



Chino Distribution Center

GREENHOUSE GAS ANALYSIS

CITY OF CHINO

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LIST OF ABBREVIATED TERMS

%	Percent
°C	Degrees Celsius
°F	Degrees Fahrenheit
(1)	Reference
<i>2022 Scoping Plan</i>	<i>2022 Scoping Plan</i>
AB	Assembly Bill
AB 32	Global Warming Solutions Act of 2006
AB 1493	Pavley Fuel Efficiency Standards
AB 1881	California Water Conservation Landscaping Act of 2006
Annex I	Industrialized Nations
AQIA	<i>Chino Distribution Center Air Quality Impact Analysis</i>
BAU	Business as Usual
C ₂ F ₆	Hexafluoroethane
C ₂ H ₆	Ethane
CAA	Federal Clean Air Act
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGAPS	California LBNL GHG Analysis of Policies Spreadsheet
CALGreen	California Green Building Standards Code
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resource Board
CEC	California Energy Commission
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
<i>CEQA Guidelines</i>	<i>2024 CEQA Statute and Guidelines</i>
CDFA	California Department of Food and Agriculture
CF ₄	Tetrafluoromethane
CFC	Chlorofluorocarbons
CFC-113	Trichlorotrifluoroethane
CH ₄	Methane
City	City of Chino
CNRA	California Natural Resources Agency
<i>CNRA 2009</i>	<i>2009 California Climate Adaptation Strategy</i>
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
Convention	United Nation’s Framework Convention on Climate Change

COP	Conference of the Parties
CPUC	California Public Utilities Commission
DWR	Department of Water Resources
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
EV	Electric Vehicle
GCC	Global Climate Change
Gg	Gigagram
GHGA	Greenhouse Gas Analysis
GO-Biz	Governor's Office of Business and Economic Development
gpd	Gallons Per Day
gpm	Gallons Per Minute
GWP	Global Warming Potential
H ₂ O	Water
HFC	Hydrofluorocarbons
HDT	Heavy-Duty Trucks
HFC-23	Fluoroform
HFC-134a	1,1,1,2-tetrafluoroethane
HFC-152a	1,1-difluoroethane
HHDT	Heavy-Heavy-Duty Trucks
hp	Horsepower
IBANK	California Infrastructure and Economic Development Bank
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Planning
ISO	Independent System Operator
ITE	Institute of Transportation Engineers
kWh	Kilowatt Hours
lbs	Pounds
LBNL	Lawrence Berkeley National Laboratory
LCA	Life-Cycle Analysis
LCD	Liquid Crystal Display
LCFS	Low Carbon Fuel Standard or Executive Order S-01-07
LDA	Light-Duty Auto
LDT1/LDT2	Light-Duty Trucks
LEV III	Low-Emission Vehicle
LHDT1/LHDT2	Light-Heavy-Duty Trucks
LULUCF	Land-Use, Land-Use Change and Forestry
MCY	Motorcycles

MD	Medium Duty
MDT	Medium-Duty Trucks
MDV	Medium-Duty Vehicles
MHDT	Medium-Heavy-Duty Trucks
MMTCO _{2e}	Million Metric Ton of Carbon Dioxide Equivalent
mpg	Miles Per Gallon
MPOs	Metropolitan Planning Organizations
MMTCO _{2e} /yr	Million Metric Ton of Carbon Dioxide Equivalent Per Year
MT/yr	Metric Tons Per Year
MTCO _{2e}	Metric Ton of Carbon Dioxide Equivalent
MTCO _{2e} /yr	Metric Ton of Carbon Dioxide Equivalent Per Year
MW	Megawatts
MWh	Megawatts Per Hour
MWELO	California Department of Water Resources' Model Water Efficient
N ₂ O	Nitrous Oxide
NDC	Nationally Determined Contributions
NF ₃	Nitrogen Trifluoride
NHTSA	National Highway Traffic Safety Administration
NIOSH	National Institute for Occupational Safety and Health
NO _x	Nitrogen Oxides
Non-Annex I	Developing Nations
OAL	Office of Administrative Law
OPR	Office of Planning and Research
PFC	Perfluorocarbons
ppb	Parts Per Billion
ppm	Parts Per Million
ppt	Parts Per Trillion
Project	Chino Distribution Center
RTP	Regional Transportation Plan
SAFE	Safer Affordable Fuel-Efficient Vehicles Rule
SB	Senate Bill
SB 32	California Global Warming Solutions Act of 2006
SB 375	Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies
SB 1078	Renewable Portfolio Standards
SB 1368	Statewide Retail Provider Emissions Performance Standards

SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
Scoping Plan	California Air Resources Board Climate Change Scoping Plan
SCS	Sustainable Communities Strategy
sf	Square Feet
SF ₆	Sulfur Hexafluoride
SP	Service Population
TDM	Transportation Demand Measures
Title 20	Appliance Energy Efficiency Standards
Title 24	California Building Code
TRU	Transportation Refrigeration Unit
U.N.	United Nations
U.S.	United States
UNFCCC	United Nations' Framework Convention on Climate Change
VMT	Vehicle Miles Traveled
WCI	Western Climate Initiative
WRI	World Resources Institute
ZE/NZE	Zero and Near-Zero Emissions
ZEV	Zero-Emissions Vehicles

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Chino Distribution Center Greenhouse Gas Analysis* (GHGA) is summarized below based on the significance criteria in Section 4 of this report consistent with Appendix G of the *California Environmental Quality Act (CEQA) Guidelines (CEQA Guidelines)* (1). Table ES-1 shows the findings of significance for potential greenhouse gas (GHG) impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
GHG Impact #1: Would the Project generate GHG emissions either directly or indirectly, that may have a significant impact on the environment?	4.7	<i>Less Than Significant</i>	<i>n/a</i>
GHG Impact #2: Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?	4.7	<i>Less Than Significant</i>	<i>n/a</i>

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the State of California and the South Coast Air Quality Management District (SCAQMD) aimed at the reduction of air pollutant emissions. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of GHG emissions include:

- Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) (2).
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (Senate Bill [SB] 375) (3).
- Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for new vehicles (4).
- California Building Code (Title 24 California Code of Regulations [CCR]). Establishes energy efficiency requirements for new construction (5).
- Appliance Energy Efficiency Standards (Title 20 CCR). Establishes energy efficiency requirements for appliances (6).
- Low Carbon Fuel Standard (LCFS). Requires carbon content of fuel sold in California to be 10 percent (%) less by 2020 (7).
- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions (8).

- Renewable Portfolio Standards (RPS) Required electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20% by 2010 and 33% by 2020. SB 350 mandated a 50% RPS by 2030. SB 100 increased the RPS requirements to 60% by 2030 with new interim targets of 44% by 2024 and 52% by 2027 (9).
- California Global Warming Solutions Act of 2006 (SB 32). Requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15 (10).
- SCAQMD Rule 2305. The SCAQMD adopted Rule 2305, the Warehouse Indirect Source Rule, on May 7, 2021. Owners and operators associated with warehouses 100,000 square feet (sf) or larger are required to directly reduce nitrogen oxides (NO_x) and particulate matter emissions, or to otherwise facilitate emission and exposure reductions of these pollutants in nearby communities.

Promulgated regulations that would affect the Project's emissions are accounted for in the Project's GHG calculations provided in this report. In particular, AB 1493, LCFS, and RPS, and therefore are accounted for in the Project's emission calculations.

ES.3 CITY OF CHINO CLIMATE ACTION PLAN (CAP)

To evaluate consistency with the CAP Update, the City has implemented CAP Update Screening Tables (Screening Tables) to aid in measuring the reduction of GHG emissions attributable to certain design and construction measures incorporated in development projects. To this end, the Screening Tables establish categories of GHG Implementation Measures. Under each Implementation Measure category, mitigation or project design features (collectively "features") are assigned point values that correspond to the minimum GHG emissions reduction that would result from each feature. Projects that yield at least 100 points are considered to be with the reduction quantities in the City's forthcoming CAP Update and would be considered less than significant for GHG emissions. The potential for such projects to generate direct or indirect GHG emissions that would result in a significant impact on the environment; or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs would be considered less-than-significant.

PDF GHG-1

Pursuant to PDF GHG-1, the Project final plans and designs would conform to provisions of the CAP Update through implementation of the Screening Table Measures.

The Project shall implement Screening Table Measures providing for a minimum 100 points per the City's Screening Tables. The Project would be consistent with the CAP Update's requirement to achieve at least 100 points and thus the Project is considered to have a less than significant individual and cumulatively considerable impact on GHG emissions. The City shall verify incorporation of the identified Screening Table Measures within the Project building plans and site designs prior to the issuance of building permit(s) and/or site plans (as applicable).

ORDINANCE No. 2023-017

The Project is also required to comply with the *City of Chino Ordinance 15.45.070 – GHG Performance Standard for New Development* (Ordinance). The Ordinance requires that all new

development in the City shall contribute to the reduction of greenhouse gas emissions by demonstrating consistency with one of the following three options:

1. Exceed the mandatory California Energy Code Title 24, Part 6 standards, in effect at the time of application submittal by five percent; or
2. Achieve an equivalent reduction through voluntary measures in the California Green Building Standards Code, Title 24, Part 11 (CALGreen) in effect at the time of development application submittal for discretionary review; or
3. Provide other equivalent greenhouse gas (GHG) reductions through measures including, but not limited to, non-vehicle transportation infrastructure, transit, ZEV (zero emission vehicle) infrastructure or other incentives, waste diversion, water conservation, tree planting, renewable energy option packages, or any combination of these or other measures such that GHG emissions are reduced by 0.074 MT CO₂e per residential dwelling unit per year and/or per thousand square feet of commercial/industrial use per year.

The Project is anticipated to comply with Option #1. It is presumed that by achieving the 100 points pursuant to the City's CAP screening tables would meet the requisite requirements for Option #1.

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1 INTRODUCTION

This report presents the results of the GHGA prepared by Urban Crossroads, Inc., for the proposed Chino Distribution Center (Project). The purpose of this GHGA is to evaluate Project-related construction and operational emissions and determine the level of GHG impacts as a result of constructing and operating the Project.

1.1 SITE LOCATION

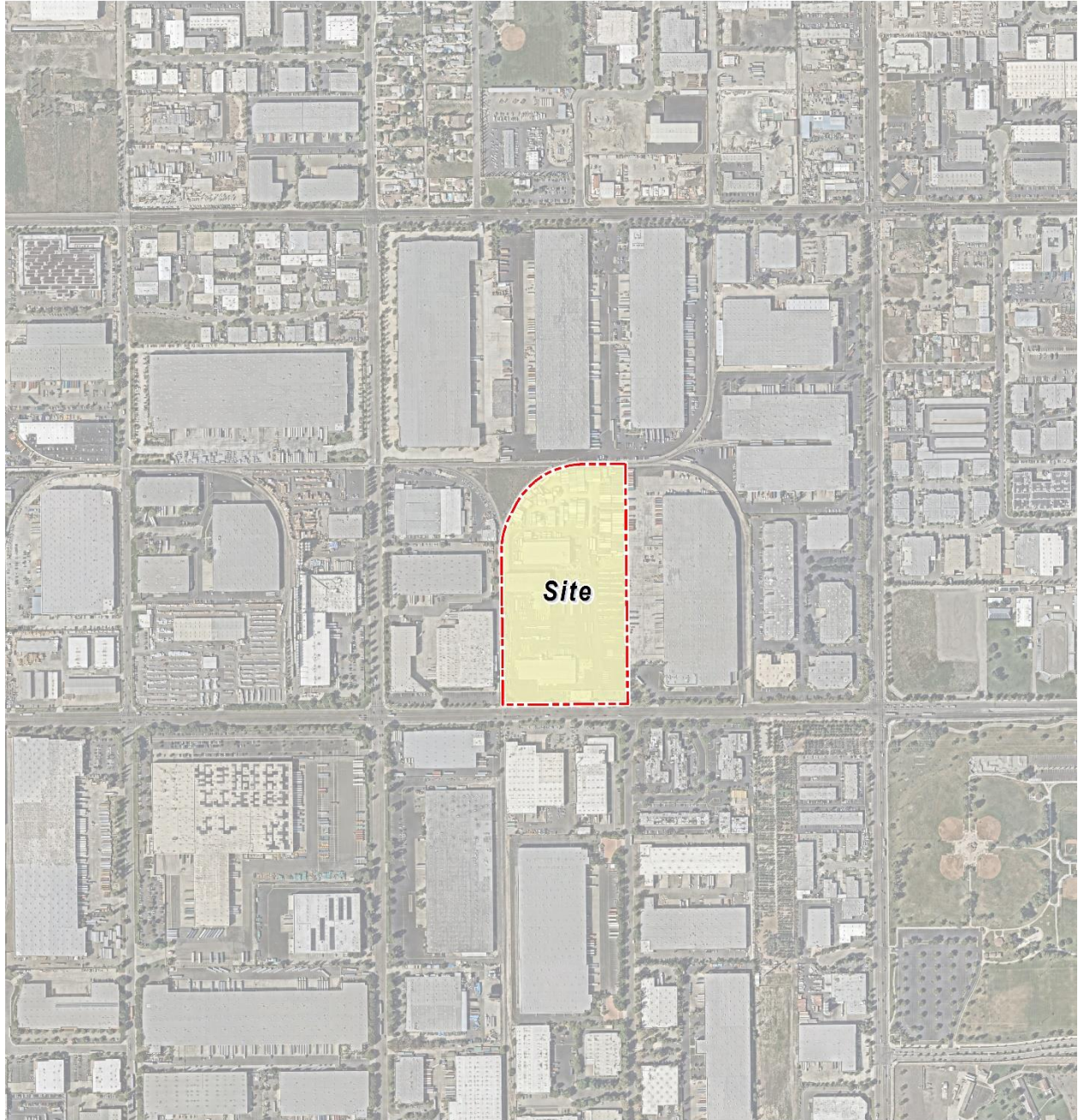
The proposed Project is located at 5088 Edison Avenue in the City of Chino, as shown on Exhibit 1-A. The Project site is surrounded by industrial and commercial uses on all sides, with residential neighborhoods primarily situated further north of the site.

1.2 PROJECT DESCRIPTION

A preliminary site plan for the proposed Project is shown on Exhibit 1-B. Development of the Project is to include the construction of a 390,778 square foot warehouse. It should be noted that the square footage of the original Project has been updated. For purposes of analysis, the Project will evaluate 98,558 square feet of high-cube cold storage warehouse use and 295,672 square feet of warehousing use (25% and 75% of the overall square footage, respectively, for a total of 394,230 square feet). The site is currently occupied by an operational manufacturing facility.

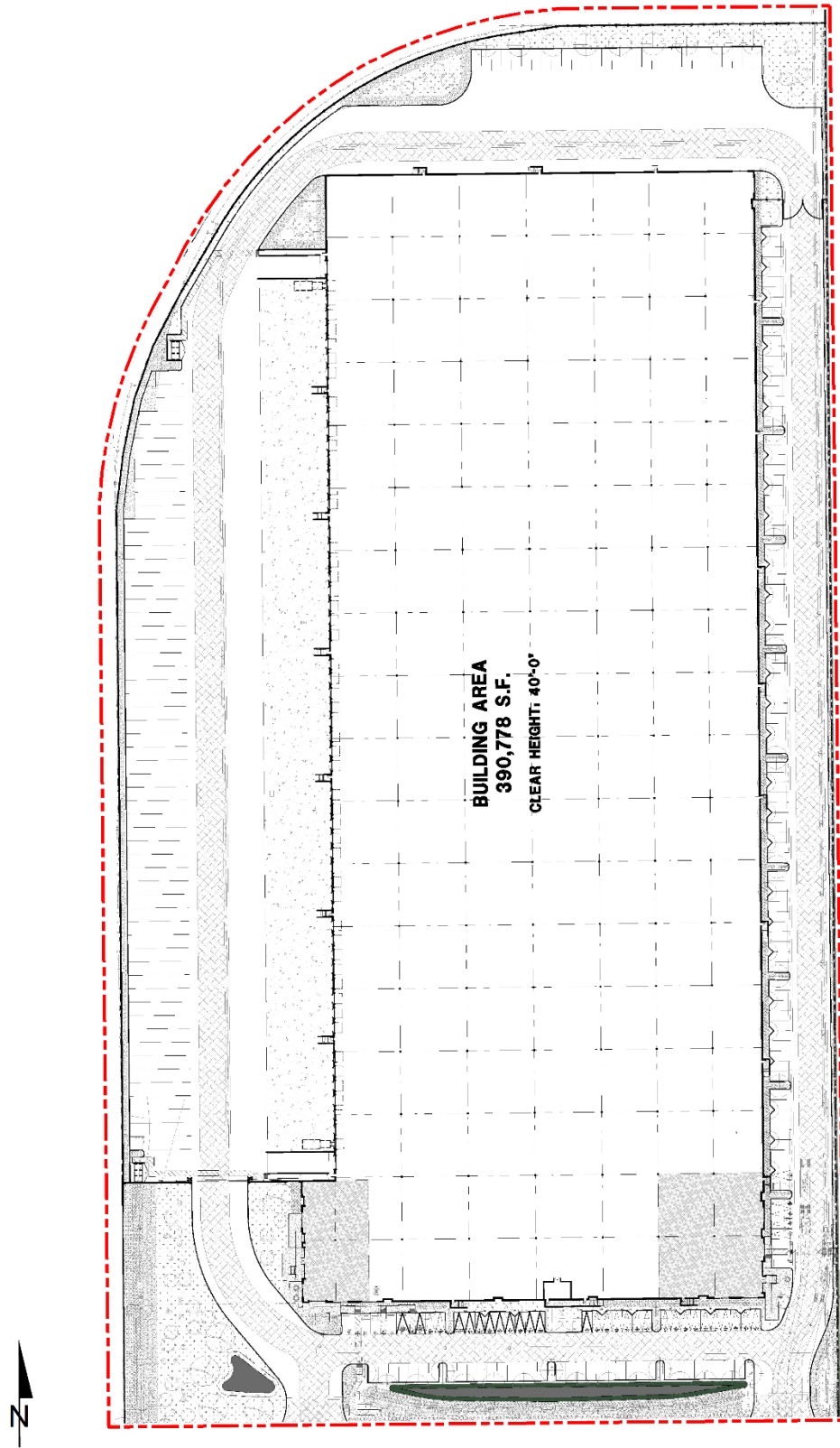
It is anticipated that the Project would be developed in a single phase with an anticipated Opening Year of 2027. In addition, this analysis describes Project-related emissions associated with typical operational activities at the Project site. The typical Project-related operational sources are expected to include architectural coatings, consumer products, landscape maintenance equipment, emissions associated with natural gas and electricity, stationary equipment, cargo handling equipment, transportation refrigeration units (TRU), and mobile source emissions. This report assumes the Project-related operational emission source activity will function 24-hours daily for seven days per week. It is expected that the Project construction emission sources would include operations of tractors, excavators, graders, dozers, scrapers, forklifts, generator sets, welders, paving equipment, and air compressors.

EXHIBIT 1-A: LOCATION MAP



LEGEND:

EXHIBIT 1-B: PRELIMINARY SITE PLAN



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2 CLIMATE CHANGE SETTING

2.1 INTRODUCTION TO GLOBAL CLIMATE CHANGE (GCC)

GCC is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed Project evaluated in this GHGA cannot generate enough GHG emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, Section 3.0 will evaluate the potential for the proposed Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

2.2 GLOBAL CLIMATE CHANGE DEFINED

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation, and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO₂, N₂O, CH₄, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radiative heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

2.3 GHGs

2.3.1 GHGs AND HEALTH EFFECTS

GHGs trap heat in the atmosphere, creating a GHG effect that results in global warming and climate change. Many gases demonstrate these properties and as discussed in Table 2-1. For the purposes of this analysis, emissions of CO₂, CH₄, and N₂O were evaluated (see Table 3-1 later in this report) because these gases are the primary contributors to GCC from development projects.

Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

TABLE 2-1: GHGS

GHGs	Description	Sources	Health Effects
Water	<p>Water is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. Climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change.</p> <p>As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to ‘hold’ more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a “positive feedback loop.” The extent to which this positive feedback loop would continue is</p>	<p>The main source of water vapor is evaporation from the oceans (approximately 85%). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.</p>	<p>There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.</p>

GHGs	Description	Sources	Health Effects
	<p>unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it would eventually condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up) (11).</p>		
<p>CO₂</p>	<p>CO₂ is an odorless and colorless GHG. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO₂ concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30%. Left unchecked, the concentration of CO₂ in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (12).</p>	<p>CO₂ is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. CO₂ is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks (13).</p>	<p>Outdoor levels of CO₂ are not high enough to result in negative health effects.</p> <p>According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of CO₂ can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO₂ in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period (14).</p>

GHGs	Description	Sources	Health Effects
CH ₄	CH ₄ is an extremely effective absorber of radiation, although its atmospheric concentration is less than CO ₂ and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.	CH ₄ has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH ₄ . Other anthropogenic sources include fossil-fuel combustion and biomass burning (15).	CH ₄ is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to elevated levels of CH ₄ can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate.
N ₂ O	N ₂ O, also known as laughing gas, is a colorless GHG. Concentrations of N ₂ O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb).	N ₂ O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream	N ₂ O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage) (16).

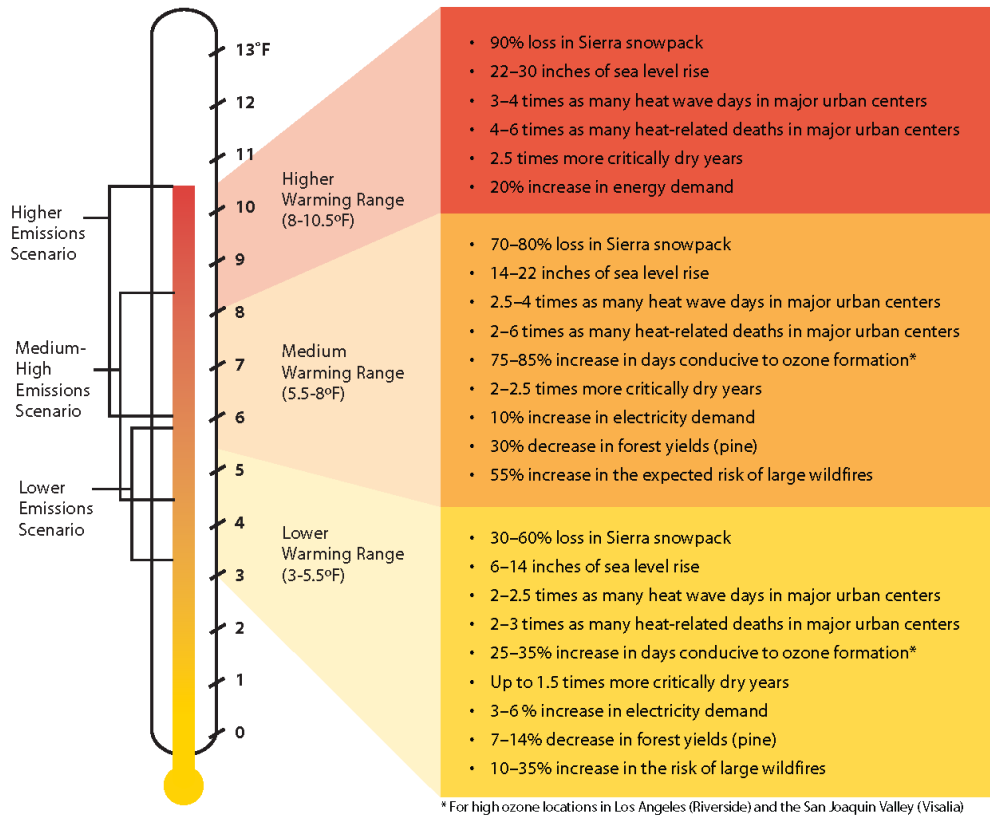
GHGs	Description	Sources	Health Effects
		bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N ₂ O can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction (16).	
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in CH ₄ or ethane (C ₂ H ₆) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	CFCs have no natural source but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs would remain in the atmosphere for over 100 years (17).	In confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

GHGs	Description	Sources	Health Effects
HFCs	HFCs are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), Fluoroform (HFC-23), 1,1,1,2-tetrafluoroethane (HFC-134a), and 1,1-difluoroethane (HFC-152a). Prior to 1990, the only significant emissions were of HFC-23. HCF-134a emissions are increasing due to its use as a refrigerant.	HFCs are manmade for applications such as automobile air conditioners and refrigerants.	No health effects are known to result from exposure to HFCs.
PFCs	PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have exceptionally long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF ₄) and hexafluoroethane (C ₂ F ₆). The EPA estimates that concentrations of CF ₄ in the atmosphere are over 70 parts per trillion (ppt).	The two main sources of PFCs are primary aluminum production and semiconductor manufacture.	No health effects are known to result from exposure to PFCs.
SF ₆	SF ₆ is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900) (18). The EPA indicates that concentrations in the 1990s were about 4 ppt.	SF ₆ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.	In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

GHGs	Description	Sources	Health Effects
Nitrogen Trifluoride (NF ₃)	NF ₃ is a colorless gas with a distinctly moldy odor. The World Resources Institute (WRI) indicates that NF ₃ has a 100-year GWP of 17,200 (19).	NF ₃ is used in industrial processes and is produced in the manufacturing of semiconductors, Liquid Crystal Display (LCD) panels, types of solar panels, and chemical lasers.	Long-term or repeated exposure may affect the liver and kidneys and may cause fluorosis (20).

The potential health effects related directly to the emissions of CO₂, CH₄, and N₂O as they relate to development projects such as the proposed Project are still being debated in the scientific community. Their cumulative effects to GCC have the potential to cause adverse effects to human health. Increases in Earth’s ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Climate change would likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (21). Exhibit 2-A presents the potential impacts of global warming (22).

EXHIBIT 2-A: SUMMARY OF PROJECTED GLOBAL WARMING IMPACT, 2070-2099 (AS COMPARED WITH 1961-1990)



Source: Barbara H. Allen-Diaz. "Climate change affects us all." *University of California, Agriculture and Natural Resources*, 2009.

2.4 GLOBAL WARMING POTENTIAL

GHGs have varying GWP values. GWP of a GHG indicates the amount of warming a gas cause over a given period of time and represents the potential of a gas to trap heat in the atmosphere. CO₂ is utilized as the reference gas for GWP, and thus has a GWP of 1. CO₂ equivalent (CO₂e) is a term used for describing the difference GHGs in a common unit. CO₂e signifies the amount of CO₂ which would have the equivalent GWP.

The atmospheric lifetime and GWP of selected GHGs are summarized at Table 2-2. As shown in the table below, GWP for the 6th Assessment Report, the Intergovernmental Panel on Climate Change (IPCC)'s scientific and socio-economic assessment on climate change, range from 1 for CO₂ to 25,200 for SF₆ (23).

TABLE 2-2: GWP AND ATMOSPHERIC LIFETIME OF SELECT GHGS

Gas	Atmospheric Lifetime (years)	GWP (100-year time horizon)
		6 th Assessment Report
CO ₂	Multiple	1
CH ₄	12 .4	28
N ₂ O	121	273
HFC-23	222	14,600
HFC-134a	13.4	1,526
HFC-152a	1.5	164
SF ₆	3,200	25,200

Source: IPCC Second Assessment Report, 1995 and IPCC Sixth Assessment Report, 2022

2.5 GHG EMISSIONS INVENTORIES

2.5.1 GLOBAL

Worldwide anthropogenic GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2021. Based on the latest available data, the sum of these emissions totaled approximately 28,272,940 gigagram (Gg) CO₂e¹ (24) (25) as summarized on Table 2-3.

¹ The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2021 data, the United Nations' Framework Convention on Climate Change (UNFCCC) data for the most recent year were used U.N. Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," The most recent GHG emissions for China and India are from 2014 and 2016, respectively.

2.5.2 UNITED STATES

As noted in Table 2-3, the United States, as a single country, was the number two producer of GHG emissions in 2021.

TABLE 2-3: TOP GHG PRODUCING COUNTRIES AND THE EUROPEAN UNION

Emitting Countries	GHG Emissions (Gg CO ₂ e)
China	12,300,200
United States	6,340,228
European Union (27-member countries)	3,468,394
India	2,839,425
Russian Federation	2,156,599
Japan	1,168,094
Total	28,272,940

2.5.3 STATE OF CALIFORNIA

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls but is still a substantial contributor to the United States (U.S.) emissions inventory total (16). The California Air Resource Board (CARB) compiles GHG inventories for the State of California. Based upon the 2023 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2021 GHG emissions period, California emitted an average 381.3 million metric tons of CO₂e per year (MMTCO₂e/yr) or 381,300 Gg CO₂e (6.01% of the total United States GHG emissions) (26).

2.6 EFFECTS OF CLIMATE CHANGE IN CALIFORNIA

2.6.1 PUBLIC HEALTH

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35% under the lower warming range to 75 to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. Based on *Our Changing Climate Assessing the Risks to California by the California Climate Change Center*, large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced (27).

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a significant increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could

increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

2.6.2 WATER RESOURCES

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the State from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90%. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

2.6.3 AGRICULTURE

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25% of the water supply needed. Although higher CO₂ levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts.

In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations

already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued GCC could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

2.6.4 FORESTS AND LANDSCAPES

GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks would not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90% due to decreased precipitation.

Moreover, continued GCC has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80% by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of GCC.

2.6.5 RISING SEA LEVELS

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches.

2.7 REGULATORY SETTING

2.7.1 INTERNATIONAL

Climate change is a global issue involving GHG emissions from all around the world; therefore, countries such as the ones discussed below have made an effort to reduce GHGs.

IPCC

In 1988, the United Nations (U.N.) and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

UNITED NATION'S FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the UNFCCC, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

INTERNATIONAL CLIMATE CHANGE TREATIES

The Kyoto Protocol is an international agreement linked to the UNFCCC. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5% against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of “common but differentiated responsibilities.”

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the UN Climate Change Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2 degrees Celsius (°C) above pre-industrial levels, subject to a review in 2015. The Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings gradually gained consensus among participants on individual climate change issues.

On September 23, 2014, more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the U.N. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the UNFCCC reached a landmark agreement on December 12, 2015, in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties (COP) 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2°C, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make “nationally determined contributions” (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and “progress made in implementing and achieving” their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they would “represent a progression” beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing \$100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address “loss and damage” resulting from climate change, which explicitly would not “involve or provide a basis for any liability or compensation;”
- Require parties engaging in international emissions trading to avoid “double counting;” and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country’s NDC (C2ES 2015a) (28).

Following President Biden’s day one executive order, the United States officially rejoined the landmark Paris Agreement on February 19, 2021, positioning the country to once again be part of the global climate solution. Meanwhile, city, state, business, and civic leaders across the country and around the world have been ramping up efforts to drive the clean energy advances needed to meet the goals of the agreement and put the brakes on dangerous climate change.

2.7.2 NATIONAL

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG ENDANGERMENT

In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the United States Supreme Court (Supreme Court) found that four GHGs, including CO₂, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act (CAA). The Supreme Court held that the EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned

decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs— CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section “Clean Vehicles” below. After a lengthy legal challenge, the Supreme Court declined to review an Appeals Court ruling that upheld the EPA Administrator’s findings (29).

CLEAN VEHICLES

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA, and the Department of Transportation’s National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty (MD) passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO₂ per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO₂ level solely through fuel economy improvements. Together, these standards would cut CO₂ emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the NHTSA issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012. The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and MD passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO₂ in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks (HDT) and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20% reduction in CO₂ emissions and fuel consumption by the 2018 model year. For HDT and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10% reduction for gasoline vehicles and a 15% reduction for diesel vehicles by the 2018 model year (12 and 17% respectively if

accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10% reduction in fuel consumption and CO₂ emissions from the 2014 to 2018 model years.

On April 2, 2018, the EPA signed the Mid-term Evaluation Final Determination, which declared that the MY 2022-2025 GHG standards are not appropriate and should be revised (30). This Final Determination serves to initiate a notice to further consider appropriate standards for MY 2022-2025 light-duty vehicles. On August 2, 2018, the NHTSA in conjunction with the EPA, released a notice of proposed rulemaking, the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule). The SAFE Vehicles Rule was proposed to amend existing Corporate Average Fuel Economy (CAFE) and tailpipe CO₂ standards for passenger cars and light trucks and to establish new standards covering model years 2021 through 2026. As of March 31, 2020, the NHTSA and EPA finalized the SAFE Vehicle Rule which increased stringency of CAFE and CO₂ emissions standards by 1.5% each year through model year 2026 (31). On December 21, 2021, after reviewing all the public comments submitted on NHTSA's April 2021 Notice of Proposed Rulemaking, NHTSA finalizes the CAFE Preemption rulemaking to withdraw its portions of the so-called SAFE I Rule. The final rule concludes that the SAFE I Rule overstepped the agency's legal authority and established overly broad prohibitions that did not account for a variety of important state and local interests. The final rule ensures that the SAFE I Rule will no longer form an improper barrier to states exploring creative solutions to address their local communities' environmental and public health challenges (32).

On March 31, 2022, NHTSA finalized CAFE standards for MY 2024-2026. The standards for passenger cars and light trucks for MYs 2024-2025 were increased at a rate of 8% per year and then increased at a rate of 10% per year for MY 2026 vehicles. NHTSA currently projects that the revised standards would require an industry fleet-wide average of roughly 49 mpg in MY 2026 and would reduce average fuel outlays over the lifetimes of affected vehicles that provide consumers hundreds of dollars in net savings. These standards are directly responsive to the agency's statutory mandate to improve energy conservation and reduce the nation's energy dependence on foreign sources (33).

MANDATORY REPORTING OF GHGs

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of GHGs Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons per year (MT/yr) or more of GHG emissions are required to submit annual reports to the EPA.

NEW SOURCE REVIEW

The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule “tailors” the requirements of these CAA permitting programs to limit which facilities would be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, the EPA states:

“This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the CAA, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to GHG sources, starting with the largest GHG emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for GHG emissions until at least April 30, 2016.”

The EPA estimates that facilities responsible for nearly 70% of the national GHG emissions from stationary sources would be subject to permitting requirements under this rule. This includes the nation’s largest GHG emitters—power plants, refineries, and cement production facilities.

STANDARDS OF PERFORMANCE FOR GHG EMISSIONS FOR NEW STATIONARY SOURCES: ELECTRIC UTILITY GENERATING UNITS

As required by a settlement agreement, the EPA proposed new performance standards for emissions of CO₂ for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts (MW) would be required to meet an output-based standard of 1,000 pounds (lbs) of CO₂ per MW-hour (MWh), based on the performance of widely used natural gas combined cycle technology. It should be noted that on February 9, 2016, the Supreme Court issued a stay of this regulation pending litigation. Additionally, the current EPA Administrator has also signed a measure to repeal the Clean Power Plan, including the CO₂ standards. The Clean Power Plan was officially repealed on June 19, 2019, when the EPA issued the final Affordable Clean Energy rule (ACE). Under ACE, new state emission guidelines were established that provided existing coal-fired electric utility generating units with achievable standards.

On January 19, 2021, the D.C. Circuit Court of Appeals ruled that the EPA’s ACE Rule for GHG emissions from power plants rested on an erroneous interpretation of the CAA that barred EPA from considering measures beyond those that apply at and to an individual source. The court therefore vacated and remanded the ACE Rule and adopted a replacement rule which regulates

CO₂ emissions from existing power plants, potentially again considering generation shifting and other measures to more aggressively target power sector emissions.

CAP-AND-TRADE

Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. Successful examples in the U.S. include the Acid Rain Program and the N₂O Budget Trading Program and Clean Air Interstate Rule in the northeast. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap-and-trade.

The Regional GHG Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps CO₂ emissions from power plants, auctions CO₂ emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008 and in 2020 has retained all participating states.

The Western Climate Initiative (WCI) partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15% below 2005 levels by 2020. The partners were originally California, British Columbia, Manitoba, Ontario, and Quebec. However, Manitoba and Ontario are not currently participating. California linked with Quebec's cap-and-trade system January 1, 2014, and joint offset auctions took place in 2015. While the WCI has yet to publish whether it has successfully reached the 2020 emissions goal initiative set in 2007, SB 32 requires that California, a major partner in the WCI, adopt the goal of reducing statewide GHG emissions to 40% below the 1990 level by 2030.

SMARTWAY PROGRAM

The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay is comprised of four components (34):

1. SmartWay Transport Partnership: A partnership in which freight carriers and shippers commit to benchmark operations, track fuel consumption, and improve performance annually.
2. SmartWay Technology Program: A testing, verification, and designation program to help freight companies identify equipment, technologies, and strategies that save fuel and lower emissions.
3. SmartWay Vehicles: A program that ranks light-duty cars and small trucks and identifies superior environmental performers with the SmartWay logo.
4. SmartWay International Interests: Guidance and resources for countries seeking to develop freight sustainability programs modeled after SmartWay.

SmartWay effectively refers to requirements geared towards reducing fuel consumption. Most large trucking fleets driving newer vehicles are compliant with SmartWay design requirements. Moreover, over time, all HDTs would have to comply with the CARB GHG Regulation that is

designed with the SmartWay Program in mind, to reduce GHG emissions by making them more fuel-efficient. For instance, in 2015, 53 foot or longer dry vans or refrigerated trailers equipped with a combination of SmartWay-verified low-rolling resistance tires and SmartWay-verified aerodynamic devices would obtain a total of 10% or more fuel savings over traditional trailers.

Through the SmartWay Technology Program, the EPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions, and fuel economy testing, demonstration projects and technical literature review. As a result, the EPA has determined the following types of technologies provide fuel saving and/or emission reducing benefits when used properly in their designed applications, and has verified certain products:

- Idle reduction technologies – less idling of the engine when it is not needed would reduce fuel consumption.
- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.
- Low rolling resistance tires can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel would eventually slow down because of this resistance.
- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc., which would reduce emissions.
- Federal excise tax exemptions.

EXECUTIVE ORDER 13990

On January 20, 2021, Federal agencies were directed to immediately review, and take action to address, Federal regulations promulgated and other actions taken during the last 4 years that conflict with national objectives to improve public health and the environment; ensure access to clean air and water; limit exposure to dangerous chemicals and pesticides; hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; reduce greenhouse gas emissions; bolster resilience to the impacts of climate change; restore and expand our national treasures and monuments; and prioritize both environmental justice and employment.

2.7.3 CALIFORNIA

2.7.3.1 LEGISLATIVE ACTIONS TO REDUCE GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 1881

The Water Conservation in Landscaping Act of 2006 requires local agencies to adopt the updated DWR model ordinance or equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

SB 1368

California SB 1368 adds Sections 8340 and 8341 to the Public Utilities Code (effective January 1, 2007) with the intent “to prevent long-term investments in power plants with GHG emissions in excess of those produced by a combined-cycle natural gas power plant” with the aim of “reducing emissions of GHGs from the state’s electricity consumption, not just the state’s electricity production.” SB 1368 provides a mechanism for reducing the GHG emissions of electricity providers, both in-state and out-of-state, thereby assisting CARB in meeting its mandate under AB 32, the Global Warming Solutions Act of 2006.

AB 32

The California State Legislature enacted AB 32, which required that GHGs emitted in California be reduced to 1990 levels by the year 2020 (this goal has been met²). GHGs as defined under AB 32 include CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆. Since AB 32 was enacted, a seventh chemical, NF₃, has also been added to the list of GHGs. CARB is the state agency charged with monitoring and regulating sources of GHGs. Pursuant to AB 32, CARB adopted regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 states the following:

“Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.”

SB 375

On September 30, 2008, SB 375 was signed by Governor Schwarzenegger. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40% of the total GHG emissions in California. SB 375 states, “Without improved land use and transportation policy, California would not be able to achieve the goals of AB 32.” SB 375 does the following: it (1) requires metropolitan planning organizations (MPOs) to include sustainable community strategies in their

² Based upon the 2023 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2021 GHG emissions period, California emitted an average 381.3 MMTCO₂e (28). This is less than the 2020 emissions target of 431 MMTCO₂e.

regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

SB 375 requires MPOs to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP) that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region. SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions. Although SB 375 does not prevent CARB from adopting additional regulations, such actions are not anticipated in the foreseeable future.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that CARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the MMs required by an applicable prior environmental document.

AB 1493 - Pavley Fuel Efficiency Standards

Enacted on July 22, 2002, California AB 1493, also known as the Pavley Fuel Efficiency Standards, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the U.S. District Court for the District of Columbia in 2011.

The standards phase in during the 2009 through 2016 MY. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program (LEV III) or the Advanced Clean Cars (ACC) program. The ACC program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for MY 2017 through 2025. The regulation would reduce GHGs from new cars by 34% from 2016 levels by 2025. The new rules would clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles (EV) and hydrogen fuel cell cars. The package would also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015 (SB 350)

In October 2015, the legislature approved, and Governor Jerry Brown signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for EV charging stations. Provisions for a 50% reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target would be achieved through the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which would facilitate the growth of renewable energy markets in the western United States.

SB 32

On September 8, 2016, Governor Brown signed SB 32 and its companion bill, AB 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature (10).

2017 CARB SCOPING PLAN

In November 2017, CARB released the *Final 2017 Scoping Plan Update (2017 Scoping Plan)*, which identifies the State's post-2020 reduction strategy. The *2017 Scoping Plan* reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the LCFS, and much cleaner cars, trucks, and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH₄ emissions from agricultural and other wastes.

The *2017 Scoping Plan* establishes a new emissions limit of 260 MMTCO_{2e} for the year 2030, which corresponds to a 40% decrease in 1990 levels by 2030 (35).

California's climate strategy would require contributions from all sectors of the economy, including the land base, and would include enhanced focus on zero and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (CH₄, black carbon, and fluorinated gases); and an increased focus on integrated land

use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries would further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California’s local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the *2017 Scoping Plan* framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero-emission vehicles (ZEV) buses and trucks.
- LCFS, with an increased stringency (18% by 2030).
- Implementing SB 350, which expands the RPS to 50% RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing CH₄ and HCF emissions by 40% and anthropogenic black carbon emissions by 50% by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20% reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California’s land base as a net carbon sink.

Note, however, that the *2017 Scoping Plan* acknowledges that:

“[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA.”

In addition to the statewide strategies listed above, the *2017 Scoping Plan* also identifies local governments as essential partners in achieving the State’s long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 metric tons of CO₂e (MTCO₂e) or less per capita by 2030 and 2 MTCO₂e or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidence-based bright-line numeric thresholds—consistent with the *2017 Scoping Plan* and the State’s long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and MMs that avoid or minimize project emissions to the degree feasible; or a performance-based metric using a CAP or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by CARB, California, under its existing and proposed GHG reduction policies, could

achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that by 2030, emissions could range from 211 to 428 MTCO₂e per year (MTCO₂e/yr), indicating that “even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40% below the 1990 level [of SB 32].” CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would not meet the State’s 80% reduction goal by 2050, various combinations of policies could allow California’s cumulative emissions to remain very low through 2050 (36) (37).

2022 CARB SCOPING PLAN

On December 15, 2022, CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) (38). The 2022 Scoping Plan builds on the 2017 Scoping Plan as well as the requirements set forth by AB 1279, which directs the state to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to “deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor.” The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, CARB no longer includes a numeric per capita threshold and instead advocates for compliance with a local GHG reduction strategy (CAP) consistent with CEQA Guidelines section 15183.5.

The key elements of the 2022 CARB Scoping Plan focus on transportation - the regulations that will impact this sector are adopted and enforced by CARB on vehicle manufacturers and outside the jurisdiction and control of local governments. As stated in the Plan’s executive summary:

“The major element of this unprecedented transformation is the aggressive reduction of fossil fuels wherever they are currently used in California, building on and accelerating carbon reduction programs that have been in place for a decade and a half. That means rapidly moving to zero-emission transportation; electrifying the cars, buses, trains, and trucks that now constitute California’s single largest source of planet-warming pollution.”

“[A]pproval of this plan catalyzes a number of efforts, including the development of new regulations as well as amendments to strengthen regulations and programs already in place, not just at CARB but across state agencies.”

Under the 2022 Scoping Plan, the State will lead efforts to meet the 2045 carbon neutrality goal through implementation of the following objectives:

- Reimagine roadway projects that increase VMT in a way that meets community needs and reduces the need to drive.
- Double local transit capacity and service frequencies by 2030.
- Complete the High-Speed Rail (HSR) System and other elements of the intercity rail network by 2040.

- Expand and complete planned networks of high-quality active transportation infrastructure.
- Increase availability and affordability of bikes, e-bikes, scooters, and other alternatives to light-duty vehicles, prioritizing needs of underserved communities.
- Shift revenue generation for transportation projects away from the gas tax into more durable sources by 2030.
- Authorize and implement roadway pricing strategies and reallocate revenues to equitably improve transit, bicycling, and other sustainable transportation choices.
- Prioritize addressing key transit bottlenecks and other infrastructure investments to improve transit operational efficiency over investments that increase VMT.
- Develop and implement a statewide transportation demand management (TDM) framework with VMT mitigation requirements for large employers and large developments.
- Prevent uncontrolled growth of autonomous vehicle (AV) VMT, particularly zero-passenger miles.
- Channel new mobility services towards pooled use models, transit complementarity, and lower VMT outcomes.
- Establish an integrated statewide system for trip planning, booking, payment, and user accounts that enables efficient and equitable multimodal systems.
- Provide financial support for low-income and disadvantaged Californians' use of transit and new mobility services.
- Expand universal design features for new mobility services.
- Accelerate infill development in existing transportation-efficient places and deploy strategic resources to create more transportation-efficient locations.
- Encourage alignment in land use, housing, transportation, and conservation planning in adopted regional plans (RTP/SCS and RHNA) and local plans (e.g., general plans, zoning, and local transportation plans).
- Accelerate production of affordable housing in forms and locations that reduce VMT and affirmatively further fair housing policy objectives.
- Reduce or eliminate parking requirements (and/or enact parking maximums, as appropriate) and promote redevelopment of excess parking, especially in infill locations.
- Preserve and protect existing affordable housing stock and protect existing residents and businesses from displacement and climate risk.

Included in the 2022 Scoping Plan is a set of Local Actions (Appendix D to the 2022 Scoping Plan) aimed at providing local jurisdictions with tools to reduce GHGs and assist the state in meeting the ambitious targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section on evaluating plan-level and project-level alignment with the State's Climate Goals in CEQA GHG analyses. In this section, CARB identifies several recommendations and strategies that should be considered for new development in order to determine consistency with the 2022 Scoping Plan. Notably, this section is focused on Residential and Mixed-Use Projects, in fact CARB states in Appendix D (page 4): "...focuses primarily on climate action plans (CAPs) and local authority over new residential development. It does not address other land use types (e.g., industrial) or air permitting."

Additionally on Page 21 in Appendix D, CARB states: “The recommendations outlined in this section apply only to residential and mixed-use development project types. California currently faces both a housing crisis and a climate crisis, which necessitates prioritizing recommendations for residential projects to address the housing crisis in a manner that simultaneously supports the State’s GHG and regional air quality goals. CARB plans to continue to explore new approaches for other land use types in the future.” As such, it would be inappropriate to apply the requirements contained in Appendix D of the 2022 Scoping Plan to any land use types other than residential or mixed-use residential development.

CAP-AND-TRADE PROGRAM

The *2017 Scoping Plan* identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program would help put California on the path to meet its goal of achieving a 40% reduction in GHG emissions from 1990 levels by 2030. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap would be able to trade permits to emit GHGs within the overall limit.

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from regulated entities by more than 16% between 2013 and 2020, and by an additional 40% by 2030. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and would decline over time, achieving GHG emission reductions throughout the program’s duration.

Covered entities that emit more than 25,000 MTCO₂e/yr must comply with the Cap-and-Trade Program. Triggering of the 25,000 MTCO₂e/yr “inclusion threshold” is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or “MRR”).

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender “compliance instruments” for each MTCO₂e of GHG they emit. There also are requirements to surrender compliance instruments covering 30% of the prior year’s compliance obligation by November of each year (39).

The Cap-and-Trade Program provides a firm cap, which provides the highest certainty of achieving the 2030 target. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in the *First Update to the Climate Change Scoping Plan*:

“The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance

instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative.” (40)

The Cap-and-Trade Program covers approximately 80% of California’s GHG emissions (35). The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects’ electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program’s first compliance period. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.

2.7.3.2 EXECUTIVE ORDERS RELATED TO GHG EMISSIONS

California’s Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

EXECUTIVE ORDER S-3-05

California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that would stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

EXECUTIVE ORDER S-01-07 (LCFS)

Governor Schwarzenegger signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California’s transportation fuels by at least 10% by 2020. CARB adopted the LCFS on April 23, 2009.

The LCFS was challenged in the U.S. District Court in Fresno in 2011. The court’s ruling issued on December 29, 2011, included a preliminary injunction against CARB’s implementation of the rule. The Ninth Circuit Court of Appeals stayed the injunction on April 23, 2012, pending final ruling on appeal, allowing CARB to continue to implement and enforce the regulation. The Ninth Circuit

Court's decision, filed September 18, 2013, vacated the preliminary injunction. In essence, the court held that LCFS adopted by CARB were not in conflict with federal law. On August 8, 2013, the Fifth District Court of Appeal (California) ruled CARB failed to comply with CEQA and the Administrative Procedure Act (APA) when adopting regulations for LCFS. In a partially published opinion, the Court of Appeal reversed the trial court's judgment and directed issuance of a writ of mandate setting aside Resolution 09-31 and two executive orders of CARB approving LCFS regulations promulgated to reduce GHG emissions. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while CARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, CARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon intensity fuels, offer additional flexibility to regulated parties, update critical technical information, simplify, and streamline program operations, and enhance enforcement. On November 16, 2015, the Office of Administrative Law (OAL) approved the Final Rulemaking Package. The new LCFS regulation became effective on January 1, 2016.

In 2018, CARB approved amendments to the regulation, which included strengthening the carbon intensity benchmarks through 2030 in compliance with the SB 32 GHG emissions reduction target for 2030. The amendments included crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector (41).

EXECUTIVE ORDER S-13-08

Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the Order, the *2009 California Climate Adaptation Strategy (CNRA 2009)* was adopted, which is the "...first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying, and exploring strategies to adapt to climate change, and specifying a direction for future research.

EXECUTIVE ORDER B-30-15

On April 29, 2015, Governor Brown issued an executive order to establish a California GHG reduction target of 40% below 1990 levels by 2030. The Governor's executive order aligned California's GHG reduction targets with those of leading international governments ahead of the U.N. Climate Change Conference in Paris late 2015. The Order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40% below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80% below 1990 levels by 2050 and directs CARB to update the *2017 Scoping Plan* to express the 2030 target in terms of MMTCO₂e. The Order also requires the state's climate adaptation plan to be updated every three years, and for the State to continue its climate change research program, among other provisions.

As with Executive Order S-3-05, this Order is not legally enforceable as to local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

EXECUTIVE ORDER B-55-18 AND SB 100

SB 100 and Executive Order B-55-18 were signed by Governor Brown on September 10, 2018. Under the existing RPS, 25% of retail sales of electricity are required to be from renewable sources by December 31, 2016, 33% by December 31, 2020, 40% by December 31, 2024, 45% by December 31, 2027, and 50% by December 31, 2030. SB 100 raises California's RPS requirement to 50% renewable resources target by December 31, 2026, and to achieve a 60% target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours (kWh) of those products sold to their retail end-use customers achieve 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California EPA (CalEPA), the California Department of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

2.7.3.3 CALIFORNIA REGULATIONS AND BUILDING CODES

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

TITLE 20 CCR SECTIONS 1601 ET SEQ. – APPLIANCE EFFICIENCY REGULATIONS

The Appliance Efficiency Regulations regulate the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles (RV) or other mobile equipment (CEC 2012).

TITLE 24 CCR PART 6 – CALIFORNIA ENERGY CODE

The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods.

TITLE 24 CCR PART 11 – CALIFORNIA GREEN BUILDING STANDARDS CODE

CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that became effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide \$1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (42). The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made. These require, among other items (43):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106.5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).

- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
 - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
 - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
 - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
 - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

CARB REFRIGERANT MANAGEMENT PROGRAM

CARB adopted a regulation in 2009 to reduce refrigerant GHG emissions from stationary sources through refrigerant leak detection and monitoring, leak repair, system retirement and retrofitting, reporting and recordkeeping, and proper refrigerant cylinder use, sale, and disposal. The regulation is set forth in sections 95380 to 95398 of Title 17, CCR. The rules implementing the regulation establish a limit on statewide GHG emissions from stationary facilities with refrigeration systems with more than 50 pounds of a high GWP refrigerant. The refrigerant management program is designed to (1) reduce emissions of high-GWP GHG refrigerants from leaky stationary, non-residential refrigeration equipment; (2) reduce emissions from the

installation and servicing of refrigeration and air-conditioning appliances using high-GWP refrigerants; and (3) verify GHG emission reductions.

TRACTOR-TRAILER GHG REGULATION

The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the HD tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors MY 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices.

PHASE I AND 2 HEAVY-DUTY VEHICLE GHG STANDARDS

In September 2011, CARB has adopted a regulation for GHG emissions from HDTs and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the EPA rule for new trucks and engines nationally. Existing HD vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer GHG Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation. The EPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements began with MY 2014 with stringency levels increasing through MY 2018. The rule organizes truck compliance into three groupings, which include a) HD pickups and vans; b) vocational vehicles; and c) combination tractors. The EPA rule does not regulate trailers.

CARB staff has worked jointly with the EPA and the NHTSA on the next phase of federal GHG emission standards for medium-duty trucks (MDT) and HDT vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later MY HDT vehicles, including trailers. The EPA and NHTSA have proposed to roll back GHG and fuel economy standards for cars and light-duty trucks, which suggests a similar rollback of Phase 2 standards for MDT and HDT vehicles may be pursued.

SB 97 AND THE CEQA GUIDELINES UPDATE

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states “(a) On or before July 1, 2009, the Office of Planning and Research (OPR) shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the OPR pursuant to subdivision (a).”

In 2012, Public Resources Code Section 21083.05 was amended to state:

“The Office of Planning and Research and the Natural Resources Agency shall periodically update the guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption, to incorporate new information or criteria established by the State Air Resources Board pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code.”

On December 28, 2018, the Natural Resources Agency announced the OAL approved the amendments to the *CEQA Guidelines* for implementing CEQA. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing *CEQA Guidelines* to reference climate change.

Section 15064.4 was added to the *CEQA Guidelines* and states that in determining the significance of a project’s GHG emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project’s emissions to the effects of climate change. A project’s incremental contribution may be cumulatively considerable even if it appears relatively insignificant compared to statewide, national, or global emissions. The agency’s analysis should consider a timeframe that is appropriate for the project. The agency’s analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. Additionally, a lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project’s incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use (44).

2.7.4 REGIONAL

The project is within the SCAB, which is under the jurisdiction of the SCAQMD.

SCAQMD

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the SCAB. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim

CEQA GHG Significance Threshold, which could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
 - Residential and commercial land use: 3,000 MTCO₂e/yr
 - Industrial land use: 10,000 MTCO₂e/yr
 - Based on land use type: residential: 3,500 MTCO₂e/yr; commercial: 1,400 MTCO₂e/yr; or mixed use: 3,000 MTCO₂e/yr
- Tier 4 has the following options:
 - Option 1: Reduce Business-as-Usual (BAU) emissions by a certain percentage; this percentage is currently undefined.
 - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
 - Option 3: 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO₂e per SP per year for projects and 6.6 MTCO₂e per SP per year for plans;
 - Option 3, 2035 target: 3.0 MTCO₂e per SP per year for projects and 4.1 MTCO₂e per SP per year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's interim thresholds used the Executive Order S-3-05-year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO₂ concentrations at 450 ppm, thus stabilizing global climate.

SCAQMD only has authority over GHG emissions from development projects that include air quality permits. At this time, it is unknown if the project would include stationary sources of emissions subject to SCAQMD permits. Notwithstanding, if the Project requires a stationary permit, it would be subject to the applicable SCAQMD regulations.

SCAQMD Regulation XXVII, adopted in 2009 includes the following rules:

- Rule 2700 defines terms and post global warming potentials.

- Rule 2701, SoCal Climate Solutions Exchange, establishes a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- Rule 2702, GHG Reduction Program created a program to produce GHG emission reductions within the SCAQMD. The SCAQMD would fund projects through contracts in response to requests for proposals or purchase reductions from other parties.
- Rule 2305, Warehouse Indirect Source Rule, which includes the Warehouse Actions and Investments to Reduce Emissions Program (WAIRE), and Rule 316. Rule 2305 establishes for the first time a regulatory program designed to reduce air pollution (and indirect GHG emissions) caused by warehouse-related activities and is focused on emissions from vehicles that service large warehouses. Rule 316 establishes a fee system to support the Rule 2305 program on an ongoing basis. Rules 2305 and 316 apply to operators and owners of existing and new warehouses with floor space greater than or equal to 100,000-sf within a single building (i.e., large warehouses). Rules 2305 and 316 require such operators and owners to annually take actions with respect to their warehouses that either reduce emissions regionally and locally or facilitate emission reductions. Specifically, owners and operators must “earn” a specific number of WAIRE Points. However, warehouse owners are only required to earn WAIRE Points if they are also a warehouse operator. If a warehouse owner is not an operator, they are not required to earn WAIRE Points even if the operator in their warehouse does not earn the required number of WAIRE Points. Warehouse owners are only required to submit a Warehouse Operations Notification to the SCAQMD.

The number of WAIRE Points required for a specific operator is based on the intensity of operations (i.e., number of truck trips and type of trucks) at each of their warehouses every year. The required points are known as the WAIRE Points Compliance Obligation (WPCO). The WPCO is calculated based on a 12-month survey of truck trips entering or exiting the site, the truck data is weighted based on the types of trucks, and activity is projected for the next year. Thus, the WAIRE Points pay for the prior year’s emissions based on points earned in subsequent years.

WAIRE Points are earned by implementing a menu of items including purchasing/renting/leasing near-zero (NZE) and zero emission (ZE) yard equipment and/or trucks, installing on-site ZE fueling stations, and proving on-site solar PV systems that are intended to offset or reduce warehouse emissions. Owners and operators may also implement custom WAIRE plans for individual facilities, subject to SCAQMD approval; or pay mitigation fees to have the SCAQMD implement measures within the SCAB. Owners and operators that over-comply may transfer excess WAIRE Points earned in one year to a subsequent year or may transfer WAIRE points to another site within their control. WAIRE Points cannot be transferred to other operators and expire after 3 years. Rule 2305 also requires reporting information about facility operations and recordkeeping. Rule 316 is the companion rule to Rule 2305 and establishes the administrative fees that Rule 2305 warehouse owners and operators must pay to support SCAQMD compliance activities.

While the Project proponent may be defined as a warehouse owner and would submit a Warehouse Operation Notice(s), as required, the Project proponent does not intend to be the warehouse operator and has no knowledge of the future operations. Thus, the specific information required by Rule 2305 for calculating the WPCO is unavailable, and the necessary number of points is unknown. Finally, the WAIRE points expire after 3 years and

are based on actions of future operators and are thus temporary and could not be calculated. Therefore, even though the WAIRE program will reduce emissions for warehouse activities in the region, no emission reductions from the WAIRE Program can be calculated for this analysis.

2.7.5 LOCAL

CITY OF CHINO CAP

The City of Chino adopted the 2020-2030 CAP Update on November 17, 2020, which went into effect on January 1, 2021. The 2020-2030 CAP Update considers the previous GHG reduction targets identified in the 2013 CAP and proposes new targets that are consistent with updates in State climate change regulations in order to meet the requirements of SB 32.

The 2020-2030 CAP Update establishes a framework under which future projects would be designed for the purposes of reducing GHG emissions. Although the 2020-2030 CAP Update is designed as a stand-alone GHG policy document, it would be utilized to provide a more comprehensive and detailed framework for land-based policy decisions to reduce GHG emissions from existing and future development. Any future projects proposed pursuant to the 2020-2030 CAP Update would be developed in accordance with General Plan Policies for energy conservation while maximizing efficient use of resources, maintaining a high quality of life, enhancing job opportunities, promoting sustainability, and facilitating access to transportation facilities.

The 2020-2030 CAP Update includes an update to the City's GHG inventory for the year 2016 and sets a target to reduce communitywide GHG emissions by 46% by 2030, which would put the City on a path toward the State's long-term goal to achieve statewide carbon neutrality (zero net emissions) by 2045. GHG reduction measures prescribed in the 2020-2030 CAP Update build upon those adopted under the City's 2013 CAP to ensure that the City meets the reduction targets established pursuant to SB 32.

The CAP Update provides a flexible way of demonstrating GHG reductions consistent with the CAP through the use of screening tables. The screening tables included in the CAP Update provide a menu of options for energy efficiency, renewable energy, water conservation measures, and additional measures that provide predictable GHG reductions. Each option within the screening tables includes point values based upon the GHG reduction that each measure can achieve relative to a development project. Projects that achieve at least 100 points from the screening tables are determined to have provided a fair-share contribution of GHG reductions and, therefore, are considered consistent with the Chino CAP Update.

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3 EXISTING PROJECT SITE GREENHOUSE GAS EMISSIONS

The Project site is currently occupied by a manufacturing facility that is currently operational. The estimated GHG operation-source emissions from the existing development are summarized on Table 3-1. Detailed operation model outputs are presented in Appendix 3.1.

TABLE 3-1: GHG EMISSIONS FROM EXISTING DEVELOPMENT

Emission Source	Emissions (MT/yr)				
	CO ₂	CH ₄	N ₂ O	Refrigerants	Total CO ₂ e
Mobile Source	518	0.02	0.05	0.78	533
Area Source	1.48	< 0.005	< 0.005	0.00	1.49
Energy Source	127	0.01	< 0.005	0.00	127
Water Usage	23.4	0.55	0.01	0.00	41.1
Waste	6.12	0.61	0.00	0.00	21.4
Total CO₂e (All Sources)	724.00				

Source: CalEEMod output, See Appendix 3.1 for detailed model outputs.

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4 PROJECT GHG IMPACT

4.1 INTRODUCTION

The Project has been evaluated to determine if it will result in a significant GHG impact. The significance of these potential impacts is described in the following sections.

4.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related GHG impacts are taken from the Initial Study Checklist in Appendix G of the State *CEQA Guidelines* (14 CCR of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to GHG if it would (1):

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

4.2.1 THRESHOLDS OF SIGNIFICANCE

The Chino CAP Update provides a menu of options for energy efficiency, renewable energy, water conservation measures, and additional measures that provide predictable GHG reductions. Each option within the screening tables includes point values based upon the GHG reduction that each measure can achieve relative to a development project. Projects that achieve at least 100 points from the screening tables are determined to have provided a fair-share contribution of GHG reductions and, therefore, are considered consistent with the Chino CAP Update. Because the Chino CAP Update addresses GHG emissions reductions and is consistent with the requirements of AB 32, SB 32, and international efforts to reduce GHG emissions, Projects that comply with the CAP Update would have a less than significant GHG impact.

4.3 MODELS EMPLOYED TO ANALYZE GHGS

4.3.1 CALIFORNIA EMISSIONS ESTIMATOR MODEL (CALEEMOD)

In May 2022, the California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including the SCAQMD, released the latest version of CalEEMod, version 2022.1.1.20. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (45). Accordingly, the latest version of CalEEMod has been used for this Project to determine GHG emissions. Output from the model runs for construction and operational activity are provided in Appendices 4.1 through 4.2. CalEEMod includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water, refrigerants, stationary, TRUs, and on-site cargo equipment.

4.4 LIFE-CYCLE ANALYSIS NOT REQUIRED

A full life-cycle analysis (LCA) for construction and operational activity is not included in this analysis due to the lack of consensus guidance on LCA methodology at this time (46). Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the Project development, infrastructure, and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. At this time, a LCA would be extremely speculative and thus has not been prepared.

Additionally, the SCAQMD recommends analyzing direct and indirect project GHG emissions generated within California and not life-cycle emissions because the life-cycle effects from a project could occur outside of California, might not be very well understood, or documented, and would be challenging to mitigate (47). Additionally, the science to calculate life cycle emissions is not yet established or well defined; therefore, SCAQMD has not recommended, and is not requiring, life-cycle emissions analysis.

4.5 CONSTRUCTION EMISSIONS

Project construction activities would generate CO₂ and CH₄ emissions. The *Chino Distribution Center Air Quality Impact Analysis* (AQIA) report contains detailed information regarding Project construction activities (48). As discussed in the AQIA, Construction related emissions are expected from the following construction activities:

- Demolition/Crushing
- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating
- Off-Site Improvements Construction

4.5.1 CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in January 2026 and would last through March 2027. The construction schedule utilized in the analysis, shown in Table 4-1, represents a “worst-case” analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent³. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (1).

³ As shown in the CalEEMod User’s Guide Version 2022.1, Section 4.3 “Off-Road Equipment” as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 4-1: CONSTRUCTION DURATION

Construction Activity		Start Date	End Date	Working
Project Construction	Demolition/Crushing	01/02/26	01/29/26	20
	Site Preparation	01/30/26	02/12/26	10
	Grading	02/13/26	03/26/26	30
	Building Construction	03/27/26	12/31/26	200
	Paving	01/01/27	01/14/27	10
	Architectural Coating	01/15/27	03/11/27	40
Off-Site Construction	Linear, Grubbing & Land Clearing	03/27/26	08/13/26	100
	Linear, Grading & Excavation	08/14/26	11/16/26	67
	Linear, Paving	11/17/26	12/31/26	33

4.5.2 CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 4-2 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code.

TABLE 4-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS (1 OF 2)

Construction Activity		Equipment	Amount	Hours Per Day
Project Construction	Demolition/Crushing	Concrete/Industrial Saws	1	8
		Excavators	3	8
		Rubber Tired Dozers	2	8
		Crushing/Proc. Equipment	1	8
	Site Preparation	Rubber Tired Dozers	3	8
		Crawler Tractors	4	8
	Grading	Excavators	2	8
		Graders	1	8
		Rubber Tired Dozers	1	8
		Scrapers	2	8
		Crawler Tractors	2	8
	Building Construction	Cranes	2	8
		Forklifts	5	8
		Generator Sets	2	8
		Tractors/Loaders/Backhoes	5	8
Welders		2	8	

TABLE 4-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS (2 OF 2)

Construction Activity		Equipment	Amount	Hours Per Day
Project Construction	Paving	Pavers	4	8
		Paving Equipment	4	8
		Rollers	4	8
	Architectural Coating	Air Compressors	1	8
Off-Site Construction	Linear, Grubbing & Land Clearing	Crawler Tractors	1	8
		Excavators	3	8
		Graders	1	8
		Rollers	2	8
		Rubber Tired Loaders	1	8
		Scrapers	2	8
		Signal Boards	1	8
		Tractors/Loaders/Backhoes	2	8
	Linear, Grading & Excavation	Air Compressors	1	8
		Generator Sets	1	8
		Graders	1	8
		Plate Compactors	1	8
		Pumps	1	8
		Rough Terrain Forklifts	1	8
		Scrapers	2	8
		Signal Boards	1	8
	Linear, Paving	Tractors/Loaders/Backhoes	2	8
		Pavers	1	8
		Paving Equipment	1	8
		Rollers	3	8
		Signal Boards	1	8
		Tractors/Loaders/Backhoes	2	8

4.5.3 CONSTRUCTION EMISSIONS SUMMARY

For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total GHG emissions for the construction activities, dividing it by a 30-year Project life then adding that number to the annual operational phase GHG emissions (49). As such, construction emissions were amortized over a 30-year period and added to the annual

operational phase GHG emissions. The amortized construction emissions are presented in Table 4-3.

TABLE 4-3: AMORTIZED ANNUAL CONSTRUCTION EMISSIONS

Year	Emissions (MT/yr)				
	CO ₂	CH ₄	N ₂ O	Refrigerants	Total CO ₂ e ⁴
2026	1,872.00	0.11	0.12	0.84	1,909.00
2027	27.40	< 0.005	< 0.005	0.01	27.80
Total GHG Emissions	1,899.40	0.11	0.12	0.85	1,936.80
Amortized Construction Emissions	63.31	3.67E-03	4.00E-03	0.03	64.56

Source: CalEEMod annual construction-source emissions are presented in Appendix 4.1.

^A CalEEMod reports the most common GHGs emitted which include CO₂, CH₄, N₂O and R. These GHGs are then converted into CO₂e by multiplying the individual GHG by the GWP.

4.6 OPERATIONAL EMISSIONS

Operational activities associated with the Project would result in emissions of CO₂, CH₄, N₂O and R from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- Stationary Source Emissions
- TRU Source Emissions
- On-Site Cargo Handling Equipment Emissions
- Water Supply, Treatment, and Distribution
- Solid Waste

4.6.1 AREA SOURCE EMISSIONS

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that on October 9, 2021, Governor Gavin Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by 2024, which is now effective. For purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

⁴ CalEEMod reports the most common GHGs emitted which include CO₂, CH₄, N₂O and R. These GHGs are then converted into the CO₂e by multiplying the individual GHG by the GWP.

4.6.2 ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO₂ and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building; the building energy use emissions do not include street lighting⁵. Based on information provided by the Project applicant, no natural gas would be used as a result of the Project, and as such use of natural gas is not considered in the analysis. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. Electricity usage associated with the Project was calculated by CalEEMod using default parameters.

4.6.3 MOBILE SOURCE EMISSIONS

The Project related GHG emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the *Chino Distribution Center Traffic Analysis* were utilized in this analysis (50).

APPROACH FOR ANALYSIS OF THE PROJECT

In order to determine emissions from passenger car vehicles, CalEEMod defaults for trip length and trip purpose were utilized. Default vehicle trip lengths for primary trips will be populated using data from the local metropolitan planning organizations/Regional Transportation Planning Agencies (MPO/RTPA). Trip type percentages and trip lengths provided by MPO/RTPAs truncate data at their demonstrative borders. This analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1⁶ & LDT2⁷), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. In order to account for emissions generated by passenger cars, the fleet mix in Table 4-4 was utilized.

TABLE 4-4: PASSENGER CAR FLEET MIX

Land Use	% Vehicle Type				
	LDA	LDT1	LDT2	MDV	MCY
Warehousing	53.99%	4.16%	23.01%	16.58%	2.26%
High-Cube Cold Storage Warehouse					

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicle types.

⁵ The CalEEMod emissions inventory model does not include indirect emission related to street lighting. Indirect emissions related to street lighting are expected to be negligible and cannot be accurately quantified at this time as there is insufficient information as to the number and type of street lighting that would occur.

⁶ Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

⁷ Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated the SCAQMD recommended truck trip length of 15.3 miles for 2-axle (LHDT1, LHDT2), 14.2 miles for 3-axle (MHDT) trucks, and 39.9 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages. The trip length function for the industrial uses has been revised to 29.43 miles with an assumption of 100% primary trips. Trucks are broken down by truck type. The truck fleet mix is estimated by rationing the trip rates for each truck type based on information provided by the SCAQMD recommended truck mix, by axle type. Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1⁸ & LHDT2⁹)/2-axle, Medium-Heavy-Duty Trucks (MHDT)/3-axle, and Heavy-Heavy-Duty Trucks (HHDT)/4+-axle. To account for emissions generated by trucks, the fleet mix in Table 4-5 was utilized.

TABLE 4-5: TRUCK FLEET MIX

Land Use	% Vehicle Type			
	LHDT1	LHDT2	MHDT	HHDT
Warehousing	13.08%	3.58%	21.11%	62.22%
High-Cube Cold Storage Warehouse	27.58%	7.55%	10.81%	54.05%

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips.

4.6.4 STATIONARY SOURCE EMISSIONS

The proposed Project was conservatively assumed to include installation of a 300-horsepower diesel-powered fire pump. The fire pump was estimated to operate for up to 1 hour per day, 1 day per week for up to 50 hours per year for maintenance and testing purposes. Emissions associated with the stationary diesel-powered emergency fire pumps were calculated using CalEEMod.

4.6.5 TRU SOURCE EMISSIONS

In order to account for the possibility of refrigerated uses, trucks associated with the cold-storage land use are assumed to also have TRUs. For modeling purposes, 74 two-way truck trips have been estimated to include TRUs (e.g., all truck trips that would be associated with up to 98,558 square feet of high-cube cold storage warehouse use as summarized in the *Chino Distribution Center Traffic Analysis*). TRUs are accounted for during on-site and off-site travel. The TRU calculations are based on the OFFROAD Model version 2021 (OFFROAD 2021), developed by CARB. OFFROAD 2021 does not provide emission rates per hour or mile as with the on-road emission model and only provides emission inventories. Emission results are produced in tons per day while all activity, fuel consumption and horsepower hours were reported at annual levels. The emission inventory is based on specific assumptions including the average horsepower rating of specific types of equipment and the hours of operation annually. These assumptions are not always consistent with assumptions used in the modeling of Project level emissions. Therefore,

⁸ Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

⁹ Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

the emissions inventory was converted into emission rates to accurately calculate emissions from TRU operation associated with Project level details. This was accomplished by converting the annual horsepower hours to daily operational characteristics and converting the daily emission levels into hourly emission rates based on the total emission of each criteria pollutant by equipment type and the average daily hours of operations.

4.6.6 ON-SITE CARGO HANDLING EQUIPMENT EMISSIONS

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to one (1) 175 horsepower (hp), natural gas-powered cargo handling equipment – port tractor operating at 4 hours a day¹⁰ for 365 days of the year.

4.6.7 WATER SUPPLY, TREATMENT AND DISTRIBUTION

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of the water. Unless otherwise noted, CalEEMod default parameters were used.

4.6.8 SOLID WASTE

Industrial land uses would result in the generation and disposal of solid waste. A percentage of this waste would be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted would be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. GHG emissions associated with the disposal of solid waste associated with the proposed Project were calculated by CalEEMod using default parameters.

4.6.9 EMISSIONS SUMMARY

The estimated Project-related GHG emissions are summarized on Table 4-6. Detailed operation model outputs for the Project are presented in Appendix 4.2. As shown in Table 4-6, construction and operation of the Project would generate a net of approximately 4,451.96 MTCO₂e/yr.

¹⁰ Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

TABLE 4-6: PROJECT GHG EMISSIONS

Emission Source	Emissions (MT/yr)				
	CO ₂	CH ₄	N ₂ O	Refrigerants	Total CO ₂ e
Annual construction-related emissions amortized over 30 years	63.31	3.67E-03	4.00E-03	0.03	64.56
Mobile Source	2,995.00	0.19	0.37	3.66	3,115.00
Area Source	8.00	0.00	0.00	0.00	8.02
Energy Source	324.00	0.03	0.00	0.00	326.00
Water Usage Source	127.00	2.98	0.07	0.00	223.00
Waste Source	33.10	3.30	0.00	0.00	116.00
Refrigeration Source	0.00	0.00	0.00	435.00	435.00
Stationary Source	11.40	0.00	0.00	0.00	11.50
TRU Source	0.00	0.00	0.00	0.00	829.50
On-Site Equipment Source					47.38
Total CO₂e (All Sources)	5,175.96				
<i>Existing</i>	<i>724.00</i>				
Net Emissions (Proposed – Existing)	4,451.96				

Source: CalEEMod output, See Appendix 4.2 for detailed model outputs.

4.8 COMPARISON TO GENERAL PLAN ENVIRONMENTAL IMPACT REPORT LAND USES

The Project is proposing an addendum to the City's current General Plan Environmental Impact Report (EIR). The General Plan identifies a land use designation of General Industrial which allows up to 0.6 floor area ratio (FAR) of development on the site. The Project site is 18.11 acres which equates to 473,323 square feet of General Industrial uses comprised of 236,662 square feet of General Light Industrial use and 236,661 square feet of Warehousing use that could be allowed under the current General Plan. Table 4-7 summarizes the operational emissions associated with 473,323 square feet of General Industrial uses comprised of 236,662 square feet of General Light Industrial use and 236,661 square feet of Warehousing use as allowed under the current General Plan. Model outputs from the model runs for the land uses associated with the General Plan are provided in Appendix 4.3.

Table 4-8 shows the emissions comparison between the 473,323 square feet of General Industrial (236,662 square feet of General Light Industrial use + 236,661 square feet of Warehousing) as allowed under the current General Plan to the proposed Project's 390,778 square-foot warehouse building (comprising of 98,808 square feet of high-cube cold storage warehouse use and 296,442 square feet of warehousing use). As shown, the Project is anticipated to generate fewer emissions as compared to what could occur with the allowable use under the current General Plan. The General Plan land use assumption has conservatively assumed a lower generating land use category. In other words, if the General Plan land use is more intense than that presented in Table 4-7 via a more intense land use category such as all General Light Industrial or Manufacturing or the square footage is increased, then the net change in emissions shown in Table 4-18 would be a higher negative value (resulting in a greater net reduction from the proposed Project).

TABLE 4-7: SUMMARY OF PEAK OPERATIONAL EMISSIONS (GENERAL PLAN)

Emission Source	Emissions (MT/yr)				
	CO ₂	CH ₄	N ₂ O	Refrigerants	Total CO ₂ e
Mobile Source	4,169.00	0.23	0.38	5.15	4,294.00
Area Source	9.60	< 0.005	< 0.005	0.00	9.63
Energy Source	1,303.00	0.12	0.01	0.00	1,309.00
Water Usage Source	152.00	3.57	0.09	0.00	267.00
Waste Source	46.00	4.60	0.00	0.00	161.00
Refrigeration Source	0.00	0.00	0.00	10.20	10.20
Stationary Source	22.80	< 0.005	< 0.005	0.00	22.90
On-Site Equipment Source					94.75
Total CO₂e (All Sources)					6,168.48

TABLE 4-8: OPERATIONAL EMISSIONS COMPARISON (GENERAL PLAN VS. PROPOSED PROJECT)

Emission Source	Emissions (MT/yr)
	Total CO ₂ e
General Plan	6,168.48
Proposed Project	5,175.96
Variance (Proposed – General Plan)	-992.52

4.8 GHG EMISSIONS FINDINGS AND RECOMMENDATIONS

GHG Impact 1: Potential to generate direct or indirect GHG emissions that would result in a significant impact on the environment.

GHG Impact 2: Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

As previously stated, pursuant to 15604.4 of the *CEQA Guidelines*, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions (51). As such, the Project's consistency with the 2022 Scoping Plan, is discussed below. It should be noted that the Project's consistency with the 2022 Scoping Plan also satisfies consistency with AB 32 since the 2022 Scoping Plan is based on the overall targets established by AB 32 and SB 32. Consistency with the 2008 and 2017 Scoping Plan is not necessary, since both of these plans have been superseded by the 2022 Scoping Plan. For reasons outlined herein, the proposed Project would result in a less than significant impact with respect to GHG emissions for GHG Impact #2.

2022 SCOPING PLAN CONSISTENCY

The Project would not impede the State's progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The Project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan. Some of the current transportation sector policies the Project will comply with (through vehicle manufacturer compliance) include: Advanced Clean Cars II, Advanced Clean Trucks, Advanced Clean Fleets, Zero Emission Forklifts, the Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, In-use Off-Road Diesel-Fueled Fleets Regulation, carbon pricing through the Cap-and-Trade Program, and the Low Carbon Fuel Standard. Additionally, the Project includes design features related to water and solid conservation that will further reduce Project GHG emissions. The Project's proposed uses are consistent with the City's General Plan land use designation, and the proposed intensity is below the maximum density allowed by the City's General Plan. As such, the Project would be consistent with the 2022 Scoping Plan.

CITY OF CHINO CAP CONSISTENCY

The proposed Project would be consistent with the CAP and Chapter 15.45 of the Chino Municipal Code, would be in concert with AB 32 and international efforts to address global climate change, and would reflect specific local requirements that would substantially lessen cumulative GHG emissions impacts. The proposed Project would therefore also fulfill the description of mitigation found in *CEQA Guidelines* §15130(a)(3) and §15183.5. The Project's incremental contribution to GHG emissions impacts would therefore not be cumulatively considerable.

Pursuant to PDF GHG-1, the Project will implement Screening Table Measures providing for a minimum 100 points per the City's Screening Tables. By achieving the 100-point minimum, the Project would be consistent with the forthcoming CAP Update and would be considered less than significant for GHG emissions and cumulatively considerable impact on GHG emissions.

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6 CERTIFICATIONS

The contents of this GHG study report represent an accurate depiction of the GHG impacts associated with the proposed Chino Distribution Center Project. The information contained in this GHG report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

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Master of Science in Environmental Studies
California State University, Fullerton • May 2010

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University of California, Irvine • June, 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Professionals
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
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APPENDIX 3.1:

CALEEMOD EXISTING OPERATIONAL EMISSIONS MODEL OUTPUTS

5088 Edison (Existing) Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	5088 Edison (Existing)
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.60
Precipitation (days)	9.20
Location	33.99915102972773, -117.6945989806811
County	San Bernardino-South Coast
City	Chino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5218
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.23

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
Unrefrigerated Warehouse-No Rail	73.0	1000sqft	10.6	73,000	0.00	—	—	—

User Defined Industrial	73.0	User Defined Unit	0.00	0.00	0.00	—	—	Passenger Cars for Warehouse
Other Asphalt Surfaces	6.89	Acre	6.89	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations 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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.58	3.10	3.17	13.6	0.04	0.08	2.91	2.98	0.07	0.75	0.82	69.3	5,296	5,366	7.28	0.46	14.9	5,700
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.98	2.55	3.29	8.77	0.04	0.07	2.91	2.98	0.07	0.75	0.82	69.3	5,129	5,198	7.28	0.46	0.39	5,519
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.11	2.70	2.56	8.89	0.03	0.06	2.11	2.18	0.06	0.54	0.61	69.3	4,012	4,081	7.23	0.36	4.69	4,374
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.20	0.49	0.47	1.62	0.01	0.01	0.39	0.40	0.01	0.10	0.11	11.5	664	676	1.20	0.06	0.78	724

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.97	0.77	2.77	10.1	0.04	0.04	2.91	2.95	0.04	0.75	0.79	—	4,410	4,410	0.19	0.37	14.9	4,541
Area	0.56	2.32	0.03	3.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	13.1	13.1	< 0.005	< 0.005	—	13.1
Energy	0.04	0.02	0.37	0.31	< 0.005	0.03	—	0.03	0.03	—	0.03	—	765	765	0.07	< 0.005	—	768
Water	—	—	—	—	—	—	—	—	—	—	—	32.3	109	141	3.33	0.08	—	248
Waste	—	—	—	—	—	—	—	—	—	—	—	37.0	0.00	37.0	3.70	0.00	—	129
Total	1.58	3.10	3.17	13.6	0.04	0.08	2.91	2.98	0.07	0.75	0.82	69.3	5,296	5,366	7.28	0.46	14.9	5,700
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.93	0.73	2.92	8.46	0.04	0.04	2.91	2.95	0.04	0.75	0.79	—	4,256	4,256	0.19	0.38	0.39	4,374
Area	—	1.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.37	0.31	< 0.005	0.03	—	0.03	0.03	—	0.03	—	765	765	0.07	< 0.005	—	768
Water	—	—	—	—	—	—	—	—	—	—	—	32.3	109	141	3.33	0.08	—	248
Waste	—	—	—	—	—	—	—	—	—	—	—	37.0	0.00	37.0	3.70	0.00	—	129
Total	0.98	2.55	3.29	8.77	0.04	0.07	2.91	2.98	0.07	0.75	0.82	69.3	5,129	5,198	7.28	0.46	0.39	5,519
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.68	0.53	2.17	6.40	0.03	0.03	2.11	2.14	0.03	0.54	0.57	—	3,129	3,129	0.14	0.28	4.69	3,220
Area	0.39	2.15	0.02	2.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.94	8.94	< 0.005	< 0.005	—	8.97
Energy	0.04	0.02	0.37	0.31	< 0.005	0.03	—	0.03	0.03	—	0.03	—	765	765	0.07	< 0.005	—	768
Water	—	—	—	—	—	—	—	—	—	—	—	32.3	109	141	3.33	0.08	—	248
Waste	—	—	—	—	—	—	—	—	—	—	—	37.0	0.00	37.0	3.70	0.00	—	129
Total	1.11	2.70	2.56	8.89	0.03	0.06	2.11	2.18	0.06	0.54	0.61	69.3	4,012	4,081	7.23	0.36	4.69	4,374
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.12	0.10	0.40	1.17	0.01	0.01	0.39	0.39	0.01	0.10	0.10	—	518	518	0.02	0.05	0.78	533

Area	0.07	0.39	< 0.005	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.48	1.48	< 0.005	< 0.005	—	1.49
Energy	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	127	127	0.01	< 0.005	—	127
Water	—	—	—	—	—	—	—	—	—	—	—	5.36	18.0	23.4	0.55	0.01	—	41.1
Waste	—	—	—	—	—	—	—	—	—	—	—	6.12	0.00	6.12	0.61	0.00	—	21.4
Total	0.20	0.49	0.47	1.62	0.01	0.01	0.39	0.40	0.01	0.10	0.11	11.5	664	676	1.20	0.06	0.78	724

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.73	0.67	0.39	8.49	0.02	0.01	1.94	1.95	0.01	0.49	0.50	—	1,954	1,954	0.06	0.04	5.78	1,974
User Defined Industrial	0.24	0.10	2.38	1.60	0.02	0.04	0.96	1.00	0.03	0.26	0.29	—	2,456	2,456	0.13	0.33	9.07	2,567
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.97	0.77	2.77	10.1	0.04	0.04	2.91	2.95	0.04	0.75	0.79	—	4,410	4,410	0.19	0.37	14.9	4,541
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-No Rail	0.70	0.64	0.44	6.86	0.02	0.01	1.94	1.95	0.01	0.49	0.50	—	1,799	1,799	0.06	0.05	0.15	1,815
User Defined Industrial	0.23	0.09	2.48	1.60	0.02	0.04	0.96	1.00	0.03	0.26	0.29	—	2,456	2,456	0.13	0.33	0.24	2,559
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.93	0.73	2.92	8.46	0.04	0.04	2.91	2.95	0.04	0.75	0.79	—	4,256	4,256	0.19	0.38	0.39	4,374
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.09	0.08	0.06	0.95	< 0.005	< 0.005	0.26	0.26	< 0.005	0.07	0.07	—	221	221	0.01	0.01	0.30	223
User Defined Industrial	0.03	0.01	0.34	0.21	< 0.005	< 0.005	0.13	0.13	< 0.005	0.03	0.04	—	297	297	0.02	0.04	0.47	310
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.12	0.10	0.40	1.17	0.01	0.01	0.39	0.39	0.01	0.10	0.10	—	518	518	0.02	0.05	0.78	533

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

Unrefrigerated	—	—	—	—	—	—	—	—	—	—	—	—	320	320	0.03	< 0.005	—	322
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	320	320	0.03	< 0.005	—	322
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	320	320	0.03	< 0.005	—	322
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	320	320	0.03	< 0.005	—	322
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	52.9	52.9	0.01	< 0.005	—	53.3
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	52.9	52.9	0.01	< 0.005	—	53.3
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	------	------	------	---------	---	------

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.04	0.02	0.37	0.31	< 0.005	0.03	—	0.03	0.03	—	0.03	—	445	445	0.04	< 0.005	—	446
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.04	0.02	0.37	0.31	< 0.005	0.03	—	0.03	0.03	—	0.03	—	445	445	0.04	< 0.005	—	446
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.04	0.02	0.37	0.31	< 0.005	0.03	—	0.03	0.03	—	0.03	—	445	445	0.04	< 0.005	—	446
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.04	0.02	0.37	0.31	< 0.005	0.03	—	0.03	0.03	—	0.03	—	445	445	0.04	< 0.005	—	446
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	73.6	73.6	0.01	< 0.005	—	73.8
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	< 0.005	0.07	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	73.6	73.6	0.01	< 0.005	—	73.8

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.56	0.52	0.03	3.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	13.1	13.1	< 0.005	< 0.005	—	13.1
Total	0.56	2.32	0.03	3.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	13.1	13.1	< 0.005	< 0.005	—	13.1

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.07	0.07	< 0.005	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.48	1.48	< 0.005	< 0.005	—	1.49
Total	0.07	0.39	< 0.005	0.40	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.48	1.48	< 0.005	< 0.005	—	1.49

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

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

Unrefrigerated Warehouse Rail	—	—	—	—	—	—	—	—	—	—	—	32.3	109	141	3.33	0.08	—	248
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	32.3	109	141	3.33	0.08	—	248
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	32.3	109	141	3.33	0.08	—	248
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	32.3	109	141	3.33	0.08	—	248
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	5.36	18.0	23.4	0.55	0.01	—	41.1
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	5.36	18.0	23.4	0.55	0.01	—	41.1

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	37.0	0.00	37.0	3.70	0.00	—	129
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	37.0	0.00	37.0	3.70	0.00	—	129
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	37.0	0.00	37.0	3.70	0.00	—	129

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	37.0	0.00	37.0	3.70	0.00	—	129
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	6.12	0.00	6.12	0.61	0.00	—	21.4
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.12	0.00	6.12	0.61	0.00	—	21.4

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

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

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

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

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	178	15.0	6.06	47,500	2,788	236	94.9	744,136
User Defined Industrial	48.0	4.06	1.63	12,810	1,115	94.3	37.8	297,580
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

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)
0	0.00	109,500	36,500	18,008

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	337,165	346	0.0330	0.0040	1,387,780
User Defined Industrial	0.00	346	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	16,881,250	0.00
User Defined Industrial	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
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Unrefrigerated Warehouse-No Rail	68.6	—
User Defined Industrial	0.00	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
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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
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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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	16.9	annual days of extreme heat
Extreme Precipitation	5.05	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	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 $\frac{3}{4}$ 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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A

Flooding	N/A	N/A	N/A	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 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	74.2
AQ-PM	93.3
AQ-DPM	61.0
Drinking Water	98.6
Lead Risk Housing	21.4
Pesticides	16.7
Toxic Releases	63.9
Traffic	29.6
Effect Indicators	—
CleanUp Sites	71.6
Groundwater	53.1

Haz Waste Facilities/Generators	97.1
Impaired Water Bodies	23.9
Solid Waste	64.4
Sensitive Population	—
Asthma	49.9
Cardio-vascular	83.2
Low Birth Weights	13.5
Socioeconomic Factor Indicators	—
Education	58.7
Housing	8.50
Linguistic	52.0
Poverty	23.9
Unemployment	18.3

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	69.9088926
Employed	62.92826896
Median HI	80.39266008
Education	—
Bachelor's or higher	43.17977672
High school enrollment	100
Preschool enrollment	4.221737457
Transportation	—
Auto Access	90.86359553

Active commuting	1.039394328
Social	—
2-parent households	33.23495445
Voting	60.79815219
Neighborhood	—
Alcohol availability	89.41357629
Park access	47.83780316
Retail density	58.01360195
Supermarket access	15.39843449
Tree canopy	23.0334916
Housing	—
Homeownership	95.07250096
Housing habitability	88.68215065
Low-inc homeowner severe housing cost burden	39.98460157
Low-inc renter severe housing cost burden	86.39804953
Uncrowded housing	51.79006801
Health Outcomes	—
Insured adults	73.78416528
Arthritis	60.6
Asthma ER Admissions	42.8
High Blood Pressure	59.0
Cancer (excluding skin)	55.0
Asthma	61.7
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	71.2
Diagnosed Diabetes	58.5
Life Expectancy at Birth	24.1

Cognitively Disabled	60.3
Physically Disabled	69.8
Heart Attack ER Admissions	7.6
Mental Health Not Good	58.7
Chronic Kidney Disease	64.9
Obesity	52.9
Pedestrian Injuries	69.7
Physical Health Not Good	59.3
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	20.5
Current Smoker	62.2
No Leisure Time for Physical Activity	61.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	62.5
Elderly	73.1
English Speaking	54.6
Foreign-born	44.6
Outdoor Workers	28.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	68.0
Traffic Density	32.4
Traffic Access	49.6
Other Indices	—
Hardship	49.8

Other Decision Support	—
2016 Voting	74.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	59.0
Healthy Places Index Score for Project Location (b)	57.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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	Total Area is 17.52 acres
Construction: Construction Phases	Construction anticipated to end in 2027
Construction: Off-Road Equipment	Crawler Tractors used in lieu of Tractors/Loaders/Backhoes
Construction: Architectural Coatings	Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic analysis

Operations: Fleet Mix	Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, & MCY). Truck Mix based on information in the Traffic analysis
Operations: Energy Use	No natural gas will be used as part of the Project

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APPENDIX 4.1:

CALEEMOD PROJECT CONSTRUCTION EMISSIONS MODEL OUTPUTS

5088 Edison (Construction) Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	5088 Edison (Construction)
Construction Start Date	1/2/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.60
Precipitation (days)	9.20
Location	33.99915102972773, -117.6945989806811
County	San Bernardino-South Coast
City	Chino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5218
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.23

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
Unrefrigerated Warehouse-No Rail	296	1000sqft	8.59	295,672	78,625	—	—	—

Refrigerated Warehouse-No Rail	98.6	1000sqft	2.26	98,558	0.00	—	—	—
Parking Lot	248	Space	1.84	0.00	0.00	—	—	—
Other Asphalt Surfaces	210	1000sqft	4.82	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.41	2.84	21.3	34.8	0.05	0.77	1.86	2.63	0.71	0.45	1.16	—	7,531	7,531	0.35	0.26	8.42	7,626
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	43.8	48.0	91.4	106	0.42	2.17	62.1	64.2	1.96	11.3	13.3	—	60,572	60,572	5.83	9.14	3.02	63,445
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.71	5.35	20.2	27.3	0.06	0.70	4.81	5.51	0.64	1.02	1.67	—	8,121	8,121	0.52	0.65	4.79	8,334
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.86	0.98	3.70	4.98	0.01	0.13	0.88	1.01	0.12	0.19	0.30	—	1,345	1,345	0.09	0.11	0.79	1,380

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.41	2.84	21.3	34.8	0.05	0.77	1.86	2.63	0.71	0.45	1.16	—	7,531	7,531	0.35	0.26	8.42	7,626
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	43.8	37.1	91.4	106	0.42	2.17	62.1	64.2	1.96	11.3	13.3	—	60,572	60,572	5.83	9.14	3.02	63,445
2027	1.88	48.0	14.0	21.1	0.03	0.60	0.37	0.89	0.55	0.09	0.62	—	3,342	3,342	0.13	0.04	0.04	3,358
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	4.71	3.96	20.2	27.3	0.06	0.70	4.81	5.51	0.64	1.02	1.67	—	8,121	8,121	0.52	0.65	4.79	8,334
2027	0.09	5.35	0.54	0.90	< 0.005	0.02	0.05	0.07	0.02	0.01	0.03	—	166	166	0.01	0.01	0.08	168
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.86	0.72	3.70	4.98	0.01	0.13	0.88	1.01	0.12	0.19	0.30	—	1,345	1,345	0.09	0.11	0.79	1,380
2027	0.02	0.98	0.10	0.17	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	27.4	27.4	< 0.005	< 0.005	0.01	27.8

3. Construction Emissions Details

3.1. Demolition (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	36.8	36.2	21.5	67.1	0.03	1.43	—	1.43	1.22	—	1.22	—	3,504	3,504	0.14	0.03	—	3,516
Demolition	—	—	—	—	—	—	46.4	46.4	—	7.02	7.02	—	—	—	—	—	—	—
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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.02	1.98	1.18	3.68	< 0.005	0.08	—	0.08	0.07	—	0.07	—	192	192	0.01	< 0.005	—	193
Demolition	—	—	—	—	—	—	2.54	2.54	—	0.38	0.38	—	—	—	—	—	—	—
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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.36	0.22	0.67	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.8	31.8	< 0.005	< 0.005	—	31.9
Demolition	—	—	—	—	—	—	0.46	0.46	—	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.75	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	166	166	< 0.005	0.01	0.02	168
Vendor	0.01	< 0.005	0.15	0.08	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	125	125	0.01	0.02	0.01	131
Hauling	6.91	0.81	69.7	38.4	0.39	0.74	15.5	16.2	0.74	4.24	4.98	—	56,777	56,777	5.68	9.09	2.99	59,630
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.20	9.20	< 0.005	< 0.005	0.01	9.34
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.84	6.84	< 0.005	< 0.005	0.01	7.18
Hauling	0.38	0.05	3.84	2.10	0.02	0.04	0.85	0.89	0.04	0.23	0.27	—	3,110	3,110	0.31	0.50	2.73	3,269
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.52	1.52	< 0.005	< 0.005	< 0.005	1.55
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.13	1.13	< 0.005	< 0.005	< 0.005	1.19
Hauling	0.07	0.01	0.70	0.38	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	515	515	0.05	0.08	0.45	541

3.3. Site Preparation (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.56	3.83	34.6	31.0	0.05	1.77	—	1.77	1.62	—	1.62	—	5,532	5,532	0.22	0.04	—	5,551
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.95	0.85	< 0.005	0.05	—	0.05	0.04	—	0.04	—	152	152	0.01	< 0.005	—	152

Dust From Material Movement:	—	—	—	—	—	—	0.16	0.16	—	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.16	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.1	25.1	< 0.005	< 0.005	—	25.2
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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.75	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	166	166	< 0.005	0.01	0.02	168
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	75.0	75.0	0.01	0.01	0.01	78.5
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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.60	4.60	< 0.005	< 0.005	0.01	4.67
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.05	2.05	< 0.005	< 0.005	< 0.005	2.15
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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.77
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.36

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	0.00	0.00	0.00
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3.5. Grading (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.03	3.39	30.0	28.7	0.06	1.38	—	1.38	1.27	—	1.27	—	6,715	6,715	0.27	0.05	—	6,738
Dust From Material Movement:	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.28	2.46	2.36	0.01	0.11	—	0.11	0.10	—	0.10	—	552	552	0.02	< 0.005	—	554
Dust From Material Movement:	—	—	—	—	—	—	0.22	0.22	—	0.08	0.08	—	—	—	—	—	—	—
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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.45	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	91.4	91.4	< 0.005	< 0.005	—	91.7

Dust From Material Movement:	—	—	—	—	—	—	0.04	0.04	—	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	0.84	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	184	184	< 0.005	0.01	0.02	186
Vendor	0.02	< 0.005	0.21	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	175	175	0.01	0.03	0.01	183
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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.3	15.3	< 0.005	< 0.005	0.02	15.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.4	14.4	< 0.005	< 0.005	0.02	15.1
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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.54	2.54	< 0.005	< 0.005	< 0.005	2.58
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.38	2.38	< 0.005	< 0.005	< 0.005	2.50
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	0.00	0.00

3.7. Building Construction (2026) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.56	2.14	19.6	25.2	0.05	0.75	—	0.75	0.69	—	0.69	—	4,817	4,817	0.20	0.04	—	4,833
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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.56	2.14	19.6	25.2	0.05	0.75	—	0.75	0.69	—	0.69	—	4,817	4,817	0.20	0.04	—	4,833
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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.40	1.17	10.8	13.8	0.03	0.41	—	0.41	0.38	—	0.38	—	2,639	2,639	0.11	0.02	—	2,648
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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.21	1.96	2.52	< 0.005	0.08	—	0.08	0.07	—	0.07	—	437	437	0.02	< 0.005	—	438
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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.74	0.68	0.51	9.00	0.00	0.00	1.57	1.57	0.00	0.37	0.37	—	1,665	1,665	0.08	0.06	5.67	1,691
Vendor	0.11	0.02	1.20	0.67	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,049	1,049	0.08	0.16	2.75	1,102
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	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.70	0.63	0.56	6.95	0.00	0.00	1.57	1.57	0.00	0.37	0.37	—	1,528	1,528	0.03	0.06	0.15	1,548
Vendor	0.11	0.02	1.25	0.68	0.01	0.02	0.29	0.31	0.02	0.08	0.10	—	1,049	1,049	0.08	0.16	0.07	1,100
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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.35	0.33	3.99	0.00	0.00	0.85	0.85	0.00	0.20	0.20	—	849	849	0.02	0.03	1.34	861
Vendor	0.06	0.01	0.69	0.37	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	575	575	0.04	0.09	0.65	603
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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.73	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	141	141	< 0.005	0.01	0.22	143
Vendor	0.01	< 0.005	0.13	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	95.2	95.2	0.01	0.01	0.11	99.8
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	0.00	0.00

3.9. Paving (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.76	1.47	13.9	19.9	0.03	0.60	—	0.60	0.55	—	0.55	—	3,022	3,022	0.12	0.02	—	3,033
Paving	—	1.75	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1	
Paving	—	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	0.00	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8	
Paving	—	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	0.00	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.12	0.11	0.09	1.17	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	271	271	0.01	0.01	0.02	274	
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	49.0	49.0	< 0.005	0.01	< 0.005	51.3	
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	0.00	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.52	7.52	< 0.005	< 0.005	0.01	7.62	
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.34	1.34	< 0.005	< 0.005	< 0.005	1.41	
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	0.00	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.24	1.24	< 0.005	< 0.005	< 0.005	1.26	

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
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	0.00	0.00

3.11. Architectural Coating (2027) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.11	1.50	< 0.005	0.03	—	0.03	0.02	—	0.02	—	178	178	0.01	< 0.005	—	179
Architect ural Coatings	—	47.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.5	19.5	< 0.005	< 0.005	—	19.6
Architect ural Coatings	—	5.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.23	3.23	< 0.005	< 0.005	—	3.24

Architect Coatings	—	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.10	1.28	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	298	298	0.01	0.01	0.03	301
Vendor	0.02	< 0.005	0.23	0.12	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	196	196	0.01	0.03	0.01	205
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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.1	33.1	< 0.005	< 0.005	0.05	33.5
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.5	21.5	< 0.005	< 0.005	0.02	22.5
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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.48	5.48	< 0.005	< 0.005	0.01	5.55
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.56	3.56	< 0.005	< 0.005	< 0.005	3.73
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	0.00	0.00

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)

Vegetatio	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
---------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

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

Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Demolition	Demolition	1/2/2026	1/29/2026	5.00	20.0	—
Site Preparation	Site Preparation	1/30/2026	2/12/2026	5.00	10.0	—
Grading	Grading	2/13/2026	3/26/2026	5.00	30.0	—
Building Construction	Building Construction	3/27/2026	12/31/2026	5.00	200	—
Paving	Paving	1/1/2027	1/14/2027	5.00	10.0	—
Architectural Coating	Architectural Coating	1/15/2027	3/11/2027	5.00	40.0	—

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
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Crushing/Proc. Equipment	Gasoline	Average	1.00	8.00	12.0	0.85
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	87.0	0.43

Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Building Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	5.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	5.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	2.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	4.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	4.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	4.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	18.0	13.4	LDA,LDT1,LDT2
Demolition	Vendor	5.00	8.33	HHDT,MHDT
Demolition	Hauling	836	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	18.0	13.4	LDA,LDT1,LDT2
Site Preparation	Vendor	3.00	8.33	HHDT,MHDT

Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	13.4	LDA,LDT1,LDT2
Grading	Vendor	7.00	8.33	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	166	13.4	LDA,LDT1,LDT2
Building Construction	Vendor	42.0	8.33	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	30.0	13.4	LDA,LDT1,LDT2
Paving	Vendor	2.00	8.33	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	33.0	13.4	LDA,LDT1,LDT2
Architectural Coating	Vendor	8.00	8.33	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	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)
Architectural Coating	0.00	0.00	591,345	197,115	17,410

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	66,862	—
Site Preparation	—	—	35.0	0.00	—
Grading	—	0.00	120	0.00	—
Paving	0.00	0.00	0.00	0.00	6.66

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Refrigerated Warehouse-No Rail	0.00	0%
Parking Lot	1.84	100%
Other Asphalt Surfaces	4.82	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	532	0.03	< 0.005
2027	0.00	532	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
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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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	16.9	annual days of extreme heat
Extreme Precipitation	5.05	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	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 $\frac{3}{4}$ 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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	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 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	74.2
AQ-PM	93.3
AQ-DPM	61.0

Drinking Water	98.6
Lead Risk Housing	21.4
Pesticides	16.7
Toxic Releases	63.9
Traffic	29.6
Effect Indicators	—
CleanUp Sites	71.6
Groundwater	53.1
Haz Waste Facilities/Generators	97.1
Impaired Water Bodies	23.9
Solid Waste	64.4
Sensitive Population	—
Asthma	49.9
Cardio-vascular	83.2
Low Birth Weights	13.5
Socioeconomic Factor Indicators	—
Education	58.7
Housing	8.50
Linguistic	52.0
Poverty	23.9
Unemployment	18.3

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	69.9088926

Employed	62.92826896
Median HI	80.39266008
Education	—
Bachelor's or higher	43.17977672
High school enrollment	100
Preschool enrollment	4.221737457
Transportation	—
Auto Access	90.86359553
Active commuting	1.039394328
Social	—
2-parent households	33.23495445
Voting	60.79815219
Neighborhood	—
Alcohol availability	89.41357629
Park access	47.83780316
Retail density	58.01360195
Supermarket access	15.39843449
Tree canopy	23.0334916
Housing	—
Homeownership	95.07250096
Housing habitability	88.68215065
Low-inc homeowner severe housing cost burden	39.98460157
Low-inc renter severe housing cost burden	86.39804953
Uncrowded housing	51.79006801
Health Outcomes	—
Insured adults	73.78416528
Arthritis	60.6

Asthma ER Admissions	42.8
High Blood Pressure	59.0
Cancer (excluding skin)	55.0
Asthma	61.7
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	71.2
Diagnosed Diabetes	58.5
Life Expectancy at Birth	24.1
Cognitively Disabled	60.3
Physically Disabled	69.8
Heart Attack ER Admissions	7.6
Mental Health Not Good	58.7
Chronic Kidney Disease	64.9
Obesity	52.9
Pedestrian Injuries	69.7
Physical Health Not Good	59.3
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	20.5
Current Smoker	62.2
No Leisure Time for Physical Activity	61.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	62.5
Elderly	73.1
English Speaking	54.6

Foreign-born	44.6
Outdoor Workers	28.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	68.0
Traffic Density	32.4
Traffic Access	49.6
Other Indices	—
Hardship	49.8
Other Decision Support	—
2016 Voting	74.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	59.0
Healthy Places Index Score for Project Location (b)	57.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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	Total Area is 17.52 acres
Construction: Construction Phases	Construction anticipated to end in 2027
Construction: Off-Road Equipment	Crawler Tractors used in lieu of Tractors/Loaders/Backhoes
Construction: Architectural Coatings	Rule 1113
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, Building Construction, Paving, and Architectural Coating

5088 Edison (Off-Site Improvements) Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	5088 Edison (Off-Site Improvements)
Construction Start Date	3/27/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.60
Precipitation (days)	9.20
Location	33.99915102972773, -117.6945989806811
County	San Bernardino-South Coast
City	Chino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5218
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.24

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
Road Construction	0.50	Mile	5.00	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.68	3.10	25.3	31.5	0.06	1.09	1.26	2.35	1.00	0.19	1.19	—	6,974	6,974	0.28	0.07	1.62	7,004
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.67	3.09	25.4	30.9	0.06	1.09	1.26	2.35	1.00	0.19	1.19	—	6,937	6,937	0.27	0.07	0.04	6,965
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.65	1.39	11.5	14.1	0.03	0.48	0.56	1.04	0.44	0.09	0.53	—	3,181	3,181	0.12	0.03	0.33	3,195
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.30	0.25	2.10	2.58	0.01	0.09	0.10	0.19	0.08	0.02	0.10	—	527	527	0.02	0.01	0.05	529

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	3.68	3.10	25.3	31.5	0.06	1.09	1.26	2.35	1.00	0.19	1.19	—	6,974	6,974	0.28	0.07	1.62	7,004
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.67	3.09	25.4	30.9	0.06	1.09	1.26	2.35	1.00	0.19	1.19	—	6,937	6,937	0.27	0.07	0.04	6,965
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.65	1.39	11.5	14.1	0.03	0.48	0.56	1.04	0.44	0.09	0.53	—	3,181	3,181	0.12	0.03	0.33	3,195
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.30	0.25	2.10	2.58	0.01	0.09	0.10	0.19	0.08	0.02	0.10	—	527	527	0.02	0.01	0.05	529

3. Construction Emissions Details

3.1. Linear, Grading & Excavation (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.52	2.96	25.2	29.1	0.06	1.09	—	1.09	1.00	—	1.00	—	6,495	6,495	0.26	0.05	—	6,517
Dust From Material Movement	—	—	—	—	—	—	0.83	0.83	—	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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	3.52	2.96	25.2	29.1	0.06	1.09	—	1.09	1.00	—	1.00	—	6,495	6,495	0.26	0.05	—	6,517
Dust From Material Movement:	—	—	—	—	—	—	0.83	0.83	—	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.97	0.81	6.90	7.97	0.02	0.30	—	0.30	0.27	—	0.27	—	1,779	1,779	0.07	0.01	—	1,785
Dust From Material Movement:	—	—	—	—	—	—	0.23	0.23	—	0.02	0.02	—	—	—	—	—	—	—
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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.26	1.45	< 0.005	0.05	—	0.05	0.05	—	0.05	—	295	295	0.01	< 0.005	—	296
Dust From Material Movement:	—	—	—	—	—	—	0.04	0.04	—	< 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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.13	2.34	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	449	449	0.02	0.02	1.54	455
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.3	30.3	< 0.005	< 0.005	0.08	31.9
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	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.14	1.77	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	411	411	0.01	0.02	0.04	416
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.4	30.4	< 0.005	< 0.005	< 0.005	31.8
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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.51	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	114	114	< 0.005	< 0.005	0.18	116
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.31	8.31	< 0.005	< 0.005	0.01	8.72
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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	18.9	18.9	< 0.005	< 0.005	0.03	19.2
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.38	1.38	< 0.005	< 0.005	< 0.005	1.44
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	0.00	0.00

3.3. Linear, Drainage, Utilities, & Sub-Grade (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.85	2.39	21.2	23.3	0.05	0.83	—	0.83	0.76	—	0.76	—	5,693	5,693	0.23	0.05	—	5,712
Dust From Material Movement	—	—	—	—	—	—	0.69	0.69	—	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	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.85	2.39	21.2	23.3	0.05	0.83	—	0.83	0.76	—	0.76	—	5,693	5,693	0.23	0.05	—	5,712
Dust From Material Movement:	—	—	—	—	—	—	0.69	0.69	—	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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.44	3.88	4.28	0.01	0.15	—	0.15	0.14	—	0.14	—	1,045	1,045	0.04	0.01	—	1,049
Dust From Material Movement:	—	—	—	—	—	—	0.13	0.13	—	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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.71	0.78	< 0.005	0.03	—	0.03	0.03	—	0.03	—	173	173	0.01	< 0.005	—	174
Dust From Material Movement:	—	—	—	—	—	—	0.02	0.02	—	< 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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.11	1.98	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	380	380	0.02	0.01	1.30	385

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.12	1.50	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	348	348	0.01	0.01	0.03	352	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.8	64.8	< 0.005	< 0.005	0.10	65.7	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.7	10.7	< 0.005	< 0.005	0.02	10.9	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.00	0.00

3.5. Linear, Paving (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.00	0.84	7.37	10.8	0.01	0.30	—	0.30	0.28	—	0.28	—	1,619	1,619	0.07	0.01	—	1,625

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	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.67	0.97	< 0.005	0.03	—	0.03	0.03	—	0.03	—	146	146	0.01	< 0.005	—	147	
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	0.00	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.02	0.01	0.12	0.18	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	24.2	24.2	< 0.005	< 0.005	—	24.3	
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	0.00	0.00	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.09	0.08	0.09	1.09	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	253	253	< 0.005	0.01	0.02	256	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
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	0.00	0.00	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	23.2	23.2	< 0.005	< 0.005	0.04	23.5	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
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	0.00	0.00	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.84	3.84	< 0.005	< 0.005	0.01	3.89	
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00	
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	0.00	0.00	

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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
Linear, Grading & Excavation	Linear, Grading & Excavation	3/27/2026	8/13/2026	5.00	100	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	8/14/2026	11/16/2026	5.00	67.0	—
Linear, Paving	Linear, Paving	11/17/2026	12/31/2026	5.00	33.0	—

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
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grading & Excavation	Excavators	Diesel	Average	3.00	8.00	36.0	0.38

Linear, Grading & Excavation	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Grading & Excavation	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38

Linear, Paving	Signal Boards	Electric	Average	1.00	8.00	6.00	0.82
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	32.5	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	1.00	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	27.5	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	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 (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grading & Excavation	—	—	5.00	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	—	—	5.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	5.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	88.1	532	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
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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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	16.9	annual days of extreme heat
Extreme Precipitation	5.05	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	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 $\frac{3}{4}$ 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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A

Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	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 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	74.2
AQ-PM	93.3
AQ-DPM	61.0
Drinking Water	98.6
Lead Risk Housing	21.4
Pesticides	16.7
Toxic Releases	63.9
Traffic	29.6
Effect Indicators	—
CleanUp Sites	71.6

Groundwater	53.1
Haz Waste Facilities/Generators	97.1
Impaired Water Bodies	23.9
Solid Waste	64.4
Sensitive Population	—
Asthma	49.9
Cardio-vascular	83.2
Low Birth Weights	13.5
Socioeconomic Factor Indicators	—
Education	58.7
Housing	8.50
Linguistic	52.0
Poverty	23.9
Unemployment	18.3

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	69.9088926
Employed	62.92826896
Median HI	80.39266008
Education	—
Bachelor's or higher	43.17977672
High school enrollment	100
Preschool enrollment	4.221737457
Transportation	—

Auto Access	90.86359553
Active commuting	1.039394328
Social	—
2-parent households	33.23495445
Voting	60.79815219
Neighborhood	—
Alcohol availability	89.41357629
Park access	47.83780316
Retail density	58.01360195
Supermarket access	15.39843449
Tree canopy	23.0334916
Housing	—
Homeownership	95.07250096
Housing habitability	88.68215065
Low-inc homeowner severe housing cost burden	39.98460157
Low-inc renter severe housing cost burden	86.39804953
Uncrowded housing	51.79006801
Health Outcomes	—
Insured adults	73.78416528
Arthritis	60.6
Asthma ER Admissions	42.8
High Blood Pressure	59.0
Cancer (excluding skin)	55.0
Asthma	61.7
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	71.2
Diagnosed Diabetes	58.5

Life Expectancy at Birth	24.1
Cognitively Disabled	60.3
Physically Disabled	69.8
Heart Attack ER Admissions	7.6
Mental Health Not Good	58.7
Chronic Kidney Disease	64.9
Obesity	52.9
Pedestrian Injuries	69.7
Physical Health Not Good	59.3
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	20.5
Current Smoker	62.2
No Leisure Time for Physical Activity	61.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	62.5
Elderly	73.1
English Speaking	54.6
Foreign-born	44.6
Outdoor Workers	28.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	68.0
Traffic Density	32.4
Traffic Access	49.6
Other Indices	—

Hardship	49.8
Other Decision Support	—
2016 Voting	74.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	59.0
Healthy Places Index Score for Project Location (b)	57.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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
Construction: Construction Phases	Construction anticipated to be concurrent with Project Building Construction

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APPENDIX 4.2:

CALEEMOD PROJECT OPERATIONAL EMISSIONS MODEL OUTPUTS

5088 Edison (Operations) Detailed Report

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 - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
- 2. Emissions Summary
 - 2.4. Operations Emissions Compared Against Thresholds
 - 2.5. Operations Emissions by Sector, Unmitigated
- 4. Operations Emissions Details
 - 4.1. Mobile Emissions by Land Use
 - 4.1.1. Unmitigated
 - 4.2. Energy
 - 4.2.1. Electricity Emissions By Land Use - Unmitigated
 - 4.2.3. Natural Gas Emissions By Land Use - Unmitigated
 - 4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	5088 Edison (Operations)
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.60
Precipitation (days)	9.20
Location	33.99915102972773, -117.6945989806811
County	San Bernardino-South Coast
City	Chino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5218
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.23

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
Unrefrigerated Warehouse-No Rail	296	1000sqft	8.59	295,672	78,625	—	—	—

User Defined Industrial	296	User Defined Unit	0.00	0.00	0.00	—	—	Passenger Cars for Warehouse
Refrigerated Warehouse-No Rail	98.6	1000sqft	2.26	98,558	0.00	—	—	—
User Defined Industrial	98.6	User Defined Unit	0.00	0.00	0.00	—	—	Passenger Cars for Cold Storage
Parking Lot	248	Space	1.84	0.00	0.00	—	—	—
Other Asphalt Surfaces	210	1000sqft	4.82	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations 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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.04	15.5	24.1	53.9	0.24	0.50	11.7	12.2	0.48	3.06	3.54	374	28,210	28,585	39.7	3.54	2,697	33,329
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.89	12.6	25.0	32.4	0.23	0.47	11.7	12.2	0.45	3.06	3.52	374	27,739	28,114	39.7	3.55	2,628	32,792
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.02	13.1	16.9	34.5	0.17	0.28	8.52	8.79	0.26	2.23	2.49	374	20,762	21,137	39.3	2.71	2,649	25,577
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.92	2.39	3.09	6.30	0.03	0.05	1.55	1.60	0.05	0.41	0.45	62.0	3,437	3,499	6.51	0.45	439	4,235
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2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.91	2.25	21.2	34.2	0.23	0.32	11.7	12.0	0.31	3.06	3.37	—	25,084	25,084	1.60	3.08	70.0	26,110
Area	3.05	12.3	0.14	17.1	< 0.005	0.03	—	0.03	0.02	—	0.02	—	70.5	70.5	< 0.005	< 0.005	—	70.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,957	1,957	0.19	0.02	—	1,969
Water	—	—	—	—	—	—	—	—	—	—	—	175	595	770	18.0	0.43	—	1,348
Waste	—	—	—	—	—	—	—	—	—	—	—	200	0.00	200	20.0	0.00	—	699
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,627	2,627
Stationary	1.08	0.98	2.75	2.51	< 0.005	0.14	0.00	0.14	0.14	0.00	0.14	0.00	504	504	0.02	< 0.005	0.00	505
Total	8.04	15.5	24.1	53.9	0.24	0.50	11.7	12.2	0.48	3.06	3.54	374	28,210	28,585	39.7	3.54	2,697	33,329
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.81	2.15	22.2	29.9	0.23	0.32	11.7	12.0	0.31	3.06	3.37	—	24,683	24,683	1.60	3.09	1.82	25,645
Area	—	9.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,957	1,957	0.19	0.02	—	1,969
Water	—	—	—	—	—	—	—	—	—	—	—	175	595	770	18.0	0.43	—	1,348
Waste	—	—	—	—	—	—	—	—	—	—	—	200	0.00	200	20.0	0.00	—	699
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,627	2,627
Stationary	1.08	0.98	2.75	2.51	< 0.005	0.14	0.00	0.14	0.14	0.00	0.14	0.00	504	504	0.02	< 0.005	0.00	505
Total	4.89	12.6	25.0	32.4	0.23	0.47	11.7	12.2	0.45	3.06	3.52	374	27,739	28,114	39.7	3.55	2,628	32,792

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.78	1.56	16.4	22.4	0.17	0.24	8.52	8.75	0.23	2.23	2.45	—	18,093	18,093	1.17	2.26	22.1	18,817
Area	2.09	11.4	0.10	11.7	< 0.005	0.02	—	0.02	0.02	—	0.02	—	48.3	48.3	< 0.005	< 0.005	—	48.5
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,957	1,957	0.19	0.02	—	1,969
Water	—	—	—	—	—	—	—	—	—	—	—	175	595	770	18.0	0.43	—	1,348
Waste	—	—	—	—	—	—	—	—	—	—	—	200	0.00	200	20.0	0.00	—	699
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,627	2,627
Stationary	0.15	0.13	0.38	0.34	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	0.00	69.0	69.0	< 0.005	< 0.005	0.00	69.2
Total	5.02	13.1	16.9	34.5	0.17	0.28	8.52	8.79	0.26	2.23	2.49	374	20,762	21,137	39.3	2.71	2,649	25,577
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.51	0.29	3.00	4.09	0.03	0.04	1.55	1.60	0.04	0.41	0.45	—	2,995	2,995	0.19	0.37	3.66	3,115
Area	0.38	2.08	0.02	2.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.00	8.00	< 0.005	< 0.005	—	8.02
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	324	324	0.03	< 0.005	—	326
Water	—	—	—	—	—	—	—	—	—	—	—	28.9	98.5	127	2.98	0.07	—	223
Waste	—	—	—	—	—	—	—	—	—	—	—	33.1	0.00	33.1	3.30	0.00	—	116
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	435	435
Stationary	0.03	0.02	0.07	0.06	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	11.4	11.4	< 0.005	< 0.005	0.00	11.5
Total	0.92	2.39	3.09	6.30	0.03	0.05	1.55	1.60	0.05	0.41	0.45	62.0	3,437	3,499	6.51	0.45	439	4,235

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.36	1.24	0.73	15.8	0.04	0.01	3.60	3.62	0.01	0.91	0.92	—	3,623	3,623	0.11	0.08	10.7	3,660
User Defined Industrial	1.98	0.49	20.2	12.0	0.18	0.30	6.62	6.92	0.29	1.78	2.07	—	19,968	19,968	1.44	2.96	54.9	20,942
Refrigerated Warehouse-No Rail	0.56	0.51	0.30	6.49	0.01	0.01	1.49	1.49	0.01	0.38	0.38	—	1,493	1,493	0.05	0.03	4.41	1,508
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.91	2.25	21.2	34.2	0.23	0.32	11.7	12.0	0.31	3.06	3.37	—	25,084	25,084	1.60	3.08	70.0	26,110
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.30	1.18	0.81	12.7	0.03	0.01	3.60	3.62	0.01	0.91	0.92	—	3,336	3,336	0.11	0.08	0.28	3,365
User Defined Industrial	1.97	0.48	21.1	12.0	0.18	0.30	6.62	6.92	0.29	1.78	2.07	—	19,972	19,972	1.44	2.97	1.42	20,894

Refrigerated Warehouse Rail	0.54	0.49	0.34	5.24	0.01	0.01	1.49	1.49	0.01	0.38	0.38	—	1,375	1,375	0.05	0.03	0.11	1,387
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.81	2.15	22.2	29.9	0.23	0.32	11.7	12.0	0.31	3.06	3.37	—	24,683	24,683	1.60	3.09	1.82	25,645
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.17	0.16	0.11	1.77	< 0.005	< 0.005	0.48	0.48	< 0.005	0.12	0.12	—	409	409	0.01	0.01	0.56	413
User Defined Industrial	0.26	0.06	2.84	1.59	0.02	0.04	0.88	0.92	0.04	0.24	0.27	—	2,417	2,417	0.17	0.36	2.87	2,532
Refrigerated Warehouse-No Rail	0.07	0.06	0.05	0.73	< 0.005	< 0.005	0.20	0.20	< 0.005	0.05	0.05	—	169	169	0.01	< 0.005	0.23	170
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.51	0.29	3.00	4.09	0.03	0.04	1.55	1.60	0.04	0.41	0.45	—	2,995	2,995	0.19	0.37	3.66	3,115

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,683	1,683	0.16	0.02	—	1,693
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	208	208	0.02	< 0.005	—	209
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	66.6	66.6	0.01	< 0.005	—	67.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,957	1,957	0.19	0.02	—	1,969
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,683	1,683	0.16	0.02	—	1,693
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Refrigerated Warehouse Rail	—	—	—	—	—	—	—	—	—	—	—	—	208	208	0.02	< 0.005	—	209
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	66.6	66.6	0.01	< 0.005	—	67.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,957	1,957	0.19	0.02	—	1,969
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	279	279	0.03	< 0.005	—	280
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	34.4	34.4	< 0.005	< 0.005	—	34.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	11.0	11.0	< 0.005	< 0.005	—	11.1
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	324	324	0.03	< 0.005	—	326

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
--------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	8.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.05	2.82	0.14	17.1	< 0.005	0.03	—	0.03	0.02	—	0.02	—	70.5	70.5	< 0.005	< 0.005	—	70.8
Total	3.05	12.3	0.14	17.1	< 0.005	0.03	—	0.03	0.02	—	0.02	—	70.5	70.5	< 0.005	< 0.005	—	70.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	8.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	9.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.54	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.38	0.35	0.02	2.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.00	8.00	< 0.005	< 0.005	—	8.02
Total	0.38	2.08	0.02	2.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.00	8.00	< 0.005	< 0.005	—	8.02

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	131	448	579	13.5	0.32	—	1,012
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	43.7	147	191	4.49	0.11	—	335
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	175	595	770	18.0	0.43	—	1,348
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	131	448	579	13.5	0.32	—	1,012
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	43.7	147	191	4.49	0.11	—	335
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	175	595	770	18.0	0.43	—	1,348
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	21.7	74.1	95.8	2.23	0.05	—	168
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	7.23	24.4	31.6	0.74	0.02	—	55.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	28.9	98.5	127	2.98	0.07	—	223

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	150	0.00	150	15.0	0.00	—	524
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	49.9	0.00	49.9	4.99	0.00	—	175
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	200	0.00	200	20.0	0.00	—	699

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	150	0.00	150	15.0	0.00	—	524
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	49.9	0.00	49.9	4.99	0.00	—	175
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	200	0.00	200	20.0	0.00	—	699
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	24.8	0.00	24.8	2.48	0.00	—	86.8
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	8.27	0.00	8.27	0.83	0.00	—	28.9

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	33.1	0.00	33.1	3.30	0.00	—	116

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,627	2,627
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,627	2,627
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,627	2,627
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2,627	2,627
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Refrigerated Warehouse Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	435	435
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	435	435

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	1.08	0.98	2.75	2.51	< 0.005	0.14	0.00	0.14	0.14	0.00	0.14	0.00	504	504	0.02	< 0.005	0.00	505
Total	1.08	0.98	2.75	2.51	< 0.005	0.14	0.00	0.14	0.14	0.00	0.14	0.00	504	504	0.02	< 0.005	0.00	505
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	1.08	0.98	2.75	2.51	< 0.005	0.14	0.00	0.14	0.14	0.00	0.14	0.00	504	504	0.02	< 0.005	0.00	505
Total	1.08	0.98	2.75	2.51	< 0.005	0.14	0.00	0.14	0.14	0.00	0.14	0.00	504	504	0.02	< 0.005	0.00	505
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	0.03	0.02	0.07	0.06	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	11.4	11.4	< 0.005	< 0.005	0.00	11.5
Total	0.03	0.02	0.07	0.06	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	11.4	11.4	< 0.005	< 0.005	0.00	11.5

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	330	27.9	11.2	88,074	5,170	437	175	1,379,753
User Defined Industrial	180	15.2	6.09	48,041	5,298	448	179	1,413,861
Refrigerated Warehouse-No Rail	136	11.5	4.60	36,297	2,131	180	72.1	568,623
User Defined Industrial	74.0	6.26	2.50	19,749	2,178	184	73.7	581,214
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

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)
0	0.00	591,345	197,115	17,410

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	1,774,644	346	0.0330	0.0040	0.00
User Defined Industrial	0.00	346	0.0330	0.0040	0.00
Refrigerated Warehouse-No Rail	218,954	346	0.0330	0.0040	0.00
User Defined Industrial	0.00	346	0.0330	0.0040	0.00
Parking Lot	70,212	346	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	68,374,150	1,262,649
User Defined Industrial	0.00	0.00
Refrigerated Warehouse-No Rail	22,791,538	0.00
User Defined Industrial	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	278	—
User Defined Industrial	0.00	—
Refrigerated Warehouse-No Rail	92.6	—
User Defined Industrial	0.00	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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Refrigerated Warehouse-No Rail	Cold storage	R-404A	3,922	7.50	7.50	7.50	25.0
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5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Fire Pump	Diesel	1.00	1.00	50.0	300	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
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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
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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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	16.9	annual days of extreme heat
Extreme Precipitation	5.05	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	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 $\frac{3}{4}$ 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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	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 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	74.2
AQ-PM	93.3
AQ-DPM	61.0
Drinking Water	98.6
Lead Risk Housing	21.4
Pesticides	16.7
Toxic Releases	63.9
Traffic	29.6
Effect Indicators	—
CleanUp Sites	71.6
Groundwater	53.1
Haz Waste Facilities/Generators	97.1
Impaired Water Bodies	23.9
Solid Waste	64.4
Sensitive Population	—
Asthma	49.9
Cardio-vascular	83.2

Low Birth Weights	13.5
Socioeconomic Factor Indicators	—
Education	58.7
Housing	8.50
Linguistic	52.0
Poverty	23.9
Unemployment	18.3

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	69.9088926
Employed	62.92826896
Median HI	80.39266008
Education	—
Bachelor's or higher	43.17977672
High school enrollment	100
Preschool enrollment	4.221737457
Transportation	—
Auto Access	90.86359553
Active commuting	1.039394328
Social	—
2-parent households	33.23495445
Voting	60.79815219
Neighborhood	—
Alcohol availability	89.41357629

Park access	47.83780316
Retail density	58.01360195
Supermarket access	15.39843449
Tree canopy	23.0334916
Housing	—
Homeownership	95.07250096
Housing habitability	88.68215065
Low-inc homeowner severe housing cost burden	39.98460157
Low-inc renter severe housing cost burden	86.39804953
Uncrowded housing	51.79006801
Health Outcomes	—
Insured adults	73.78416528
Arthritis	60.6
Asthma ER Admissions	42.8
High Blood Pressure	59.0
Cancer (excluding skin)	55.0
Asthma	61.7
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	71.2
Diagnosed Diabetes	58.5
Life Expectancy at Birth	24.1
Cognitively Disabled	60.3
Physically Disabled	69.8
Heart Attack ER Admissions	7.6
Mental Health Not Good	58.7
Chronic Kidney Disease	64.9
Obesity	52.9

Pedestrian Injuries	69.7
Physical Health Not Good	59.3
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	20.5
Current Smoker	62.2
No Leisure Time for Physical Activity	61.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	62.5
Elderly	73.1
English Speaking	54.6
Foreign-born	44.6
Outdoor Workers	28.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	68.0
Traffic Density	32.4
Traffic Access	49.6
Other Indices	—
Hardship	49.8
Other Decision Support	—
2016 Voting	74.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	59.0

Healthy Places Index Score for Project Location (b)	57.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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	Total Area is 17.52 acres
Construction: Construction Phases	Construction anticipated to end in 2027
Construction: Off-Road Equipment	Crawler Tractors used in lieu of Tractors/Loaders/Backhoes
Construction: Architectural Coatings	Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, & MCY). Truck Mix based on information in the Traffic analysis
Operations: Energy Use	No natural gas will be used as part of the Project

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APPENDIX 4.3:

CALEEMOD GENERAL PLAN OPERATIONAL EMISSIONS MODEL OUTPUTS

5088 Edison (General Plan Land Use) Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	5088 Edison (General Plan Land Use)
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.60
Precipitation (days)	9.20
Location	33.99915102972773, -117.6945989806811
County	San Bernardino-South Coast
City	Chino
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5218
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.28

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
Unrefrigerated Warehouse-No Rail	237	1000sqft	5.43	236,662	0.00	—	—	Passenger Cars for Warehouse

User Defined Industrial	237	User Defined Unit	0.00	0.00	0.00	—	—	Trucks for Warehouse
Other Asphalt Surfaces	6.65	Acre	6.65	0.00	0.00	—	—	—
General Heavy Industry	237	1000sqft	5.43	236,662	0.00	—	—	Passenger Cars for General Light Industrial
User Defined Industrial	237	User Defined Unit	0.00	0.00	0.00	—	—	Trucks for General Light Industrial

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations 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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	25.0	22.5	30.0	105	0.34	0.94	20.7	21.6	0.92	5.31	6.23	488	42,201	42,689	51.8	3.51	151	45,182
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	21.1	18.9	30.9	71.7	0.33	0.91	20.7	21.6	0.89	5.31	6.21	488	40,916	41,404	51.9	3.53	63.9	43,817
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	20.4	18.6	21.8	72.2	0.26	0.61	16.8	17.4	0.59	4.31	4.91	488	33,957	34,444	51.5	2.87	92.7	36,680
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.73	3.39	3.98	13.2	0.05	0.11	3.07	3.18	0.11	0.79	0.90	80.8	5,622	5,703	8.52	0.48	15.4	6,073

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.40	5.59	20.4	76.0	0.31	0.32	20.7	21.0	0.30	5.31	5.62	—	32,530	32,530	1.72	2.93	89.9	33,538
Area	15.0	14.8	0.17	20.6	< 0.005	0.04	—	0.04	0.03	—	0.03	—	84.7	84.7	< 0.005	< 0.005	—	85.0
Energy	0.43	0.22	3.93	3.31	0.02	0.30	—	0.30	0.30	—	0.30	—	7,872	7,872	0.72	0.05	—	7,904
Water	—	—	—	—	—	—	—	—	—	—	—	210	707	916	21.6	0.52	—	1,611
Waste	—	—	—	—	—	—	—	—	—	—	—	278	0.00	278	27.8	0.00	—	973
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	61.6	61.6
Stationary	2.16	1.97	5.50	5.02	0.01	0.29	0.00	0.29	0.29	0.00	0.29	0.00	1,007	1,007	0.04	0.01	0.00	1,011
Total	25.0	22.5	30.0	105	0.34	0.94	20.7	21.6	0.92	5.31	6.23	488	42,201	42,689	51.8	3.51	151	45,182
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.14	5.33	21.5	63.3	0.29	0.32	20.7	21.0	0.30	5.31	5.62	—	31,330	31,330	1.74	2.96	2.33	32,258
Area	11.4	11.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.43	0.22	3.93	3.31	0.02	0.30	—	0.30	0.30	—	0.30	—	7,872	7,872	0.72	0.05	—	7,904
Water	—	—	—	—	—	—	—	—	—	—	—	210	707	916	21.6	0.52	—	1,611
Waste	—	—	—	—	—	—	—	—	—	—	—	278	0.00	278	27.8	0.00	—	973
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	61.6	61.6
Stationary	2.16	1.97	5.50	5.02	0.01	0.29	0.00	0.29	0.29	0.00	0.29	0.00	1,007	1,007	0.04	0.01	0.00	1,011
Total	21.1	18.9	30.9	71.7	0.33	0.91	20.7	21.6	0.89	5.31	6.21	488	40,916	41,404	51.9	3.53	63.9	43,817
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.82	4.40	17.0	54.1	0.24	0.25	16.8	17.1	0.24	4.31	4.55	—	25,182	25,182	1.37	2.31	31.1	25,935

Area	13.9	13.7	0.12	14.1	< 0.005	0.03	—	0.03	0.02	—	0.02	—	58.0	58.0	< 0.005	< 0.005	—	58.2
Energy	0.43	0.22	3.93	3.31	0.02	0.30	—	0.30	0.30	—	0.30	—	7,872	7,872	0.72	0.05	—	7,904
Water	—	—	—	—	—	—	—	—	—	—	—	210	707	916	21.6	0.52	—	1,611
Waste	—	—	—	—	—	—	—	—	—	—	—	278	0.00	278	27.8	0.00	—	973
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	61.6	61.6
Stationary	0.30	0.27	0.75	0.69	< 0.005	0.04	0.00	0.04	0.04	0.00	0.04	0.00	138	138	0.01	< 0.005	0.00	138
Total	20.4	18.6	21.8	72.2	0.26	0.61	16.8	17.4	0.59	4.31	4.91	488	33,957	34,444	51.5	2.87	92.7	36,680
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.06	0.80	3.10	9.88	0.04	0.05	3.07	3.11	0.04	0.79	0.83	—	4,169	4,169	0.23	0.38	5.15	4,294
Area	2.53	2.50	0.02	2.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.60	9.60	< 0.005	< 0.005	—	9.63
Energy	0.08	0.04	0.72	0.60	< 0.005	0.05	—	0.05	0.05	—	0.05	—	1,303	1,303	0.12	0.01	—	1,309
Water	—	—	—	—	—	—	—	—	—	—	—	34.7	117	152	3.57	0.09	—	267
Waste	—	—	—	—	—	—	—	—	—	—	—	46.0	0.00	46.0	4.60	0.00	—	161
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.2	10.2
Stationary	0.05	0.05	0.14	0.13	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	22.8	22.8	< 0.005	< 0.005	0.00	22.9
Total	3.73	3.39	3.98	13.2	0.05	0.11	3.07	3.18	0.11	0.79	0.90	80.8	5,622	5,703	8.52	0.48	15.4	6,073

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

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

Unrefrig Warehouse-No Rail	1.09	0.99	0.58	12.6	0.03	0.01	2.88	2.90	0.01	0.73	0.74	—	2,898	2,898	0.09	0.06	8.57	2,928
User Defined Industrial	1.68	0.38	17.3	9.91	0.16	0.26	5.55	5.81	0.25	1.49	1.74	—	17,316	17,316	1.26	2.60	44.9	18,168
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Heavy Industry	4.63	4.22	2.48	53.5	0.12	0.05	12.3	12.3	0.05	3.09	3.14	—	12,316	12,316	0.37	0.27	36.4	12,442
Total	7.40	5.59	20.4	76.0	0.31	0.32	20.7	21.0	0.30	5.31	5.62	—	32,530	32,530	1.72	2.93	89.9	33,538
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.04	0.95	0.65	10.2	0.03	0.01	2.88	2.90	0.01	0.73	0.74	—	2,669	2,669	0.09	0.07	0.22	2,692
User Defined Industrial	1.67	0.37	18.1	9.93	0.16	0.26	5.55	5.81	0.25	1.49	1.74	—	17,320	17,320	1.26	2.61	1.16	18,129
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Heavy Industry	4.43	4.02	2.76	43.2	0.11	0.05	12.3	12.3	0.05	3.09	3.14	—	11,341	11,341	0.39	0.29	0.94	11,437
Total	7.14	5.33	21.5	63.3	0.29	0.32	20.7	21.0	0.30	5.31	5.62	—	31,330	31,330	1.74	2.96	2.33	32,258
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.14	0.13	0.09	1.42	< 0.005	< 0.005	0.38	0.38	< 0.005	0.10	0.10	—	327	327	0.01	0.01	0.45	331

User Defined Industrial	0.23	0.05	2.56	1.39	0.02	0.04	0.78	0.81	0.03	0.21	0.24	—	2,207	2,207	0.16	0.33	2.47	2,312
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Heavy Industry	0.69	0.63	0.45	7.07	0.02	0.01	1.91	1.92	0.01	0.48	0.49	—	1,635	1,635	0.06	0.04	2.24	1,651
Total	1.06	0.80	3.10	9.88	0.04	0.05	3.07	3.11	0.04	0.79	0.83	—	4,169	4,169	0.23	0.38	5.15	4,294

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,037	1,037	0.10	0.01	—	1,043
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	2,141	2,141	0.20	0.02	—	2,153
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,178	3,178	0.30	0.04	—	3,196

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,037	1,037	0.10	0.01	—	1,043
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	2,141	2,141	0.20	0.02	—	2,153
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,178	3,178	0.30	0.04	—	3,196
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	172	172	0.02	< 0.005	—	173
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	354	354	0.03	< 0.005	—	357
Total	—	—	—	—	—	—	—	—	—	—	—	—	526	526	0.05	0.01	—	529

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.13	0.07	1.21	1.02	0.01	0.09	—	0.09	0.09	—	0.09	—	1,442	1,442	0.13	< 0.005	—	1,446
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Heavy Industry	0.30	0.15	2.73	2.29	0.02	0.21	—	0.21	0.21	—	0.21	—	3,253	3,253	0.29	0.01	—	3,262
Total	0.43	0.22	3.93	3.31	0.02	0.30	—	0.30	0.30	—	0.30	—	4,695	4,695	0.42	0.01	—	4,708
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.13	0.07	1.21	1.02	0.01	0.09	—	0.09	0.09	—	0.09	—	1,442	1,442	0.13	< 0.005	—	1,446
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Heavy Industry	0.30	0.15	2.73	2.29	0.02	0.21	—	0.21	0.21	—	0.21	—	3,253	3,253	0.29	0.01	—	3,262

Total	0.43	0.22	3.93	3.31	0.02	0.30	—	0.30	0.30	—	0.30	—	4,695	4,695	0.42	0.01	—	4,708
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig- erated Wareho- use-No Rail	0.02	0.01	0.22	0.19	< 0.005	0.02	—	0.02	0.02	—	0.02	—	239	239	0.02	< 0.005	—	239
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Heavy Industry	0.05	0.03	0.50	0.42	< 0.005	0.04	—	0.04	0.04	—	0.04	—	539	539	0.05	< 0.005	—	540
Total	0.08	0.04	0.72	0.60	< 0.005	0.05	—	0.05	0.05	—	0.05	—	777	777	0.07	< 0.005	—	779

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	10.2	10.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect- ural Coatings	1.22	1.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape	3.66	3.38	0.17	20.6	< 0.005	0.04	—	0.04	0.03	—	0.03	—	84.7	84.7	< 0.005	< 0.005	—	85.0
Total	15.0	14.8	0.17	20.6	< 0.005	0.04	—	0.04	0.03	—	0.03	—	84.7	84.7	< 0.005	< 0.005	—	85.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	10.2	10.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	1.22	1.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	11.4	11.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.85	1.85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.22	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.46	0.42	0.02	2.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.60	9.60	< 0.005	< 0.005	—	9.63
Total	2.53	2.50	0.02	2.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.60	9.60	< 0.005	< 0.005	—	9.63

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	105	353	458	10.8	0.26	—	805
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	105	353	458	10.8	0.26	—	805
Total	—	—	—	—	—	—	—	—	—	—	—	210	707	916	21.6	0.52	—	1,611
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	105	353	458	10.8	0.26	—	805
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	105	353	458	10.8	0.26	—	805
Total	—	—	—	—	—	—	—	—	—	—	—	210	707	916	21.6	0.52	—	1,611

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	17.4	58.5	75.9	1.79	0.04	—	133
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	17.4	58.5	75.9	1.79	0.04	—	133
Total	—	—	—	—	—	—	—	—	—	—	—	34.7	117	152	3.57	0.09	—	267

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	120	0.00	120	12.0	0.00	—	419
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	158	0.00	158	15.8	0.00	—	553
Total	—	—	—	—	—	—	—	—	—	—	—	278	0.00	278	27.8	0.00	—	973
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	120	0.00	120	12.0	0.00	—	419
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	158	0.00	158	15.8	0.00	—	553
Total	—	—	—	—	—	—	—	—	—	—	—	278	0.00	278	27.8	0.00	—	973
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	19.8	0.00	19.8	1.98	0.00	—	69.4
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	26.2	0.00	26.2	2.62	0.00	—	91.6
Total	—	—	—	—	—	—	—	—	—	—	—	46.0	0.00	46.0	4.60	0.00	—	161

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	61.6	61.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	61.6	61.6
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	61.6	61.6
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	61.6	61.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.2	10.2
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.2	10.2

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipm ent Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	2.16	1.97	5.50	5.02	0.01	0.29	0.00	0.29	0.29	0.00	0.29	0.00	1,007	1,007	0.04	0.01	0.00	1,011
Total	2.16	1.97	5.50	5.02	0.01	0.29	0.00	0.29	0.29	0.00	0.29	0.00	1,007	1,007	0.04	0.01	0.00	1,011
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fire Pump	2.16	1.97	5.50	5.02	0.01	0.29	0.00	0.29	0.29	0.00	0.29	0.00	1,007	1,007	0.04	0.01	0.00	1,011
Total	2.16	1.97	5.50	5.02	0.01	0.29	0.00	0.29	0.29	0.00	0.29	0.00	1,007	1,007	0.04	0.01	0.00	1,011
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	0.05	0.05	0.14	0.13	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	22.8	22.8	< 0.005	< 0.005	0.00	22.9
Total	0.05	0.05	0.14	0.13	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	22.8	22.8	< 0.005	< 0.005	0.00	22.9

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

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)

Vegetati on	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	264	22.3	8.95	70,459	4,136	350	140	1,103,803
User Defined Industrial	144	12.2	4.88	38,435	4,385	371	148	1,170,342
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Heavy Industry	1,094	155	1,122	351,784	17,138	2,425	17,574	5,511,012
User Defined Industrial	60.0	8.50	61.5	19,293	1,839	260	1,887	591,515

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

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)
0	0.00	709,986	236,662	17,380

5.10.3. Landscape Equipment

Season	Unit	Value
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Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	1,093,072	346	0.0330	0.0040	4,499,105
User Defined Industrial	0.00	346	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00
General Heavy Industry	2,257,217	346	0.0330	0.0040	10,149,513
User Defined Industrial	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	54,728,088	0.00
User Defined Industrial	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
General Heavy Industry	54,728,088	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	222	—
User Defined Industrial	0.00	—
Other Asphalt Surfaces	0.00	—
General Heavy Industry	293	—
User Defined Industrial	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Served
General Heavy Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Fire Pump	Diesel	2.00	1.00	50.0	300	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
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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
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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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	16.9	annual days of extreme heat
Extreme Precipitation	5.05	annual days with precipitation above 20 mm

Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	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 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	74.2
AQ-PM	93.3
AQ-DPM	61.0
Drinking Water	98.6
Lead Risk Housing	21.4
Pesticides	16.7
Toxic Releases	63.9
Traffic	29.6
Effect Indicators	—

CleanUp Sites	71.6
Groundwater	53.1
Haz Waste Facilities/Generators	97.1
Impaired Water Bodies	23.9
Solid Waste	64.4
Sensitive Population	—
Asthma	49.9
Cardio-vascular	83.2
Low Birth Weights	13.5
Socioeconomic Factor Indicators	—
Education	58.7
Housing	8.50
Linguistic	52.0
Poverty	23.9
Unemployment	18.3

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	69.9088926
Employed	62.92826896
Median HI	80.39266008
Education	—
Bachelor's or higher	43.17977672
High school enrollment	100
Preschool enrollment	4.221737457
Transportation	—

Auto Access	90.86359553
Active commuting	1.039394328
Social	—
2-parent households	33.23495445
Voting	60.79815219
Neighborhood	—
Alcohol availability	89.41357629
Park access	47.83780316
Retail density	58.01360195
Supermarket access	15.39843449
Tree canopy	23.0334916
Housing	—
Homeownership	95.07250096
Housing habitability	88.68215065
Low-inc homeowner severe housing cost burden	39.98460157
Low-inc renter severe housing cost burden	86.39804953
Uncrowded housing	51.79006801
Health Outcomes	—
Insured adults	73.78416528
Arthritis	60.6
Asthma ER Admissions	42.8
High Blood Pressure	59.0
Cancer (excluding skin)	55.0
Asthma	61.7
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	71.2
Diagnosed Diabetes	58.5
Life Expectancy at Birth	24.1

Cognitively Disabled	60.3
Physically Disabled	69.8
Heart Attack ER Admissions	7.6
Mental Health Not Good	58.7
Chronic Kidney Disease	64.9
Obesity	52.9
Pedestrian Injuries	69.7
Physical Health Not Good	59.3
Stroke	80.6
Health Risk Behaviors	—
Binge Drinking	20.5
Current Smoker	62.2
No Leisure Time for Physical Activity	61.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	62.5
Elderly	73.1
English Speaking	54.6
Foreign-born	44.6
Outdoor Workers	28.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	68.0
Traffic Density	32.4
Traffic Access	49.6
Other Indices	—
Hardship	49.8
Other Decision Support	—

2016 Voting	74.9
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7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	59.0
Healthy Places Index Score for Project Location (b)	57.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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	Total Area is 17.52 acres
Construction: Construction Phases	Construction anticipated to end in 2027
Construction: Off-Road Equipment	Crawler Tractors used in lieu of Tractors/Loaders/Backhoes
Construction: Architectural Coatings	Rule 1113
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic analysis

Operations: Fleet Mix	Passenger Car Mix estimated based on the CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, & MCY). Truck Mix based on information in the Traffic analysis
Operations: Energy Use	No natural gas will be used as part of the Project

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