuel Efficiency (CAFE) standards.

2.4.2 State Regulations and Standards

2.4.2.1 CEQA

Under CEQA, Lead Agencies are required to consider environmental impacts relating to air quality. This includes the consideration of potential impacts resulting from pollutant emissions associated with the construction and operational phases of projects.

2.4.2.2 CARB

The state agency responsible for the coordination of state and local air pollution control programs is CARB, a branch of the California EPA (Cal/EPA). A primary responsibility of CARB is to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the EPA. Although CARB has primary responsibility and produces a major portion of the SIP for pollution sources that are statewide in scope

(e.g., motor vehicles), it relies on local air districts to provide additional strategies for sources under their jurisdiction, mainly stationary sources. CARB combines its data and plans with the plans provided by the local air districts and submits the SIP to the EPA. As such, the SIP consists of the emissions standards for vehicular sources set by CARB and the attainment plans, including the rules adopted by the local air districts and approved by CARB. In 2015, the U.S. EPA strengthened the 8-hour ozone standard to 70 parts per billion (ppb) or 0.070 ppm. In 2024, the U.S. EPA strengthened the annual arithmetic mean for $PM_{2.5}$ to 9 micrograms per cubic meter. Nineteen areas in California were designated nonattainment for ozone in 2018. The 2022 California SIP Strategy includes measures and commitments to reduce ozone precursor emissions (NO_X and VOC) from State-regulated sources to support attainment of the 70 ppb standard in all nonattainment areas across California.

To ensure attainment of the NAAQS and to improve California's air quality, CARB has established a stricter set of standards in the CAAQS. The CAAQS are defined as the maximum acceptable pollutant concentrations that are not to be equaled or exceeded depending on the specific pollutant and averaging times.

Further duties of CARB include monitoring air quality. CARB has established and maintains, in conjunction with local air pollution control agencies, a network of ambient air monitoring stations. CARB is also responsible for setting emission standards for motor vehicles, consumer products, small utility engines, and off-road vehicles. CARB is additionally responsible, in conjunction with the local air districts, for developing and maintaining the AB 2588 Air Toxic "Hot Spots" program and for regulating TACs in general.

On October 20, 2020, SDAPCD submitted the 2020 8-hour O_3 attainment plan for the County and 8-hour O_3 Reasonably Achievable Control Technology (RACT) Demonstration for the 2008 and 2015 O_3 standards for the County to CARB for submittal to EPA.

2.4.2.3 CARB GHG

Over the past 15 years, California has set numerous GHG emission reduction goals. Starting in 2005, Governor Schwarzenegger implemented Executive Order (EO) S-3-05, which was codified in Global Warming Solutions Act of 2006 (AB 32), that set a GHG target of reducing emissions to 80% below 1990 levels by 2050. In 2015-2016, Governor Brown and the Legislature set a target of reducing emissions to 40% below 1990 levels by 2030 through EO B-30-15 and Senate Bill (SB) 32. In 2018, Governor Brown established a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter" through EO B-55-18. This new goal is in addition to the existing statewide targets of reducing greenhouse gas emissions.

In 2022, Governor Gavin Newsom signed AB 1279, the California Climate Crisis Act. AB 1279 requires the state to achieve net zero GHG emissions (carbon neutrality) as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter. The bill also requires California to reduce statewide GHG emissions by 85%

compared to 1990 levels and directs CARB to work with relevant state agencies to achieve these goals.

In June 2008, CARB developed a *Draft Scoping Plan for Climate Change*, pursuant to AB 32. The *Scoping Plan* was approved on December 12, 2008. The *Scoping Plan* proposed a comprehensive set of actions designed to reduce overall carbon emissions in California, improve our environment, reduce dependence on oil, diversify energy sources, save energy, and enhance public health while creating new jobs and enhancing the growth in California's economy. The *Scoping Plan* was updated in May 2014, and confirmed that California is on target for meeting the 2020 GHG emissions reduction goal. On December 14, 2017, CARB approved the *2017 Final Scoping Plan Update*. The *2017 Scoping Plan* outlines CARB's programs to achieve a 40% reduction in GHG emissions from 1990 levels by 2030, as required by the passage of SB 32 in 2017. (CARB 2017)

CARB approved the *2022 Scoping Plan for Achieving Carbon Neutrality* in December 2022, which outlines the state's plan to reduce anthropogenic emissions to 85% below 1990 levels by 2045 and achieve carbon neutrality by 2045 or earlier. The *2022 Scoping Plan* also emphasizes that there is no realistic path to carbon neutrality without carbon removal and sequestration, and to achieve the state's carbon neutrality goal, carbon reduction programs must be supplemented by strategies to remove and sequester carbon. (CARB 2022)

California's Renewables Portfolio Standard (RPS) program was established in 2002 by SB 1078 with the initial requirement that 20% of electricity retail sales must be served by renewable resources by 2017. The program was accelerated in 2015 with SB 350 which mandated a 50% RPS by 2030. SB 350 includes interim annual RPS targets with three-year compliance periods and requires 65% of RPS procurement to be derived from long-term contracts of 10 or more years. In 2018, SB 100 was signed into law, which again increases the RPS to 60% by 2030 and requires all the state's electricity to come from carbon-free resources by 2045. (CEC 2022a)

The CPUC implements and administers RPS compliance rules for California's retail sellers of electricity, which include large and small investor-owned utilities (IOUs), electric service providers (ESPs) and community choice aggregators (CCAs). The California Energy Commission (CEC) is responsible for the certification of electrical generation facilities as eligible renewable energy resources and adopting regulations for the enforcement of RPS procurement requirements of publicly owned utilities (POUs).

All electricity retail sellers had an interim target between compliance periods to serve at least 27% of their load with RPS-eligible resources by December 31, 2017. In general, retail sellers either met or exceeded the interim 27% target and are on track to achieve their compliance requirements.

California's three largest IOUs, SDG&E, SCE, and PG&E collectively served 36% of their 2017 retail electricity sales with renewable power. The Small and Multi-Jurisdictional Utilities (SMJUs) and ESPs served roughly 27% of retail sales with renewables and CCAs collectively served 50% of retail sales with renewable power.

All retail sellers utilize a mix of RPS resources such as wind, solar photovoltaic, solar thermal, hydroelectric, geothermal, and bioenergy to meet their renewable procurement targets.

In addition, CARB has implemented numerous GHG regulations with regards to limiting vehicle emissions including,

- AB 1493 (Pavley), enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks by an estimated 18% in 2020 and by 27% in 2030.
- SB 375 (Steinberg) directs CARB to set regional targets for reducing GHG emissions. It requires cities and counties to use regional transportation plans to reduce GHGs emitted by motor vehicles.
- EO S-1-07. Under the AB 32 Scoping Plan, the Low-Carbon Fuel Standard (LCFS) is one of the nine discrete early action measures to reduce California's GHG emissions. It calls for a reduction of at least 10% in the carbon intensity of California's transportation fuels by 2020.

2.4.3 Local Regulations and Standards

2.4.3.1 SDAPCD

The SDAPCD is a County agency with the authority, delegated by CARB, to regulate stationary, indirect, and area sources of air pollution (e.g., power plants, highway construction, and housing developments) within the SDAB.

The SDAPCD is primarily responsible for the control of air pollution from all sources other than emissions from motor vehicles (mobile sources), which are the responsibility of CARB and the EPA. Under federal and state law, the SDAPCD is required to adopt and enforce rules and regulations to achieve NAAQS and CAAQS and implement applicable federal and state laws. Since the passage of the California Clean Air Act (CCAA) and the CAAA, this role has been expanded to include the implementation of transportation control measures and indirect source control programs to reduce mobile source emissions.

2.4.3.2 Regional Air Quality Plans

As previously stated, a nonattainment designation means that a primary NAAQS or CAAQS has been exceeded in a given area per a designated schedule depending on the pollutant. For each nonattainment area within the state, the CCAA has specified air quality management strategies that must be adopted by the agency responsible for the nonattainment area. Each area must prepare and adopt an Air Quality Management Plan (AQMP) or RAQS, which lays out programs for attaining the CAAQS and NAAQS for all criteria pollutants. At present, no attainment plan for $PM_{2.5}$ or PM_{10} in San Diego County is required by the state regulations.

The County RAQS for the SDAB was last updated in 2023 (2022 RAQS) The RAQS is periodically updated to reflect updated information on air quality, emission trends, and new feasible control measures; the 2022 RAQS was adopted in 2023. The RAQS outlines the SDAPCD's plans, and control measures designed to attain the state air quality standards for O_3. In addition, the SDAPCD relies on the SIP, which includes the SDAPCD's plans

and control measures for attaining the O_3 NAAQS. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on sources to attain the standards. The County RAQS relies on information from the SANDAG, including the SANDAG Transportation Control Measures Plan, and information regarding projected growth in the County to identify strategies for the reduction of stationary source emissions through regulatory controls.

2.4.3.3 San Diego County General Plan

The *San Diego County General Plan* (County 2011) outlines a number of GHG strategies to comply with AB 32. AB 32 mandates the reduction of GHG emissions, and the General Plan includes a number of policies to meet this goal.

2.4.3.4 County of San Diego Climate Action Plan

The County *Climate Action Plan* (CAP) (County 2018a) outlines a number of strategies to comply with AB 32. Although the County Board of Supervisors has set aside its approval of the County's 2018 Climate Action Plan due to issues with the CAP Environmental Impact Report (EIR), the County is still actively engaged in implementing the 26 measures in the 2018 CAP to reduce GHG emissions and is preparing a new CAP.

2.4.4 TACs

New sources of TACs are controlled under SDAPCD Regulation XII. The regulation of TACs is based on the levels of cancer risk and other chronic or acute health risks posed to persons who may be exposed, typically near a source. Joint federal, state, and local efforts to develop further regulation of air toxics will be ongoing for the foreseeable future, e.g., AB 617, the Community Air Protection Program.

Under federal law (1990 CAAA Title III), 187 substances are listed as hazardous air pollutants (HAPs)[5]. The Project will not be a major source of HAPs (HAPs is the federal term for TACs).

State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program, and is aimed at TACs that are problematic in California. The state has formally identified more than 200 substances as TACs. The California Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) is a statewide program that requires facilities to quantify actual (historic) emissions of TACs, conduct a Health Risk Assessment (HRA) if required, notify the public if required, and, if necessary, develop risk reduction strategies. SDAPCD Rule 1210 implements the public notification and risk reduction requirements of the state Air Toxics "Hot Spots" Act and establishes acceptable risk levels and emission control requirements for new and modified stationary source facilities that may emit TACs.

Typically, land development projects generate diesel exhaust emissions from offroad construction equipment and onroad vehicles. During the construction phase, as well as from heavy-duty trucks during the operational phase, diesel particulate matter (DPM) will

[5] Substances which have been listed as federal HAPs pursuant to section 7412 of Title 42 of the United States Code are TACs under the air toxics program pursuant to section 39657 (b) of the California Health and Safety Code.

be emitted. Emissions from diesel engines currently include over 40 substances that are listed by the EPA as HAPs. In addition, DPM is listed as a TAC by CARB.

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGY

3.1 Air Quality Significance Criteria

The County has approved guidelines for determining significant air quality impacts (County 2007) that essentially mirror Appendix G of the CEQA Guidelines and are intended to provide consistency in each environmental analysis.

The County guidelines outlines land use project size triggers to determine if a project is likely to have a less than significant air quality impact.

Under the County's guidelines, a project would have a significant adverse environmental impact related to air quality if it would:

1. Conflict with or obstruct the implementation of the County RAQS and/or applicable portions of the SIP;
2. Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation:
    a. Result in total emissions (stationary, fugitive, and mobile sources) exceeding the Screening-Level Thresholds (SLTs) in Table 3-1 for NO_x, VOCs, PM_{10}, and $PM_{2.5}$;
    b. Result in emissions that exceed 250 pounds per day of NO_x or 75 pounds per day of VOCs[6];
    c. Result in emissions of CO that exceed 550 pounds per day, or the SLT, and when totaled with the ambient concentrations exceed a 1-hour concentration of 20 ppm or an 8-hour average of 9 ppm;
    d. Result in emissions of $PM_{2.5}$ that exceed 55 pounds per day[7]; and
    e. Result in emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentration by 5.0 $\mu g/m^3$ or greater at the maximum exposed individual receptor;
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is nonattainment under an applicable federal or state ambient air quality standard (including emissions which exceed the SLTs for O_3 precursors listed in Table 3-1 for PM_{10}, $PM_{2.5}$, and O_3 precursors, specifically NO_x and VOCs);
4. Expose sensitive receptors (including but not limited to K-12 schools, hospitals, resident care facilities, daycare centers, and residents) to substantial pollutant concentrations:

[6] Threshold for VOCs based on the threshold of significance for VOCs from the SCAQMD for the Coachella Valley.

[7] For PM2.5, the EPA "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 8, 2005, which quantifies significant emissions as 10 tons per year, is used as the screening-level criteria. Also used by the SCAQMD.

a. Place sensitive receptors near CO hot spots or creates CO hot spots near sensitive receptors; and

b. Result in exposure to TACs resulting in a maximum incremental cancer risk greater than 1 in 1 million without the application of T-BACT, an incremental cancer risk greater than 10 in 1 million with application of T-BACT, or a health hazard index greater than one would be deemed as having a potentially significant impact; and

5. Expose a considerable number of persons to objectionable odors.

For projects whose total stationary, fugitive, and mobile source emissions exceed the SLTs listed in Table 3-1, an Air Quality Impact Assessment (AQIA) is typically required to show that project emissions would not cause a violation of an air quality standard or contribute substantially to an existing or projected air quality violation.

Table 3-1: Screening Level Thresholds for Air Quality Impact Analysis

Air Contaminant	County AQIA Trigger Levels Mass Emission Rates		
	(lbs/hour)	(lbs/day)	(tons/year)
NO_x	25	250	40
CO	100	550	100
PM_{10}	–	100	15
SO_x	25	250	40
Lead and Lead Compounds	–	3.2	0.6
$PM_{2.5}$	–	55	10
VOC	–	75	13.7

Reference: County thresholds based on SDAPCD Rule 20.2 AQIA trigger levels, VOCs from the South Coast Air Quality Management District (SCAQMD) per County guidance, $PM_{2.5}$ from the EPA's "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" (County 2007)

3.2 GHG Significance Criteria

Appendix G of the CEQA Guidelines identifies that a project would have a significant adverse environmental impact related to GHG emissions if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The CEQA threshold of significance identified in the County's Guidelines for Determining Significance, Climate Change (County 2018b) is that "a proposed project would have a less than significant cumulatively considerable contribution to climate change impacts if it is found to be consistent with the County's Climate Action Plan."

The County's Climate Change Analysis Guidance was prepared to assist in project-level analyses of GHGs for discretionary projects. Although it has been rescinded, it based the significance thresholds on those identified in the California Air Pollution Control Officers Association (CAPCOA) white paper (CAPCOA 2008).

The annual 900 MT per year of CO_2e screening level referenced in the CAPCOA white paper is a conservative screening criterion for determining which projects require further analysis and identification of project design features or potential mitigation measures with regard to GHG emissions. The CAPCOA white paper reports that the 900 MT/year screening level would capture more than 90% of development projects, allowing for mitigation towards achieving the State's GHG reduction goals.

3.3 Analysis Methodology

The construction analysis was performed using California Emissions Estimator Model® (CalEEMod) version 2022, the official statewide land use computer model designed to provide a uniform platform for estimating potential criteria pollutant and GHG emissions associated with both construction and operations of land use projects under CEQA. The model quantifies direct emissions from construction (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The mobile source emission factors used in the model – published by the California Air Resources Board (CARB) – include the Pavley standards and Low Carbon Fuel standards. The model also identifies project design features, regulatory measures, and mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from the selected measures. CalEEMod was developed by CAPCOA in collaboration with the California air districts, including the SDAPCD. Default land use data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) were provided by the various California air districts to account for local requirements and conditions. As the official assessment methodology for land use projects in California, CalEEMod is relied upon herein for construction and operational emissions quantification, which forms the basis for the impact analysis. (CalEEMod 2022)

3.3.1 CalEEMod Assumptions

The following lists sources of information used in developing the emission estimates for the construction phase of the proposed Project using CalEEMod. Not all CalEEMod defaults are listed, but some defaults which have a particularly important impact on the project are listed.

- The Applicant defined:
  - Basic project design features;
  - During construction (site preparation and grading) exposed soil will be watered three times a day to control dust;
  - During construction (site preparation and grading) paved roads will be cleaned to control dust;
  - Low VOC paints will be used for surface coating in compliance with SDAPCD rules;
- CalEEMod defaults were used for:
  - Construction equipment count, load factor, and age;
  - Vehicle emissions, and all calculations related to traffic and mobile source emissions.

Land use data used for CalEEMod input is presented in Table 3-2.

Table 3-2: Land Use Data for CalEEMod Input

Land Use Type	Land Use Subtype	Size	Size Metric	Lot Acreage (footprint)	Building Acres (est.)	Landscape Square Feet (est.)
Industrial	General Heavy Industry	25,483	1,000 sq. ft.	585	11	254,826
Linear	Gen-Tie Line	0.64	Miles	7.00	--	--

Sources: Applicant 2023, CalEEMod version 2022.1.1.20

Notes:

Electric utility: San Diego Gas and Electric

CEC California Electricity Demand Forecast Zone 12

3.3.1 Construction

A project's construction phase produces many types of emissions, but PM_{10} (including $PM_{2.5}$) in fugitive dust and diesel engine exhaust are the pollutants of greatest concern. Fugitive dust emissions can result from a variety of construction activities, including excavation, grading, demolition, vehicle travel on paved and unpaved surfaces, and vehicle exhaust. Construction-related emissions can cause substantial increases in localized concentrations of PM_{10}, as well as affecting PM_{10} compliance with ambient air quality standards on a regional basis. Particulate emissions from construction activities can lead to adverse health effects as well as nuisance concerns such as reduced visibility and soiling of exposed surfaces. The use of diesel-powered construction equipment emits O_3 precursors oxides of nitrogen (NO_x) and volatile organic compounds (VOC), and diesel particulate matter (DPM), the latter being a composite of TACs containing a variety of hazardous substances. Large construction projects using multiple large earthmoving equipment are evaluated to determine if operations may exceed the District's daily threshold for NO_x emissions and could temporarily expose area residents to hazardous levels of DPM. Use of architectural coatings and other materials associated with finishing buildings may also emit VOC and TACs. CEQA significance thresholds address the impacts of construction activity emissions on local and regional air quality. Thresholds are also provided for other potential impacts related to project construction, such as odors and TACs.

PM_{10} emitted during construction can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors. Despite this variability in emissions, experience has shown that there are several feasible control measures that can be reasonably implemented to significantly reduce fugitive dust emissions from construction, primarily through frequent water application, constitutes sufficient mitigation to reduce PM_{10} impacts to a level considered less than significant.

The project design indicates that some blasting may be required during Phase I construction activities to facilitate building of array foundations and the gen-tie. During blasting

operations, other construction activities would temporarily stop and resume once blasting is completed. Blasting would occur at 2- to 3-day intervals, with no more than one blast per day. It is estimated that 5,000 cubic yards of rock would be blasted during the early stages of excavation and mass grading for Phase I. The area of each blast would be limited to 30,000 square feet area. Blasting operations usually require a chemical material that is capable of extremely rapid combustion resulting in an explosion or detonation. These materials are usually mixtures of several ingredients but are often oxygen deficient as combustion reactions take place which causes a formation of carbon monoxide and to a lesser extent, nitrogen oxides. Per AP-42, Table 13.3-1, Gelatin Dynamite (Dynamite with 20-100% Nitroglycerine) is expected to generate CO in quantities of 104 pounds per every ton of explosives detonated and NOx at 53 pounds per ton (EPA 1980). PM_{10} will also be generated from blasting and is estimated using Table 11.9-1 of the AP-42 document using the following equation (EPA 1998):

$$PM_{10}(lb/Blast) = 0.000014 * (BlastArea(ft^2)) * 0.52$$

3.3.2 Operations

The term "project operations" refers to the full range of activities that can or may generate criteria pollutant, GHG, and TAC emissions when the project is functioning in its intended use. For projects, such as office parks, shopping centers, apartment buildings, residential subdivisions, and other indirect sources, motor vehicles traveling to and from the project represents the primary source of air pollutant emissions. For industrial projects and some commercial projects, equipment operation and manufacturing processes, i.e., permitted stationary sources, can be of greatest concern from an emissions standpoint. CEQA significance thresholds address the impacts of operational emission sources on local and regional air quality. Thresholds are also provided for other potential impacts related to project operations, such as odors.

The proposed Project will be operated remotely and normally unstaffed. Operational emissions of the Project would be minimal, limited to the occasional use of maintenance vehicles and as-needed use of small equipment, e.g., portable utility generators. Minimal operational emissions are not quantified because such estimates would be speculative.

3.3.3 Future Decommissioning

The aboveground (detachable) equipment and structures would be disassembled and removed from the site when the facility reaches the end of its useful economic life, assumed to be 30 years in service. Detachable elements include all PV modules and support structures, battery storage units, inverters, transformers, and associated controllers. Fencing, substation, and aboveground conductors on the transmission facilities would be removed next. Underground collector and transmission components would then be removed. Most of these materials would be recycled or reclaimed. Remaining materials that cannot be recycled or reclaimed would be limited and would be contained and disposed of offsite, consistent with the County of San Diego Construction Demolition and Debris Management Plan (County Ordinance 68.508- 68.518). The activities associated with decommissioning would not include substantial earthmoving, such as grading.

3.3.4 CO Hotspots

Throughout California, the emissions and ambient concentrations of CO have decreased substantially since the mid-1970s. The SDAPCD is designated as attainment or unclassifiable for both the NAAQS and CAAQS for CO. These improvements are largely due to the introduction of lower emitting motor vehicles equipped with three-way catalytic converters and cleaner burning oxygenated fuels. Because of the substantial reductions of vehicular CO exhaust, CO hotspot analyses are no longer needed to demonstrate Project related CO emissions would not cause an exceedance of the NAAQS and CAAQS. Additionally, the Project site is rural and in attainment with state and federal ambient air quality standards for CO. Exhaust emissions would be dispersed over a wide desert area with characteristic seasonal winds. Due to dispersion and the non-urban nature of the project area, i.e., few receptors, a CO hotspots analysis would be expected to show less than significant air quality impacts, i.e., well under state ambient air quality standards (20 ppmv 1-hour; 9 ppmv 8-hour).

3.3.5 TACs

Due to the short duration of construction activities, approximately one year, with typical grading activities and limited fill being hauled to the site (e.g., substation and battery facilities which must be on flat ground), and since the criteria pollutant construction emissions are well below the CEQA thresholds, emissions of TACs (as DPM) are not expected to result in exposing widely dispersed sensitive receptors to substantial pollutant concentrations. As such an HRA was not deemed necessary for the Project.

Operational emissions of the Project would be minimal for the normally unstaffed solar energy facility, limited to the occasional use of maintenance vehicles and as-needed use of small equipment, e.g., portable utility generators. Minimal operational emissions are not quantified because such estimates would be speculative.

4.0 PROJECT IMPACT ANALYSIS

4.1 Conformance to the Regional Air Quality Strategy

4.1.1 Guidelines for the Determination of Significance

Project consistency is based on whether the Project would conflict with or obstruct the implementation of the RAQS and/or applicable portions of the SIP, which would lead to increases in the frequency or severity of existing air quality violations.

4.1.2 Significance of Impacts Prior to Mitigation

The RAQS outlines the SDAPCD's plans, and control measures designed to attain the CAAQS for O_3. In addition, the SDAPCD relies on the SIP, which includes the SDAPCD's plans and control measures for attaining the O_3 NAAQS.

The RAQS is largely based on population predictions by the SANDAG. Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS.

The Project would produce less growth than predicted by SANDAG and therefore would not conflict with the existing RAQS and applicable SIP, thus the Project would have a ***less than significant*** impact to regional air quality.

4.1.3 Mitigation Measures and Design Considerations

No additional mitigation measures are needed to reduce Project impacts to less than significant.

4.1.4 Conclusions

The Project would not conflict with the existing RAQS and applicable SIP. Thus, the Project would have a ***less than significant*** impact to regional air quality.

4.2 Conformance to Federal and State Ambient Air Quality Standards

4.2.1 Construction Impacts

4.2.1.1 Guidelines for the Determination of Significance

A project is determined to have a significant direct air quality impact if the project exceeds any of the following thresholds:

- 250 pounds per day (lbs/day) of NO_x or 75 lbs/day of VOCs;
- CO that exceeds a 1-hour concentration of 20 ppm, an 8-hour average of 9 ppm, or 550 lbs/day of CO;
- 55 lbs/day of $PM_{2.5}$; and
- 100 lbs/day of PM_{10} or increases the ambient PM_{10} concentration by 5 $\mu g/m^3$.

4.2.1.2 Significance of Impacts Prior to Mitigation

Construction emissions associated with the Project were quantified using CalEEMod as described in Section 3.3.1. Detailed CalEEMod input parameters and output files are presented in Appendix A.

As discussed in Section 3.3.1, blasting is expected to generate CO and NOx in quantities of 104 and 53 pounds per every ton of explosives detonated, respectively. With the use of up to three tons of explosives per day, construction CO and NOx emissions will remain below the CEQA thresholds. Approximately, 0.22 lbs of PM_{10} per day will be generated during the blasting operations.

Baseline (unmitigated) and Design (mitigated) construction emissions are presented in Tables 4-1, 4-2, and 4-3 and compared to the SLTs. As discussed above and shown in Tables 4-1, 4-2, and 4-3, construction emissions are less than the SLTs and thus are considered ***less than significant***.

Table 4-1: Construction Annual Emissions Summary and Significance Evaluation

Criteria Pollutants	Baseline (tons/yr)	Design (tons/yr)	Threshold (tons/yr)	Significance
VOC	0.5	0.5	13.7	LTS
NO_X	4.1	4.1	40	LTS
CO	4.7	4.7	100	LTS
SO_X	0.0	0.0	40	LTS
Total PM_{10}	1.3	0.6	15	LTS
Total $PM_{2.5}$	0.6	0.3	10	LTS

Sources: County 2007, CalEEMod version 2022.1.1.20
Notes:
Total PM_{10} / $PM_{2.5}$ comprises fugitive dust plus engine exhaust
LTS - Less Than Significant

Table 4-2: Construction Daily Emissions Summary and Significance Evaluation

Criteria Pollutants	Baseline (lbs/day)	Design (lbs/day)	Threshold (lbs/day)	Significance
VOC	6.5	6.5	75	LTS
NO_X	65.4	65.4	250	LTS
CO	61.1	61.1	550	LTS
SO_X	0.11	0.11	250	LTS
Total PM_{10}	30.1	10.2	100	LTS
Total $PM_{2.5}$	16.2	6.2	55	LTS

Sources: County 2007, CalEEMod version 2022.1.1.20
Notes:
lbs/day emissions are winter or summer maxima for planned land use
Total PM_{10} / $PM_{2.5}$ comprises fugitive dust plus engine exhaust
LTS - Less Than Significant

Table 4-3: Construction Hourly Emissions Summary and Significance Evaluation

Criteria Pollutants	Baseline (lbs/hr)	Design (lbs/hr)	Threshold (lbs/hr)	Significance
VOC	0.8	0.8	–	LTS
NO_X	8.2	8.2	25	LTS
CO	7.6	7.6	100	LTS
SO_X	0.0	0.0	25	LTS
Total PM_{10}	3.8	1.3	–	LTS
Total $PM_{2.5}$	2.0	0.8	–	LTS

Sources: County 2007, CalEEMod version 2022.1.1.20
Notes:
Assumes 8-hour construction workday
Total PM_{10} / $PM_{2.5}$ comprises fugitive dust plus engine exhaust
LTS - Less Than Significant

4.2.1.3 Mitigation Measures and Design Considerations

4.2.1.3.1 Project Design Considerations

The following design considerations [Best Management Practices (BMPs)] are accounted for in the construction emissions presented in Tables 4-1 and 4-2.

AQ-DC-1 Prior to the County of San Diego's (County's) approval of any grading permits and during Proposed Project construction, a Fugitive Dust Control Plan shall be prepared demonstrating compliance with San Diego Air Pollution Control District (SDAPCD) Rule 55 and County Code Section 87.428 (Grading Ordinance), to the satisfaction of the County. The Project applicant or its designee shall require implementation of the following fugitive dust measures to minimize PM10 emissions as part of the Fugitive Dust Control Plan. All measures shall be designated on Grading and Improvement Plans.

a. Prior to construction activities, the Project applicant shall employ a construction relations officer who shall address community concerns regarding on-site construction activity. The Project applicant shall provide public notification in the form of a visible sign containing the contact information of the construction relations officer who shall document complaints and concerns regarding on-site construction activity. The sign shall be placed in easily accessible locations and noted on Grading and Improvement Plans.

b. Grading areas shall be watered, or another SDAPCD-approved dust control non-toxic agent shall be used, at least three times daily, to minimize fugitive dust only where chemical stabilizers are not used.

c. All permanent roads and the paved access roadway improvements shall be constructed and paved as early as possible in the construction process to reduce construction vehicle travel on unpaved roads. Foundations shall be finalized as soon as possible following site preparation and grading activities to reduce fugitive dust from earth-moving operations.

d. Grading areas shall be stabilized as quickly as possible to minimize fugitive dust.

e. Wheel washers, grates, rock, or road washers shall be installed adjacent to the site access points for tire inspection and washing prior to vehicle entry on public roads.

f. Visible track-out into traveled public streets shall be removed with the use of sweepers, water trucks, or similar method within 30 minutes of occurrence.

g. Haul trucks shall be covered or at least 2 feet of freeboard shall be maintained to reduce blow-off during hauling.

h. A 15-mile-per-hour speed limit on unpaved surfaces shall be enforced.

i. Haul truck staging areas shall be provided for loading and unloading of soil and materials and shall be located away from sensitive receptors at the farthest feasible distance.

AQ-DC-2 All architectural coatings used during construction will be SDAPCD Rule 67 compliant.

AQ-DC-3 Paved roads shall be cleaned regularly during construction.

AQ-DC-4 During blasting activities, the construction contractor shall implement all feasible engineering controls to control fugitive dust including exhaust ventilation, blasting

cabinets and enclosures, vacuum blasters, drapes, water curtains, or wet blasting. Watering methods, such as water sprays and water applications, also shall be implemented during blasting, rock crushing, cutting, chipping, sawing, or any activity that would release dust particles to reduce fugitive dust emissions.

AQ-DC-5 Vegetative Cover On-Site During Operation. In order to provide dust control and minimize erosion during Project operation, at least 70% vegetation cover shall be maintained during Project operation on the portions of the solar facility development footprint within the perimeter fencing not overlain by vehicle access driveways and internal access, inverter/transformer platforms, battery storage containers, the substation, and the Switchyard Facilities. These areas shall be reseeded with a native hydroseed mix that shall be approved by the County Landscape Architect prior to reseeding. A biologist shall also review the native hydroseed mix prior to reseeding for compatibility with native habitats in the Project area. The Project owner shall ensure that at least 70% of the hydroseeded area is covered with vegetation within one year of occupancy. If this coverage threshold is not met, additional native hydroseed applications must be conducted in order to meet the 70% threshold. The Project owner shall submit a written report with photographic evidence of the vegetative cover to the County Landscape Architect one year after occupancy. This report shall also include documentation of the date of hydroseeding and the type of native hydroseed mix. Subsequently a report with photographic evidence shall be submitted to the County Landscape Architect bi-annually (every other year) during Project operation.

4.2.1.3.2 Project Mitigation Measures

There are no mitigation measures necessary to remain under the County thresholds.

4.2.1.4 Conclusions

Therefore, construction emissions would result in a ***less than significant*** impact to regional air quality.

4.2.2 Operational Impacts

4.2.2.1 Guidelines for the Determination of Significance

Operational emissions are subject to the same significance thresholds as those described in Section 4.2.1.1.

4.2.2.2 Conclusions

Operational emissions of the Project would be minimal, limited to the occasional use, about once or twice a week (50 to 100 trips per year), of onroad vehicles, e.g., maintenance pickup trucks, and as-needed use of small and portable equipment, e.g., portable utility generators. Minimal operational emissions will be ***less than significant*** and not quantified because such estimates would be speculative.

4.2.3 Decommissioning Impacts

4.2.3.1 Guidelines for the Determination of Significance

Decommissioning emissions are subject to the same significance thresholds as those described in Section 4.2.1.1.

4.2.3.2 Conclusions

It is expected that the air quality and GHG impacts from decommissioning the solar facility would be less than that for construction because no substantial earthmoving would be necessary. Thus, the potential air quality and GHG impacts from the Project's decommissioning activities would also be considered ***less than significant***.

4.3 Cumulatively Considerable Net Increase of Criteria Pollutants

4.3.1 Construction Impacts

4.3.1.1 Guidelines for the Determination of Significance

Projects that would 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 (PM_{10}, $PM_{2.5}$, or an exceedance of quantitative thresholds for O_3 precursors, NO_x and VOCs) would be considered as having a potentially significant impact.

In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the SLTs.

Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other are simultaneously constructing projects.

4.3.1.2 Significance of Impacts Prior to Mitigation

Construction-related emissions of the criteria pollutants are significantly less than the County's SLTs and would therefore not cause a significant direct impact.

The proposed Project could combine with other future projects anticipated in the vicinity to increase the amount of pollutant emissions within the SDAB. Because the SDAB is currently in nonattainment of CAAQS for O_3, PM_{10}, and $PM_{2.5}$, cumulative development has the potential to perpetuate or worsen this excess of standards. However, cumulative development is subject to the plans and control measures presented in the RAQS, which is updated to incorporate land use projections for the County and other local jurisdictions. Projects that propose new development that is consistent with the growth anticipated in land use plans used in the projections are generally consistent with the RAQS.

Therefore, it is concluded that implementation of the Project would not result in cumulatively significant impacts.

4.3.1.3 Mitigation Measures and Design Considerations

No mitigation measures are needed.

4.3.1.4 Conclusions

Project-related construction emissions shown in Tables 4-1, 4-2, and 4-3 are well below the SLTs and thus would contribute to a ***less than significant*** cumulatively considerable net increase in criteria pollutants. Because these emissions impacts would not be expected

to exceed any of the significance thresholds, cumulative air quality impacts from comparable development projects would also be expected to be less than significant. Therefore, potential adverse impacts from implementing the proposed project would not be "cumulatively considerable" as defined by state CEQA Guidelines Section 15064(h)(1) for air quality impacts. Per state CEQA Guidelines Section 15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

4.3.2 Operational Impacts

4.3.2.1 Guidelines for the Determination of Significance

Projects that would 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 (PM_{10}, $PM_{2.5}$, or an exceedance of quantitative thresholds for O_3 precursors, NO_x and VOCs) would be considered as having a potentially significant impact. It is assumed that a project that conforms to the County General Plan and does not have emissions exceeding the SLTs will not create a cumulatively considerable net increase to O_3 since the emissions were accounted for in the RAQS.

4.3.2.2 Significance of Impacts Prior to Mitigation

As discussed in Section 4.2.2.2, operational emissions of the Project would be minimal, limited to the occasional use of maintenance vehicles and as-needed use of small equipment, e.g., portable utility generators. Therefore, the Project conforms to the County General Plan and RAQS. Thus, the Project will not create a cumulatively considerable net increase in nonattainment pollutants.

Therefore, it is concluded that implementation of the Project would not result in cumulatively significant operational impacts.

4.3.2.3 Mitigation Measures and Design Considerations

No mitigation measures are needed.

4.3.2.4 Conclusions

The Project conforms to the County General Plan and RAQS and it would not result in a cumulatively considerable increase of nonattainment pollutants. Thus, the Project would be considered ***less than significant***.

4.3.3 Decommissioning Impacts

4.3.3.1 Guidelines for the Determination of Significance

Decommissioning emissions are subject to the same significance thresholds as those described in Section 4.3.1.1 for construction.

4.3.3.2 Significance of Impacts Prior to Mitigation

Decommissioning-related emissions of the criteria pollutants would be less than construction emissions, significantly less than the County's SLTs, and would therefore not cause a significant direct impact.

4.3.3.3 Mitigation Measures and Design Considerations

No mitigation measures are needed.

4.3.3.4 Conclusions

It is expected that cumulative air quality impacts from decommissioning the solar facility would be less than that for construction because no substantial earthmoving would be necessary. Thus, the cumulative air quality impact from the Project's decommissioning activities would also be considered ***less than significant***. Therefore, potential adverse impacts from decommissioning the project would not be "cumulatively considerable" as defined by state CEQA Guidelines Section 15064(h)(1) for air quality impacts.

4.4 Impacts to Sensitive Receptors

4.4.1 Guidelines for the Determination of Significance

The Clover Flat Elementary School is approximately 3,700 feet (0.7 mile) from the Project Site. Projects that would expose sensitive receptors (including but not limited to schools, hospitals, resident care facilities, or daycare centers) to substantial pollutant concentrations would be considered as having a potentially significant impact.

4.4.1.1 CO

Projects that would site sensitive receptors near potential CO hot spots (i.e., zones where the CO concentration exceeds the NAAQS and/or CAAQS) or would contribute vehicle traffic to local intersections where a CO hot spot could occur would be considered as having a potentially significant impact.

4.4.1.2 TACs

Projects that would result in exposure to TAC resulting in a maximum incremental cancer risk greater than 1 in 1 million, without the application risk reduction measures, or a threshold of 10 in 1 million for projects implementing best emission control technologies or an HIA or HIC greater than one would be considered as having a potentially significant impact.

4.4.2 Construction Impacts

4.4.2.1 Significance of Impacts Prior to Mitigation

4.4.2.1.1 CO

Because of the substantial reductions of vehicular CO exhaust, CO hotspot analyses are no longer needed to demonstrate Project related CO emissions would not cause an exceedance of the NAAQS and CAAQS. Additionally, the Project site is rural and in attainment with state and federal ambient air quality standards for CO. Emissions would be dispersed over a wide desert area with characteristic seasonal winds. Due to dispersion and the non-urban nature of the project area, i.e., few receptors, a CO hotspots analysis would be expected to show less than significant air quality impacts, i.e., well under state ambient air quality standards (20 ppmv 1-hour; 9 ppmv 8-hour). Thus, a CO hot spot analysis is not necessary to show that impacts are less than significant.

4.4.2.1.2 TACs

The TAC of most concern associated with construction is DPM, which is a potent carcinogen. For permanent (long-term) sources, cancer risk is typically predicted for a lifetime exposure of 30 years, although the construction duration is much shorter. Construction activities are expected to last approximately one year, or about 3% of the long-term criterion.

Construction emissions were estimated to be significantly less than the SLTs (Table 4-1). Due to the short-term nature of the construction activities and low construction emissions associated with the Project, impacts from TAC emissions are expected to be low, therefore, sensitive receptors would not be exposed to substantial pollutant concentrations.

Therefore, for the above reasons, impacts to sensitive receptors would be less than significant.

4.4.2.2 Mitigation Measures and Design Considerations

No mitigation measures are needed.

4.4.2.3 Conclusions

The short-term construction emissions dispersed over a wide area would not expose sensitive receptors to substantial pollutant concentrations. Therefore, construction-related impacts to sensitive receptors would be ***less than significant***.

4.4.3 Operational Impacts

4.4.3.1 Significance of Impacts Prior to Mitigation

4.4.3.1.1 CO

Maintenance trips to the facility would occur once or twice a week (50 to 100 trips per year). Due to vehicle exhaust control improvements and infrequent site visits, a CO hot spot analysis is not necessary to show that impacts are less than significant.

4.4.3.1.2 TACs

Minimal TACs would be emitted during operation of the solar facility, therefore, sensitive receptors would not be exposed to substantial pollutant concentrations.

Therefore, impacts to sensitive receptors would be less than significant.

4.4.3.2 Mitigation Measures and Design Considerations

No additional mitigation measures are needed.

4.4.3.3 Conclusions

Operational emissions of the Project would be minimal and therefore, would not expose sensitive receptors to substantial pollutant concentrations. Thus, operation-related impacts to sensitive receptors would be ***less than significant***.

4.4.4 Decommissioning Impacts

4.4.4.1 Guidelines for the Determination of Significance

Impacts from decommissioning emissions of CO and TACs are subject to the same risk criteria as those described in Section 4.4.1.

4.4.4.2 Significance of Impacts Prior to Mitigation

Decommissioning-related TAC and CO emissions impacts to sensitive receptors would be less than construction impacts described in Section 4.4.2.1 and would therefore not cause a significant direct impact.

4.4.4.3 Mitigation Measures and Design Considerations

No mitigation measures are needed.

4.4.4.4 Conclusions

It is expected that cumulative TAC and CO impacts from decommissioning the solar facility would be less than that for construction because no substantial earthmoving would be necessary. Thus, the cumulative risk impact from the Project's decommissioning activities would also be considered ***less than significant***. Therefore, potential adverse impacts from decommissioning the project would not be "cumulatively considerable" as defined by state CEQA Guidelines Section 15064(h)(1) for air quality impacts.

4.5 Odor Impacts

4.5.1 Guidelines for the Determination of Significance

Projects that would create objectionable odors affecting a substantial number of people would be considered as having a potentially significant impact.

4.5.2 Significance of Impacts Prior to Mitigation

Potential onsite odor might occur during short term construction activities such as paving and painting. However, the odors would be considered short term as they would not last for more than one day after the odor was initially emitted, thus would not be considered a significant impact.

Operationally, the solar facility would not create any significant odors.

Therefore, impacts would be less than significant.

4.5.3 Mitigation Measures and Design Considerations

No mitigation measures are needed to reduce Project impacts to less than significant.

4.5.4 Conclusions

The Project's impact with respect to odor levels would be ***less than significant***.

4.6 Greenhouse Gas Impact Analysis

4.6.1 Greenhouse Gas Emissions from Construction and Operation

Greenhouse gases – primarily carbon dioxide (CO_2), methane (CH_4), and nitrous (N_2O) oxide, collectively reported as carbon dioxide equivalents (CO_2e) – are directly emitted from stationary source combustion of natural gas in equipment such as water heaters, boilers, process heaters, and furnaces. GHGs are also emitted from mobile sources such as on-road vehicles and off-road construction equipment burning fuels such as gasoline, diesel, biodiesel, propane, or natural gas (compressed or liquefied). Indirect GHG emissions result from electric power generated elsewhere (i.e., power plants) used to operate process equipment, lighting, and utilities at a facility. Also, included in GHG

quantification is electric power used to pump the water supply (e.g., aqueducts, wells, pipelines) and disposal and decomposition of municipal waste in landfills. (CARB 2017)

California's Building Energy Efficiency Standards are updated on an approximately three-year cycle. The 2022 standards improved upon the 2019 standards for new construction of, and additions and alterations to, residential, commercial, and industrial buildings. The 2022 standards went into effect on January 1, 2023 (CEC 2022b).

Using CalEEMod, direct onsite, offsite, and indirect GHG emissions were estimated for construction phase of the proposed Project.

4.6.2 Results of Greenhouse Gas Emissions Analyses

Table 4-4 shows Baseline (unmitigated) and Design (mitigated) GHG emissions and evaluates design emissions against CAPCOA significance thresholds. For common context with long-term operational sources, construction emissions are amortized over 30 years.

As the common combustion byproduct GHGs listed above are considered nontoxic simple asphyxiants, the GHG emissions from the construction of solar facility would not expose sensitive receptors to substantial pollutant concentrations. Therefore, GHG emissions from the project would have a ***less than significant*** impact on the environment.

Table 4-4: Greenhouse Gas Emissions Summary with 30-Year Amortization

Greenhouse Gases	Baseline (MT)	Design (MT)	Design (MT/year)
CO_2	3,086	3,086	103
CH_4	0.135	0.135	0.005
N_2O	0.178	0.178	0.006
CO_2e	3,144	3,144	105

4.6.3 GHG Significance Determination

4.6.3.1 Greenhouse Gas Emissions

As shown in Table 4-4, the GHG emissions associated with the Project would have a ***less than significant*** impact on the environment. In particular, the goals of the proposed project, i.e., renewable energy generation, are consistent with and meet the County CAP goals.

4.6.3.2 Carbon Sequestration

The MUP project site encompasses approximately 585 noncontiguous acres within the Mountain Empire Subregional Plan area in unincorporated San Diego County, which is within the San Diego Air Basin. Consistent with CalEEMod 2022 Appendix G-42, the Project site can be characterized as desert "shrubland" with a carbon sequestration capacity of 2.38 MT carbon per acre per year. Thus, for the entire MUP project site, approximately 1,400 MT per year of carbon sequestration capacity would be eliminated due to the loss of natural vegetation. (CalEEMod 2022)

Upon completion, the 100 MW project would be expected to generate approximately 300 gigawatt-hours (GWh) per year of carbon-free electric power. Per 40 CFR 98 Subpart C, natural gas combustion has a CO_2 emission factor of 117 pounds per million British thermal units (lbs/MMBtu). For a modern natural gas fired combined cycle generating unit, the calculated CO_2 emission intensity is approximately 800 pounds CO_2 per MWh, or 363 MT

CO_2 per GWh, which is equivalent to 99 MT of carbon per GWh. Thus, the output of the proposed Project would avoid approximately 29,700 MT per year of carbon emissions compared to combined cycle generation, for a net carbon avoidance of approximately 28,300 MT per year when sequestration loss is considered.

4.6.3.3 Conformance to an Applicable GHG Plan, Policy, or Regulation

The proposed project is consistent with the existing General Plan and Community Plan land use and zoning designations, therefore would result in an equivalent or less GHG-intensive project when compared to the existing designations.

The *2022 Scoping Plan* provides the framework illustrating how the state will meet its long-term GHG reduction targets pursuant to AB 1279 (i.e., an 85 percent reduction from a 1990 statewide GHG inventory and carbon neutrality by 2045). Appendix D, "Local Actions," of the *2022 Scoping Plan* identifies decarbonization as a key priority area for local projects as a measure to demonstrate that they are doing their "fair share" in assisting the state in furthering its long-term GHG reduction targets legislated by AB 1279. While Appendix D is generally considered applicable to residential and mixed-use projects, the direction contained therein can be applied to other project types, such as the proposed project. As detailed within this report, the project proposes 100 MW of solar photovoltaic panels. The operation of the project would not only bolster the reliability of the electrical grid but would additionally offset the combustion of natural gas and the emissions associated with this action, aligning with the decarbonization goal of the *2022 Scoping Plan*.

Therefore, the project serves to further reduce natural gas usage and provides the infrastructure for renewable energy resources and would be consistent with the goals of the *2022 Scoping Plan*.

Furthermore, as shown in Table 4-4, based on CalEEMod results, project construction would generate approximately 3,144 MT CO_2e over the entire construction period, which would last approximately 12 months. These emissions would include offroad construction equipment, onroad haul trucks, and construction worker vehicles. Operation of the solar energy project would cause minimal emissions from occasional use of maintenance vehicles and small utility equipment. Given the quantifiable GHG emissions that would be generated over the 30-year accounting life of the project (105 MT per year, amortized) and unincorporated portion of the county's service area population (505,675 persons), the Project would result in GHG emissions of 0.0002 MT CO_2e per service population per year (200 grams CO_2e per service population per year). This is far below typical residential project emission levels and impacts would not be significant. (County 2020)

For these reasons, the Project would not conflict with the County General Plan or the *2022 Scoping Plan*, thus the Project would have a ***less than significant*** impact for the purpose of reducing the emissions of GHGs.

4.6.3.4 Mitigation Measures and Design Considerations

No mitigation measures are needed to reduce Project impacts to less than significant.

4.6.3.5 Conclusions

Since the Project is a renewable energy project and the emissions associated with it are minimal, any construction emissions made from Project implementation would be offset by the fact that this project will provide the community with zero-carbon electricity, thus furthering the state in meeting its long-term GHG reduction goals consistent with the *2022 Scoping Plan*.

The Project related GHG emissions would have a ***less than significant*** impact on the environment.

5.0 SUMMARY OF RECOMMENDED PROJECT DESIGN FEATURES, IMPACTS, AND MITIGATION

No mitigation measures are needed to reduce Project impacts to less than significant. The Project's construction and operational activities would be considered ***less than significant***.

6.0 LIST OF PREPARERS

Julie Mitchell, Yorke, Principal Scientist

Tina Darjazanie, Yorke Engineering, LLC (Yorke), Senior Environmental Engineer

Bradford Boyes, Yorke, Principal Engineer

7.0 REFERENCES

California Air Pollution Control Officers Association (CAPCOA). 2008. CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. January 2008. Website: (https://www.counties.org/sites/main/files/file-attachments/capcoa_white_paper_ceqa_and_climate_change_final.pdf?1344472764) accessed May 9, 2024.

California Air Resources Board (CARB). 2022. California's 2022 Scoping Plan for Achieving Carbon Neutrality by 2045. Website: (https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp_1.pdf) accessed May 9, 2024.

California Air Resources Board (CARB). 2017. California's 2017 Climate Change Scoping Plan. Website: (https://ww3.arb.ca.gov/cc/scopingplan/scopingplan.htm) accessed May 9, 2024.

California Air Resources Board (CARB). 2016. Ambient Air Quality Standards. Website: (https://ww2.arb.ca.gov/resources/documents/ambient-air-quality-standards-0) accessed May 9, 2024.

California Emissions Estimation Model® (CalEEMod). 2022. Version 2022. Website: (http://www.caleemod.com/) accessed May 9, 2024.

California Energy Commission (CEC). 2022a. Renewables Portfolio Standard (RPS) Program. Website: (https://www.cpuc.ca.gov/rps/) accessed May 9, 2024.

California Energy Commission (CEC). 2022b. Building Energy Efficiency Program. Website: (https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency) accessed May 9, 2024.

County of San Diego (County). 2023. Attainment Status. Website: (https://www.sdapcd.org/content/sdapcd/planning/attainment-status.html) accessed May 9, 2024.

County of San Diego (County). 2022a. 2022 Regional Air Quality Strategy (RAQS). Website: (https://www.sdapcd.org/content/dam/sdapcd/documents/grants/planning/Att.%20A%20-%202022%20RAQS.pdf) accessed May 9, 2024.

County of San Diego (County). 2022b. 2022 Annual Air Quality Monitoring Network Report. Website: (https://www.sdapcd.org/content/dam/sdapcd/documents/monitoring/2022-Network-Report.pdf) accessed May 9, 2024.

County of San Diego (County). 2022c. 5-Year Air Quality Summary Annual Report. Website: (https://www.sdapcd.org/content/sdapcd/air-quality/reports-and-plans.html#:~:text=5%2DYear%20Air%20Quality%20Summary%20Annual%20Report) accessed May 9, 2024.

County of San Diego (County). 2020. Adopted Operational Plan Fiscal Years 2021–22 and 2022–23, San Diego County Profile and Economic Indicators. Website: (https://www.sandiegocounty.gov/content/dam/sdc/cto/budget/sdcounty_profile_economicindicators.pdf) accessed May 9, 2024.

County of San Diego (County). 2018a. Climate Action Plan, Final, February 2018. Website: (https://www.sandiegocounty.gov/content/sdc/sustainability/cap.html) accessed May 9, 2024.

County of San Diego (County). 2018b. Guidelines for Determining Significance, Climate Change, February 2018. Website (https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/Final%20Climate%20Change%20Significance%20Guidelines%20Clean.pdf) accessed May 9, 2024.

County of San Diego (County). 2011. San Diego County General Plan, August 2011. Website: (http://www.sandiegocounty.gov/content/sdc/pds/generalplan.html) accessed May 9, 2024.

County of San Diego (County). 2007. Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality, March 2007. Website: (http://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf) accessed May 9, 2024.

U.S. Environmental Protection Agency (EPA). 1998. AP-42, Fifth Edition Compilation of Air Pollutant Emission Factors, Volume I Chapter 11: Mineral Products Industry, Western Surface Coal Mining. Website: (https://www.epa.gov/sites/default/files/2020-10/documents/c11s09.pdf) accessed May 9, 2024.

U.S. Environmental Protection Agency (EPA). 1980. AP-42, Fifth Edition Compilation of Air Pollutant Emission Factors, Volume I, Chapter 13: Miscellaneous Sources, Explosives Detonation. Website: (https://www.epa.gov/sites/default/files/2020-10/documents/13.3_explosives_detonation.pdf) accessed May 9, 2024.

APPENDIX A – CALEEMOD OUTPUTS

Starlight Solar v2 Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Starlight Solar v2
Construction Start Date	10/1/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.70
Precipitation (days)	3.40
Location	Boulevard, CA 91905, USA
County	San Diego
City	Unincorporated
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6101
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	25,483	1000sqft	585	479,160	254,826	0.00	—	—

User Defined Linear	0.64	Mile	7.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-12	Sweep Paved Roads

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.29	40.7	45.5	0.10	1.43	22.7	24.1	1.32	10.9	12.1	—	14,076	14,076	0.61	1.20	14,469
Mit.	4.29	40.7	45.5	0.10	1.43	8.13	9.48	1.32	3.41	4.66	—	14,076	14,076	0.61	1.20	14,469
% Reduced	—	—	—	—	—	64%	61%	—	69%	62%	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.51	65.4	61.1	0.11	2.77	27.3	30.1	2.55	13.7	16.2	—	15,319	15,319	0.66	1.21	15,696
Mit.	6.51	65.4	61.1	0.11	2.77	8.13	10.2	2.55	3.63	6.18	—	15,319	15,319	0.66	1.21	15,696
% Reduced	—	—	—	—	—	70%	66%	—	73%	62%	—	—	—	—	—	—

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.55	22.3	25.6	0.04	0.91	6.81	7.29	0.83	3.05	3.49	—	5,948	5,948	0.25	0.45	6,094
Mit.	2.55	22.3	25.6	0.04	0.91	2.59	3.06	0.83	1.01	1.62	—	5,948	5,948	0.25	0.45	6,094
% Reduced	—	—	—	—	—	62%	58%	—	67%	54%	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.47	4.06	4.68	0.01	0.17	1.24	1.33	0.15	0.56	0.64	—	985	985	0.04	0.08	1,009
Mit.	0.47	4.06	4.68	0.01	0.17	0.47	0.56	0.15	0.18	0.30	—	985	985	0.04	0.08	1,009
% Reduced	—	—	—	—	—	62%	58%	—	67%	54%	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	—	Yes	Yes	—	Yes	Yes	—	Yes	—	—	—	—	—	—	—	—
Mit.	—	Yes	Yes	—	Yes	Yes	—	Yes	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	—	Yes	Yes	—	Yes	Yes	—	Yes	—	—	—	—	—	—	—	—
Mit.	—	Yes	Yes	—	Yes	Yes	—	Yes	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.29	34.5	45.5	0.07	1.43	8.61	10.0	1.32	3.79	5.10	—	8,774	8,774	0.38	0.17	8,841
2026	3.92	40.7	39.8	0.10	1.35	22.7	24.1	1.24	10.9	12.1	—	14,076	14,076	0.61	1.20	14,469
2027	1.86	14.4	23.3	0.05	0.39	2.65	3.04	0.36	0.66	1.02	—	7,831	7,831	0.32	0.59	8,029
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	6.51	65.4	61.1	0.11	2.77	27.3	30.1	2.55	13.7	16.2	—	12,581	12,581	0.58	0.33	12,693
2025	5.84	56.5	55.4	0.11	2.25	16.8	19.1	2.07	7.21	9.28	—	12,552	12,552	0.58	0.32	12,663
2026	3.89	41.2	39.3	0.11	1.35	22.7	24.1	1.24	10.9	12.1	—	15,319	15,319	0.66	1.21	15,696
2027	3.67	37.1	37.3	0.11	1.15	12.3	13.4	1.06	4.45	5.51	—	15,138	15,138	0.66	1.16	15,500
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.17	11.8	11.0	0.02	0.50	4.89	5.39	0.46	2.45	2.90	—	2,033	2,033	0.10	0.06	2,052
2025	2.55	22.3	25.6	0.04	0.91	6.03	6.93	0.83	2.62	3.45	—	5,309	5,309	0.24	0.12	5,352
2026	1.42	14.8	14.3	0.04	0.48	6.81	7.29	0.44	3.05	3.49	—	5,353	5,353	0.23	0.44	5,494
2027	1.41	11.9	16.7	0.04	0.32	2.53	2.86	0.30	0.73	1.03	—	5,948	5,948	0.25	0.45	6,094
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.21	2.15	2.01	< 0.005	0.09	0.89	0.98	0.08	0.45	0.53	—	337	337	0.02	0.01	340
2025	0.47	4.06	4.68	0.01	0.17	1.10	1.27	0.15	0.48	0.63	—	879	879	0.04	0.02	886
2026	0.26	2.70	2.60	0.01	0.09	1.24	1.33	0.08	0.56	0.64	—	886	886	0.04	0.07	910
2027	0.26	2.16	3.06	0.01	0.06	0.46	0.52	0.06	0.13	0.19	—	985	985	0.04	0.08	1,009

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.29	34.5	45.5	0.07	1.43	3.36	4.79	1.32	1.25	2.57	—	8,774	8,774	0.38	0.17	8,841
2026	3.92	40.7	39.8	0.10	1.35	8.13	9.48	1.24	3.41	4.66	—	14,076	14,076	0.61	1.20	14,469
2027	1.86	14.4	23.3	0.05	0.39	2.65	3.04	0.36	0.66	1.02	—	7,831	7,831	0.32	0.59	8,029
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	6.51	65.4	61.1	0.11	2.77	7.41	10.2	2.55	3.63	6.18	—	12,581	12,581	0.58	0.33	12,693
2025	5.84	56.5	55.4	0.11	2.25	4.69	6.94	2.07	1.96	4.03	—	12,552	12,552	0.58	0.32	12,663
2026	3.89	41.2	39.3	0.11	1.35	8.13	9.48	1.24	3.41	4.66	—	15,319	15,319	0.66	1.21	15,696
2027	3.67	37.1	37.3	0.11	1.15	5.42	6.56	1.06	1.74	2.80	—	15,138	15,138	0.66	1.16	15,500
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.17	11.8	11.0	0.02	0.50	1.33	1.83	0.46	0.65	1.11	—	2,033	2,033	0.10	0.06	2,052
2025	2.55	22.3	25.6	0.04	0.91	2.02	2.92	0.83	0.79	1.62	—	5,309	5,309	0.24	0.12	5,352
2026	1.42	14.8	14.3	0.04	0.48	2.59	3.06	0.44	1.01	1.45	—	5,353	5,353	0.23	0.44	5,494
2027	1.41	11.9	16.7	0.04	0.32	2.05	2.37	0.30	0.54	0.84	—	5,948	5,948	0.25	0.45	6,094
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.21	2.15	2.01	< 0.005	0.09	0.24	0.33	0.08	0.12	0.20	—	337	337	0.02	0.01	340
2025	0.47	4.06	4.68	0.01	0.17	0.37	0.53	0.15	0.14	0.30	—	879	879	0.04	0.02	886
2026	0.26	2.70	2.60	0.01	0.09	0.47	0.56	0.08	0.18	0.26	—	886	886	0.04	0.07	910
2027	0.26	2.16	3.06	0.01	0.06	0.37	0.43	0.06	0.10	0.15	—	985	985	0.04	0.08	1,009

3. Construction Emissions Details

3.1. Site Preparation I (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	5,314
Dust From Material Movement	—	—	—	—	—	19.8	19.8	—	10.1	10.1	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	6.40	5.86	0.01	0.28	—	0.28	0.26	—	0.26	—	943	943	0.04	0.01	946
Dust From Material Movement	—	—	—	—	—	3.52	3.52	—	1.80	1.80	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.17	1.07	< 0.005	0.05	—	0.05	0.05	—	0.05	—	156	156	0.01	< 0.005	157
Dust From Material Movement	—	—	—	—	—	0.64	0.64	—	0.33	0.33	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.9	63.9	< 0.005	< 0.005	64.8
Vendor	0.01	0.22	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	159
Hauling	0.10	3.21	1.83	0.01	0.01	0.20	0.21	0.01	0.05	0.07	—	1,031	1,031	0.10	0.17	1,083
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	11.7
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.2	27.2	< 0.005	< 0.005	28.4
Hauling	0.02	0.56	0.32	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	183	183	0.02	0.03	193
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.90	1.90	< 0.005	< 0.005	1.93
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.51	4.51	< 0.005	< 0.005	4.70
Hauling	< 0.005	0.10	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.3	30.3	< 0.005	< 0.005	31.9

3.2. Site Preparation I (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	5,314

Dust From Material Movement	—	—	—	—	—	5.14	5.14	—	2.63	2.63	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	6.40	5.86	0.01	0.28	—	0.28	0.26	—	0.26	—	943	943	0.04	0.01	946
Dust From Material Movement	—	—	—	—	—	0.91	0.91	—	0.47	0.47	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.17	1.07	< 0.005	0.05	—	0.05	0.05	—	0.05	—	156	156	0.01	< 0.005	157
Dust From Material Movement	—	—	—	—	—	0.17	0.17	—	0.09	0.09	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.9	63.9	< 0.005	< 0.005	64.8
Vendor	0.01	0.22	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	159
Hauling	0.10	3.21	1.83	0.01	0.01	0.20	0.21	0.01	0.05	0.07	—	1,031	1,031	0.10	0.17	1,083
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.5	11.5	< 0.005	< 0.005	11.7
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.2	27.2	< 0.005	< 0.005	28.4
Hauling	0.02	0.56	0.32	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	183	183	0.02	0.03	193
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.90	1.90	< 0.005	< 0.005	1.93
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.51	4.51	< 0.005	< 0.005	4.70
Hauling	< 0.005	0.10	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.3	30.3	< 0.005	< 0.005	31.9

3.3. Site Preparation II (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	5,316
Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	5,316
Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—
Onsite truck	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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	6.39	6.31	0.01	0.27	—	0.27	0.25	—	0.25	—	1,161	1,161	0.05	0.01	1,165
Dust From Material Movement	—	—	—	—	—	4.33	4.33	—	2.22	2.22	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.17	1.15	< 0.005	0.05	—	0.05	0.05	—	0.05	—	192	192	0.01	< 0.005	193
Dust From Material Movement	—	—	—	—	—	0.79	0.79	—	0.40	0.40	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.35	5.45	0.00	0.00	1.07	1.07	0.00	0.25	0.25	—	1,171	1,171	0.06	0.04	1,189
Vendor	0.23	8.77	4.12	0.05	0.09	1.77	1.87	0.09	0.49	0.58	—	6,805	6,805	0.26	0.98	7,120
Hauling	0.09	2.39	1.45	0.01	0.01	0.16	0.17	0.01	0.04	0.05	—	802	802	0.08	0.13	844
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.39	4.80	0.00	0.00	1.07	1.07	0.00	0.25	0.25	—	1,106	1,106	0.06	0.04	1,121
Vendor	0.22	9.12	4.19	0.05	0.09	1.77	1.87	0.09	0.49	0.58	—	6,809	6,809	0.26	0.98	7,108
Hauling	0.08	2.50	1.49	0.01	0.01	0.16	0.17	0.01	0.04	0.05	—	805	805	0.08	0.13	846
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	1.06	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	245	245	0.01	0.01	248

Vendor	0.05	1.98	0.91	0.01	0.02	0.39	0.41	0.02	0.11	0.13	—	1,492	1,492	0.06	0.21	1,559
Hauling	0.02	0.54	0.32	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	176	176	0.02	0.03	185
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.5	40.5	< 0.005	< 0.005	41.1
Vendor	0.01	0.36	0.17	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.01	0.04	258
Hauling	< 0.005	0.10	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.2	29.2	< 0.005	< 0.005	30.7

3.4. Site Preparation II (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	5,316
Dust From Material Movement	—	—	—	—	—	5.13	5.13	—	2.63	2.63	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	5,316
Dust From Material Movement	—	—	—	—	—	5.13	5.13	—	2.63	2.63	—	—	—	—	—	—
Onsite truck	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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	6.39	6.31	0.01	0.27	—	0.27	0.25	—	0.25	—	1,161	1,161	0.05	0.01	1,165
Dust From Material Movement	—	—	—	—	—	1.12	1.12	—	0.58	0.58	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.17	1.15	< 0.005	0.05	—	0.05	0.05	—	0.05	—	192	192	0.01	< 0.005	193
Dust From Material Movement	—	—	—	—	—	0.21	0.21	—	0.11	0.11	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.46	0.35	5.45	0.00	0.00	1.07	1.07	0.00	0.25	0.25	—	1,171	1,171	0.06	0.04	1,189
Vendor	0.23	8.77	4.12	0.05	0.09	1.77	1.87	0.09	0.49	0.58	—	6,805	6,805	0.26	0.98	7,120
Hauling	0.09	2.39	1.45	0.01	0.01	0.16	0.17	0.01	0.04	0.05	—	802	802	0.08	0.13	844
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.39	4.80	0.00	0.00	1.07	1.07	0.00	0.25	0.25	—	1,106	1,106	0.06	0.04	1,121
Vendor	0.22	9.12	4.19	0.05	0.09	1.77	1.87	0.09	0.49	0.58	—	6,809	6,809	0.26	0.98	7,108
Hauling	0.08	2.50	1.49	0.01	0.01	0.16	0.17	0.01	0.04	0.05	—	805	805	0.08	0.13	846
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	1.06	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	245	245	0.01	0.01	248

Vendor	0.05	1.98	0.91	0.01	0.02	0.39	0.41	0.02	0.11	0.13	—	1,492	1,492	0.06	0.21	1,559
Hauling	0.02	0.54	0.32	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	176	176	0.02	0.03	185
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.5	40.5	< 0.005	< 0.005	41.1
Vendor	0.01	0.36	0.17	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.01	0.04	258
Hauling	< 0.005	0.10	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.2	29.2	< 0.005	< 0.005	30.7

3.5. Grading I (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	9.30	9.30	—	3.67	3.67	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.9	12.9	< 0.005	< 0.005	13.0
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—

Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.14	2.14	< 0.005	< 0.005	2.15
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.9	63.9	< 0.005	< 0.005	64.8
Vendor	0.01	0.22	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	159
Hauling	0.10	3.21	1.83	0.01	0.01	0.20	0.21	0.01	0.05	0.07	—	1,031	1,031	0.10	0.17	1,083
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	0.13
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	0.31
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.01	2.01	< 0.005	< 0.005	2.12
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.02	0.02	< 0.005	< 0.005	0.02
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	0.05
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	0.35

3.6. Grading I (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	2.42	2.42	—	0.95	0.95	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.9	12.9	< 0.005	< 0.005	13.0
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.14	2.14	< 0.005	< 0.005	2.15
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.9	63.9	< 0.005	< 0.005	64.8
Vendor	0.01	0.22	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	159
Hauling	0.10	3.21	1.83	0.01	0.01	0.20	0.21	0.01	0.05	0.07	—	1,031	1,031	0.10	0.17	1,083
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	0.13
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	0.31
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.01	2.01	< 0.005	< 0.005	2.12
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.02	0.02	< 0.005	< 0.005	0.02
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	0.05
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	0.35

3.7. Grading I (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	6,622

Dust From Material Movement	—	—	—	—	—	9.30	9.30	—	3.67	3.67	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	5.23	4.99	0.01	0.22	—	0.22	0.20	—	0.20	—	1,162	1,162	0.05	0.01	1,166
Dust From Material Movement	—	—	—	—	—	1.64	1.64	—	0.65	0.65	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.95	0.91	< 0.005	0.04	—	0.04	0.04	—	0.04	—	192	192	0.01	< 0.005	193
Dust From Material Movement	—	—	—	—	—	0.30	0.30	—	0.12	0.12	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.28	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	62.7	62.7	< 0.005	< 0.005	63.5
Vendor	0.01	0.21	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	150	150	0.01	0.02	157
Hauling	0.10	3.14	1.84	0.01	0.01	0.20	0.21	0.01	0.05	0.07	—	1,011	1,011	0.10	0.16	1,061
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	11.3
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.5	26.5	< 0.005	< 0.005	27.6
Hauling	0.02	0.54	0.32	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	178	178	0.02	0.03	187
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.85	1.85	< 0.005	< 0.005	1.87
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.38	4.38	< 0.005	< 0.005	4.57
Hauling	< 0.005	0.10	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.4	29.4	< 0.005	< 0.005	30.9

3.8. Grading I (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14	—	6,599	6,599	0.27	0.05	6,622
Dust From Material Movement	—	—	—	—	—	2.42	2.42	—	0.95	0.95	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	5.23	4.99	0.01	0.22	—	0.22	0.20	—	0.20	—	1,162	1,162	0.05	0.01	1,166
Dust From Material Movement	—	—	—	—	—	0.43	0.43	—	0.17	0.17	—	—	—	—	—	—

Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.95	0.91	< 0.005	0.04	—	0.04	0.04	—	0.04	—	192	192	0.01	< 0.005	193
Dust From Material Movement	—	—	—	—	—	0.08	0.08	—	0.03	0.03	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.28	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	62.7	62.7	< 0.005	< 0.005	63.5
Vendor	0.01	0.21	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	150	150	0.01	0.02	157
Hauling	0.10	3.14	1.84	0.01	0.01	0.20	0.21	0.01	0.05	0.07	—	1,011	1,011	0.10	0.16	1,061
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	11.3
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.5	26.5	< 0.005	< 0.005	27.6
Hauling	0.02	0.54	0.32	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	178	178	0.02	0.03	187
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.85	1.85	< 0.005	< 0.005	1.87
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.38	4.38	< 0.005	< 0.005	4.57
Hauling	< 0.005	0.10	0.06	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.4	29.4	< 0.005	< 0.005	30.9

3.9. Grading II (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	9.29	9.29	—	3.67	3.67	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	4.05	4.10	0.01	0.17	—	0.17	0.15	—	0.15	—	981	981	0.04	0.01	985
Dust From Material Movement	—	—	—	—	—	1.38	1.38	—	0.55	0.55	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.74	0.75	< 0.005	0.03	—	0.03	0.03	—	0.03	—	162	162	0.01	< 0.005	163
Dust From Material Movement	—	—	—	—	—	0.25	0.25	—	0.10	0.10	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.39	4.80	0.00	0.00	1.07	1.07	0.00	0.25	0.25	—	1,106	1,106	0.06	0.04	1,121
Vendor	0.22	9.12	4.19	0.05	0.09	1.77	1.87	0.09	0.49	0.58	—	6,809	6,809	0.26	0.98	7,108
Hauling	0.08	2.50	1.49	0.01	0.01	0.16	0.17	0.01	0.04	0.05	—	805	805	0.08	0.13	846
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.72	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	166	166	0.01	0.01	168
Vendor	0.03	1.35	0.61	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	1,012	1,012	0.04	0.15	1,058
Hauling	0.01	0.37	0.22	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	119	119	0.01	0.02	126
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.5	27.5	< 0.005	< 0.005	27.9
Vendor	0.01	0.25	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	168	168	0.01	0.02	175
Hauling	< 0.005	0.07	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	19.8	19.8	< 0.005	< 0.005	20.8

3.10. Grading II (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.04	27.2	27.6	0.06	1.12	—	1.12	1.03	—	1.03	—	6,599	6,599	0.27	0.05	6,621

Dust From Material Movement	—	—	—	—	—	2.41	2.41	—	0.95	0.95	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.45	4.05	4.10	0.01	0.17	—	0.17	0.15	—	0.15	—	981	981	0.04	0.01	985
Dust From Material Movement	—	—	—	—	—	0.36	0.36	—	0.14	0.14	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.74	0.75	< 0.005	0.03	—	0.03	0.03	—	0.03	—	162	162	0.01	< 0.005	163
Dust From Material Movement	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.39	4.80	0.00	0.00	1.07	1.07	0.00	0.25	0.25	—	1,106	1,106	0.06	0.04	1,121
Vendor	0.22	9.12	4.19	0.05	0.09	1.77	1.87	0.09	0.49	0.58	—	6,809	6,809	0.26	0.98	7,108
Hauling	0.08	2.50	1.49	0.01	0.01	0.16	0.17	0.01	0.04	0.05	—	805	805	0.08	0.13	846
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.07	0.06	0.72	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	166	166	0.01	0.01	168
Vendor	0.03	1.35	0.61	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	1,012	1,012	0.04	0.15	1,058
Hauling	0.01	0.37	0.22	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	119	119	0.01	0.02	126
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.5	27.5	< 0.005	< 0.005	27.9
Vendor	0.01	0.25	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	168	168	0.01	0.02	175
Hauling	< 0.005	0.07	0.04	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	19.8	19.8	< 0.005	< 0.005	20.8

3.11. Grading II (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.95	25.6	27.3	0.06	1.04	—	1.04	0.96	—	0.96	—	6,598	6,598	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	9.29	9.29	—	3.67	3.67	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	1.80	1.92	< 0.005	0.07	—	0.07	0.07	—	0.07	—	465	465	0.02	< 0.005	466
Dust From Material Movement	—	—	—	—	—	0.65	0.65	—	0.26	0.26	—	—	—	—	—	—

Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.33	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	77.0	77.0	< 0.005	< 0.005	77.2
Dust From Material Movement	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.39	4.54	0.00	0.00	1.07	1.07	0.00	0.25	0.25	—	1,087	1,087	0.06	0.04	1,102
Vendor	0.22	8.71	4.03	0.05	0.09	1.77	1.87	0.09	0.49	0.58	—	6,664	6,664	0.26	0.93	6,949
Hauling	0.08	2.45	1.48	0.01	0.01	0.16	0.17	0.01	0.04	0.05	—	788	788	0.08	0.13	828
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	77.3	77.3	< 0.005	< 0.005	78.4
Vendor	0.02	0.61	0.28	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	469	469	0.02	0.07	490
Hauling	0.01	0.17	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	55.4	55.4	0.01	0.01	58.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	13.0
Vendor	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	77.7	77.7	< 0.005	0.01	81.1
Hauling	< 0.005	0.03	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.17	9.17	< 0.005	< 0.005	9.63

3.12. Grading II (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.95	25.6	27.3	0.06	1.04	—	1.04	0.96	—	0.96	—	6,598	6,598	0.27	0.05	6,621
Dust From Material Movement	—	—	—	—	—	2.41	2.41	—	0.95	0.95	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	1.80	1.92	< 0.005	0.07	—	0.07	0.07	—	0.07	—	465	465	0.02	< 0.005	466
Dust From Material Movement	—	—	—	—	—	0.17	0.17	—	0.07	0.07	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.33	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	77.0	77.0	< 0.005	< 0.005	77.2
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.39	4.54	0.00	0.00	1.07	1.07	0.00	0.25	0.25	—	1,087	1,087	0.06	0.04	1,102
Vendor	0.22	8.71	4.03	0.05	0.09	1.77	1.87	0.09	0.49	0.58	—	6,664	6,664	0.26	0.93	6,949
Hauling	0.08	2.45	1.48	0.01	0.01	0.16	0.17	0.01	0.04	0.05	—	788	788	0.08	0.13	828
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	77.3	77.3	< 0.005	< 0.005	78.4
Vendor	0.02	0.61	0.28	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	469	469	0.02	0.07	490
Hauling	0.01	0.17	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	55.4	55.4	0.01	0.01	58.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	13.0
Vendor	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	77.7	77.7	< 0.005	0.01	81.1
Hauling	< 0.005	0.03	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.17	9.17	< 0.005	< 0.005	9.63

3.13. Building Construction I (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	3.72	4.64	0.01	0.15	—	0.15	0.14	—	0.14	—	854	854	0.03	0.01	857
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.68	0.85	< 0.005	0.03	—	0.03	0.03	—	0.03	—	141	141	0.01	< 0.005	142
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.65	0.49	7.41	0.00	0.00	1.35	1.35	0.00	0.32	0.32	—	1,518	1,518	0.07	0.05	1,541
Vendor	0.01	0.17	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	125	125	0.01	0.02	131
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.19	2.35	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	515	515	0.03	0.02	523
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.6	44.6	< 0.005	0.01	46.6
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.43	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	85.3	85.3	< 0.005	< 0.005	86.5
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.38	7.38	< 0.005	< 0.005	7.71

Hauling	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

3.14. Building Construction I (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	2,406
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	3.72	4.64	0.01	0.15	—	0.15	0.14	—	0.14	—	854	854	0.03	0.01	857
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.68	0.85	< 0.005	0.03	—	0.03	0.03	—	0.03	—	141	141	0.01	< 0.005	142
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.65	0.49	7.41	0.00	0.00	1.35	1.35	0.00	0.32	0.32	—	1,518	1,518	0.07	0.05	1,541

Vendor	0.01	0.17	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	125	125	0.01	0.02	131
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.19	2.35	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	515	515	0.03	0.02	523
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.6	44.6	< 0.005	0.01	46.6
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.43	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	85.3	85.3	< 0.005	< 0.005	86.5
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.38	7.38	< 0.005	< 0.005	7.71
Hauling	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

3.15. Building Construction II (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	2,405

Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	5.92	8.15	0.01	0.21	—	0.21	0.20	—	0.20	—	1,510	1,510	0.06	0.01	1,516
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.08	1.49	< 0.005	0.04	—	0.04	0.04	—	0.04	—	250	250	0.01	< 0.005	251
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.49	8.20	0.00	0.00	1.69	1.69	0.00	0.40	0.40	—	1,828	1,828	0.08	0.07	1,855
Vendor	0.13	4.55	2.15	0.03	0.05	0.96	1.01	0.05	0.27	0.32	—	3,606	3,606	0.14	0.51	3,769
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.69	0.62	7.20	0.00	0.00	1.69	1.69	0.00	0.40	0.40	—	1,726	1,726	0.09	0.07	1,749
Vendor	0.12	4.71	2.18	0.03	0.05	0.96	1.01	0.05	0.27	0.32	—	3,609	3,609	0.14	0.51	3,763
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.39	4.59	0.00	0.00	1.06	1.06	0.00	0.25	0.25	—	1,097	1,097	0.06	0.04	1,113
Vendor	0.08	2.95	1.37	0.02	0.03	0.60	0.64	0.03	0.17	0.20	—	2,273	2,273	0.09	0.32	2,373
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.07	0.84	0.00	0.00	0.19	0.19	0.00	0.05	0.05	—	182	182	0.01	0.01	184
Vendor	0.01	0.54	0.25	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	376	376	0.01	0.05	393
Hauling	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

3.16. Building Construction II (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	2,405
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.65	5.92	8.15	0.01	0.21	—	0.21	0.20	—	0.20	—	1,510	1,510	0.06	0.01	1,516
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.08	1.49	< 0.005	0.04	—	0.04	0.04	—	0.04	—	250	250	0.01	< 0.005	251

Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.71	0.49	8.20	0.00	0.00	1.69	1.69	0.00	0.40	0.40	—	1,828	1,828	0.08	0.07	1,855
Vendor	0.13	4.55	2.15	0.03	0.05	0.96	1.01	0.05	0.27	0.32	—	3,606	3,606	0.14	0.51	3,769
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.69	0.62	7.20	0.00	0.00	1.69	1.69	0.00	0.40	0.40	—	1,726	1,726	0.09	0.07	1,749
Vendor	0.12	4.71	2.18	0.03	0.05	0.96	1.01	0.05	0.27	0.32	—	3,609	3,609	0.14	0.51	3,763
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.39	4.59	0.00	0.00	1.06	1.06	0.00	0.25	0.25	—	1,097	1,097	0.06	0.04	1,113
Vendor	0.08	2.95	1.37	0.02	0.03	0.60	0.64	0.03	0.17	0.20	—	2,273	2,273	0.09	0.32	2,373
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.84	0.00	0.00	0.19	0.19	0.00	0.05	0.05	—	182	182	0.01	0.01	184
Vendor	0.01	0.54	0.25	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	376	376	0.01	0.05	393
Hauling	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

3.17. Gen-Tie Line (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.68	25.2	25.2	0.04	1.15	—	1.15	1.06	—	1.06	—	4,372	4,372	0.18	0.04	4,387
Dust From Material Movement	—	—	—	—	—	7.10	7.10	—	3.43	3.43	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	4.55	4.54	0.01	0.21	—	0.21	0.19	—	0.19	—	787	787	0.03	0.01	790
Dust From Material Movement	—	—	—	—	—	1.28	1.28	—	0.62	0.62	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.83	0.83	< 0.005	0.04	—	0.04	0.03	—	0.03	—	130	130	0.01	< 0.005	131
Dust From Material Movement	—	—	—	—	—	0.23	0.23	—	0.11	0.11	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.9	63.9	< 0.005	< 0.005	64.8
Vendor	< 0.005	0.18	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	127	127	0.01	0.02	133
Hauling	0.02	0.53	0.31	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	172	172	0.02	0.03	180
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.6	11.6	< 0.005	< 0.005	11.8
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.9	22.9	< 0.005	< 0.005	23.9
Hauling	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.9	30.9	< 0.005	< 0.005	32.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.92	1.92	< 0.005	< 0.005	1.95
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.80	3.80	< 0.005	< 0.005	3.96
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.11	5.11	< 0.005	< 0.005	5.37

3.18. Gen-Tie Line (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.68	25.2	25.2	0.04	1.15	—	1.15	1.06	—	1.06	—	4,372	4,372	0.18	0.04	4,387
Dust From Material Movement	—	—	—	—	—	1.85	1.85	—	0.89	0.89	—	—	—	—	—	—

Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	4.55	4.54	0.01	0.21	—	0.21	0.19	—	0.19	—	787	787	0.03	0.01	790
Dust From Material Movement	—	—	—	—	—	0.33	0.33	—	0.16	0.16	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.83	0.83	< 0.005	0.04	—	0.04	0.03	—	0.03	—	130	130	0.01	< 0.005	131
Dust From Material Movement	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.9	63.9	< 0.005	< 0.005	64.8
Vendor	< 0.005	0.18	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	127	127	0.01	0.02	133
Hauling	0.02	0.53	0.31	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	172	172	0.02	0.03	180
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.6	11.6	< 0.005	< 0.005	11.8
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.9	22.9	< 0.005	< 0.005	23.9

Hauling	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.9	30.9	< 0.005	< 0.005	32.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.92	1.92	< 0.005	< 0.005	1.95
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.80	3.80	< 0.005	< 0.005	3.96
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.11	5.11	< 0.005	< 0.005	5.37

3.19. Gen-Tie Line (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.46	22.7	24.2	0.04	0.99	—	0.99	0.91	—	0.91	—	4,373	4,373	0.18	0.04	4,388
Dust From Material Movement	—	—	—	—	—	7.10	7.10	—	3.43	3.43	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.46	22.7	24.2	0.04	0.99	—	0.99	0.91	—	0.91	—	4,373	4,373	0.18	0.04	4,388
Dust From Material Movement	—	—	—	—	—	7.10	7.10	—	3.43	3.43	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.31	12.1	12.9	0.02	0.53	—	0.53	0.49	—	0.49	—	2,328	2,328	0.09	0.02	2,336
Dust From Material Movement	—	—	—	—	—	3.78	3.78	—	1.82	1.82	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	2.21	2.35	< 0.005	0.10	—	0.10	0.09	—	0.09	—	385	385	0.02	< 0.005	387
Dust From Material Movement	—	—	—	—	—	0.69	0.69	—	0.33	0.33	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.32	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	66.4	66.4	< 0.005	< 0.005	67.4
Vendor	0.01	0.17	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	125	125	0.01	0.02	131
Hauling	0.02	0.50	0.30	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	168	168	0.02	0.03	177
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.28	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	62.7	62.7	< 0.005	< 0.005	63.5
Vendor	< 0.005	0.17	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	125	125	0.01	0.02	131
Hauling	0.02	0.52	0.31	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	168	168	0.02	0.03	177
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.7	33.7	< 0.005	< 0.005	34.2
Vendor	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	66.6	66.6	< 0.005	0.01	69.6

Hauling	0.01	0.27	0.16	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	89.5	89.5	0.01	0.01	94.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.58	5.58	< 0.005	< 0.005	5.66
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	11.5
Hauling	< 0.005	0.05	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.8	14.8	< 0.005	< 0.005	15.6

3.20. Gen-Tie Line (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.46	22.7	24.2	0.04	0.99	—	0.99	0.91	—	0.91	—	4,373	4,373	0.18	0.04	4,388
Dust From Material Movement	—	—	—	—	—	1.85	1.85	—	0.89	0.89	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.46	22.7	24.2	0.04	0.99	—	0.99	0.91	—	0.91	—	4,373	4,373	0.18	0.04	4,388
Dust From Material Movement	—	—	—	—	—	1.85	1.85	—	0.89	0.89	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.31	12.1	12.9	0.02	0.53	—	0.53	0.49	—	0.49	—	2,328	2,328	0.09	0.02	2,336
Dust From Material Movement	—	—	—	—	—	0.98	0.98	—	0.47	0.47	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	2.21	2.35	< 0.005	0.10	—	0.10	0.09	—	0.09	—	385	385	0.02	< 0.005	387
Dust From Material Movement	—	—	—	—	—	0.18	0.18	—	0.09	0.09	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.32	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	66.4	66.4	< 0.005	< 0.005	67.4
Vendor	0.01	0.17	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	125	125	0.01	0.02	131
Hauling	0.02	0.50	0.30	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	168	168	0.02	0.03	177
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.28	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	62.7	62.7	< 0.005	< 0.005	63.5
Vendor	< 0.005	0.17	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	125	125	0.01	0.02	131
Hauling	0.02	0.52	0.31	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	168	168	0.02	0.03	177
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.7	33.7	< 0.005	< 0.005	34.2
Vendor	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	66.6	66.6	< 0.005	0.01	69.6

Hauling	0.01	0.27	0.16	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	89.5	89.5	0.01	0.01	94.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.58	5.58	< 0.005	< 0.005	5.66
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	11.5
Hauling	< 0.005	0.05	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.8	14.8	< 0.005	< 0.005	15.6

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation I	Site Preparation	10/1/2024	12/30/2024	5.00	65.0	Phase I Site Prep
Site Preparation II	Site Preparation	6/29/2026	10/16/2026	5.00	80.0	Phase II Site Prep
Grading I	Grading	12/31/2024	3/31/2025	5.00	65.0	Phase I Grading

Grading II	Grading	10/17/2026	2/5/2027	5.00	80.0	Phase II Grading
Building Construction I	Building Construction	4/1/2025	9/29/2025	5.00	130	Phase I Building Construction
Building Construction II	Building Construction	2/6/2027	12/24/2027	5.00	230	Phase II Building Construction
Gen-Tie Line	Linear, Drainage, Utilities, & Sub-Grade	10/1/2024	9/29/2025	5.00	260	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation I	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation I	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Site Preparation II	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation II	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading I	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading I	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading I	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading I	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading I	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading II	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading II	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading II	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading II	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading II	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

Building Construction I	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction I	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction I	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction I	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction I	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction II	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction II	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction II	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction II	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction II	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Gen-Tie Line	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Gen-Tie Line	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Gen-Tie Line	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Gen-Tie Line	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Gen-Tie Line	Cranes	Diesel	Average	1.00	8.00	367	0.29
Gen-Tie Line	Graders	Diesel	Average	1.00	8.00	148	0.41
Gen-Tie Line	Other General Industrial Equipment	Diesel	Average	1.00	8.00	35.0	0.34
Gen-Tie Line	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Gen-Tie Line	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation I	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40

Site Preparation I	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Site Preparation II	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation II	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading I	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading I	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading I	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading I	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading I	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Grading II	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading II	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading II	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading II	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading II	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction I	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction I	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction I	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction I	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction I	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction II	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction II	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction II	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction II	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction II	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Gen-Tie Line	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50

Gen-Tie Line	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Gen-Tie Line	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Gen-Tie Line	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Gen-Tie Line	Cranes	Diesel	Average	1.00	8.00	367	0.29
Gen-Tie Line	Graders	Diesel	Average	1.00	8.00	148	0.41
Gen-Tie Line	Other General Industrial Equipment	Diesel	Average	1.00	8.00	35.0	0.34
Gen-Tie Line	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Gen-Tie Line	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation I	—	—	—	—
Site Preparation I	Worker	7.00	12.0	LDA,LDT1,LDT2
Site Preparation I	Vendor	6.00	7.63	HHDT,MHDT
Site Preparation I	Hauling	144	1.50	HHDT
Site Preparation I	Onsite truck	—	—	HHDT
Grading I	—	—	—	—
Grading I	Worker	7.00	12.0	LDA,LDT1,LDT2
Grading I	Vendor	6.00	7.63	HHDT,MHDT
Grading I	Hauling	144	1.50	HHDT
Grading I	Onsite truck	0.00	—	HHDT
Building Construction I	—	—	—	—
Building Construction I	Worker	160	12.0	LDA,LDT1,LDT2

Building Construction I	Vendor	5.00	7.63	HHDT,MHDT
Building Construction I	Hauling	0.00	1.50	HHDT
Building Construction I	Onsite truck	—	—	HHDT
Gen-Tie Line	—	—	—	—
Gen-Tie Line	Worker	7.00	12.0	LDA,LDT1,LDT2
Gen-Tie Line	Vendor	5.00	7.63	HHDT,MHDT
Gen-Tie Line	Hauling	24.0	1.50	HHDT
Gen-Tie Line	Onsite truck	—	—	HHDT
Site Preparation II	—	—	—	—
Site Preparation II	Worker	126	12.0	LDA,LDT1,LDT2
Site Preparation II	Vendor	277	7.63	HHDT,MHDT
Site Preparation II	Hauling	117	1.50	HHDT
Site Preparation II	Onsite truck	0.00	—	HHDT
Grading II	—	—	—	—
Grading II	Worker	126	12.0	LDA,LDT1,LDT2
Grading II	Vendor	277	7.63	HHDT,MHDT
Grading II	Hauling	117	1.50	HHDT
Grading II	Onsite truck	—	—	HHDT
Building Construction II	—	—	—	—
Building Construction II	Worker	200	12.0	LDA,LDT1,LDT2
Building Construction II	Vendor	150	7.63	HHDT,MHDT
Building Construction II	Hauling	0.00	1.50	HHDT
Building Construction II	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation I	—	—	—	—

Site Preparation I	Worker	7.00	12.0	LDA,LDT1,LDT2
Site Preparation I	Vendor	6.00	7.63	HHDT,MHDT
Site Preparation I	Hauling	144	1.50	HHDT
Site Preparation I	Onsite truck	—	—	HHDT
Grading I	—	—	—	—
Grading I	Worker	7.00	12.0	LDA,LDT1,LDT2
Grading I	Vendor	6.00	7.63	HHDT,MHDT
Grading I	Hauling	144	1.50	HHDT
Grading I	Onsite truck	0.00	—	HHDT
Building Construction I	—	—	—	—
Building Construction I	Worker	160	12.0	LDA,LDT1,LDT2
Building Construction I	Vendor	5.00	7.63	HHDT,MHDT
Building Construction I	Hauling	0.00	1.50	HHDT
Building Construction I	Onsite truck	—	—	HHDT
Gen-Tie Line	—	—	—	—
Gen-Tie Line	Worker	7.00	12.0	LDA,LDT1,LDT2
Gen-Tie Line	Vendor	5.00	7.63	HHDT,MHDT
Gen-Tie Line	Hauling	24.0	1.50	HHDT
Gen-Tie Line	Onsite truck	—	—	HHDT
Site Preparation II	—	—	—	—
Site Preparation II	Worker	126	12.0	LDA,LDT1,LDT2
Site Preparation II	Vendor	277	7.63	HHDT,MHDT
Site Preparation II	Hauling	117	1.50	HHDT
Site Preparation II	Onsite truck	0.00	—	HHDT
Grading II	—	—	—	—
Grading II	Worker	126	12.0	LDA,LDT1,LDT2
Grading II	Vendor	277	7.63	HHDT,MHDT

Grading II	Hauling	117	1.50	HHDT
Grading II	Onsite truck	—	—	HHDT
Building Construction II	—	—	—	—
Building Construction II	Worker	200	12.0	LDA,LDT1,LDT2
Building Construction II	Vendor	150	7.63	HHDT,MHDT
Building Construction II	Hauling	0.00	1.50	HHDT
Building Construction II	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation I	0.00	75,000	22.5	0.00	—
Site Preparation II	0.00	75,000	120	0.00	—
Grading I	0.00	75,000	93.0	0.00	—
Grading II	0.00	75,000	240	0.00	—
Gen-Tie Line	0.00	50,000	7.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Heavy Industry	0.00	0%
User Defined Linear	7.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	589	0.03	< 0.005
2025	0.00	589	0.03	< 0.005
2026	0.00	589	0.03	< 0.005
2027	0.00	589	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	22.4	annual days of extreme heat
Extreme Precipitation	4.70	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	32.2	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	70.7
AQ-PM	6.76
AQ-DPM	3.27
Drinking Water	78.6
Lead Risk Housing	48.6
Pesticides	10.6
Toxic Releases	29.6
Traffic	4.89
Effect Indicators	—
CleanUp Sites	86.8
Groundwater	35.0
Haz Waste Facilities/Generators	74.7
Impaired Water Bodies	87.0

Solid Waste	98.8
Sensitive Population	—
Asthma	50.1
Cardio-vascular	35.4
Low Birth Weights	34.2
Socioeconomic Factor Indicators	—
Education	69.9
Housing	63.6
Linguistic	60.6
Poverty	72.4
Unemployment	82.3

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	32.19556012
Employed	4.042089054
Median HI	—
Education	—
Bachelor's or higher	38.73989478
High school enrollment	4.042089054
Preschool enrollment	21.96843321
Transportation	—
Auto Access	66.18760426
Active commuting	31.55395868
Social	—

2-parent households	39.62530476
Voting	56.30694213
Neighborhood	—
Alcohol availability	80.55947645
Park access	24.45784679
Retail density	2.694726036
Supermarket access	17.54138329
Tree canopy	20.19761324
Housing	—
Homeownership	62.60746824
Housing habitability	65.00705762
Low-inc homeowner severe housing cost burden	62.44065187
Low-inc renter severe housing cost burden	52.02104453
Uncrowded housing	61.41408957
Health Outcomes	—
Insured adults	34.33850892
Arthritis	0.0
Asthma ER Admissions	57.5
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	13.6
Cognitively Disabled	8.2
Physically Disabled	8.5

Heart Attack ER Admissions	67.9
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	59.0
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	70.4
SLR Inundation Area	0.0
Children	29.7
Elderly	29.9
English Speaking	70.2
Foreign-born	29.0
Outdoor Workers	13.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	97.7
Traffic Density	3.3
Traffic Access	23.0
Other Indices	—
Hardship	72.0
Other Decision Support	—
2016 Voting	60.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	63.0
Healthy Places Index Score for Project Location (b)	16.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Site specific data
Construction: Construction Phases	Site specific
Construction: Architectural Coatings	Most equipment arrives prepainted
Construction: Dust From Material Movement	Project specific
Construction: Off-Road Equipment	CalEEMod defaults and Project Specifics
Construction: Trips and VMT	Project Specific

APPENDIX B – FINAL CAP CONSISTENCY REVIEW CHECKLIST

Permit Number: _____

COUNTY OF SAN DIEGO

LAND USE AND ENVIRONMENT GROUP

Department of Planning & Development Services

Appendix A: Final Climate Action Plan Consistency Review Checklist

Introduction

The County of San Diego (County) Climate Action Plan (CAP), adopted by the Board of Supervisors on February 14, 2018, outlines actions that the County will undertake to meet its greenhouse gas (GHG) emissions reduction targets. Implementation of the CAP will require that new development projects incorporate more sustainable design standards and implement applicable reduction measures consistent with the CAP. To help plan and design projects consistent with the CAP, and to assist County staff in implementing the CAP and determining the consistency of proposed projects with the CAP during development review, the County has prepared a CAP Consistency Review Checklist (Checklist). This Checklist, in conjunction with the CAP, provides a streamlined review process for proposed discretionary projects that require environmental review pursuant to the California Environmental Quality Act (CEQA). Please refer to the County's Guidelines for Determining Significance for Climate Change (Guidelines) for more information on GHG emissions, climate change impact requirements, thresholds of significance, and compliance with CEQA Guidelines Section 15183.5.

The purpose of this Checklist is to implement GHG reduction measures from the CAP that apply to new development projects. The CAP presents the County's comprehensive strategy to reduce GHG emissions to meet its reduction targets. These reductions will be achieved through a combination of County initiatives and reduction actions for both existing and new development. Reduction actions that apply to existing and new development will be implemented through a combination of mandatory requirements and incentives. This Checklist specifically applies to proposed discretionary projects that require environmental review pursuant to CEQA. Therefore, the Checklist represents one implementation tool in the County's overall strategy to implement the CAP. Implementation of measures that do not apply to new development projects will occur through the implementation mechanisms identified in Chapter 5 of the CAP. Implementation of applicable reduction measures in new development projects will help the County achieve incremental reductions towards its targets, with additional reductions occurring through County initiatives and measures related to existing development that are implemented outside of the Checklist process.

The Checklist follows a two-step process to determine if projects are consistent with the CAP and whether they may have a significant cumulative impact under the County's adopted GHG thresholds of significance. The Checklist first assesses a project's consistency with the growth projections and land use assumptions that formed the basis of CAP emissions projections. If a project is consistent with the projections and land use assumptions in the CAP, its associated growth in terms of GHG emissions would have been accounted for in the CAP's projections and project implementation of the CAP reduction measures will contribute towards reducing the County's emissions and meeting the County's reduction targets. Projects that include a land use plan and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project

when compared to existing designation, would also be within the projections assumed in the CAP. Projects responding in the affirmative to Step 1 questions can move forward to Step 2 of the Checklist. If a land use and/or zoning designation amendment results in a more GHG-intensive project, the project is required to demonstrate consistency with applicable CAP measures and offset the increase in emissions as described in the Guidelines. Step 2 of the Checklist contains the CAP GHG reduction measures that projects are required to implement to ensure compliance with the CAP. Implementation of these measures would ensure that new development is consistent with relevant CAP strategies and measures and will contribute towards achieving the identified GHG reduction targets. Projects that are consistent with the CAP, as determined using this Checklist, may rely on the CAP for the cumulative impacts analysis of GHG emissions under CEQA.

A project's incremental contribution to cumulative GHG emissions may be determined to not be cumulatively considerable if it is determined to be consistent with the CAP. As specified in the CEQA Guidelines, the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the project's incremental effects are "cumulatively considerable" (CCR, Title 14, Division 6, Chapter 3, Section 15064[h][4]). Projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist may have a cumulatively considerable contribution to a significant cumulative impact and would be required to prepare a separate, more detailed project-level GHG analysis as part of the CEQA document prepared for the project.

Checklist Applicability

This Checklist only applies to development projects that require discretionary review and are subject to environmental review (i.e., not statutorily or categorically exempt projects) pursuant to CEQA. Projects that are limited to ministerial review and approval (e.g., only building permits) would not be subject to the Checklist. The CAP contains other measures that, when implemented, would apply broadly to all ministerial and discretionary projects. These measures are included for discretionary projects in this Checklist, but could also apply more broadly once the County takes action to codify specific requirements or standards.

Checklist Procedures

General procedures for Checklist compliance and review are described below. Specific guidance is also provided under each of the questions under Steps 1 and 2 of the Checklist in subsequent pages.

1. The County's Department of Planning & Development Services (PDS) reviews development applications and makes determinations regarding environmental review requirements under CEQA. Procedures for CEQA can be found on the County's Process Guidance & Regulations/Statutes Homepage. The Director of PDS will determine whether environmental review is required, and if so, whether completion of the CAP Checklist is required for a proposed project or whether a separate project-level GHG analysis is required.

2. The specific applicable requirements outlined in the Checklist shall be required as a condition of project approval.

3. The project must provide substantial evidence that demonstrates how the proposed project will implement each applicable Checklist requirement described herein to the satisfaction of the Director of PDS.

4. If a question in the Checklist is deemed not applicable (N/A) to a project, substantial evidence shall be provided to the satisfaction of the Director of PDS demonstrating why the Checklist item is not applicable. Feasibility of reduction measures for new projects was assessed in development of the

CAP and measures determined to be feasible were incorporated into the Checklist. Therefore, it is expected that projects would have the ability to comply with all applicable Checklist measures.

5. Development projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist shall prepare a separate, project-level GHG analysis as part of the CEQA document prepared for the project and may be required to prepare an Environmental Impact Report (EIR). Guidance for project-specific GHG Technical Reports is outlined in the Report Format and Content Requirements for Climate Change document, provided under separate cover. The Report Format and Content Requirements document provides guidance on the outline and content of GHG analyses for discretionary projects processed by PDS that cannot show compliance with the CAP Checklist.

Checklist Updates

The Guidelines and Checklist may be administratively updated by the County from time to time to comply with amendments to State laws or court directives, or to remove measures that may become mandatory through future updates to State or local codes. Administrative revisions to the Guidelines and Checklist will be limited to changes that do not trigger a subsequent EIR or a supplement to the SEIR for the CAP pursuant to CEQA Guidelines Section 15162. Administrative revisions, as described above, will not require approval by the Board of Supervisors (Board). All other changes to the Guidelines and Checklist require Board approval.

Comprehensive updates to the Guidelines and Checklist will be coordinated with each CAP update (i.e., every five years beginning in 2025) and would require Board approval. Future updates of the CAP, Guidelines, and Checklist shall comply with CEQA.

Application Information

Contact Information

Project No. and Name: Starlight Solar

Property Address and APN: South of Interstate 8 (I-8) and Old Highway 80, and east of Tierra Del S

Applicant Name and Co.: Starlight Solar, LLC.

Contact Phone: _____ Contact Email: _____

Was a consultant retained to complete this checklist? ☑ Yes ☐ No

If Yes, complete the following:

Consultant Name: Julie Mitchell Contact Phone: (949) 248-8490

Company Name: Yorke Engineering, LLC. Contact Email: JMitchell@yorkeengr.com

Project Information

1. What is the size of the project site (acres [gross and net])? 592

2. Identify all applicable proposed land uses (indicate square footage [gross and net]):

   ☐ Residential (indicate # of single-family dwelling units): _____

   ☐ Residential (indicate # of multi-family dwelling units): _____

   ☐ Commercial (indicate total square footage [gross and net]): _____

   ■ Industrial (indicate total square footage [gross and net]): 25,483

   ☐ Agricultural (indicate total acreage [gross and net]): _____

   ☐ Other (describe): _____

3. Provide a description of the project proposed. This description should match the project description used for the CEQA document. The description may be attached to the Checklist if there are space constraints.

Starlight Solar is requesting a Major Use Permit from San Diego County to develop, finance, construct, and operate a normally unstaffed renewable energy solar and battery storage project in southeastern San Diego County. The County's General Plan designates the project site as Rural Lands 80 (RL-80) and the County's Zoning Ordinance identifies the site as General Rural (S92). The County's General Regulation states that solar power plant projects are considered Major Impact Service and Utility in all zones and thus require the approval of a Major Use Permit. The Project would utilize PV arrays and large inverter technology to produce up to 100 MW of utility-scale AC electric power. The project would also include 217.4 MWh of DC battery storage.

CAP Consistency Checklist Questions

Step 1: Land Use Consistency

For projects that are subject to CAP consistency review, the first step in determining consistency is to assess the project's consistency with the growth projections used in the development of the CAP. This section allows the County to determine a project's consistency with the land use assumptions used in the CAP.

Step 1: Land Use Consistency		
Checklist Item (Check the appropriate box and provide explanation and supporting documentation for your answer)	Yes	No
1. Is the proposed project consistent with the existing General Plan regional category, land use designations, and zoning designations? If **"Yes,"** provide substantiation below and then proceed to Step 2 (CAP Measures Consistency) of the Checklist. If **"No,"** proceed to question 2 below.	☑	☐
Project Detail: Please substantiate how the project satisfies question 1. The County General Plan designates the project site as Rural Lands 80 (RL-80) and the County's Zoning Ordinance identifies the site as General Rural (S92). These planning and zoning designations would not change under the proposed project, and the proposed project would not by itself cause a population increase in the area.		
2. Does the project include a land use element and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to the existing designations? If **"Yes,"** the project must provide estimated project GHG emissions under both existing and proposed designation(s) for comparison to substantiate the response and proceed to Step 2 (CAP Measures Consistency) of the Checklist. If **"No,"** (i.e., the project proposes an increase in density or intensity above that which is allowed under existing General Plan designations and consequently would not result in an equivalent or less GHG-intensive project when compared to the existing designations), the project must prepare a separate, more detailed project-level GHG analysis. As outlined in the County's Guidelines for Determining Significance for Climate Change and Report Format and Content Requirements for Climate Change, this analysis must demonstrate how the project would offset the increase in GHG emissions over the existing designations or baseline conditions. The project must also incorporate each of the CAP measures identified in Step 2 to mitigate cumulative GHG emissions impacts. Proceed and complete a separate project-specific GHG analysis and Step 2 of the Checklist. Refer to Section 4 of the County's Guidelines for procedures on analyzing General Plan Amendments.	☐	☑
Project Detail: Please substantiate how the project satisfies question 2. Operational GHG emissions from the proposed project would be minimal from occasional maintenance activities only. Amortized short-term construction emissions of would be far below applicable thresholds. The Project would result in GHG emissions of 0.0002 MT CO2e per service population per year amortized over 30 years.		

Step 2: CAP Measures Consistency

The second step of the CAP consistency review is to review and evaluate a project's consistency with the applicable measures of the CAP. Each checklist item is associated with a specific GHG reduction measure(s) in the County CAP.

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Step 2A: Project Operations (All projects with an operational component must fill out this portion of the Checklist)				
Reducing Vehicle Miles Traveled				
1a. Reducing Vehicle Miles Traveled Non-Residential: For non-residential projects with anticipated tenant-occupants of 25 or more, will the project achieve a 15% reduction in emissions from commute vehicle miles traveled (VMT), and commit to monitoring and reporting results to demonstrate on-going compliance? VMT reduction may be achieved through a combination of Transportation Demand Management (TDM) and parking strategies, as long as the 15% reduction can be substantiated. VMT reduction actions though TDM may include, but are not limited to: ☐ Telecommuting ☐ Car Sharing ☐ Shuttle Service ☐ Carpools ☐ Vanpools ☐ Bicycle Parking Facilities ☐ Transit Subsidies Shared and reduced parking strategies may include, but are not limited to:[1] ☐ Shared parking facilities ☐ Carpool/vanpool-only parking spaces ☐ Shuttle facilities ☐ Electric Vehicle-only parking spaces The project may incorporate the measures listed above, and propose additional trip reduction measures, as long as a 15% reduction in emissions from commute VMT can be demonstrated through substantial evidence. Check "N/A" if the project is a residential project or if the project would not accommodate more than 25 tenant-occupants.	T-2.2 and T-2.4	☐	☐	☑
1b. Project Detail: Please substantiate how the project satisfies question 1a. _____ _____ _____ _____				

[1] Reduction actions and strategies under 1a may be used to achieve a 10% reduction in emissions from commute VMT under 2a

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Shared and Reduced Parking				
2a. Shared and Reduced Parking Non-Residential: For non-residential projects with anticipated tenant-occupants of 24 or less, will the project implement shared and reduced parking strategies that achieves a 10% reduction in emissions from commute VMT? Shared and reduced parking strategies may include, but are not limited to: ☐ Shared parking facilities ☐ Carpool/vanpool-only parking spaces ☐ Shuttle facilities ☐ Electric Vehicle-only parking spaces Check "N/A" if the project is a residential project or if the project would accommodate 25 or more tenant-occupants.	T-2.4	☑	☐	☐
2b. Project Detail: Please substantiate how the project satisfies question 2a. The proposed facility will be normally unstaffed and will not generate daily commute trips. Vehicle trips will be for occasional maintenance activities only. Estimated maintanance trip frequency is once or twice per week for at least a 60% reduction in emissions from commute VMT.				
Water Heating Systems				
3a. Electric or Alternatively-Fueled Water Heating Systems Residential: For projects that include residential construction, will the project, as a condition of approval, install the following types of electric or alternatively-fueled water heating system(s)? Please check which types of system(s) will be installed: ☐ Solar thermal water heater ☐ Tankless electric water heater ☐ Storage electric water heaters ☐ Electric heat pump water heater ☐ Tankless gas water heater ☐ Other Check "N/A" if the project does not contain any residential buildings.	E-1.2	☐	☐	☑
3b. Project Detail: Please substantiate how the project satisfies question 3a.				

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Water-Efficient Appliances and Plumbing Fixtures				
4a. Water Efficient Appliances and Plumbing Fixtures Residential: For new residential projects, will the project comply with all of the following water efficiency and conservation BMPs[2]? ☐ Kitchen Faucets: The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi[3]. ☐ Energy Efficient Appliances: Install at least one qualified ENERGY STAR dishwasher or clothes washer per unit. Check "N/A" if the project is a non-residential project.	W-1.1	☐	☐	☑
4b. Project Detail: Please substantiate how the project satisfies question 4a. _____ _____ _____ _____ _____ _____ _____ _____ _____				
Rain Barrel Installations				
5a. Rain Barrel Installations Residential: For new residential projects, will the project make use of incentives to install one rain barrel per every 500 square feet of available roof area? Check "N/A" if the project is a non-residential project; if State, regional or local incentives/rebates to purchase rain barrels are not available; or if funding for programs/rebates has been exhausted.	W-2.1	☐	☐	☑
5b. Project Detail: Please substantiate how the project satisfies question 5a. _____ _____ _____ _____ _____ _____ _____ _____ _____ _____				

[2] CALGreen Tier 1 residential voluntary measure A4.303 of the California Green Building Standards Code.
[3] Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
Reduce Outdoor Water Use				
6a. Reduce Outdoor Water Use Residential: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance[4] and demonstrates a 40% reduction in current Maximum Applied Water Allowance (MAWA) for outdoor use? Non-Residential: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance and demonstrates a 40% reduction in current MAWA for outdoor use? Check "N/A" if the project does not propose any landscaping, or if the aggregate landscaped area is between 500 – 2,499 square feet and elects to comply with the Prescriptive Compliance Option within the Water Conservation in Landscaping Ordinance.	W-1.2	☐	☐	☑
6b. Project Detail: Please substantiate how the project satisfies question 6a. _____ _____ _____ _____ _____ _____ _____ _____				
Agricultural and Farming Operations[5]				
7a. Agricultural and Farming Equipment Will the project use the San Diego County Air Pollution Control District's (SDAPCD's) farm equipment incentive program to convert gas- and diesel-powered farm equipment to electric equipment? Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted.	A-1.1	☐	☐	☑
7b. Project Detail: Please substantiate how the project satisfies question 7a. _____ _____ _____ _____ _____ _____ _____ _____				

[4] http://www.sandiegocounty.gov/content/dam/sdc/cob/ordinances/ord10427.pdf.
[5] Existing agricultural operations would not be subject to questions 7 and 8 of the Checklist, unless a proposed expansion is subject to discretionary review and requires environmental review pursuant to CEQA.

Step 2: CAP Measures Consistency				
Checklist Item (Check the appropriate box and provide an explanation for your answer)	CAP Measure	Yes	No	N/A
8a. Electric Irrigation Pumps Will the project use SDAPCD's farm equipment incentive program to convert diesel- or gas-powered irrigation pumps to electric irrigation pumps? Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted.	A-1.2	☐	☐	☑
8b. Project Detail: Please substantiate how the project satisfies question 8a. _____ _____ _____ _____ _____ _____ _____ _____				
Tree Planting				
9a. Tree Planting <u>Residential:</u> For residential projects, will the project plant, at a minimum, two trees per every new residential dwelling unit proposed? Check "N/A" if the project is a non-residential project.	A-2.1	☐	☐	☑
9b. Project Detail: Please substantiate how the project satisfies question 9a. _____ _____ _____ _____ _____ _____ _____ _____				