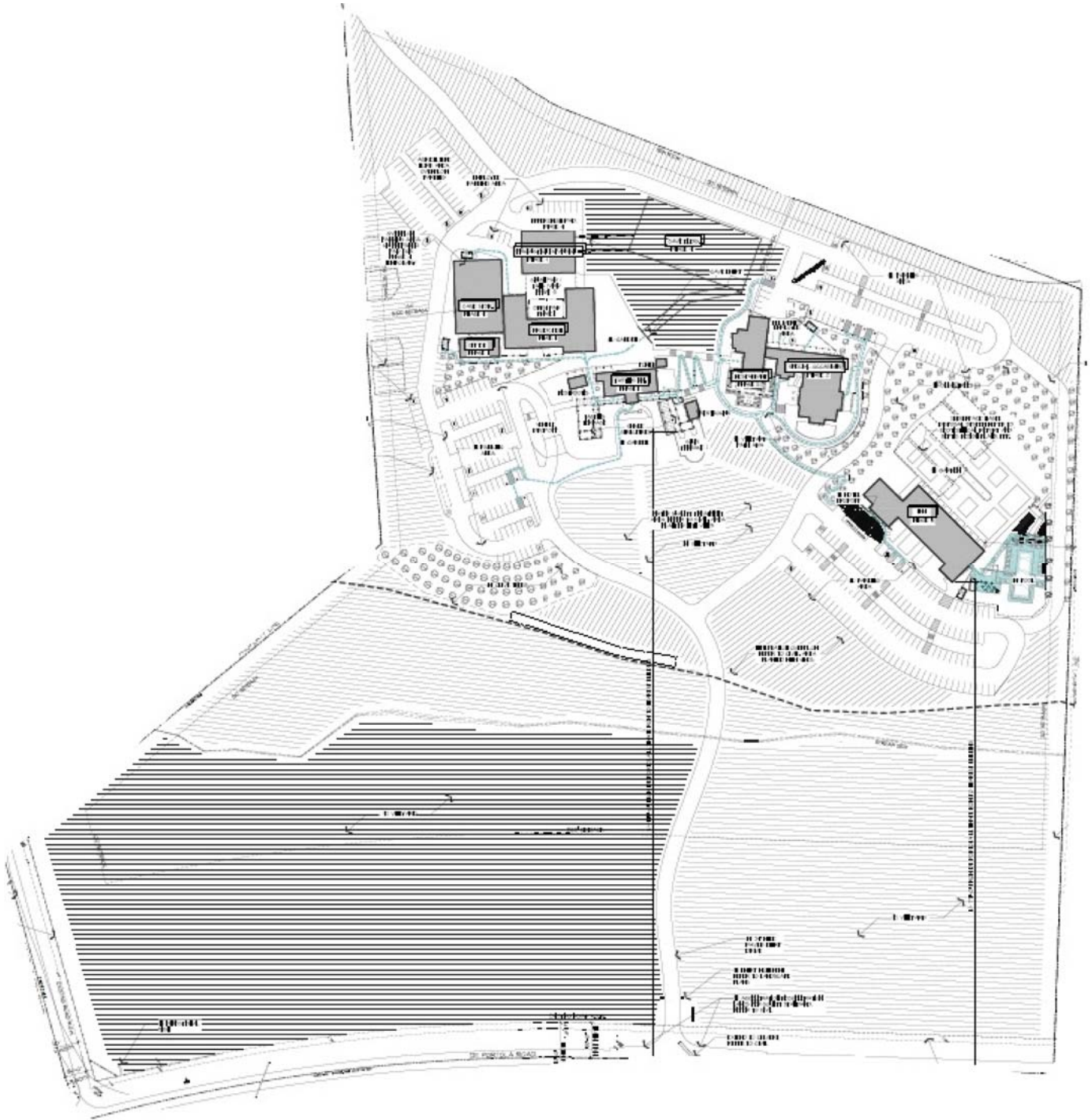


MONARCH WINERY AIR QUALITY AND GHG IMPACT STUDY COUNTY OF RIVERSIDE



**MONARCH WINERY
AIR QUALITY AND GREENHOUSE GAS IMPACT STUDY
County of Riverside, California**

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1.0 Introduction

The purpose of this air quality and greenhouse gas (GHG) analysis is to determine whether the estimated criteria air pollutants and greenhouse gas emissions generated from the construction and operation of the proposed Monarch Winery (project) would cause significant impacts to air resources.

This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows the California Air Resources Board (CARB), South Coast Air Quality Management District (SCAQMD), and Riverside County recommendations for quantification of emissions and evaluation of potential impacts.

1.1 Site Location

The proposed project is located at the north corner of De Portola Road and Monte De Oro Road, in unincorporated Riverside County. The project site is bounded by agricultural land to the north, De Portola Road to the south, Monte De Oro Road to the southwest, a winery to the east and residential uses to the west.

Existing land uses surrounding the proposed project site include; Residential Agricultural (R-A) uses to the north and south, Wine County-Winery to the east and Rural Residential uses to the west.

The project site is located within the South Coast Air Basin (SCAB), the SCAQMD Temecula Valley Area Air Monitoring Area-26.

The project location map is provided in Exhibit A.

1.2 Project Description

The project would consist of constructing and operating a new winery with production buildings, tasting room, restaurant and a 10 room hotel on a 44.6 gross acres (42.27 net developable acres). Approximately 33 acres of the site will be used for agricultural production (vineyards and olive trees).

The project site is currently vacant and is zoned for WC-W (Wine Country-Winery) in the Riverside County Zoning Ordinance and is located within the Temecula Wine Country Community Plan and the Southwest Area Plan of the Riverside County General Plan.

The site plan used for this analysis, provided by WALTER R. ALLEN, AIA, is illustrated in Exhibit B. Table 1 summarizes the proposed project land uses.

**Table 1
Land Use Summary**

Phase	Land Use	Quantity	Metric ¹
Phase 1	Tasting Room	4.934	TSF
	Production Building	9.554	TSF
	Office/Storage	1.805	TSF
Phase 2	Special Occasions Facility	8.390	TSF
Phase 3	Restaurant	4.746	TSF
Phase 4	Cave Building	17.400	TSF
	Production Building	6.000	TSF
	Case Storage	8.750	TSF
Phase 5	Hotel	10	Room
Vineyard		1,444.032	TSF
Parking Lot		374	Spaces

¹TSF = Thousand Square Feet

The project is proposed to be built-out over several phases, however, for purposes of this analysis, and to provide a worst-case estimate of impacts, the entire project development has been analyzed in one complete phase. Construction of the project is estimated to begin in the year 2020 and expected to last approximately 44 months. Construction activities are expected to consist of site preparation, grading, building construction, paving, and architectural coating. The project is expected to be fully operational by the year 2023.

1.3 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24-hours or longer, such as residences, hospitals, and schools (etc), as described in the Localized Significance Threshold Methodology (SCAQMD 2008a, page 3-2).

The nearest sensitive land uses are considered the residential and equestrian uses located approximately 110 feet to the south of the property line, residential uses located approximately 20 feet to the west of the property line, and the Frangipani Estate Winery located approximately 30 feet to the east of the property line.

1.4 Summary of Analysis Results

Tables 2 and 3 provide a summary of the Air Quality and Greenhouse Gas impact analysis results, per the 2019 CEQA Statute and Guidelines, Appendix G, Environmental Checklist Form.

**Table 2
CEQA Air Quality Impact Criteria**

Air Quality Impact Criteria	Potentially Significant	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Conflict with, or obstruct implementation of, the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

**Table 3
CEQA GHG Impact Criteria**

GHG Impact Criteria	Potentially Significant	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
<i>Would the project:</i>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?		X		
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?		X		

1.5 Recommended Mitigation Measures

The following recommended mitigation measures are provided and should be implemented to ensure the project impacts are reduced to less than significant.

- MM-1.** Participate in the Riverside County Climate Action Plan (CAP) greenhouse gas reduction strategies by implementing building design, site-area and operational enhancements that garner 100 points or greater through improvements listed in the CAP Screening Tables. See Appendix C.

1.6 Recommended Project Design Features

The following recommended project design features include standard rules and requirements, best practices and recognized design features for reducing air quality and GHG emissions. Design features are assumed to be part of the conditions of approval for the project and integrated into the design.

Construction Design Features:

- DF-1.** The project must follow the standard SCAQMD rules and requirements with regards to fugitive dust control, which includes, but are not limited to the following:
1. All active construction areas shall be watered two (2) times daily.
 2. Speed on unpaved roads shall be reduced to less than 15 mph.
 3. Any visible dirt deposition on any public roadway shall be swept or washed at the site access points within 30 minutes.
 4. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily.
 5. All operations on any unpaved surface shall be suspended if winds exceed 15 mph.
 6. Access points shall be washed or swept daily.
 7. Construction sites shall be sandbagged for erosion control.
 8. Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
 9. Cover all trucks hauling dirt, sand, soil, or other loose materials, and maintain at least 2 feet of freeboard space in accordance with the requirements of California Vehicle Code (CVC) section 23114.

10. Pave or gravel construction access roads at least 100 feet onto the site from the main road and use gravel aprons at truck exits.
11. Replace the ground cover of disturbed areas as quickly possible.
12. A fugitive dust control plan should be prepared and submitted to SCAQMD prior to the start of construction.

DF-2. Prepare and implement a Construction Management Plan which will include Best Available Control Measures to be submitted to the County of Riverside.

DF-3. Construction equipment shall be maintained in proper tune.

DF-4. All construction vehicles shall be prohibited from excessive idling. Excessive idling is defined as five (5) minutes or longer.

DF-5. Minimize the simultaneous operation of multiple construction equipment units.

DF-6. The use of heavy construction equipment and earthmoving activity shall be suspended during Air Alerts when the Air Quality Index reaches the "Unhealthy" level.

DF-7. Utilize low emission "clean diesel" equipment with new or modified engines that include diesel oxidation catalysts, diesel particulate filters or Moyer Program retrofits that meet CARB best available control technology.

DF-8. Establish an electricity supply to the construction site and use electric powered equipment instead of diesel-powered equipment or generators, where feasible.

DF-9. Establish staging areas for the construction equipment that are as distant as possible from adjacent sensitive receptors (residential land uses).

DF-10. Use haul trucks with on-road engines instead of off-road engines for on-site hauling.

DF-11. Utilize zero VOC and low VOC paints and solvents, wherever possible.

Operational Design Features:

DF-12. Comply with the mandatory requirements of Title 24 part 11 of the California Building Standards Code (CALGreen) and the Title 24 Part 6 Building Efficiency Standards.

- DF-13.** Implement water conservation strategies, including low flow fixtures and toilets, water efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.
- DF-14.** Use electric landscaping equipment, such as lawn mowers and leaf blowers.
- DF-15.** Comply with the mandatory requirements of CalRecycle's commercial recycling program and implement zero waste strategies.

2.0 Air Quality Setting

The Federal Clean Air Act (§ 7602) defines an air pollution as any agent or combination of such agents, including any physical, chemical, biological, or radioactive substance which is emitted into or otherwise enters the ambient air. Household combustion devices, motor vehicles, industrial facilities and forest fires are common sources of air pollution. Air pollution can cause disease, allergies and death. It affects soil, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate. It can also cause damage to and deterioration of property, present hazards to transportation, and negatively impact the economy.

This section provides background information on criteria air pollutants, the applicable federal, state and local regulations concerning air pollution, and the existing physical setting of the project within the context of local air quality.

2.1 Description of Air Pollutants¹.

The following section describes the air pollutants of concern related to the project. Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health. The following descriptions of criteria air pollutants have been provided by the SCAQMD.

- **Carbon Monoxide (CO)** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, and competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs in the body. The ambient air quality standard for carbon monoxide is intended to protect persons whose medical condition already compromises their circulatory system's ability to deliver oxygen. These medical conditions include certain heart ailments, chronic lung diseases, and anemia. Persons with these conditions have reduced exercise capacity even when exposed to relatively low levels of CO. Fetuses are at risk because their blood has an even greater affinity to bind with CO. Smokers are also at risk from ambient CO levels because smoking

¹ SCAQMD. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning (May 6, 2005)

increases the background level of CO in their blood. The South Coast basin has recently achieved attainment status for carbon monoxide by both USEPA and CARB.

- **Nitrogen Dioxide (NO₂)** is a byproduct of fuel combustion. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts quickly to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO₂ is only potentially irritating. There is some indication of a relationship between NO₂ and chronic pulmonary fibrosis. Some increase in bronchitis in young children has also been observed at concentrations below 0.3 parts per million (ppm). NO₂ absorbs blue light which results in a brownish red cast to the atmosphere and reduced visibility. Although NO₂ concentrations have not exceeded national standards since 1991 and the state hourly standard since 1993, NO_x emissions remain of concern because of their contribution to the formation of O₃ and particulate matter.
- **Ozone (O₃)** is one of a number of substances called photochemical oxidants that are formed when volatile organic compounds (VOC) and NO_x react in the presence of ultraviolet sunlight. O₃ concentrations in the South Coast basin are typically among the highest in the nation, and the damaging effects of photochemical smog, which is a popular name for a number of oxidants in combination, are generally related to the concentrations of O₃. Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the subgroups most susceptible to O₃ effects. Short-term exposures (lasting for a few hours) to O₃ at levels typically observed in southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. In recent years, a correlation between elevated ambient O₃ levels and increases in daily hospital admission rates, as well as mortality, has also been reported. The South Coast Air Basin is designated by the USEPA as an extreme non-attainment area for ozone. Although O₃ concentrations have declined substantially since the early 1990s, the South Coast basin continues to have peak O₃ levels that exceed both state and federal standards.
- **Fine Particulate Matter (PM₁₀)** consists of extremely small suspended particles or droplets 10 microns or smaller in diameter that can lodge in the lungs, contributing to respiratory problems. PM₁₀ arises from such sources as re-entrained road dust, diesel soot, combustion products, tire and brake abrasion, construction operations, and fires. It is also formed in the atmosphere from NO_x and SO₂ reactions with ammonia. PM₁₀ scatters light and significantly reduces visibility. Inhalable particulates

pose a serious health hazard, alone or in combination with other pollutants. More than half of the smallest particles inhaled will be deposited in the lungs and can cause permanent lung damage. Inhalable particulates can also have a damaging effect on health by interfering with the body's mechanism for clearing the respiratory tract or by acting as a carrier of an absorbed toxic substance. The South Coast basin has recently achieved federal attainment status for PM₁₀, but is non-attainment based on state requirements.

- **Ultra-Fine Particulate Matter (PM_{2.5})** is defined as particulate matter with a diameter less than 2.5 microns and is a subset of PM₁₀. PM_{2.5} consists mostly of products from the reaction of NO_x and SO₂ with ammonia, secondary organics, finer dust particles, and the combustion of fuels, including diesel soot. PM_{2.5} can cause exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease, declines in pulmonary function growth in children, and increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in PM_{2.5} levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma. The South Coast basin is designated as non-attainment for PM_{2.5} by both federal and state standards.
- **Sulfur dioxide (SO₂)** is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Health effects include acute respiratory symptoms and difficulty in breathing for children. Individuals with asthma may experience constriction of airways with exposure to SO₂. Though SO₂ concentrations have been reduced to levels well below state and federal standards, further reductions in SO₂ emissions are needed because SO₂ is a precursor to sulfate and PM₁₀. The South Coast basin is considered a SO₂ attainment area by USEPA and CARB.
- **Lead (Pb)** is a toxic heavy metal that can be emitted into the air through some industrial processes, burning of leaded gasoline and past use of lead-based consumer products. Lead is a neurotoxin that accumulates in soft tissues and bones, damages the nervous system, and causes blood disorders. It is particularly problematic in children, in that permanent brain damage may result, even if blood levels are promptly normalized with treatment. Concentrations of lead once exceeded the state and federal air quality standards by a wide margin, but as a result of the removal of lead from motor vehicle gasoline, ambient air quality standards for lead have not been exceeded since 1982. Though special monitoring sites immediately downwind of lead sources recorded localized violations of the state standard in 1994, no violations have been recorded since. Consequently, the South Coast basin is designated as an attainment area for lead by both the USEPA and CARB. This report

does not analyze lead emissions from the project, as it is not expected to emit lead in any significant measurable quantity.

- **Volatile Organic Compounds (VOC)**, although not actually a criteria air pollutant, VOCs are regulated by the SCAQMD because they cause chemical reactions which contribute to the formation of ozone. VOCs are also transformed into organic aerosols in the atmosphere, contributing to higher PM₁₀ and lower visibility levels. Sources of VOCs include combustion engines, and evaporative emissions associated with fuel, paints and solvents, asphalt paving, and the use of household consumer products such as aerosols. Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations of VOC. Some hydrocarbon components classified as VOC emissions are hazardous air pollutants. Benzene, for example, is a hydrocarbon component of VOC emissions that are known to be a human carcinogen. The term reactive organic gases (ROG) are often used interchangeably with VOC.
- **Toxic Air Contaminants (TACs)** are defined as air pollutants which may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health, and for which there is no concentration that does not present some risk. This contrasts with the criteria pollutants, in that there is no threshold level for TAC exposure below which adverse health impacts are not expected to occur. The majority of the estimated health risk from TACs can be attributed to a relatively few compounds, the most common being diesel particulate matter (DPM). In addition to DPM, benzene and 1,3-butadiene are also significant contributors to overall ambient public health risk in California.

2.2 Federal and State Ambient Air Quality Standards

The Federal Clean Air Act, which was last amended in 1990, requires the EPA to set National Ambient Air Quality Standards (NAAQS) for criteria pollutants considered harmful to public health and the environment. The State of California has also established additional and more stringent California Ambient Air Quality Standards (CAAQS) in addition to the seven criteria pollutants designated by the federal government.

AAQS are designed to protect the health and welfare of the populace with a reasonable margin of safety. The standards are divided into two categories, primary standards and secondary standards. Primary standards are implemented to provide protection for the "sensitive" populations such as those with asthma, or the children and elderly. Secondary standards are to provide protection against visible pollution as well as damage to the surrounding environment, including animals, crops, and buildings.

Table 4 shows the Federal and State Ambient Air Quality Standards.

**Table 4
Federal and State Ambient Air Quality Standards (AAQS)¹**

Air Pollutant	Averaging Time ²	Federal Standard (NAAQS) ²	California Standard (CAAQS) ²
Ozone	1 Hour	--	0.09 ppm
	8 Hour	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	1 Hour	35 ppm	20 ppm
	8 Hour	9 ppm	9 ppm
Nitrogen Dioxide (NO ₂)	1 Hour	0.100 ppm	0.18 ppm
	Annual	0.053 ppm	0.030 ppm
Sulfur Dioxide (SO ₂)	1 Hour	0.075 ppm	0.25 ppm
	3 Hour	0.5 ppm ³	--
	24 Hour	--	0.04 ppm
Particulate Matter (PM ₁₀)	24 Hour	150 µg/m ³	50 µg/m ³
	Mean	--	20 µg/m ³
Particulate Matter (PM _{2.5})	24 Hour	35 µg/m ³	--
	Annual	12 µg/m ³	12 µg/m ³
Lead	30-day	--	1.5 µg/m
	Quarter	1.5 µg/m	--
	3-month average	0.15 µg/m	--
Visibility reducing particles	8 Hour	--	0.23/km extinction coefficient. (10-mile visibility standard)
Sulfates	24 Hour	--	25 µg/m
Vinyl chloride	24 Hour	--	0.01 ppm
Hydrogen sulfide	24 Hour	--	0.03 ppm

¹ Source: USEPA: <https://www.epa.gov/criteria-air-pollutants/naaqs-table> and

CARB: <https://www2.arb.ca.gov/resources/california-ambient-air-quality-standards>

² ppm = parts per million of air, by volume; µg/m³ = micrograms per cubic meter; Annual = Annual Arithmetic Mean; 30-day = 30-day average; Quarter = Calendar quarter.

³ Secondary standard

Several pollutants listed in Table 4 are not addressed in this analysis. Lead is not included because the project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The project is not expected to generate or be exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity.

2.3 Attainment Status

The Clean Air Act requires states to prepare a State Implementation Plan (SIP) to ensure air quality meets the NAAQS. The California Air Resources Board (CARB) provides designations of attainment for air basins where AAQS are either met or exceeded. If the AAQS are met, the area is designated as being in "attainment", if the air pollutant concentrations exceed the AAQS, then the area is designated as being "nonattainment". If there is inadequate or inconclusive data to make a definitive attainment designation, the area is considered "unclassified."

National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or 'form' of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM_{2.5} standard is met if the three-year average of the annual average PM_{2.5} concentration is less than or equal to the standard.

When a state submits a request to the EPA to re-designate a nonattainment area to attainment, the Clean Air Act (CAA) section 175A(a) requires that the state (or states, if the area is a multi-state area) submit a maintenance plan ensuring the area can maintain the air quality standard for which the area is to be re-designated for at least 10 years following the effective date of re-designation.

Table 5 lists the attainment status for the criteria pollutants in the South Coast Air Basin (SCAB).

Table 5
South Coast Air Basin Attainment Status¹

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment (Extreme) ²
Carbon monoxide	Attainment	Attainment (Maintenance)
Nitrogen dioxide	Attainment	Attainment (Maintenance)
PM ₁₀	Nonattainment	Attainment (Maintenance)
PM _{2.5}	Nonattainment	Nonattainment
Lead	Attainment	Nonattainment (Partial) ³

¹ Source: California Air Resources Board. <http://www.arb.ca.gov/desig/adm/adm.htm>

² 8-Hour Ozone.

³ Partial Nonattainment designation – Los Angeles County portion of Basin only.

2.4 South Coast Air Quality Management District (SCAQMD)

The agency responsible for air pollution control for the South Coast Air Basin (SCAB) is the South Coast Air Quality Management District (SCAQMD). SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the SCAB. SCAQMD, in coordination with the Southern California Association of Governments, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the SCAB. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the federal and/or California ambient air quality standards. The term nonattainment area is used to refer to an air SCAB where one or more ambient air quality standards are exceeded.

Every three (3) years the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon. The latest version is the 2016 AQMP. The 2016 AQMP is a regional blueprint for achieving the federal air quality standards and healthful air. While air quality has dramatically improved over the years, the SCAB still exceeds federal public health standards for both ozone and particulate matter (PM) and experiences some of the worst air pollution in the nation. The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the Plan is not approved or if the NAAQS are not met on time.

The most significant air quality challenge in the SCAB is to reduce nitrogen oxide (NOx) emissions sufficiently to meet the upcoming ozone standard deadlines. Based on the inventory and modeling results, 522 tons per day (tpd) of total SCAB NOx 2012 emissions are projected to drop to 255 tpd and 214 tpd in the 8-hour ozone attainment years of 2023 and 2031 respectively, due to continued implementation of already adopted regulatory actions (“baseline emissions”). The analysis suggests that total SCAB emissions of NOx must be reduced to approximately 141 tpd in 2023 and 96 tpd in 2031 to attain the 8-hour ozone standards. This represents an additional 45 percent reduction in NOx in 2023, and an additional 55 percent NOx reduction beyond 2031 levels.²

The SCAQMD establishes a program of rules and regulations to obtain attainment of the state and federal standards in conjunction with the AQMP. Several of the rules and regulations that may be applicable to this project include, but are not limited to, the following:

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

SCAQMD Rule 445 restricts wood burning devices from being installed into any new development and is intended to reduce the emissions of particulate matter for wood burning devices.

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

² <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf>

SCAQMD Rule 1143 governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

SCAQMD Rule 1186 limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency or special district such as water, air, sanitation, transit, or school district.

SCAQMD Rule 1303 governs the permitting of re-located or new major emission sources, requiring Best Available Control Measures and setting significance limits for PM10 among other pollutants.

SCAQMD Rule 2202 On-Road Motor Vehicle Mitigation Options, is to provide employers with a menu of options to reduce mobile source emissions generated from employee commutes, to comply with federal and state Clean Air Act requirements, Health & Safety Code Section 40458, and Section 182(d)(1)(B) of the federal Clean Air Act. It applies to any employer who employs 250 or more employees on a full or part-time basis at a worksite for a consecutive six-month period calculated as a monthly average.

2.5 South Coast Air Basin

The project is located within the South Coast Air SCAB (SCAB). To the west of the SCAB is the Pacific Ocean. To the north and east are the San Gabriel, San Bernardino, and San Jacinto mountains, while the southern limit of the SCAB is the San Diego County line. The SCAB consists of Orange County, all of Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County.

The local dominant wind blows predominantly from the south-southwest with relatively low velocities. The annual average annual wind speed is about 10 miles per hour. Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion limit the vertical dispersion of air pollutants throughout the SCAB.

The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean.

If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The annual average temperature varies little throughout much of the SCAB, ranging from the low to middle 60s (°F). With more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal regions and Los Angeles metropolitan area are transported inland until reaching the mountains, where the combination of mountains and temperature inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas of the SCAB. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows.

Temperature inversions are an important feature that limits the vertical depth through which pollution can be mixed. During the summer, coastal areas are characterized by a sharp discontinuity between the cool marine air at the surface and the warm, sinking air aloft within the high-pressure cell over the ocean to the west. This marine/subsidence inversion allows for good local mixing, but acts like a giant lid over the SCAB. The air remains stagnant, as the average wind speed in downtown Los Angeles becomes less than five mph.

The second type of inversion forms on clear winter nights when cold air off the mountains sinks to the valley floor while the air aloft over the valley remains warm. This forms radiation inversions. These inversions, in conjunction with calm winds, trap pollutants such as those from automobile exhaust near their source. They lead to air pollution “hotspots” in heavily developed coastal areas of the SCAB, although onshore breezes often push the pollutants along canyons into the inland valleys. Summers are often periods of hazy visibility and occasionally unhealthy air, while winter air quality impacts tend to be highly localized and can consist of elevated levels of nitrogen dioxide and fine particulate matter.

2.6 Local Climate and Meteorology

The weather station closest to the project site is a National Weather Service Cooperative weather station located at Sun City (048655). Climatological data from the National Weather Service at this station is summarized in Table 6.

**Table 6
Meteorological Summary¹**

Month	Temperature (°F)			Mean Precipitation (inches)
	Max.	Min.	Mean	
January	66.1	36.3	51.1	2.66
February	68.4	38.7	53.5	3.25
March	69.6	41.1	55.4	1.96
April	76.7	44.4	60.5	0.66
May	82.1	49.6	65.9	0.31
June	91.9	54.0	72.9	0.05
July	97.4	58.9	78.1	0.03
August	98.0	59.4	78.7	0.24
September	92.6	57.5	75.0	0.15
October	84.2	49.2	66.8	0.25
November	73.8	39.8	56.8	0.66
December	67.6	34.5	51.0	1.02
Annual	80.7	46.9	63.8	11.22

¹ Source: Western Regional Climate Center 2012. Averages derived from measurements recorded between 1901 and 2012 at Sun City Station No. 048655.

2.7 Local Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates of the existing emissions in the Basin provided in the Final 2016 Air Quality Management Plan, prepared by SCAQMD, March 2017, indicate that collectively, mobile sources account for 60 percent of the VOC, 90 percent of the NOx emissions, 95 percent of the CO emissions and 34 percent of directly emitted PM2.5, with another 13 percent of PM2.5 from road dust.

The SCAQMD has divided the SCAB into fourteen general forecasting areas and thirty eight Source Receptor Areas (SRA) for monitoring and reporting local air quality. The SCAQMD provides daily reports of the current air quality conditions in each general forecast area and SRA. The monitoring areas provide a general representation of the local meteorological, terrain, and air quality conditions within the SCAB.

The project is located within Temecula Valley (SRA-26).

Table 7 summarizes the published air quality monitoring data from 2016 through 2018, which is the most recent 3-year period available. These pollutant levels were used to comprise a “background” for the project location and existing local air quality. For criteria pollutants not monitored at the Temecula Valley station, data from the nearest monitoring station with a comparable setting were used. The data shows that during the past few years, the project area has exceeded State thresholds for Ozone, NO_x, PM₁₀ and PM_{2.5}.

**Table 7
Local Air Quality**

Air Pollutant Location	Averaging Time	Item	2016	2017	2018
Carbon Monoxide -- Elsinore Valley	1 Hour	Max 1-Hour (ppm)	1.2	1.2	1.1
		Exceeded State Standard (20 ppm)	No	No	No
		Exceeded National Standard (35 ppm)	No	No	No
	8 Hour	Max 8 Hour (ppm)	0.6	0.8	0.8
		Exceeded State Standard (9 ppm)	No	No	No
		Exceeded National Standard (9 ppm)	No	No	No
Ozone -- Temecula Valley	1 Hour	Max 1-Hour (ppm)	0.092	0.104	0.107
		Days > State Standard (0.09 ppm)	0	4	2
	8 Hour	Max 8 Hour (ppm)	0.081	0.088	0.085
		Days > State Standard (0.07 ppm)	20	47	15
		Days > National Standard (0.070 ppm)	19	47	15
Nitrogen Dioxide -- Elsinore Valley	1 Hour	Max 1-Hour (ppm)	0.0513	0.049	0.0413
		Exceeded State Standard (0.18 ppm)	No	No	No
	Annual	Annual Average (ppm)	0.0081	0.0082	0.0085
		Exceeded >State Standard (0.030 ppm)	No	No	No
		Exceeded >National Standard (0.053 ppm)	No	No	No
Sulfur Dioxide -- Temecula Valley	1 Hour	Max 1 Hour (ppm)	--	--	--
		Exceed State Standard (0.25 ppm)	--	--	--
		Exceed National Standard (0.075 ppm)	--	--	--
Coarse Particles (PM10) -- Elsinore Valley	24 Hour	Max 24-Hour ($\mu\text{g}/\text{m}^3$)	99	133	104
		Days > State Standard ($50 \mu\text{g}/\text{m}^3$)	4	9	9
		Days > National Standard ($150 \mu\text{g}/\text{m}^3$)	0	0	0
	Annual	Annual Average ($\mu\text{g}/\text{m}^3$)	21.4	22.5	22.4
		Exceeded State Standard ($20 \mu\text{g}/\text{m}^3$)	Yes	Yes	Yes
Fine Particulates (PM2.5) -- Metropolitan Riverside County-1	24 Hour	Max 24-Hour ($\mu\text{g}/\text{m}^3$)	39.12	50.3	50.7
		Days > National Standard ($35 \mu\text{g}/\text{m}^3$)	4	6	2
	Annual	Annual Average ($\mu\text{g}/\text{m}^3$)	12.54	12.18	12.41
		Exceeded State Standard ($12 \mu\text{g}/\text{m}^3$)	Yes	Yes	Yes
		Exceeded National Standard ($15 \mu\text{g}/\text{m}^3$)	No	No	No

Source: <https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year> & <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/aaqmp-appendix-a6BF4F040D8A9.pdf?sfvrsn=46>

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter
ppm = part per million

3.0 Global Climate Change Setting

Global climate change is the change in the average weather of the earth that is measured by such things as alterations in temperature, wind patterns, storms, and precipitation. Current data shows that the recent period of warming is occurring more rapidly than past geological events. The average global surface temperature has increased by approximately 1.4° Fahrenheit since the early 20th Century. 1.4° Fahrenheit may seem like a small change, but it's an unusual event in Earth's recent history, and as we are seeing, even small changes in temperature can cause enormous changes in the environment.

The planet's climate record, preserved in tree rings, ice cores, and coral reefs, shows that the global average temperature has been stable over long periods of time. For example, at the end of the last ice age, when the Northeast United States was covered by more than 3,000 feet of ice, average global temperatures were only 5° to 9° Fahrenheit cooler than today. The Intergovernmental Panel on Climate Change (IPCC), which includes more than 1,300 scientists from the United States and other countries, forecasts a temperature rise of 2.5° to 10° Fahrenheit over the next century. Therefore, significant changes to the environment are expected in the near future.

The consequences of global climate change include more frequent and severe weather, worsening air pollution by increasing ground level ozone, higher rates of plant and animal extinction, more acidic and oxygen depleted oceans, strain on food and water resources, and threats to densely populated coastal and low lying areas from sea level rise.

The impacts of climate change are already visible in the Southwest United States. In California, the consequences of climate change include;

- A rise in sea levels resulting in the displacement of coastal businesses and residencies
- A reduction in the quality and supply of water from the Sierra snowpack
- Increased risk of large wildfires
- Exacerbation of air quality problems
- Reductions in the quality and quantity of agricultural products
- An increased temperature and extreme weather events
- A decrease in the health and productivity of California's forests

3.1 Greenhouse Gases

Most scientists agree the main cause of the current global warming trend is anthropogenic (human-induced) augmentation of the greenhouse effect. The greenhouse effect refers to the way gases in the earth's atmosphere trap and re-emits long wave infrared radiation, acting like a blanket insulating the earth. Activities such as fossil fuel combustion, industrial processes, agriculture, and waste decomposition have elevated the concentration of greenhouse gases in the atmosphere beyond the level of naturally occurring concentrations.

GHGs comprise less than 0.1 percent of the total atmospheric composition, yet they play an essential role in influencing climate. Greenhouse gases include naturally occurring compounds such as carbon dioxide (CO_2), methane (CH_4), water vapor (H_2O), and nitrous oxide (N_2O), while others are synthetic. Man-made GHGs include the chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs) and Perfluorocarbons (PFCs), as well as sulfur hexafluoride (SF_6). Different GHGs have different effects on the Earth's warming. GHGs differ from each other in their ability to absorb energy (their "radiative efficiency") and how long they stay in the atmosphere, also known as the "lifetime".

The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of CO_2 . The larger the GWP, the more than a given gas warms the Earth compared to CO_2 over that time period. The time period usually used for GWPs is 100 years. GWPs provide a common unit of measure, which allows analysts to add up emissions estimates of different gases and allows policymakers to compare emissions reduction opportunities across sectors and gases.

Table 8 lists the 100-year GWP of GHGs from the Intergovernmental Panel on Climate Change (IPCC) fourth assessment report (AR4).

Table 8
Global Warming Potential of Greenhouse Gases^{1, 2}

Gas Name	Formula	Lifetime (years)	GWP
Carbon Dioxide	CO ₂		1
Methane	CH ₄	12	25
Nitrous Oxide	N ₂ O	114	298
Sulphur Hexafluoride	SF ₆	3200	22,800
Nitrogen Trifluoride	NF ₃	740	17,200
Hexafluoroethane (PFC-116)	C ₂ F ₆	10,000	12,200
Octafluoropropane (PFC-218)	C ₃ F ₈	2,600	8,830
Octafluorocyclobutane (PFC-318)	C ₄ F ₈	3,200	10,300
Tetrafluoromethane (PFC-14)	CF ₄	50,000	7,390
Hydrofluorocarbon 125	HFC-125	29	3,500
Hydrofluorocarbon 134a	HFC-134a	14	1,430
Hydrofluorocarbon 143a	HFC-143a	52	4,470
Hydrofluorocarbon 152a	HFC-152a	1	124
Hydrofluorocarbon 227ea	HFC-227ea	34	3,220
Hydrofluorocarbon 23	HFC-23	270	14,800
Hydrofluorocarbon 236fa	HFC-236fa	240	9,810
Hydrofluorocarbon 245fa	HFC-245fa	8	1,030
Hydrofluorocarbon 32	HFC-32	5	675
Hydrofluorocarbon 365mfc	HFC-365mfc	9	794
Hydrofluorocarbon 43-10mee	HFC-43-10mee	16	1,640

¹ Source: IPCC Fourth Assessment Report (AR4)

² GWPs are used to convert GHG emission values to "carbon dioxide equivalent" (CO₂e) units

3.2 GHG Regulatory Setting - International

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations. The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). Under the Convention, governments gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas 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. The 2014 UN Climate Change Conference in Lima Peru provided a unique opportunity to engage all countries to assess how developed countries are implementing actions to reduce emissions.

Kyoto Protocol. The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5 percent from 1990 levels during the first commitment period of 2008 – 2012 (UNFCCC 1997). On December 8, 2012, the Doha Amendment to the Kyoto Protocol was adopted. The amendment includes: New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from 2013 – 2020, a revised list of greenhouse gases (GHG) to be reported on by Parties in the second commitment period, and Amendments to several articles of the Kyoto Protocol, which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period.

The Paris Agreement. The Paris agreement is the first comprehensive global climate agreement to be ratified by the United States, United Nations, China, and India; the largest producers of greenhouse gas emissions in the world. The agreement was negotiated by a total of 195 nations and entered into force on November 4, 2016. The central aim is to strengthen the global response to the threat of climate change by keeping the global temperature rise this century well below 2 degrees Celsius compared to pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. Currently, 122 parties have ratified the agreement. The Trump

administration has recently indicated the United States federal government will no longer participate in the Paris agreement.

3.3 GHG Regulatory Setting – National

Greenhouse Gas Endangerment. On December 2, 2009, the EPA announced that GHGs threaten the public health and welfare of the American people. The EPA also states that GHG emissions from on-road vehicles contribute to that threat. The decision was based on *Massachusetts v. EPA* (Supreme Court Case 05-1120) which argued that GHGs are air pollutants covered by the Clean Air Act and that the EPA has authority to regulate those emissions.

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy (CAFE) 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 United States. 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 greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program applied to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They required these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards were estimated to cut carbon dioxide 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 second phase of the national program for passenger cars, light-duty trucks, and medium-duty passenger vehicles covers model years 2017 through 2025. The final standards were established in 2012 and were projected to result in an average industry fleet-wide level of 163 grams/mile of carbon dioxide (CO₂) in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation also implemented the first national standards to reduce greenhouse gas emissions and improve the fuel efficiency of medium-

and heavy-duty engines and vehicles trucks and buses in 2010. The standards applied to all on-road vehicles rated at a gross vehicle weight at or above 8,500 pounds, and the engines that power them, except those covered by the current GHG emissions and CAFE standards for light duty vehicles, for model year 2014 to 2018. In 2016, the EPA and NHTSA finalized phase 2 of the standards which applied to model years 2018 through 2027.

Under the direction of the current Trump administration, the NHTSA and EPA propose to amend the Corporate Average Fuel Economy (CAFE) and greenhouse gas emissions standards for passenger cars and light trucks and establish new standards, covering model years 2021 through 2026.

Mandatory Reporting of Greenhouse Gases. On January 1, 2010, the EPA started requiring large emitters of heat-trapping emissions to begin collecting GHG data under a new reporting system. Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse gas emissions are required to submit annual reports to the EPA.

Climate Adaption Plan. The EPA's Climate Change Adaptation Plan identifies priority actions the EPA will take to incorporate considerations of climate change into its programs, policies, rules and operations to ensure they are effective under future climatic conditions. Under the Trump administration, the EPA has said it would continue to advance climate adaptation efforts and that the agency recognizes the challenges that communities face in adapting to a changing climate. The EPA currently runs the Climate Change Adaptation Resource Center (ARC-X) to help local governments prepare for climate change.

3.5 GHG Emissions Inventory

Table 9 shows the latest GHG emission inventories at the national, state, regional and local levels.

Table 9
GHG Emissions Inventory¹

United States (2018)²	State of California (2017)³	SCAG (2020)⁴	County of Riverside (2017)⁵
6,678 MMTCO ₂ e	424 MMTCO ₂ e	216.4 MMTCO ₂ e	4.90 MMTCO ₂ e

¹ MMTCO₂e = Million Metric Tons of Carbon Dioxide Equivalent

² <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

³ <https://www.arb.ca.gov/cc/inventory/data/data.htm>

⁴ <http://www.scag.ca.gov/programs/Pages/GreenhouseGases.aspx>

⁵ https://planning.rctlma.org/Portals/14/CAP/2019/2019_CAP_Update_Full.pdf

4.0 Modeling Parameters and Assumptions

The California Emissions Estimator Model Version 2016.3.2 (CalEEMod) was used to calculate criteria air pollutants and GHG emissions from the construction and operation of the project. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify criteria air pollutant and GHG emissions.

The model quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as GHG emissions from off-site energy generation, solid waste disposal, vegetation planting and/or removal, and water use. The model also identifies mitigation measures to reduce criteria pollutant and GHG emissions. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts.

4.1 Construction Assumptions

The project is proposed to be built-out over several phases, however, for purposes of this analysis, and to provide a worst-case estimate of impacts, the entire project development has been analyzed in one complete phase. Construction of the project is estimated to begin in the year 2020 and expected to last approximately 44 months. The project is expected to be fully operational by the year 2023. Construction activities are expected to consist of site preparation, grading, building construction, paving, and architectural coating. Construction activities are based on CalEEMod defaults.

The CalEEMod default construction equipment list is based on survey data and the size of the site. The parameters used to estimate construction emissions, such as the worker and vendor trips and trip lengths, utilize the CalEEMod defaults. The construction equipment list is shown in Table 10.

The quantity of fugitive dust estimated by CalEEMod is based on the number of equipment used during site preparation and grading. CalEEMod estimates the worst-case fugitive dust impacts will occur during the site preparation phase. The maximum daily disturbance footprint would be 4 acres per 8-hour day with all equipment in use.

Based on recent discussions with SCAQMD, the Fact Sheet for Applying CalEEMod to Localized Significance Thresholds should no longer be used to determine disturbance acreage.

Table 10
Construction Equipment Assumptions Phase ¹

Phase	Equipment	Number	Hours Per Day	Soil Disturbance Rate (Acres/8hr-Day) ²	Off-Road Equipment Daily Disturbance Footprint (Acres)	Total Daily Disturbance Footprint (Acres)
Site Preparation	Rubber Tired Dozers	3	8	0.5	1.5	3.5
	Tractors/Loaders/Backhoes	4	8	0.5	2.0	
Grading	Excavators	2	8	0.0	0.0	4.0
	Graders	1	8	0.5	0.5	
	Rubber Tired Dozers	1	8	0.5	0.5	
	Scrapper	2	8	1.0	2.0	
	Tractors/Loaders/Backhoes	2	8	0.5	1.0	
Building Construction	Cranes	1	7	0.0	0.0	1.3
	Forklifts	3	8	0.0	0.0	
	Generator Sets	1	8	0.0	0.0	
	Tractors/Loaders/Backhoes	3	7	0.5	1.3	
	Welders	1	8	0.0	0.0	
Paving	Pavers	2	8	0.0	0.0	0.0
	Paving Equipment	2	8	0.0	0.0	
	Rollers	2	8	0.0	0.0	
Architectural Coating	Air Compressors	1	6	0.0	0.0	0.0

¹ CalEEMod Defaults

4.2 Localized Construction Analysis Modeling Parameters

CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. This report identifies the following parameters in the project design or applicable mitigation measures in order to compare CalEEMod reported emissions against the localized significance threshold lookup tables:

- 1) The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
- 2) The maximum number of acres disturbed on the peak day.
- 3) Any emission control devices added onto off-road equipment.
- 4) Specific dust suppression techniques used on the day of construction activity with maximum emissions.

4.3 Operational Assumptions

Operational emissions occur over the life of the project and are considered “long-term” sources of emissions. Operational emissions include both direct and indirect sources. This section briefly describes the operational sources of emissions analyzed for the project.

4.3.1 Mobile Source Emissions

Mobile source emissions are the largest source of long-term air pollutants from the operation of the project. Mobile sources are direct sources of project emissions that are primarily attributed to tailpipe exhaust and road dust (tire, brake, clutch, and road surface wear) from motor vehicles traveling to and from the site.

Estimates of mobile source emissions require information on four parameters: trip generation, trip length, vehicle/fleet mix, and emission factors (quantity of emission for each mile traveled or time spent idling by each vehicle).

The trip generation rates for this project are consistent with the Traffic Impact Study for Portola Winery, Darnell & Associates, Inc., July 27, 2018 and the latest version of the ITE Trip Generation Manual. Operational vehicle trip assumptions include trip lengths, trip type, and diverted/pass-by trips. The CalEEMod default trip assumptions are shown Appendix B.

The Emission Factors (EMFAC) 2014 model is used to estimate the mobile source emissions are embedded in the CalEEMod emissions model. No adjustments have been made to default emission factors.

The project’s estimated unmitigated vehicle miles traveled are shown in the Table 11 for all the land uses for this project.

Table 11
Operational Vehicle Miles Traveled

Land Use	Annual Vehicle Miles Traveled (VMT)
Project Total	4,677,603

The operational vehicle fleet mix is shown in Table 12. The CalEEMod default fleet mix for the project, which is based on regional averages.

Table 12
Vehicle Mix for Trips¹

Vehicle Classification	Vehicle Mix (%)
Light Duty Automobile (LDA)	54.86%
Light Duty Truck (LDT1)	3.63%
Light Duty Truck (LDT2)	18.69%
Medium Duty Truck (MDV)	11.25%
Light Heavy Truck (LHD1)	1.43%
Light Heavy Truck (LHD2)	0.48%
Medium Heavy Truck (MHD)	1.76%
Heavy Heavy Truck (HHD)	7.01%
Other Bus (OBUS)	0.14%
Urban Bus (UBUS)	0.11%
Motorcycle (MCY)	0.45%
School Bus (SBUS)	0.09%
Motor Home (MH)	0.09%
Total	100.0%

¹ CalEEMod Default

4.3.2 Energy Source Emissions

Energy usage includes both direct and indirect sources of emissions. Direct sources of emissions include on-site natural gas usage (non-hearth) for heating, while indirect emissions include electricity generated by offsite power plants. Natural gas use is measured in units of a thousand British Thermal Units (kBtu) per size metric for each land use subtype and electricity use is measured in kilowatt hours (kWh) per size metric for each land use subtype.

CalEEMod divides building electricity and natural gas use into uses that are subject to Title 24 standards and those that are not. Lighting electricity usage is also calculated as a separate category in CalEEMod. For electricity, Title 24 uses include the major building envelope systems covered by Part 6 (California Energy Code) of Title 24, such as space heating, space cooling, water heating, and ventilation. Non-Title 24 uses include all other end uses, such as appliances, electronics, and other miscellaneous plug-in uses. Because some lighting is not considered as part of the building envelope energy budget, and since a

separate mitigation measure is applicable to this end use, CalEEMod makes lighting a separate category.

For natural gas, uses are likewise categorized as Title 24 or Non-Title 24. Title 24 uses including building heating and hot water end uses. Non-Title 24 natural gas uses include cooking and appliances (including pool/spa heaters).

The baseline values are based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

Table 13 shows the total annual expected electricity and natural gas usage for the proposed project.

Table 13
Electricity and Natural Gas Usage

Land Use	Electricity Usage ¹ (KWhr/yr) ²	Natural Gas Usage ¹ (KBTU/yr) ²
General Light Industry	157,833.00	505,219.00
General Office Building	17,183.60	6,263.35
Hotel	146,444.00	484,461.00
Vineyard (Other Non-Asphalt Surfaces)	0.00	0.00
Parking Lot	97,733.60	0.00
Quality Restaurant	1,684,115.60	9,698,920.00
Refrigerated Warehouse-No Rail	349,563.00	452,900.00
Total	2,452,872.80	11,147,763.35

¹ CalEEMod default estimates.

² KWhr/yr = Kilowatt Hours per Year

KBTU/yr = Thousand British Thermal Units per Year

The proposed project anticipates using on-site propane storage instead of natural gas for most of its onsite energy requirements. However, for purposes of this analysis, emissions from natural gas usage are still assumed. Propane is a relatively clean-burning fuel, which is attributed to its lower carbon content. However, like natural gas, its combustion does still produce wastes, such as particulate matter, sulfur dioxide, nitrogen oxides, nitrous oxide, carbon monoxide, greenhouse gas, methane and non-methane overall organic carbon.

Because propane is a low-carbon fuel, using it to replace conventional fuels could cause significant reductions in harmful emissions. For example, the Argonne National Laboratory has estimated that converting a vehicle from using conventional fuels to propane could reduce greenhouse gas emissions by almost 10 percent. Therefore, the emissions associated with natural gas usage are considered a conservative assessment of impacts.

4.3.3 Area Source Emissions

Area source emissions are direct sources of emissions that fall under four categories; hearths, consumer products, architectural coatings, and landscaping equipment. Per SCAQMD rule 445, no wood burning devices are allowed in new developments; therefore, no wood hearths are included in this project.

Consumer products are various solvents used in non-industrial applications which emit ROG's during their product use. These typically include cleaning supplies, kitchen aerosols, cosmetics and toiletries.

4.3.4 Other Sources of Operational Emissions

Water. Greenhouse gas emissions are generated from the upstream energy required to supply and treat the water used on the project site. Indirect emissions from water usage are counted as part of the project's overall impact. The estimated water usage for the project is reported in Table 16 and recommendations to reduce water usage are discussed in Section 6.0. However, CalEEMod doesn't provide agricultural land use, therefore, Other Non-asphalt Surfaces has been used for vineyard uses. The water requirement for the vineyard is calculated by using the assumption made on <https://www.evineyardapp.com/blog/2018/04/09/how-to-schedule-vineyard-irrigation/>. The project is expected to have 33 acre of vineyard and according to the assumptions from evineyardapp website, each acre requires 2,579 gallons of water and a frequency of twice a week watering has been utilized in calculating the water requirement of vineyard.

Waste. CalEEMod calculates the indirect GHG emissions associated with waste that is disposed of at a landfill. The program uses annual waste disposal rates from the California Department of Resources Recycling and Recovery (CalRecycle) data for individual land uses. The program quantifies the GHG emissions associated with the decomposition of the waste which generates methane based on the total amount of degradable organic carbon.

The estimated waste generation by the project is reported in Table 14 and recommendations to reduce waste generation in landfills are discussed in Section 6.0.

Table 14
Operational Water Usage and Waste Generation

Land Use	Water Usage (gallons/year)			Waste Generation (tons/year) ¹
	Indoor ¹	Outdoor	Total	
General Light Industry	3,595,937.50	0.00	3,595,937.50	19.28
General Office Building	321,698.08	197,169.79	518,867.87	1.68
Hotel	253,667.70	28,185.30	281,853.00	44.89
Vineyard (Other Non-Asphalt Surfaces) ²	0.00	9,191,762.32	9,191,762.32	0
Parking Lot	0.00	0.00	0.00	0.00
Quality Restaurant	10,766,340.78	678,213.24	11,453,554.02	32.37
Refrigerated Warehouse- No Rail	2,023,437.50	0.00	25,041,974.71	8.22
Total	16,961,081.56	10,104,330.65	50,083,949.42	106.44

¹ CalEEMod default estimates.

² <https://www.evineyardapp.com/blog/2018/04/09/how-to-schedule-vineyard-irrigation/>

Operational Off-Road Equipment. Emissions from the use of off-road diesel equipment (farm equipment) associated with the maintenance and production of the working vineyard are included in this analysis. Two (2) tractors/loaders/backhoes are assumed to be in operation eight hours a day, 260 days a year. This assessment utilizes CalEEMod default usage rates and is considered a worst case estimate.

Operational Stationary Equipment. Emissions from stationary equipment used in the winery production process are included in this analysis. Emissions from two (2) CNG boilers with rating of 0.199 MMBtu/hr are included. Boiler Specs are based on a Rheem Standard Recovery Commercial Gas Water Heater with 119 gallon tank capacity. The specific

equipment list to be used for the project was not available at the time this analysis was prepared.

5.0 Significance Thresholds

5.1 Air Quality Regional Significance Thresholds

The SCAQMD has established air quality emissions thresholds for criteria air pollutants for the purposes of determining whether a project may have a significant effect on the environment per Section 15002(g) of the Guidelines for implementing CEQA. By complying with the thresholds of significance, the project would be in compliance with the SCAQMD Air Quality Management Plan (AQMP) and the federal and state air quality standards.

Table 15 lists the air quality significance thresholds for the six air pollutants analyzed in this report. Lead is not included as part of this analysis as the project is not expected to emit lead in any significant measurable quantity.

Table 15
SCAQMD Regional Significance Thresholds

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

¹ Source: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>

5.2 Air Quality Localized Significance Thresholds

Air quality emissions were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold (LST) Look-up Tables.

Table 16 lists the Localized Significance Thresholds (LST) used to determine whether a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard.

LSTs are developed based on the ambient concentrations of four applicable air pollutants for source receptor area (SRA) 26 – Temecula Valley.

The nearest existing sensitive receptors are residential/winery uses located along the southern, eastern and western property line of the site. The nearest structures to the property, where people would be expected to stay for 24-hours or longer are approximately 50-75 meters away. However, to be conservative this analysis uses the most stringent 25 meter thresholds for localized emissions from any potential area of construction or operational activity. SCAQMD LST methodology states that projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.

The daily disturbance area is calculated to be 4 acres, however LST thresholds are only based on 1, 2 and 5-acre sites. In order to be conservative, a linear progression model was used to estimate the threshold for 4-acre site based on the established LST thresholds.

Table 16
SCAQMD Localized Significance Thresholds¹ (LST)

Pollutant	Construction (lbs/day)	Operational (lbs/day)
NO_x	323.3	323.3
CO	1671.9	1671.9
PM₁₀	10.9	3.3
PM_{2.5}	6.7	1.7

¹ Source: SCAQMD Mass Rate Localized Significance Thresholds for 4-acre site in SRA-26 at 25 meters

5.3 Microscale CO Concentration Standards

The significance of localized CO impacts depends on whether ambient CO levels in the vicinity of the project are above or below federal or state standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of the AAQS. If ambient levels already exceed State or federal standards, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more.

Current CO levels in the SCAB are in attainment of both federal and state standards, and local air quality monitoring data indicates there have not been any localized exceedances of

CO over the past three years. Therefore, the project must not contribute to an exceedance of a federal or state ambient air quality standard.

5.4 Riverside County General Plan Air Quality Element

This Riverside County General Plan Air Quality Element establishes goals, policies and programs that are meant to balance the County's actions regarding land use, circulation and other issues with their potential effects on air quality and global climate change.

In order for the project's air quality and GHG impact to be considered less than significant, the project should not conflict with, or obstruct implementation of, the Riverside County General Plan Air Quality Element.

5.5 Riverside County Climate Action Plan and GHG Significance Thresholds

Riverside County is the lead agency under CEQA for the proposed project, and therefore, GHG thresholds of significance are based on the adopted Riverside County Climate Action Plan (CAP). Riverside County adopted the CAP in December 2019 in an effort to reduce community-wide GHG emissions. The purpose CAP is to adopt a plan that is consistent with and complementary to the GHG emissions reduction efforts being conducted by the State of California through the Global Warming Solutions Act (AB 32).

The implementation mechanisms for the CAP are the Screening Tables for New Development. The Screening Tables allow new development projects a streamlined option for complying with CEQA requirements for addressing GHG emissions. Additionally, Riverside County's Climate Action Plan details policies to reduce emissions from municipal and community-wide sources; including emissions from existing buildings and new development. Projects have the option of preparing a project-specific technical analysis to quantify and mitigate GHG emissions.

- A threshold level above 3,000 MTCO₂e per year will be used to identify projects that require the use of Screening Tables or a project-specific technical analysis to quantify and mitigate project emissions.

The screening tables are setup similar to a checklist, with points allocated to certain elements that reduce greenhouse gas emissions. If a project garners 100 points (by including enough GHG reducing elements), then the project is consistent with Riverside County's plan for reducing emissions.

6.0 Air Quality Impact Analysis

Consistent with CEQA and the State CEQA Guidelines, a significant impact related to air quality would occur if the proposed project is determined to:

- a) Conflict with, or obstruct implementation of, the applicable air quality plan?
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
- c) Expose sensitive receptors to substantial pollutant concentrations.
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

6.1 Short Term Air Quality Impacts - Construction

6.1.1 Regional Emissions - Construction

Regional air quality emissions include both on-site and off-site emissions associated with construction of the project. Regional daily emissions of criteria pollutants are compared to the SCAQMD regional thresholds of significance.

Table 17 shows that the project's daily construction emissions will be below the applicable SCAQMD regional air quality standards and thresholds of significance. As a result, the project would not contribute substantially to an existing or projected air quality violation. Furthermore, by complying with the SCAQMD standards, the project would not contribute to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The project's short-term construction impact on regional air quality is less than significant.

CalEEMod daily emissions outputs are provided in Appendix A.

**Table 17
Regional Construction Emissions**

Maximum Daily Emissions (lbs/day) ¹						
Activity	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Site Preparation	4.17	42.47	22.24	0.04	9.31	5.87
Grading	4.55	50.26	32.76	0.06	5.72	3.44
Building Construction	6.77	51.70	52.74	0.19	11.64	4.04
Paving	1.40	10.23	15.06	0.02	0.68	0.51
Architectural Coating	21.27	1.65	6.56	0.02	1.77	0.53
Maximum ¹	21.27	51.70	52.74	0.19	11.64	5.87
SCAQMD Threshold	75	100	550	150	150	55
Exceeds Threshold (?)	No	No	No	No	No	No

¹ Maximum daily emission during summer or winter; includes both on-site and off-site project emissions.

The air quality emissions shown in Table 17 include standard SCAQMD rules and requirements with regards to fugitive dust control. For CEQA purposes, dust control compliance is considered a standard requirement and included as part of the project's design features, not mitigation. Section 6.1.3 provides further discussion on the specific dust control measures applicable to this project.

6.1.2 Localized Emissions - Construction

Table 18 illustrates the construction related localized emissions and compares the results to SCAQMD LST thresholds. As shown in Table 18, the emissions will be below the SCAQMD thresholds of significance for localized construction emissions. The project must follow all standard SCAQMD rules and requirements with regards to fugitive dust control, as described in Section 6.1.3. Compliance with the dust control is considered a standard requirement and included as part of the project's design features, not mitigation.

The project's short-term construction impact to localized air resources is less than significant.

Table 18
Localized Construction Emissions - Unmitigated

Maximum Daily Emissions (lbs/day)¹				
Activity	NOx	CO	PM₁₀	PM_{2.5}
On-site Emissions	50.20	31.96	9.11	5.82
SCAQMD Construction Threshold ²	323.3	1,671.9	10.9	6.7
Exceeds Threshold (?)	No	No	No	No

¹ Maximum daily emission during summer or winter; includes on-site project emissions only.

² Reference 2006-2008 SCAQMD Mass Rate Localized Significant Thresholds for construction and operation. SRA-26, Temecula Valley, 4-acre site, receptor distance 25 meters.

6.1.3 Fugitive Dust - Construction

The Project is required to comply with local and regional rules that assist in reducing short-term air pollutant emissions associated with suspended particulate matter, also known as fugitive dust. Fugitive dust emissions are commonly associated with land clearing activities, cut-and-fill grading operations, and exposure of soils to the air and wind. SCAQMD Rule 403 requires that fugitive dust is controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rules 402 and 403 require implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site.

Applicable suppression techniques are as follows:

1. All active construction areas shall be watered two (2) times daily.
2. Speed on unpaved roads shall be reduced to less than 15 mph.
3. Any visible dirt deposition on any public roadway shall be swept or washed at the site access points within 30 minutes.
4. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily.
5. All operations on any unpaved surface shall be suspended if winds exceed 15 mph.
6. Access points shall be washed or swept daily.
7. Construction sites shall be sandbagged for erosion control.

8. Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
9. Cover all trucks hauling dirt, sand, soil, or other loose materials, and maintain at least 2 feet of freeboard space in accordance with the requirements of California Vehicle Code (CVC) section 23114.
10. Pave or gravel construction access roads at least 100 feet onto the site from the main road and use gravel aprons at truck exits.
11. Replace the ground cover of disturbed areas as quickly possible.
12. A fugitive dust control plan should be prepared and submitted to SCAQMD prior to the start of construction.

Localized construction emissions, shown in Section 6.1.2, indicate daily construction emissions, with the recommended design features, would be below the applicable thresholds established by the SCAQMD. **The proposed project's short-term fugitive dust generating construction activities would cause less than significant.**

6.1.4 Odors - Construction

Heavy-duty equipment in the project area during construction will emit odors; however, the construction activity would cease to occur after individual construction is completed. The project is required to comply with Rule 402 during construction, which states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. No other sources of objectionable odors have been identified for the proposed Project. **Therefore, the project impact from odor emissions is less than significant.**

6.1.5 Asbestos - Construction

Asbestos is a mineral fiber that has been used commonly in a variety of building construction materials for insulation and as a fire-retardant. When asbestos-containing materials are damaged or disturbed by repair, remodeling or demolition activities, microscopic fibers become airborne and can be inhaled into the lungs, where they can cause significant health problems. No structures are proposed to be demolished as part of this project.

Based on the California Division of Mines and Geology General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos, naturally occurring asbestos, found in serpentine and ultramafic rock, has not been shown to occur within in the vicinity of the project site. Therefore, the potential risk for naturally occurring asbestos (NOA) during project construction is small. However, in the event NOA is found on the site, the project will be required to comply with the NESHAP standards. An Asbestos NESHAP Notification Form shall be completed and submitted to the CARB immediately upon discovery of the contaminant. The project will be required to follow NESHAP standards for emissions control during site renovation, waste transport and waste disposal. A person certified in asbestos removal procedures will be required to supervise on-site activities.

By following the required asbestos abatement protocols, **the project impact is less than significant.**

6.1.6 Diesel Particulate Matter - Construction

The greatest potential for toxic air contaminant emissions from the project would be related to diesel particulate matter (DPM) emissions associated with heavy diesel equipment used during construction. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 30-year lifetime will contract cancer, based on the use of standard risk-assessment methodology.

As shown in Tables 17 and 18, construction-based particulate matter (PM) emissions (including diesel exhaust emissions) have the potential to exceed local emissions levels. Therefore, the project is required to implement the following mitigation measure to reduce particulate matter (PM) from diesel exhaust:

Given the short-term construction schedule, the proposed project's construction activity is not expected to be a long-term (i.e., 30 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. It should be noted, however, that a quantified health risk assessment has not been performed for this project.

In September 2000, the CARB adopted the Diesel Risk Reduction Plan, which recommends several control measures to reduce the risks associated with diesel particulate matter (DPM). The key elements of the Plan are to clean up existing engines through engine retrofit emission control devices, to adopt stringent standards for new diesel engines, to

lower the sulfur content of diesel fuel, and implement advanced technology emission control devices on diesel engines.

In order to ensure the level of DPM exposure is reduced as much as possible, the project should implement the best available pollution control strategies to minimize potential health risks. The follow DPM control measures include:

- Utilize low emission “clean diesel” equipment with new or modified engines (Tier 4 or better) that include diesel oxidation catalysts, diesel particulate filters or Moyer Program retrofits that meet CARB best available control technology.
- Establish staging areas for the construction equipment that are as distant as possible from adjacent sensitive receptors;
- Establish an electricity supply to the construction site and use electric powered equipment instead of diesel-powered equipment or generators, where feasible;
- Use haul trucks with on-road engines instead of off-road engines for on-site hauling.

6.2 Long Terms Air Quality Impacts - Operation

6.2.1 Regional Emissions - Operation

Long-term operational air pollutant impacts from the project are shown in Table 19. The project is not expected to exceed any of the allowable daily emissions thresholds for criteria pollutants at the regional level. CalEEMod daily emissions outputs are provided in Appendix A.

The project’s daily operational emissions will be below the applicable SCAQMD regional air quality standards and thresholds of significance, and the project would not contribute substantially to an existing or projected air quality violation. Furthermore, by complying with the SCAQMD standards, the project would not contribute to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The project related long-term air quality impacts are less than significant.

**Table 19
Regional Operational Emissions**

Maximum Daily Emissions (lbs/day) ¹						
Activity	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Mobile Sources	4.73	27.89	37.56	0.16	11.20	3.05
Energy Sources	0.33	2.99	2.52	0.02	0.23	0.23
Area Sources	2.30	0.00	0.05	0.00	0.00	0.00
Off-Road Equipment	0.30	3.07	4.46	0.01	0.15	0.14
Stationary Sources	0.02	0.10	0.38	0.00	0.03	0.03
Total	7.69	34.06	44.97	0.19	11.61	3.45
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold (?)	No	No	No	No	No	No

¹ Maximum daily emission during summer or winter; includes both on-site and off-site project emissions.

6.2.2 Localized Operational Emissions - Operation

Table 20 shows the localized operational emissions and compares the results to SCAQMD LST thresholds of significance. As shown in Table 20, the emissions will be below the SCAQMD thresholds of significance for localized operational emissions. **The project will result in less than significant localized operational emissions impacts.**

**Table 20
Localized Operational Emissions**

Maximum Daily Emissions (lbs/day) ¹				
LST Pollutants	NO _x (lbs/day)	CO (lbs/day)	PM ₁₀ (lbs/day)	PM _{2.5} (lbs/day)
On-site Emissions ¹	7.56	9.29	1.0	0.5
SCAQMD Operation Threshold ²	323.3	1,671.9	3.3	1.7
Exceeds Threshold (?)	No	No	No	No

¹ Maximum daily emission in summer or winter.

² Mobile source emissions include on-site vehicle emissions only. It is estimated that approximately 5% of mobile emissions will occur on the project site.

³ Reference: 2006-2008 SCAQMD Mass Rate Localized Significant Thresholds for construction and operation Table C-1 through C-6; SRA 26, Temecula valley disturbance area of 4-acre and receptor distance of 25 meters.

6.2.3 Odors - Operation

Land uses that commonly receive odor complaints include agricultural uses (farming and livestock), chemical plants, composting operations, dairies, fiberglass molding facilities, food processing plants, landfills, refineries, rail yards, and wastewater treatment plants. The proposed project does not contain land uses that would typically be associated with significant odor emissions.

The project will be required to comply with standard building code requirements related to exhaust ventilation, as well as comply with SCAQMD Rule 402. Rule 402 requires that a person may not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. Project related odors are not expected to meet the criteria of being a nuisance. **The project's operation would result in less than significant odor impacts.**

6.2.4 Toxic Air Contaminants - Operations

A Toxic Air Contaminant (TAC) is defined as air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health, and for which there is no concentration that does not present some risk. The primary source of TACs from non-industrial land use development projects would include diesel particulate matter (DPM) generated from diesel exhaust emissions.

The winery project may attract some light-heavy trucks for shipping and delivery purposes, however, overall the project is not considered a truck intensive use that would generate a significant amount of DPM. Based on the project's trip generation, the project is expected to generate a maximum of 70 heavy truck trips per day.

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

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

Based on the project's trip generation, it is not expected that the project would result in significant incremental increases in potential cancer risks to surrounding sensitive receptors.

It should be noted however that a detailed health risk assessment has not been performed for this project. In order to determine if the proposed project may have a significant impact related to hazardous air pollutants (HAP), the Health Risk Assessment Guidance for analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, (Diesel Analysis), prepared by SCAQMD, August 2003, recommends that if the proposed project is anticipated to create hazardous air pollutants through stationary sources or regular operations of diesel trucks on the project site, then the proximity of the nearest receptors to the source of the hazardous air pollutants and the toxicity of the hazardous air pollutants should be analyzed through a comprehensive facility-wide health risk assessment (HRA).

The following recommendations are provided to reduce the project's potential exposure of sensitive receptors to substantial pollutant concentrations:

- Limit engine idling time to 5 minutes or less
- Encourage trucks accessing the site to be equipped with the latest cleaner-burning diesel fuel technology.
- Encourage trucks that visit the site to be retrofit engines with particle-trapping filters
- Encourage the use of alternative fuels, such as natural gas, propane and electricity instead of diesel whenever possible.

6.3 CO Hot Spot Emissions

A CO hot spot is a localized concentration of carbon monoxide (CO) that is above the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. At the time of the publishing of the 1993 CEQA Air Quality Handbook, the SCAB was designated nonattainment, and projects were required to perform hot spot analyses to ensure they did not exacerbate an existing problem. Since this time, the SCAB has achieved attainment status and the potential for hot spots caused by vehicular traffic congestion has been greatly reduced. In fact, the SCAQMD AQMP found that peak CO concentrations were primarily the result of unusual meteorological and topographical conditions, not traffic congestion. Additionally, the 2003 SCAQMD AQMP found that, at four of the busiest intersections in SCAB, there were no CO hot spots concentrations.

Furthermore, the Traffic Study for Portola Winery (July 2018) found that all significant project traffic impacts would be mitigated to less than significant levels. Therefore, it is

reasonable to conclude that the project would not significantly increase traffic congestion in the vicinity of the site that would lead to the formation of CO Hot Spots. **The project impact to CO Hot Spots is less than significant.**

6.4 SCAQMD Air Quality Management Plan Consistency

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

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

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

The SCAQMD CEQA Handbook identifies two key indicators of consistency:

- (1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- (2) Whether the project will exceed the assumptions in the AQMP in 2016 or increments based on the year of project buildout and phase.

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

The results of the short-term construction emission levels and long-term operational emission levels show that the project would not result in significant impacts based on the SCAQMD regional and local thresholds of significance. Therefore, the proposed project would not contribute to the exceedance of an air pollutant concentration standard and is found to be consistent with the AQMP for the first criterion.

6.4.2 Criterion 2 - Exceed Assumptions in the AQMP

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The 2016-2040 Regional Transportation/Sustainable Communities Strategy, prepared by SCAG, 2016, includes chapters on: the challenges in a changing region, creating a plan for our future, and the road to greater mobility and sustainable growth. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA.

The project is consistent with the land use requirements in the Riverside County Riverside County Zoning Ordinance for WC-W (Wine Country-Winery). The project land uses are also consistent with the Temecula Wine Country Community Plan and the Southwest Area Plan. As a result, the project is not expected to significantly increase emissions compared to what is currently allowed and projected in the AQMP for this region. The project is considered to be consistent with the AQMP and the impact is less than significant.

6.5 Human Health Effects

The project would generate criteria air pollutant emissions which can cause human health effects. Health effects from air pollution exposure may lead to respiratory and circulatory impairment, chronic disease, asthma, and death (please see Section 2.1 for further information of the effects of air pollution). To protect the health and welfare of the most sensitive population groups, the Federal and State Ambient Air Quality Standards (AAQS) have been established and air enforced at the local level through the SCAQMD. To ensure the project does not cause or contribute to an exceedance of the most stringent applicable federal or state AAQS, which could lead to significant health effects, the SCAQMD has established regional and localized significance thresholds.

The construction and operational emissions associated with this project are found to be below the applicable SCAQMD thresholds of significance. Therefore, the projects effect on human health is considered less than significant.

7.0 Greenhouse Gas Impact Analysis

Consistent with CEQA Guidelines, a significant impact related to greenhouse gas would occur if the proposed project is determined to:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases.

7.1 Greenhouse Gas Emissions - Construction

Greenhouse gas emissions are estimated for on-site and off-site construction activity using CalEEMod. Table 21 shows the construction greenhouse gas emissions, including equipment and worker vehicle emissions for all phases of construction. Construction emissions are amortized over 30 years and added to the long-term operational emissions, pursuant to SCAQMD recommendations.

CalEEMod annual GHG output calculations are provided in Appendix B.

Table 21
Construction Greenhouse Gas Emissions

Activity	Emissions (MTCO ₂ e/yr) ¹		
	On-site	Off-site	Total
Site Preparation	50.55	2.48	53.03
Grading	205.97	6.90	212.87
Building Construction	862.37	5,096.61	5,958.98
Paving	55.52	3.40	58.92
Architectural Coating	7.03	34.23	41.26
Total	1,181.44	5,143.62	6,325.06
Amortized over 30 years²	39.38	171.45	210.84

¹ MTCO₂e/yr = metric tons of carbon dioxide equivalents per year.

² The emissions are amortized over 30 years and added to the operational emissions, pursuant to SCAQMD recommendations.

7.2 Greenhouse Gas Emissions - Operation

Greenhouse gas emissions are estimated for on-site and off-site operational activity using CalEEMod. Greenhouse gas emissions from mobile sources, area sources and energy sources are shown in Table 22. CalEEMod annual GHG output calculations are provided in Appendix B.

**Table 22
Operational Greenhouse Gas Emissions**

Emission Source	GHG Emissions (MTCO₂e/yr)¹
Mobile Source	2,364.94
Energy Source	1,382.76
Area Source	0.01
Water	129.60
Waste	33.70
Off-Road Equipment	71.71
Stationary Sources	2.67
Construction (30 year amortization)	210.84
Total Annual Emissions	4,196.23
Riverside County CAP Screening Threshold	3,000
Exceed CAP Threshold?	Yes

¹ MTCO₂e/yr = metric tons of carbon dioxide equivalents per year

As shown in Table 22, the project GHG emissions would exceed the Riverside County CAP thresholds, which limit GHG emissions to 3,000 MTCO₂e. Therefore, mitigation measures are required to ensure the project does not cause a significant impact on the environment. Recommended greenhouse gas mitigation measures are discussed in Section 7.3.

7.3 Riverside County Climate Action Plan Consistency

Riverside County is the lead agency under CEQA for the proposed project, and therefore, GHG thresholds of significance are based on the adopted Riverside County Climate Action Plan (CAP). The updated Riverside County's Climate Action Plan (CAP) adopted in December

2019 contains further guidance on Riverside County's Greenhouse Gas (GHG) Inventory reduction goals, thresholds, policies, guidelines, and implementation programs. The purpose of the CAP is to have in place a plan that is consistent with and complementary to the GHG emissions reduction efforts being conducted by the State of California through the Global Warming Solutions Act (AB 32).

Additionally, Riverside County's Climate Action Plan, December 2019 details policies to reduce emissions from municipal and community-wide sources; including emissions from existing buildings and new development.

The screening tables are setup similar to a checklist, with points allocated to certain elements that reduce greenhouse gas emissions. If a project garners 100 points (by including enough GHG reducing elements), then the project is consistent with Riverside County's plan for reducing emissions.

The following mitigation measures are recommended in order to ensure GHG emission levels are less than significant:

MM-1. Participate in the Riverside County Climate Action Plan (CAP) greenhouse gas reduction strategies by implementing building design, site-area and operational enhancements that garner 100 points or greater through improvements listed in the CAP Screening Tables.

A copy of the CAP Screening Tables for commercial developments are provided in Appendix C.

The project will also be required to comply with the mandatory requirements of Title 24 part 11 of the California Building Standards Code (CALGreen) and Title 24 Part 6 Building Efficiency Standards to further reduce energy usage and GHG emissions. CALGreen and building code compliance are considered part of the project's design features.

With the implementation of the recommended mitigation measures, the project will not conflict with an applicable plan, policy or regulation for the purpose of reducing the emissions of greenhouse gases and the impact is considered less than significant with mitigation.

7.4 Temecula Wine Country Community Plan EIR Consistency

The project is located within the Temecula Wine Country Community Plan (TWCCP) area and will therefore be required to comply with the mitigation requirements from the TWCCP EIR. The following mitigation measures are required of the project, per the TWCCP EIR:

TWCCP Mitigation Measures

GHG-1 All implementing projects shall use the following mitigation measures to reduce impacts from construction activities as related to construction equipment and vehicle exhaust emissions:

- The County shall require implementing projects to use low-emission and high energy efficiency construction equipment on site. Examples of low-emission and high energy efficiency equipment include use of EPA Tier 2 (or better) emission compliant construction equipment and use of alternative-fuel construction equipment (natural gas), if available.
- The County shall require implementing projects to include a statement on grading plans that all construction equipment will be tuned and maintained in accordance with the manufacturer's specifications.
- The County shall require implementing project to utilize electric- or diesel-powered equipment, in lieu of gasoline-powered engines, where feasible.
- The County shall require implementing projects to include a statement on grading plans that work crews shall shut off equipment when not in use. During smog season (May through October), the overall length of the construction period shall be extended, thereby decreasing the size of the area prepared each day, to minimize vehicles and equipment operating at the same time.
- The County shall require implementing projects to time construction activities so as to not interfere with peak hour traffic and minimize obstruction of through traffic lanes adjacent to the site; if necessary, a flag person shall be retained to maintain safety adjacent to existing roadways.

- The County shall require implementing projects to use EPA-rated engines of Tier 3 or better for construction equipment.
- As soon as electric utilities are available at construction sites, the County shall require implementing projects to supply the construction site with electricity from the local utility and all equipment that can be electrically operated shall use the electric utility rather than portable generators.

GHG-2 Individual implementing projects shall have the option to use the Option Tables or project-specific GHG analysis in order to demonstrate that GHG emissions from the implementing project are less than significant.

- Implementing projects which implement enough reduction measures from the Option Tables and achieve a 100/70 points shall be considered to be consistent with the County's GHG reduction goals for the Project area. Refer to Temecula Valley Wine Country Greenhouse Gas Reduction Workbook (refer to Appendix E of this Draft EIR).
- Those implementing projects that do not garnish the minimum points using the Option Tables (presented in the Temecula Valley Wine Country Greenhouse Gas Reduction Workbook, Appendix A [refer to Appendix E of this Draft EIR]) shall require quantification of project-specific GHG emissions and shall provide mitigation measures to reduce GHG emissions at least 28.5% below Business As Usual (BAU) emissions.

The implementation mechanisms for the Temecula Valley Wine Country GHG Reduction Workbook are the Screening Tables for New Development; please refer to Section 7.3 for more details. By complying with the requirements from the Riverside County Climate Action Plan and TWCCP EIR, the project impact is considered less than significant.

8.0 References

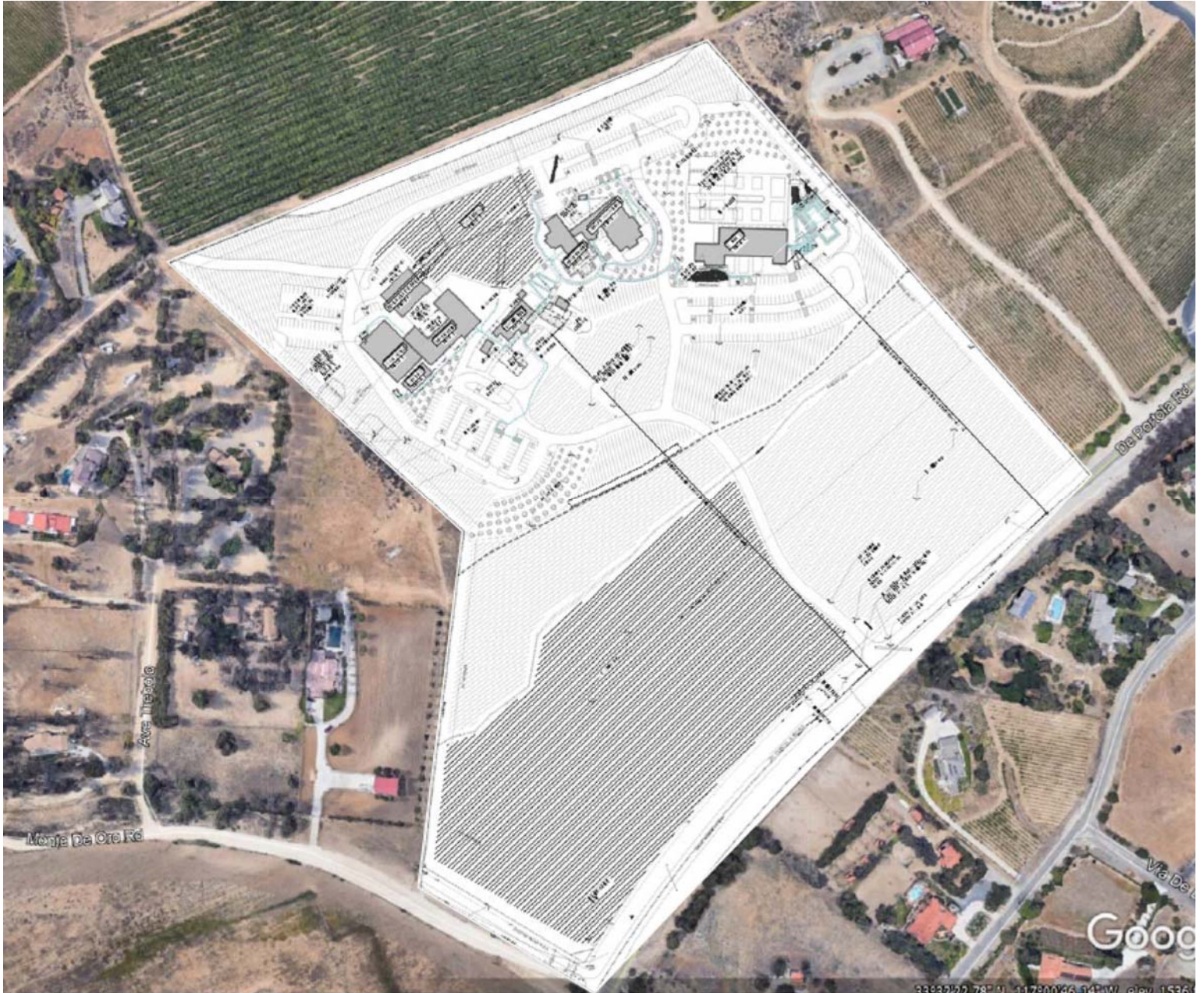
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Exhibits





Appendices

Appendix A

Daily Emissions Calculations Output
(CalEEMod)

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

Monarch Winery Air Quality and GHG Analysis
Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.81	1000sqft	0.68	1,805.00	0
General Light Industry	15.55	1000sqft	0.21	15,550.00	0
Refrigerated Warehouse-No Rail	8.75	1000sqft	0.11	8,750.00	0
Other Non-Asphalt Surfaces	34.27	Acre	34.27	1,444,032.60	0
Parking Lot	374.00	Space	6.41	279,239.00	0
Hotel	10.00	Room	0.11	8,073.00	0
Quality Restaurant	35.47	1000sqft	0.48	35,470.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

Project Characteristics -

Land Use - Based on the site plan dated 01/16/18. Tasting Room, Special Occasion Facility, Cave Building and Restaurant are calculated under Quality Restaurant.

Construction Phase -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Two tractors has been added to account for vineyard

Off-road Equipment -

Vehicle Trips - Trip rates are based on the ITE Trip Generation Manual, 10th Edition, except for Saturday rates which are based on the Portola Winery Traffic Impact Study.

Water And Wastewater - Vineyard water usage is estimated based on the data obtained from evineyardapp.com

Construction Off-road Equipment Mitigation - Project will be required to comply with SCAQMD Rule 403 regarding fugitive dust control.

Operational Off-Road Equipment - For Vineyard use only.

Stationary Sources - Process Boilers - Boiler Specs obtained from Rheem Standard Recovery Commercial Gas Water Heater: 119 gal Tank Capacity.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblLandUse	LandUseSquareFeet	1,810.00	1,805.00
tblLandUse	LandUseSquareFeet	1,492,801.20	1,444,032.60
tblLandUse	LandUseSquareFeet	149,600.00	279,239.00
tblLandUse	LandUseSquareFeet	14,520.00	8,073.00
tblLandUse	LotAcreage	0.04	0.68
tblLandUse	LotAcreage	0.36	0.21
tblLandUse	LotAcreage	0.20	0.11
tblLandUse	LotAcreage	3.37	6.41
tblLandUse	LotAcreage	0.33	0.11
tblLandUse	LotAcreage	0.81	0.48

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	8.19	5.88
tblVehicleTrips	ST_TR	94.36	48.07
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	0.68	5.00
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	SU_TR	72.16	71.97
tblVehicleTrips	SU_TR	1.68	0.06
tblVehicleTrips	WD_TR	6.97	4.96
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	8.17	8.36
tblVehicleTrips	WD_TR	89.95	90.04
tblVehicleTrips	WD_TR	1.68	1.74
tblWater	OutdoorWaterUseRate	0.00	9,191,762.32

2.0 Emissions Summary

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	6.7712	51.7024	52.7446	0.1870	18.2675	2.1986	20.4661	9.9840	2.0227	12.0068	0.0000	18,944.56 31	18,944.56 31	1.9481	0.0000	18,980.63 19
2021	6.1572	46.6724	49.2686	0.1836	10.2994	1.0600	11.3593	2.7742	0.9964	3.7706	0.0000	18,604.51 83	18,604.51 83	1.3819	0.0000	18,639.06 61
2022	5.6854	43.1144	46.5563	0.1799	10.2993	0.9008	11.2001	2.7742	0.8472	3.6214	0.0000	18,244.15 45	18,244.15 45	1.3280	0.0000	18,277.35 37
2023	21.2718	35.3371	43.9213	0.1750	10.2992	0.7663	11.0655	2.7741	0.7204	3.4945	0.0000	17,739.62 95	17,739.62 95	1.1796	0.0000	17,769.12 06
Maximum	21.2718	51.7024	52.7446	0.1870	18.2675	2.1986	20.4661	9.9840	2.0227	12.0068	0.0000	18,944.56 31	18,944.56 31	1.9481	0.0000	18,980.63 19

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.3021	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119
Energy	0.3294	2.9943	2.5152	0.0180		0.2276	0.2276		0.2276	0.2276		3,593.1540	3,593.1540	0.0689	0.0659	3,614.5064
Mobile	4.7332	27.8947	37.5564	0.1642	11.1092	0.0872	11.1964	2.9720	0.0812	3.0532		16,825.6721	16,825.6721	0.9109		16,848.4442
Offroad	0.3027	3.0714	4.4626	6.2300e-003		0.1516	0.1516		0.1395	0.1395		603.1530	603.1530	0.1951		608.0298
Stationary	0.0216	0.0960	0.3843	2.3500e-003		0.0298	0.0298		0.0298	0.0298		470.5963	470.5963	9.0200e-003		470.8218
Total	7.6890	34.0568	44.9676	0.1908	11.1092	0.4964	11.6055	2.9720	0.4783	3.4502		21,492.6804	21,492.6804	1.1841	0.0659	21,541.9140

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.3021	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119
Energy	0.3294	2.9943	2.5152	0.0180		0.2276	0.2276		0.2276	0.2276		3,593.1540	3,593.1540	0.0689	0.0659	3,614.5064
Mobile	4.7332	27.8947	37.5564	0.1642	11.1092	0.0872	11.1964	2.9720	0.0812	3.0532		16,825.6721	16,825.6721	0.9109		16,848.4442
Offroad	0.3027	3.0714	4.4626	6.2300e-003		0.1516	0.1516		0.1395	0.1395		603.1530	603.1530	0.1951		608.0298
Stationary	0.0216	0.0960	0.3843	2.3500e-003		0.0298	0.0298		0.0298	0.0298		470.5963	470.5963	9.0200e-003		470.8218
Total	7.6890	34.0568	44.9676	0.1908	11.1092	0.4964	11.6055	2.9720	0.4783	3.4502		21,492.6804	21,492.6804	1.1841	0.0659	21,541.9140

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	2/11/2020	5	30	
2	Grading	Grading	2/12/2020	5/26/2020	5	75	
3	Building Construction	Building Construction	5/27/2020	3/28/2023	5	740	
4	Paving	Paving	3/29/2023	6/13/2023	5	55	
5	Architectural Coating	Architectural Coating	6/14/2023	8/29/2023	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 40.68

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 104,472; Non-Residential Outdoor: 34,824; Striped Parking Area: 103,396 (Architectural Coating – sqft)

OffRoad Equipment

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	753.00	294.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	151.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	4.0765	42.4173	21.5136	0.0380	18.0663	2.1974	20.2637	9.9307	2.0216	11.9523		3,685.1016	3,685.1016	1.1918		3,714.8975

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0916	0.0542	0.7258	1.9900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		198.2870	198.2870	5.0800e-003		198.4141
Total	0.0916	0.0542	0.7258	1.9900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		198.2870	198.2870	5.0800e-003		198.4141

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.9103	0.0000	6.9103	3.7985	0.0000	3.7985			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	4.0765	42.4173	21.5136	0.0380	6.9103	2.1974	9.1078	3.7985	2.0216	5.8201	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0916	0.0542	0.7258	1.9900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		198.2870	198.2870	5.0800e-003		198.4141
Total	0.0916	0.0542	0.7258	1.9900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		198.2870	198.2870	5.0800e-003		198.4141

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	4.4501	50.1975	31.9583	0.0620	8.6733	2.1739	10.8472	3.5965	2.0000	5.5965		6,005.8653	6,005.8653	1.9424		6,054.4257

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601
Total	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3176	0.0000	3.3176	1.3757	0.0000	1.3757			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	4.4501	50.1975	31.9583	0.0620	3.3176	2.1739	5.4915	1.3757	2.0000	3.3757	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601
Total	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8194	30.2502	5.5341	0.0768	1.8827	0.1721	2.0547	0.5421	0.1646	0.7067		8,096.4931	8,096.4931	0.6073		8,111.6750
Worker	3.8319	2.2662	30.3621	0.0833	8.4168	0.0510	8.4677	2.2322	0.0469	2.2791		8,295.0069	8,295.0069	0.2126		8,300.3224
Total	4.6513	32.5164	35.8961	0.1601	10.2994	0.2230	10.5225	2.7742	0.2115	2.9858		16,391.5000	16,391.5000	0.8199		16,411.9974

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8194	30.2502	5.5341	0.0768	1.8827	0.1721	2.0547	0.5421	0.1646	0.7067		8,096.4931	8,096.4931	0.6073		8,111.6750
Worker	3.8319	2.2662	30.3621	0.0833	8.4168	0.0510	8.4677	2.2322	0.0469	2.2791		8,295.0069	8,295.0069	0.2126		8,300.3224
Total	4.6513	32.5164	35.8961	0.1601	10.2994	0.2230	10.5225	2.7742	0.2115	2.9858		16,391.5000	16,391.5000	0.8199		16,411.9974

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6864	27.2065	4.8541	0.0762	1.8826	0.0518	1.9343	0.5420	0.0495	0.5915		8,033.580 0	8,033.580 0	0.5747		8,047.948 2
Worker	3.5699	2.0338	27.8393	0.0805	8.4168	0.0496	8.4664	2.2322	0.0457	2.2778		8,017.574 4	8,017.574 4	0.1912		8,022.353 7
Total	4.2563	29.2403	32.6934	0.1567	10.2994	0.1014	10.4007	2.7742	0.0952	2.8694		16,051.15 44	16,051.15 44	0.7659		16,070.30 18

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6864	27.2065	4.8541	0.0762	1.8826	0.0518	1.9343	0.5420	0.0495	0.5915		8,033.5800	8,033.5800	0.5747		8,047.9482
Worker	3.5699	2.0338	27.8393	0.0805	8.4168	0.0496	8.4664	2.2322	0.0457	2.2778		8,017.5744	8,017.5744	0.1912		8,022.3537
Total	4.2563	29.2403	32.6934	0.1567	10.2994	0.1014	10.4007	2.7742	0.0952	2.8694		16,051.1544	16,051.1544	0.7659		16,070.3018

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6400	25.6685	4.5149	0.0755	1.8825	0.0435	1.9260	0.5420	0.0416	0.5836		7,965.2003	7,965.2003	0.5443		7,978.8079
Worker	3.3392	1.8303	25.6781	0.0775	8.4168	0.0483	8.4651	2.2322	0.0445	2.2766		7,724.6207	7,724.6207	0.1717		7,728.9137
Total	3.9792	27.4988	30.1929	0.1530	10.2993	0.0918	10.3911	2.7742	0.0861	2.8602		15,689.8209	15,689.8209	0.7160		15,707.7215

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6400	25.6685	4.5149	0.0755	1.8825	0.0435	1.9260	0.5420	0.0416	0.5836		7,965.2003	7,965.2003	0.5443		7,978.8079
Worker	3.3392	1.8303	25.6781	0.0775	8.4168	0.0483	8.4651	2.2322	0.0445	2.2766		7,724.6207	7,724.6207	0.1717		7,728.9137
Total	3.9792	27.4988	30.1929	0.1530	10.2993	0.0918	10.3911	2.7742	0.0861	2.8602		15,689.8209	15,689.8209	0.7160		15,707.7215

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4909	19.3017	3.9795	0.0735	1.8824	0.0194	1.9019	0.5420	0.0186	0.5605		7,753.3547	7,753.3547	0.4177		7,763.7963
Worker	3.1309	1.6505	23.6978	0.0746	8.4168	0.0472	8.4639	2.2322	0.0434	2.2756		7,431.0649	7,431.0649	0.1541		7,434.9182
Total	3.6218	20.9522	27.6773	0.1480	10.2992	0.0666	10.3658	2.7741	0.0620	2.8361		15,184.4196	15,184.4196	0.5718		15,198.7145

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4909	19.3017	3.9795	0.0735	1.8824	0.0194	1.9019	0.5420	0.0186	0.5605		7,753.3547	7,753.3547	0.4177		7,763.7963
Worker	3.1309	1.6505	23.6978	0.0746	8.4168	0.0472	8.4639	2.2322	0.0434	2.2756		7,431.0649	7,431.0649	0.1541		7,434.9182
Total	3.6218	20.9522	27.6773	0.1480	10.2992	0.0666	10.3658	2.7741	0.0620	2.8361		15,184.4196	15,184.4196	0.5718		15,198.7145

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.3054					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3381	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0624	0.0329	0.4721	1.4900e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		148.0292	148.0292	3.0700e-003		148.1059
Total	0.0624	0.0329	0.4721	1.4900e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		148.0292	148.0292	3.0700e-003		148.1059

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.3054					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3381	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0624	0.0329	0.4721	1.4900e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		148.0292	148.0292	3.0700e-003		148.1059
Total	0.0624	0.0329	0.4721	1.4900e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		148.0292	148.0292	3.0700e-003		148.1059

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	20.4523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	20.6440	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6278	0.3310	4.7521	0.0150	1.6878	9.4500e-003	1.6973	0.4476	8.7000e-003	0.4563		1,490.1604	1,490.1604	0.0309		1,490.9331
Total	0.6278	0.3310	4.7521	0.0150	1.6878	9.4500e-003	1.6973	0.4476	8.7000e-003	0.4563		1,490.1604	1,490.1604	0.0309		1,490.9331

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	20.4523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	20.6440	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6278	0.3310	4.7521	0.0150	1.6878	9.4500e-003	1.6973	0.4476	8.7000e-003	0.4563		1,490.1604	1,490.1604	0.0309		1,490.9331
Total	0.6278	0.3310	4.7521	0.0150	1.6878	9.4500e-003	1.6973	0.4476	8.7000e-003	0.4563		1,490.1604	1,490.1604	0.0309		1,490.9331

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.7332	27.8947	37.5564	0.1642	11.1092	0.0872	11.1964	2.9720	0.0812	3.0532		16,825.67 21	16,825.67 21	0.9109		16,848.44 42
Unmitigated	4.7332	27.8947	37.5564	0.1642	11.1092	0.0872	11.1964	2.9720	0.0812	3.0532		16,825.67 21	16,825.67 21	0.9109		16,848.44 42

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	77.13	0.00	77.75	293,146	293,146
General Office Building	17.63	0.00	1.27	41,149	41,149
Hotel	83.60	58.80	59.50	182,815	182,815
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	3,193.72	1,705.04	2552.78	4,113,565	4,113,565
Refrigerated Warehouse-No Rail	15.23	0.00	0.53	46,929	46,929
Total	3,387.30	1,763.84	2,691.82	4,677,603	4,677,603

4.3 Trip Type Information

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Refrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
General Office Building	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Hotel	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Other Non-Asphalt Surfaces	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Quality Restaurant	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Refrigerated Warehouse-No Rail	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3294	2.9943	2.5152	0.0180		0.2276	0.2276		0.2276	0.2276		3,593.1540	3,593.1540	0.0689	0.0659	3,614.5064
NaturalGas Unmitigated	0.3294	2.9943	2.5152	0.0180		0.2276	0.2276		0.2276	0.2276		3,593.1540	3,593.1540	0.0689	0.0659	3,614.5064

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	1384.16	0.0149	0.1357	0.1140	8.1000e-004		0.0103	0.0103		0.0103	0.0103		162.8427	162.8427	3.1200e-003	2.9900e-003	163.8104
General Office Building	17.1599	1.9000e-004	1.6800e-003	1.4100e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		2.0188	2.0188	4.0000e-005	4.0000e-005	2.0308
Hotel	1327.29	0.0143	0.1301	0.1093	7.8000e-004		9.8900e-003	9.8900e-003		9.8900e-003	9.8900e-003		156.1517	156.1517	2.9900e-003	2.8600e-003	157.0797
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	26572.4	0.2866	2.6051	2.1883	0.0156		0.1980	0.1980		0.1980	0.1980		3,126.1617	3,126.1617	0.0599	0.0573	3,144.7390
Refrigerated Warehouse-No Rail	1240.82	0.0134	0.1217	0.1022	7.3000e-004		9.2500e-003	9.2500e-003		9.2500e-003	9.2500e-003		145.9791	145.9791	2.8000e-003	2.6800e-003	146.8465
Total		0.3294	2.9943	2.5152	0.0180		0.2276	0.2276		0.2276	0.2276		3,593.1540	3,593.1540	0.0689	0.0659	3,614.5064

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	1.38416	0.0149	0.1357	0.1140	8.1000e-004		0.0103	0.0103		0.0103	0.0103		162.8427	162.8427	3.1200e-003	2.9900e-003	163.8104
General Office Building	0.0171599	1.9000e-004	1.6800e-003	1.4100e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		2.0188	2.0188	4.0000e-005	4.0000e-005	2.0308
Hotel	1.32729	0.0143	0.1301	0.1093	7.8000e-004		9.8900e-003	9.8900e-003		9.8900e-003	9.8900e-003		156.1517	156.1517	2.9900e-003	2.8600e-003	157.0797
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	26.5724	0.2866	2.6051	2.1883	0.0156		0.1980	0.1980		0.1980	0.1980		3,126.1617	3,126.1617	0.0599	0.0573	3,144.7390
Refrigerated Warehouse-No Rail	1.24082	0.0134	0.1217	0.1022	7.3000e-004		9.2500e-003	9.2500e-003		9.2500e-003	9.2500e-003		145.9791	145.9791	2.8000e-003	2.6800e-003	146.8465
Total		0.3294	2.9943	2.5152	0.0180		0.2276	0.2276		0.2276	0.2276		3,593.1540	3,593.1540	0.0689	0.0659	3,614.5064

6.0 Area Detail

6.1 Mitigation Measures Area

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.3021	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119
Unmitigated	2.3021	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5400e-003	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119
Total	2.3021	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5400e-003	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119
Total	2.3021	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	2	8.00	260	97	0.37	Diesel

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Tractors/Loaders/Backhoes	0.3027	3.0714	4.4626	6.2300e-003		0.1516	0.1516		0.1395	0.1395		603.1530	603.1530	0.1951		608.0298
Total	0.3027	3.0714	4.4626	6.2300e-003		0.1516	0.1516		0.1395	0.1395		603.1530	603.1530	0.1951		608.0298

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
Boiler	2	2	25	0.199	CNG

User Defined Equipment

Equipment Type	Number
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Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Summer

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Boiler - CNG (0 - 2 MMBTU)	0.0216	0.0960	0.3843	2.3500e-003		0.0298	0.0298		0.0298	0.0298		470.5963	470.5963	9.0200e-003		470.8218
Total	0.0216	0.0960	0.3843	2.3500e-003		0.0298	0.0298		0.0298	0.0298		470.5963	470.5963	9.0200e-003		470.8218

11.0 Vegetation

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

Monarch Winery Air Quality and GHG Analysis
Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.81	1000sqft	0.68	1,805.00	0
General Light Industry	15.55	1000sqft	0.21	15,550.00	0
Refrigerated Warehouse-No Rail	8.75	1000sqft	0.11	8,750.00	0
Other Non-Asphalt Surfaces	34.27	Acre	34.27	1,444,032.60	0
Parking Lot	374.00	Space	6.41	279,239.00	0
Hotel	10.00	Room	0.11	8,073.00	0
Quality Restaurant	35.47	1000sqft	0.48	35,470.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

Project Characteristics -

Land Use - Based on the site plan dated 01/16/18. Tasting Room, Special Occasion Facility, Cave Building and Restaurant are calculated under Quality Restaurant.

Construction Phase -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Two tractors has been added to account for vineyard

Off-road Equipment -

Vehicle Trips - Trip rates are based on the ITE Trip Generation Manual, 10th Edition, except for Saturday rates which are based on the Portola Winery Traffic Impact Study.

Water And Wastewater - Vineyard water usage is estimated based on the data obtained from evineyardapp.com

Construction Off-road Equipment Mitigation - Project will be required to comply with SCAQMD Rule 403 regarding fugitive dust control.

Operational Off-Road Equipment - For Vineyard use only.

Stationary Sources - Process Boilers - Boiler Specs obtained from Rheem Standard Recovery Commercial Gas Water Heater: 119 gal Tank Capacity.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblLandUse	LandUseSquareFeet	1,810.00	1,805.00
tblLandUse	LandUseSquareFeet	1,492,801.20	1,444,032.60
tblLandUse	LandUseSquareFeet	149,600.00	279,239.00
tblLandUse	LandUseSquareFeet	14,520.00	8,073.00
tblLandUse	LotAcreage	0.04	0.68
tblLandUse	LotAcreage	0.36	0.21
tblLandUse	LotAcreage	0.20	0.11
tblLandUse	LotAcreage	3.37	6.41
tblLandUse	LotAcreage	0.33	0.11
tblLandUse	LotAcreage	0.81	0.48

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	8.19	5.88
tblVehicleTrips	ST_TR	94.36	48.07
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	0.68	5.00
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	SU_TR	72.16	71.97
tblVehicleTrips	SU_TR	1.68	0.06
tblVehicleTrips	WD_TR	6.97	4.96
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	8.17	8.36
tblVehicleTrips	WD_TR	89.95	90.04
tblVehicleTrips	WD_TR	1.68	1.74
tblWater	OutdoorWaterUseRate	0.00	9,191,762.32

2.0 Emissions Summary

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	6.7368	51.6222	47.8891	0.1755	18.2675	2.1986	20.4661	9.9840	2.0227	12.0068	0.0000	17,786.73 58	17,786.73 58	1.9473	0.0000	17,823.82 21
2021	6.1333	46.5076	44.7891	0.1724	10.2994	1.0615	11.3609	2.7742	0.9979	3.7721	0.0000	17,477.38 40	17,477.38 40	1.4226	0.0000	17,512.94 91
2022	5.6735	42.9192	42.4193	0.1691	10.2993	0.9022	11.2015	2.7742	0.8486	3.6227	0.0000	17,148.39 32	17,148.39 32	1.3685	0.0000	17,182.60 61
2023	21.2639	35.1297	39.9119	0.1645	10.2992	0.7669	11.0661	2.7741	0.7210	3.4951	0.0000	16,687.10 01	16,687.10 01	1.2052	0.0000	16,717.22 91
Maximum	21.2639	51.6222	47.8891	0.1755	18.2675	2.1986	20.4661	9.9840	2.0227	12.0068	0.0000	17,786.73 58	17,786.73 58	1.9473	0.0000	17,823.82 21

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.3021	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119
Energy	0.3294	2.9943	2.5152	0.0180		0.2276	0.2276		0.2276	0.2276		3,593.1540	3,593.1540	0.0689	0.0659	3,614.5064
Mobile	3.8823	27.4781	34.2470	0.1508	11.1092	0.0882	11.1974	2.9720	0.0822	3.0542		15,462.4313	15,462.4313	0.9674		15,486.6173
Offroad	0.3027	3.0714	4.4626	6.2300e-003		0.1516	0.1516		0.1395	0.1395		603.1530	603.1530	0.1951		608.0298
Stationary	0.0216	0.0960	0.3843	2.3500e-003		0.0298	0.0298		0.0298	0.0298		470.5963	470.5963	9.0200e-003		470.8218
Total	6.8381	33.6402	41.6581	0.1773	11.1092	0.4974	11.6066	2.9720	0.4792	3.4512		20,129.4397	20,129.4397	1.2407	0.0659	20,180.0872

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.3021	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119
Energy	0.3294	2.9943	2.5152	0.0180		0.2276	0.2276		0.2276	0.2276		3,593.1540	3,593.1540	0.0689	0.0659	3,614.5064
Mobile	3.8823	27.4781	34.2470	0.1508	11.1092	0.0882	11.1974	2.9720	0.0822	3.0542		15,462.4313	15,462.4313	0.9674		15,486.6173
Offroad	0.3027	3.0714	4.4626	6.2300e-003		0.1516	0.1516		0.1395	0.1395		603.1530	603.1530	0.1951		608.0298
Stationary	0.0216	0.0960	0.3843	2.3500e-003		0.0298	0.0298		0.0298	0.0298		470.5963	470.5963	9.0200e-003		470.8218
Total	6.8381	33.6402	41.6581	0.1773	11.1092	0.4974	11.6066	2.9720	0.4792	3.4512		20,129.4397	20,129.4397	1.2407	0.0659	20,180.0872

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	2/11/2020	5	30	
2	Grading	Grading	2/12/2020	5/26/2020	5	75	
3	Building Construction	Building Construction	5/27/2020	3/28/2023	5	740	
4	Paving	Paving	3/29/2023	6/13/2023	5	55	
5	Architectural Coating	Architectural Coating	6/14/2023	8/29/2023	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 40.68

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 104,472; Non-Residential Outdoor: 34,824; Striped Parking Area: 103,396 (Architectural Coating – sqft)

OffRoad Equipment

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	753.00	294.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	151.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.1 Mitigation Measures Construction

- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	4.0765	42.4173	21.5136	0.0380	18.0663	2.1974	20.2637	9.9307	2.0216	11.9523		3,685.1016	3,685.1016	1.1918		3,714.8975

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0897	0.0560	0.5871	1.7900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		177.8824	177.8824	4.4200e-003		177.9929
Total	0.0897	0.0560	0.5871	1.7900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		177.8824	177.8824	4.4200e-003		177.9929

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.9103	0.0000	6.9103	3.7985	0.0000	3.7985			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	4.0765	42.4173	21.5136	0.0380	6.9103	2.1974	9.1078	3.7985	2.0216	5.8201	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0897	0.0560	0.5871	1.7900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		177.8824	177.8824	4.4200e-003		177.9929
Total	0.0897	0.0560	0.5871	1.7900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		177.8824	177.8824	4.4200e-003		177.9929

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	4.4501	50.1975	31.9583	0.0620	8.6733	2.1739	10.8472	3.5965	2.0000	5.5965		6,005.8653	6,005.8653	1.9424		6,054.4257

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0623	0.6524	1.9800e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		197.6472	197.6472	4.9100e-003		197.7699
Total	0.0997	0.0623	0.6524	1.9800e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		197.6472	197.6472	4.9100e-003		197.7699

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3176	0.0000	3.3176	1.3757	0.0000	1.3757			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	4.4501	50.1975	31.9583	0.0620	3.3176	2.1739	5.4915	1.3757	2.0000	3.3757	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0623	0.6524	1.9800e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		197.6472	197.6472	4.9100e-003		197.7699
Total	0.0997	0.0623	0.6524	1.9800e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		197.6472	197.6472	4.9100e-003		197.7699

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8644	30.0918	6.4798	0.0739	1.8827	0.1741	2.0568	0.5421	0.1665	0.7086		7,792.257 2	7,792.257 2	0.6758		7,809.151 3
Worker	3.7526	2.3444	24.5609	0.0747	8.4168	0.0510	8.4677	2.2322	0.0469	2.2791		7,441.415 5	7,441.415 5	0.1848		7,446.036 3
Total	4.6169	32.4361	31.0406	0.1486	10.2994	0.2251	10.5245	2.7742	0.2135	2.9877		15,233.67 27	15,233.67 27	0.8606		15,255.18 76

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8644	30.0918	6.4798	0.0739	1.8827	0.1741	2.0568	0.5421	0.1665	0.7086		7,792.257 2	7,792.257 2	0.6758		7,809.151 3
Worker	3.7526	2.3444	24.5609	0.0747	8.4168	0.0510	8.4677	2.2322	0.0469	2.2791		7,441.415 5	7,441.415 5	0.1848		7,446.036 3
Total	4.6169	32.4361	31.0406	0.1486	10.2994	0.2251	10.5245	2.7742	0.2135	2.9877		15,233.67 27	15,233.67 27	0.8606		15,255.18 76

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7290	26.9722	5.7421	0.0733	1.8826	0.0533	1.9359	0.5420	0.0510	0.5930		7,731.4126	7,731.4126	0.6404		7,747.4223
Worker	3.5034	2.1033	22.4718	0.0722	8.4168	0.0496	8.4664	2.2322	0.0457	2.2778		7,192.6074	7,192.6074	0.1662		7,196.7626
Total	4.2323	29.0755	28.2139	0.1455	10.2994	0.1029	10.4023	2.7742	0.0967	2.8708		14,924.0201	14,924.0201	0.8066		14,944.1849

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7290	26.9722	5.7421	0.0733	1.8826	0.0533	1.9359	0.5420	0.0510	0.5930		7,731.4126	7,731.4126	0.6404		7,747.4223
Worker	3.5034	2.1033	22.4718	0.0722	8.4168	0.0496	8.4664	2.2322	0.0457	2.2778		7,192.6074	7,192.6074	0.1662		7,196.7626
Total	4.2323	29.0755	28.2139	0.1455	10.2994	0.1029	10.4023	2.7742	0.0967	2.8708		14,924.0201	14,924.0201	0.8066		14,944.1849

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6807	25.4115	5.3602	0.0727	1.8825	0.0449	1.9274	0.5420	0.0430	0.5850		7,663.9078	7,663.9078	0.6071		7,679.0856
Worker	3.2866	1.8921	20.6958	0.0695	8.4168	0.0483	8.4651	2.2322	0.0445	2.2766		6,930.1518	6,930.1518	0.1495		6,933.8883
Total	3.9673	27.3036	26.0559	0.1422	10.2993	0.0932	10.3925	2.7742	0.0874	2.8616		14,594.0597	14,594.0597	0.7566		14,612.9739

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6807	25.4115	5.3602	0.0727	1.8825	0.0449	1.9274	0.5420	0.0430	0.5850		7,663.9078	7,663.9078	0.6071		7,679.0856
Worker	3.2866	1.8921	20.6958	0.0695	8.4168	0.0483	8.4651	2.2322	0.0445	2.2766		6,930.1518	6,930.1518	0.1495		6,933.8883
Total	3.9673	27.3036	26.0559	0.1422	10.2993	0.0932	10.3925	2.7742	0.0874	2.8616		14,594.0597	14,594.0597	0.7566		14,612.9739

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5200	19.0394	4.5960	0.0707	1.8824	0.0201	1.9025	0.5420	0.0192	0.5612		7,464.7375	7,464.7375	0.4630		7,476.3118
Worker	3.0913	1.7054	19.0719	0.0669	8.4168	0.0472	8.4639	2.2322	0.0434	2.2756		6,667.1527	6,667.1527	0.1343		6,670.5112
Total	3.6114	20.7448	23.6679	0.1376	10.2992	0.0672	10.3664	2.7741	0.0626	2.8367		14,131.8902	14,131.8902	0.5973		14,146.8230

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5200	19.0394	4.5960	0.0707	1.8824	0.0201	1.9025	0.5420	0.0192	0.5612		7,464.7375	7,464.7375	0.4630		7,476.3118
Worker	3.0913	1.7054	19.0719	0.0669	8.4168	0.0472	8.4639	2.2322	0.0434	2.2756		6,667.1527	6,667.1527	0.1343		6,670.5112
Total	3.6114	20.7448	23.6679	0.1376	10.2992	0.0672	10.3664	2.7741	0.0626	2.8367		14,131.8902	14,131.8902	0.5973		14,146.8230

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.3054					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3381	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0616	0.0340	0.3799	1.3300e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		132.8118	132.8118	2.6800e-003		132.8787
Total	0.0616	0.0340	0.3799	1.3300e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		132.8118	132.8118	2.6800e-003		132.8787

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.3054					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.3381	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0616	0.0340	0.3799	1.3300e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		132.8118	132.8118	2.6800e-003		132.8787
Total	0.0616	0.0340	0.3799	1.3300e-003	0.1677	9.4000e-004	0.1686	0.0445	8.6000e-004	0.0453		132.8118	132.8118	2.6800e-003		132.8787

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	20.4523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	20.6440	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6199	0.3420	3.8245	0.0134	1.6878	9.4500e-003	1.6973	0.4476	8.7000e-003	0.4563		1,336.972 2	1,336.972 2	0.0269		1,337.645 7
Total	0.6199	0.3420	3.8245	0.0134	1.6878	9.4500e-003	1.6973	0.4476	8.7000e-003	0.4563		1,336.972 2	1,336.972 2	0.0269		1,337.645 7

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	20.4523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	20.6440	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6199	0.3420	3.8245	0.0134	1.6878	9.4500e-003	1.6973	0.4476	8.7000e-003	0.4563		1,336.972 2	1,336.972 2	0.0269		1,337.645 7
Total	0.6199	0.3420	3.8245	0.0134	1.6878	9.4500e-003	1.6973	0.4476	8.7000e-003	0.4563		1,336.972 2	1,336.972 2	0.0269		1,337.645 7

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.8823	27.4781	34.2470	0.1508	11.1092	0.0882	11.1974	2.9720	0.0822	3.0542		15,462.43 13	15,462.43 13	0.9674		15,486.61 73
Unmitigated	3.8823	27.4781	34.2470	0.1508	11.1092	0.0882	11.1974	2.9720	0.0822	3.0542		15,462.43 13	15,462.43 13	0.9674		15,486.61 73

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	77.13	0.00	77.75	293,146	293,146
General Office Building	17.63	0.00	1.27	41,149	41,149
Hotel	83.60	58.80	59.50	182,815	182,815
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	3,193.72	1,705.04	2552.78	4,113,565	4,113,565
Refrigerated Warehouse-No Rail	15.23	0.00	0.53	46,929	46,929
Total	3,387.30	1,763.84	2,691.82	4,677,603	4,677,603

4.3 Trip Type Information

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Refrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
General Office Building	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Hotel	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Other Non-Asphalt Surfaces	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Quality Restaurant	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Refrigerated Warehouse-No Rail	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3294	2.9943	2.5152	0.0180		0.2276	0.2276		0.2276	0.2276		3,593.1540	3,593.1540	0.0689	0.0659	3,614.5064
NaturalGas Unmitigated	0.3294	2.9943	2.5152	0.0180		0.2276	0.2276		0.2276	0.2276		3,593.1540	3,593.1540	0.0689	0.0659	3,614.5064

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	1384.16	0.0149	0.1357	0.1140	8.1000e-004		0.0103	0.0103		0.0103	0.0103		162.8427	162.8427	3.1200e-003	2.9900e-003	163.8104
General Office Building	17.1599	1.9000e-004	1.6800e-003	1.4100e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		2.0188	2.0188	4.0000e-005	4.0000e-005	2.0308
Hotel	1327.29	0.0143	0.1301	0.1093	7.8000e-004		9.8900e-003	9.8900e-003		9.8900e-003	9.8900e-003		156.1517	156.1517	2.9900e-003	2.8600e-003	157.0797
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	26572.4	0.2866	2.6051	2.1883	0.0156		0.1980	0.1980		0.1980	0.1980		3,126.1617	3,126.1617	0.0599	0.0573	3,144.7390
Refrigerated Warehouse-No Rail	1240.82	0.0134	0.1217	0.1022	7.3000e-004		9.2500e-003	9.2500e-003		9.2500e-003	9.2500e-003		145.9791	145.9791	2.8000e-003	2.6800e-003	146.8465
Total		0.3294	2.9943	2.5152	0.0180		0.2276	0.2276		0.2276	0.2276		3,593.1540	3,593.1540	0.0689	0.0659	3,614.5064

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	1.38416	0.0149	0.1357	0.1140	8.1000e-004		0.0103	0.0103		0.0103	0.0103		162.8427	162.8427	3.1200e-003	2.9900e-003	163.8104
General Office Building	0.0171599	1.9000e-004	1.6800e-003	1.4100e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		2.0188	2.0188	4.0000e-005	4.0000e-005	2.0308
Hotel	1.32729	0.0143	0.1301	0.1093	7.8000e-004		9.8900e-003	9.8900e-003		9.8900e-003	9.8900e-003		156.1517	156.1517	2.9900e-003	2.8600e-003	157.0797
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	26.5724	0.2866	2.6051	2.1883	0.0156		0.1980	0.1980		0.1980	0.1980		3,126.1617	3,126.1617	0.0599	0.0573	3,144.7390
Refrigerated Warehouse-No Rail	1.24082	0.0134	0.1217	0.1022	7.3000e-004		9.2500e-003	9.2500e-003		9.2500e-003	9.2500e-003		145.9791	145.9791	2.8000e-003	2.6800e-003	146.8465
Total		0.3294	2.9943	2.5152	0.0180		0.2276	0.2276		0.2276	0.2276		3,593.1540	3,593.1540	0.0689	0.0659	3,614.5064

6.0 Area Detail

6.1 Mitigation Measures Area

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.3021	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119
Unmitigated	2.3021	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5400e-003	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119
Total	2.3021	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3082					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.9894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5400e-003	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119
Total	2.3021	4.5000e-004	0.0490	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1050	0.1050	2.8000e-004		0.1119

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	2	8.00	260	97	0.37	Diesel

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Tractors/Loaders/Backhoes	0.3027	3.0714	4.4626	6.2300e-003		0.1516	0.1516		0.1395	0.1395		603.1530	603.1530	0.1951		608.0298
Total	0.3027	3.0714	4.4626	6.2300e-003		0.1516	0.1516		0.1395	0.1395		603.1530	603.1530	0.1951		608.0298

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
Boiler	2	2	25	0.199	CNG

User Defined Equipment

Equipment Type	Number
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Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Winter

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Boiler - CNG (0 - 2 MMBTU)	0.0216	0.0960	0.3843	2.3500e-003		0.0298	0.0298		0.0298	0.0298		470.5963	470.5963	9.0200e-003		470.8218
Total	0.0216	0.0960	0.3843	2.3500e-003		0.0298	0.0298		0.0298	0.0298		470.5963	470.5963	9.0200e-003		470.8218

11.0 Vegetation

Appendix B

Annual Emission Calculations Output
(CalEEMod)

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

Monarch Winery Air Quality and GHG Analysis
Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.81	1000sqft	0.68	1,805.00	0
General Light Industry	15.55	1000sqft	0.21	15,550.00	0
Refrigerated Warehouse-No Rail	8.75	1000sqft	0.11	8,750.00	0
Other Non-Asphalt Surfaces	34.27	Acre	34.27	1,444,032.60	0
Parking Lot	374.00	Space	6.41	279,239.00	0
Hotel	10.00	Room	0.11	8,073.00	0
Quality Restaurant	35.47	1000sqft	0.48	35,470.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

Project Characteristics -

Land Use - Based on the site plan dated 01/16/18. Tasting Room, Special Occasion Facility, Cave Building and Restaurant are calculated under Quality Restaurant.

Construction Phase -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Two tractors has been added to account for vineyard

Off-road Equipment -

Vehicle Trips - Trip rates are based on the ITE Trip Generation Manual, 10th Edition, except for Saturday rates which are based on the Portola Winery Traffic Impact Study.

Water And Wastewater - Vineyard water usage is estimated based on the data obtained from evineyardapp.com

Construction Off-road Equipment Mitigation - Project will be required to comply with SCAQMD Rule 403 regarding fugitive dust control.

Operational Off-Road Equipment - For Vineyard use only.

Stationary Sources - Process Boilers - Boiler Specs obtained from Rheem Standard Recovery Commercial Gas Water Heater: 119 gal Tank Capacity.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblLandUse	LandUseSquareFeet	1,810.00	1,805.00
tblLandUse	LandUseSquareFeet	1,492,801.20	1,444,032.60
tblLandUse	LandUseSquareFeet	149,600.00	279,239.00
tblLandUse	LandUseSquareFeet	14,520.00	8,073.00
tblLandUse	LotAcreage	0.04	0.68
tblLandUse	LotAcreage	0.36	0.21
tblLandUse	LotAcreage	0.20	0.11
tblLandUse	LotAcreage	3.37	6.41
tblLandUse	LotAcreage	0.33	0.11
tblLandUse	LotAcreage	0.81	0.48

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	8.19	5.88
tblVehicleTrips	ST_TR	94.36	48.07
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	0.68	5.00
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	SU_TR	72.16	71.97
tblVehicleTrips	SU_TR	1.68	0.06
tblVehicleTrips	WD_TR	6.97	4.96
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	8.17	8.36
tblVehicleTrips	WD_TR	89.95	90.04
tblVehicleTrips	WD_TR	1.68	1.74
tblWater	OutdoorWaterUseRate	0.00	9,191,762.32

2.0 Emissions Summary

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.7364	6.6189	5.3810	0.0171	1.4029	0.2198	1.6227	0.5014	0.2045	0.7059	0.0000	1,556.7156	1,556.7156	0.1859	0.0000	1,561.3622
2021	0.7609	6.1362	5.9448	0.0230	1.3224	0.1384	1.4608	0.3567	0.1301	0.4868	0.0000	2,111.7768	2,111.7768	0.1647	0.0000	2,115.8938
2022	0.7001	5.6419	5.6047	0.0224	1.3173	0.1172	1.4345	0.3553	0.1102	0.4656	0.0000	2,064.0282	2,064.0282	0.1578	0.0000	2,067.9726
2023	0.7741	1.4262	1.8331	6.3300e-003	0.3643	0.0400	0.4043	0.0981	0.0375	0.1355	0.0000	578.5274	578.5274	0.0523	0.0000	579.8347
Maximum	0.7741	6.6189	5.9448	0.0230	1.4029	0.2198	1.6227	0.5014	0.2045	0.7059	0.0000	2,111.7768	2,111.7768	0.1859	0.0000	2,115.8938

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.7364	6.6189	5.3810	0.0171	1.0347	0.2198	1.2546	0.3261	0.2045	0.5306	0.0000	1,556.7151	1,556.7151	0.1859	0.0000	1,561.3617
2021	0.7609	6.1362	5.9448	0.0230	1.3224	0.1384	1.4608	0.3567	0.1301	0.4868	0.0000	2,111.7765	2,111.7765	0.1647	0.0000	2,115.8935
2022	0.7001	5.6419	5.6047	0.0224	1.3173	0.1172	1.4345	0.3553	0.1102	0.4656	0.0000	2,064.0279	2,064.0279	0.1578	0.0000	2,067.9723
2023	0.7741	1.4262	1.8331	6.3300e-003	0.3643	0.0400	0.4043	0.0981	0.0375	0.1355	0.0000	578.5273	578.5273	0.0523	0.0000	579.8346
Maximum	0.7741	6.6189	5.9448	0.0230	1.3224	0.2198	1.4608	0.3567	0.2045	0.5306	0.0000	2,111.7765	2,111.7765	0.1859	0.0000	2,115.8935

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	8.35	0.00	7.48	13.36	0.00	9.77	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	1.6588	1.6588
2	4-1-2020	6-30-2020	1.8271	1.8271
3	7-1-2020	9-30-2020	1.9213	1.9213
4	10-1-2020	12-31-2020	1.9175	1.9175
5	1-1-2021	3-31-2021	1.6920	1.6920
6	4-1-2021	6-30-2021	1.7170	1.7170
7	7-1-2021	9-30-2021	1.7358	1.7358
8	10-1-2021	12-31-2021	1.7296	1.7296

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9	1-1-2022	3-31-2022	1.5619	1.5619
10	4-1-2022	6-30-2022	1.5860	1.5860
11	7-1-2022	9-30-2022	1.6034	1.6034
12	10-1-2022	12-31-2022	1.5966	1.5966
13	1-1-2023	3-31-2023	1.2651	1.2651
14	4-1-2023	6-30-2023	0.4463	0.4463
15	7-1-2023	9-30-2023	0.4908	0.4908
		Highest	1.9213	1.9213

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4199	6.0000e-005	6.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127
Energy	0.0601	0.5465	0.4590	3.2800e-003		0.0415	0.0415		0.0415	0.0415	0.0000	1,376.4245	1,376.4245	0.0437	0.0176	1,382.7556
Mobile	0.6372	4.5847	5.6958	0.0254	1.7857	0.0143	1.8000	0.4784	0.0133	0.4917	0.0000	2,361.4892	2,361.4892	0.1382	0.0000	2,364.9448
Offroad	0.0394	0.3993	0.5801	8.1000e-004		0.0197	0.0197		0.0181	0.0181	0.0000	71.1323	71.1323	0.0230	0.0000	71.7074
Stationary	1.3000e-004	6.0000e-004	2.4000e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6682	2.6682	5.0000e-005	0.0000	2.6695
Waste						0.0000	0.0000		0.0000	0.0000	13.6045	0.0000	13.6045	0.8040	0.0000	33.7045
Water						0.0000	0.0000		0.0000	0.0000	5.3810	106.1358	111.5168	0.5571	0.0140	129.6023
Total	1.1567	5.5311	6.7435	0.0295	1.7857	0.0758	1.8615	0.4784	0.0732	0.5516	18.9854	3,917.8619	3,936.8473	1.5660	0.0315	3,985.3967

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4199	6.0000e-005	6.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127
Energy	0.0601	0.5465	0.4590	3.2800e-003		0.0415	0.0415		0.0415	0.0415	0.0000	1,376.4245	1,376.4245	0.0437	0.0176	1,382.7556
Mobile	0.6372	4.5847	5.6958	0.0254	1.7857	0.0143	1.8000	0.4784	0.0133	0.4917	0.0000	2,361.4892	2,361.4892	0.1382	0.0000	2,364.9448
Offroad	0.0394	0.3993	0.5801	8.1000e-004		0.0197	0.0197		0.0181	0.0181	0.0000	71.1323	71.1323	0.0230	0.0000	71.7074
Stationary	1.3000e-004	6.0000e-004	2.4000e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6682	2.6682	5.0000e-005	0.0000	2.6695
Waste						0.0000	0.0000		0.0000	0.0000	13.6045	0.0000	13.6045	0.8040	0.0000	33.7045
Water						0.0000	0.0000		0.0000	0.0000	5.3810	106.1358	111.5168	0.5571	0.0140	129.6023
Total	1.1567	5.5311	6.7435	0.0295	1.7857	0.0758	1.8615	0.4784	0.0732	0.5516	18.9854	3,917.8619	3,936.8473	1.5660	0.0315	3,985.3967

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	2/11/2020	5	30	
2	Grading	Grading	2/12/2020	5/26/2020	5	75	
3	Building Construction	Building Construction	5/27/2020	3/28/2023	5	740	
4	Paving	Paving	3/29/2023	6/13/2023	5	55	
5	Architectural Coating	Architectural Coating	6/14/2023	8/29/2023	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 40.68

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 104,472; Non-Residential Outdoor: 34,824; Striped Parking Area: 103,396 (Architectural Coating – sqft)

OffRoad Equipment

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	753.00	294.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	151.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

3.1 Mitigation Measures Construction

- Use Soil Stabilizer
- Replace Ground Cover
- Water Exposed Area
- Water Unpaved Roads
- Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0612	0.6363	0.3227	5.7000e-004		0.0330	0.0330		0.0303	0.0303	0.0000	50.1460	50.1460	0.0162	0.0000	50.5515
Total	0.0612	0.6363	0.3227	5.7000e-004	0.2710	0.0330	0.3040	0.1490	0.0303	0.1793	0.0000	50.1460	50.1460	0.0162	0.0000	50.5515

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2400e-003	8.7000e-004	9.2800e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.4829	2.4829	6.0000e-005	0.0000	2.4845
Total	1.2400e-003	8.7000e-004	9.2800e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.4829	2.4829	6.0000e-005	0.0000	2.4845

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1037	0.0000	0.1037	0.0570	0.0000	0.0570	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0612	0.6363	0.3227	5.7000e-004		0.0330	0.0330		0.0303	0.0303	0.0000	50.1460	50.1460	0.0162	0.0000	50.5514
Total	0.0612	0.6363	0.3227	5.7000e-004	0.1037	0.0330	0.1366	0.0570	0.0303	0.0873	0.0000	50.1460	50.1460	0.0162	0.0000	50.5514

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2400e-003	8.7000e-004	9.2800e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.4829	2.4829	6.0000e-005	0.0000	2.4845
Total	1.2400e-003	8.7000e-004	9.2800e-003	3.0000e-005	2.9700e-003	2.0000e-005	2.9900e-003	7.9000e-004	2.0000e-005	8.0000e-004	0.0000	2.4829	2.4829	6.0000e-005	0.0000	2.4845

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3253	0.0000	0.3253	0.1349	0.0000	0.1349	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1669	1.8824	1.1984	2.3300e-003		0.0815	0.0815		0.0750	0.0750	0.0000	204.3161	204.3161	0.0661	0.0000	205.9681
Total	0.1669	1.8824	1.1984	2.3300e-003	0.3253	0.0815	0.4068	0.1349	0.0750	0.2099	0.0000	204.3161	204.3161	0.0661	0.0000	205.9681

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4500e-003	2.4200e-003	0.0258	8.0000e-005	8.2400e-003	5.0000e-005	8.2900e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.8969	6.8969	1.7000e-004	0.0000	6.9013
Total	3.4500e-003	2.4200e-003	0.0258	8.0000e-005	8.2400e-003	5.0000e-005	8.2900e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.8969	6.8969	1.7000e-004	0.0000	6.9013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1244	0.0000	0.1244	0.0516	0.0000	0.0516	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1669	1.8824	1.1984	2.3300e-003		0.0815	0.0815		0.0750	0.0750	0.0000	204.3159	204.3159	0.0661	0.0000	205.9679
Total	0.1669	1.8824	1.1984	2.3300e-003	0.1244	0.0815	0.2059	0.0516	0.0750	0.1266	0.0000	204.3159	204.3159	0.0661	0.0000	205.9679

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3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4500e-003	2.4200e-003	0.0258	8.0000e-005	8.2400e-003	5.0000e-005	8.2900e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.8969	6.8969	1.7000e-004	0.0000	6.9013
Total	3.4500e-003	2.4200e-003	0.0258	8.0000e-005	8.2400e-003	5.0000e-005	8.2900e-003	2.1900e-003	5.0000e-005	2.2400e-003	0.0000	6.8969	6.8969	1.7000e-004	0.0000	6.9013

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1664	1.5061	1.3226	2.1100e-003		0.0877	0.0877		0.0825	0.0825	0.0000	181.8138	181.8138	0.0444	0.0000	182.9227
Total	0.1664	1.5061	1.3226	2.1100e-003		0.0877	0.0877		0.0825	0.0825	0.0000	181.8138	181.8138	0.0444	0.0000	182.9227

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3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0656	2.4005	0.4696	5.9300e-003	0.1458	0.0136	0.1593	0.0421	0.0130	0.0550	0.0000	567.4842	567.4842	0.0454	0.0000	568.6182
Worker	0.2717	0.1904	2.0325	6.0100e-003	0.6497	4.0000e-003	0.6537	0.1725	3.6800e-003	0.1762	0.0000	543.5757	543.5757	0.0136	0.0000	543.9160
Total	0.3372	2.5908	2.5021	0.0119	0.7955	0.0176	0.8130	0.2146	0.0167	0.2313	0.0000	1,111.0598	1,111.0598	0.0590	0.0000	1,112.5342

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1664	1.5061	1.3226	2.1100e-003		0.0877	0.0877		0.0825	0.0825	0.0000	181.8136	181.8136	0.0444	0.0000	182.9225
Total	0.1664	1.5061	1.3226	2.1100e-003		0.0877	0.0877		0.0825	0.0825	0.0000	181.8136	181.8136	0.0444	0.0000	182.9225

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3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0656	2.4005	0.4696	5.9300e-003	0.1458	0.0136	0.1593	0.0421	0.0130	0.0550	0.0000	567.4842	567.4842	0.0454	0.0000	568.6182
Worker	0.2717	0.1904	2.0325	6.0100e-003	0.6497	4.0000e-003	0.6537	0.1725	3.6800e-003	0.1762	0.0000	543.5757	543.5757	0.0136	0.0000	543.9160
Total	0.3372	2.5908	2.5021	0.0119	0.7955	0.0176	0.8130	0.2146	0.0167	0.2313	0.0000	1,111.0598	1,111.0598	0.0590	0.0000	1,112.5342

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099
Total	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2867	302.2867	0.0729	0.0000	304.1099

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3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0915	3.5774	0.6883	9.7800e-003	0.2423	6.8400e-003	0.2492	0.0699	6.5400e-003	0.0765	0.0000	936.0520	936.0520	0.0714	0.0000	937.8371
Worker	0.4213	0.2839	3.0935	9.6600e-003	1.0801	6.4700e-003	1.0866	0.2868	5.9600e-003	0.2928	0.0000	873.4382	873.4382	0.0204	0.0000	873.9469
Total	0.5129	3.8613	3.7818	0.0194	1.3224	0.0133	1.3357	0.3567	0.0125	0.3692	0.0000	1,809.4902	1,809.4902	0.0918	0.0000	1,811.7840

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095
Total	0.2481	2.2749	2.1631	3.5100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	302.2863	302.2863	0.0729	0.0000	304.1095

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3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0915	3.5774	0.6883	9.7800e-003	0.2423	6.8400e-003	0.2492	0.0699	6.5400e-003	0.0765	0.0000	936.0520	936.0520	0.0714	0.0000	937.8371
Worker	0.4213	0.2839	3.0935	9.6600e-003	1.0801	6.4700e-003	1.0866	0.2868	5.9600e-003	0.2928	0.0000	873.4382	873.4382	0.0204	0.0000	873.9469
Total	0.5129	3.8613	3.7818	0.0194	1.3224	0.0133	1.3357	0.3567	0.0125	0.3692	0.0000	1,809.4902	1,809.4902	0.0918	0.0000	1,811.7840

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2428	301.2428	0.0722	0.0000	303.0471
Total	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2428	301.2428	0.0722	0.0000	303.0471

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3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0851	3.3574	0.6386	9.6600e-003	0.2414	5.7300e-003	0.2471	0.0696	5.4800e-003	0.0751	0.0000	924.4446	924.4446	0.0674	0.0000	926.1293
Worker	0.3932	0.2545	2.8388	9.2700e-003	1.0759	6.2800e-003	1.0822	0.2857	5.7800e-003	0.2915	0.0000	838.3408	838.3408	0.0182	0.0000	838.7963
Total	0.4783	3.6119	3.4774	0.0189	1.3173	0.0120	1.3293	0.3553	0.0113	0.3666	0.0000	1,762.7854	1,762.7854	0.0856	0.0000	1,764.9256

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467
Total	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990	0.0000	301.2425	301.2425	0.0722	0.0000	303.0467

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0851	3.3574	0.6386	9.6600e-003	0.2414	5.7300e-003	0.2471	0.0696	5.4800e-003	0.0751	0.0000	924.4446	924.4446	0.0674	0.0000	926.1293
Worker	0.3932	0.2545	2.8388	9.2700e-003	1.0759	6.2800e-003	1.0822	0.2857	5.7800e-003	0.2915	0.0000	838.3408	838.3408	0.0182	0.0000	838.7963
Total	0.4783	3.6119	3.4774	0.0189	1.3173	0.0120	1.3293	0.3553	0.0113	0.3666	0.0000	1,762.7854	1,762.7854	0.0856	0.0000	1,764.9256

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0488	0.4459	0.5036	8.4000e-004		0.0217	0.0217		0.0204	0.0204	0.0000	71.8595	71.8595	0.0171	0.0000	72.2868
Total	0.0488	0.4459	0.5036	8.4000e-004		0.0217	0.0217		0.0204	0.0204	0.0000	71.8595	71.8595	0.0171	0.0000	72.2868

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0155	0.5987	0.1326	2.2400e-003	0.0576	6.1000e-004	0.0582	0.0166	5.8000e-004	0.0172	0.0000	214.6365	214.6365	0.0123	0.0000	214.9440
Worker	0.0881	0.0547	0.6240	2.1300e-003	0.2566	1.4600e-003	0.2580	0.0681	1.3500e-003	0.0695	0.0000	192.3247	192.3247	3.9000e-003	0.0000	192.4223
Total	0.1036	0.6534	0.7566	4.3700e-003	0.3141	2.0700e-003	0.3162	0.0847	1.9300e-003	0.0867	0.0000	406.9612	406.9612	0.0162	0.0000	407.3663

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0488	0.4459	0.5036	8.4000e-004		0.0217	0.0217		0.0204	0.0204	0.0000	71.8594	71.8594	0.0171	0.0000	72.2867
Total	0.0488	0.4459	0.5036	8.4000e-004		0.0217	0.0217		0.0204	0.0204	0.0000	71.8594	71.8594	0.0171	0.0000	72.2867

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0155	0.5987	0.1326	2.2400e-003	0.0576	6.1000e-004	0.0582	0.0166	5.8000e-004	0.0172	0.0000	214.6365	214.6365	0.0123	0.0000	214.9440
Worker	0.0881	0.0547	0.6240	2.1300e-003	0.2566	1.4600e-003	0.2580	0.0681	1.3500e-003	0.0695	0.0000	192.3247	192.3247	3.9000e-003	0.0000	192.4223
Total	0.1036	0.6534	0.7566	4.3700e-003	0.3141	2.0700e-003	0.3162	0.0847	1.9300e-003	0.0867	0.0000	406.9612	406.9612	0.0162	0.0000	407.3663

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0284	0.2803	0.4011	6.3000e-004		0.0140	0.0140		0.0129	0.0129	0.0000	55.0739	55.0739	0.0178	0.0000	55.5192
Paving	8.4000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0368	0.2803	0.4011	6.3000e-004		0.0140	0.0140		0.0129	0.0129	0.0000	55.0739	55.0739	0.0178	0.0000	55.5192

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5600e-003	9.7000e-004	0.0110	4.0000e-005	4.5300e-003	3.0000e-005	4.5600e-003	1.2000e-003	2.0000e-005	1.2300e-003	0.0000	3.3986	3.3986	7.0000e-005	0.0000	3.4003
Total	1.5600e-003	9.7000e-004	0.0110	4.0000e-005	4.5300e-003	3.0000e-005	4.5600e-003	1.2000e-003	2.0000e-005	1.2300e-003	0.0000	3.3986	3.3986	7.0000e-005	0.0000	3.4003

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0284	0.2803	0.4011	6.3000e-004		0.0140	0.0140		0.0129	0.0129	0.0000	55.0738	55.0738	0.0178	0.0000	55.5191
Paving	8.4000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0368	0.2803	0.4011	6.3000e-004		0.0140	0.0140		0.0129	0.0129	0.0000	55.0738	55.0738	0.0178	0.0000	55.5191

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5600e-003	9.7000e-004	0.0110	4.0000e-005	4.5300e-003	3.0000e-005	4.5600e-003	1.2000e-003	2.0000e-005	1.2300e-003	0.0000	3.3986	3.3986	7.0000e-005	0.0000	3.4003
Total	1.5600e-003	9.7000e-004	0.0110	4.0000e-005	4.5300e-003	3.0000e-005	4.5600e-003	1.2000e-003	2.0000e-005	1.2300e-003	0.0000	3.3986	3.3986	7.0000e-005	0.0000	3.4003

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5624					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2700e-003	0.0358	0.0498	8.0000e-005		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	7.0215	7.0215	4.2000e-004	0.0000	7.0320
Total	0.5677	0.0358	0.0498	8.0000e-005		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	7.0215	7.0215	4.2000e-004	0.0000	7.0320

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0157	9.7300e-003	0.1110	3.8000e-004	0.0456	2.6000e-004	0.0459	0.0121	2.4000e-004	0.0124	0.0000	34.2128	34.2128	6.9000e-004	0.0000	34.2301
Total	0.0157	9.7300e-003	0.1110	3.8000e-004	0.0456	2.6000e-004	0.0459	0.0121	2.4000e-004	0.0124	0.0000	34.2128	34.2128	6.9000e-004	0.0000	34.2301

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5624					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2700e-003	0.0358	0.0498	8.0000e-005		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	7.0214	7.0214	4.2000e-004	0.0000	7.0319
Total	0.5677	0.0358	0.0498	8.0000e-005		1.9500e-003	1.9500e-003		1.9500e-003	1.9500e-003	0.0000	7.0214	7.0214	4.2000e-004	0.0000	7.0319

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0157	9.7300e-003	0.1110	3.8000e-004	0.0456	2.6000e-004	0.0459	0.0121	2.4000e-004	0.0124	0.0000	34.2128	34.2128	6.9000e-004	0.0000	34.2301
Total	0.0157	9.7300e-003	0.1110	3.8000e-004	0.0456	2.6000e-004	0.0459	0.0121	2.4000e-004	0.0124	0.0000	34.2128	34.2128	6.9000e-004	0.0000	34.2301

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6372	4.5847	5.6958	0.0254	1.7857	0.0143	1.8000	0.4784	0.0133	0.4917	0.0000	2,361.489 2	2,361.489 2	0.1382	0.0000	2,364.944 8
Unmitigated	0.6372	4.5847	5.6958	0.0254	1.7857	0.0143	1.8000	0.4784	0.0133	0.4917	0.0000	2,361.489 2	2,361.489 2	0.1382	0.0000	2,364.944 8

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	77.13	0.00	77.75	293,146	293,146
General Office Building	17.63	0.00	1.27	41,149	41,149
Hotel	83.60	58.80	59.50	182,815	182,815
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	3,193.72	1,705.04	2552.78	4,113,565	4,113,565
Refrigerated Warehouse-No Rail	15.23	0.00	0.53	46,929	46,929
Total	3,387.30	1,763.84	2,691.82	4,677,603	4,677,603

4.3 Trip Type Information

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Refrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
General Office Building	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Hotel	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Other Non-Asphalt Surfaces	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Quality Restaurant	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Refrigerated Warehouse-No Rail	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated							0.0000	0.0000		0.0000	0.0000	781.5376	781.5376	0.0323	6.6800e-003	784.3336
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	781.5376	781.5376	0.0323	6.6800e-003	784.3336
NaturalGas Mitigated	0.0601	0.5465	0.4590	3.2800e-003			0.0415	0.0415		0.0415	0.0415	594.8870	594.8870	0.0114	0.0109	598.4221
NaturalGas Unmitigated	0.0601	0.5465	0.4590	3.2800e-003			0.0415	0.0415		0.0415	0.0415	594.8870	594.8870	0.0114	0.0109	598.4221

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	505219	2.7200e-003	0.0248	0.0208	1.5000e-004		1.8800e-003	1.8800e-003		1.8800e-003	1.8800e-003	0.0000	26.9604	26.9604	5.2000e-004	4.9000e-004	27.1207
General Office Building	6263.35	3.0000e-005	3.1000e-004	2.6000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3342	0.3342	1.0000e-005	1.0000e-005	0.3362
Hotel	484461	2.6100e-003	0.0238	0.0200	1.4000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	25.8527	25.8527	5.0000e-004	4.7000e-004	26.0063
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	9.69892e+006	0.0523	0.4754	0.3994	2.8500e-003		0.0361	0.0361		0.0361	0.0361	0.0000	517.5711	517.5711	9.9200e-003	9.4900e-003	520.6468
Refrigerated Warehouse-No Rail	452900	2.4400e-003	0.0222	0.0187	1.3000e-004		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	24.1685	24.1685	4.6000e-004	4.4000e-004	24.3121
Total		0.0601	0.5465	0.4590	3.2700e-003		0.0415	0.0415		0.0415	0.0415	0.0000	594.8870	594.8870	0.0114	0.0109	598.4221

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	505219	2.7200e-003	0.0248	0.0208	1.5000e-004		1.8800e-003	1.8800e-003		1.8800e-003	1.8800e-003	0.0000	26.9604	26.9604	5.2000e-004	4.9000e-004	27.1207
General Office Building	6263.35	3.0000e-005	3.1000e-004	2.6000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3342	0.3342	1.0000e-005	1.0000e-005	0.3362
Hotel	484461	2.6100e-003	0.0238	0.0200	1.4000e-004		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	25.8527	25.8527	5.0000e-004	4.7000e-004	26.0063
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	9.69892e+006	0.0523	0.4754	0.3994	2.8500e-003		0.0361	0.0361		0.0361	0.0361	0.0000	517.5711	517.5711	9.9200e-003	9.4900e-003	520.6468
Refrigerated Warehouse-No Rail	452900	2.4400e-003	0.0222	0.0187	1.3000e-004		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	24.1685	24.1685	4.6000e-004	4.4000e-004	24.3121
Total		0.0601	0.5465	0.4590	3.2700e-003		0.0415	0.0415		0.0415	0.0415	0.0000	594.8870	594.8870	0.0114	0.0109	598.4221

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	157833	50.2888	2.0800e-003	4.3000e-004	50.4687
General Office Building	17183.6	5.4751	2.3000e-004	5.0000e-005	5.4947
Hotel	146444	46.6603	1.9300e-003	4.0000e-004	46.8272
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	97733.6	31.1400	1.2900e-003	2.7000e-004	31.2514
Quality Restaurant	1.68412e+006	536.5953	0.0222	4.5800e-003	538.5150
Refrigerated Warehouse-No Rail	349563	111.3781	4.6000e-003	9.5000e-004	111.7766
Total		781.5376	0.0323	6.6800e-003	784.3336

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	157833	50.2888	2.0800e-003	4.3000e-004	50.4687
General Office Building	17183.6	5.4751	2.3000e-004	5.0000e-005	5.4947
Hotel	146444	46.6603	1.9300e-003	4.0000e-004	46.8272
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	97733.6	31.1400	1.2900e-003	2.7000e-004	31.2514
Quality Restaurant	1.68412e+006	536.5953	0.0222	4.5800e-003	538.5150
Refrigerated Warehouse-No Rail	349563	111.3781	4.6000e-003	9.5000e-004	111.7766
Total		781.5376	0.0323	6.6800e-003	784.3336

6.0 Area Detail**6.1 Mitigation Measures Area**

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4199	6.0000e-005	6.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127
Unmitigated	0.4199	6.0000e-005	6.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0562					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3631					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.7000e-004	6.0000e-005	6.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127
Total	0.4199	6.0000e-005	6.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0562					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3631					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.7000e-004	6.0000e-005	6.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127
Total	0.4199	6.0000e-005	6.1200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0119	0.0119	3.0000e-005	0.0000	0.0127

7.0 Water Detail

7.1 Mitigation Measures Water

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	111.5168	0.5571	0.0140	129.6023
Unmitigated	111.5168	0.5571	0.0140	129.6023

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	3.59594 / 0	16.0595	0.1178	2.8900e-003	19.8667
General Office Building	0.321698 / 0.19717	2.1347	0.0106	2.6000e-004	2.4778
Hotel	0.253668 / 0.0281853	1.2327	8.3100e-003	2.1000e-004	1.5016
Other Non-Asphalt Surfaces	0 / 9.19176	32.5378	1.3400e-003	2.8000e-004	32.6542
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	10.7663 / 0.687213	50.5154	0.3528	8.6900e-003	61.9230
Refrigerated Warehouse-No Rail	2.02344 / 0	9.0367	0.0663	1.6300e-003	11.1790
Total		111.5168	0.5571	0.0140	129.6023

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	3.59594 / 0	16.0595	0.1178	2.8900e-003	19.8667
General Office Building	0.321698 / 0.19717	2.1347	0.0106	2.6000e-004	2.4778
Hotel	0.253668 / 0.0281853	1.2327	8.3100e-003	2.1000e-004	1.5016
Other Non-Asphalt Surfaces	0 / 9.19176	32.5378	1.3400e-003	2.8000e-004	32.6542
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	10.7663 / 0.687213	50.5154	0.3528	8.6900e-003	61.9230
Refrigerated Warehouse-No Rail	2.02344 / 0	9.0367	0.0663	1.6300e-003	11.1790
Total		111.5168	0.5571	0.0140	129.6023

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.6045	0.8040	0.0000	33.7045
Unmitigated	13.6045	0.8040	0.0000	33.7045

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	19.28	3.9137	0.2313	0.0000	9.6959
General Office Building	1.68	0.3410	0.0202	0.0000	0.8449
Hotel	5.47	1.1104	0.0656	0.0000	2.7509
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	32.37	6.5708	0.3883	0.0000	16.2789
Refrigerated Warehouse-No Rail	8.22	1.6686	0.0986	0.0000	4.1339
Total		13.6045	0.8040	0.0000	33.7045

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	19.28	3.9137	0.2313	0.0000	9.6959
General Office Building	1.68	0.3410	0.0202	0.0000	0.8449
Hotel	5.47	1.1104	0.0656	0.0000	2.7509
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	32.37	6.5708	0.3883	0.0000	16.2789
Refrigerated Warehouse-No Rail	8.22	1.6686	0.0986	0.0000	4.1339
Total		13.6045	0.8040	0.0000	33.7045

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Tractors/Loaders/Backhoes	2	8.00	260	97	0.37	Diesel

Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Tractors/Loaders/Backhoes	0.0394	0.3993	0.5801	8.1000e-004		0.0197	0.0197		0.0181	0.0181	0.0000	71.1323	71.1323	0.0230	0.0000	71.7074
Total	0.0394	0.3993	0.5801	8.1000e-004		0.0197	0.0197		0.0181	0.0181	0.0000	71.1323	71.1323	0.0230	0.0000	71.7074

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
Boiler	2	2	25	0.199	CNG

User Defined Equipment

Equipment Type	Number
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Monarch Winery Air Quality and GHG Analysis - Riverside-South Coast County, Annual

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Boiler - CNG (0 - 2 MMBTU)	1.3000e-004	6.0000e-004	2.4000e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6682	2.6682	5.0000e-005	0.0000	2.6695
Total	1.3000e-004	6.0000e-004	2.4000e-003	1.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.6682	2.6682	5.0000e-005	0.0000	2.6695

11.0 Vegetation

Appendix C

Riverside County Climate Action Plan Screening Tables

Table 2: Screening Table for GHG Implementation Measures for Commercial Development and Public Facilities

Feature	Description	Assigned Point Values	Project Points
Reduction Measure R2-EE10: Exceed Energy Efficiency Standards in New Commercial Units			
EE10.A Building Envelope			
EE10.A.1 Insulation	<ul style="list-style-type: none"> 2017 Title 24 Requirements (walls R-13; roof/attic R-30) Modestly Enhanced Insulation (walls R-13, roof/attic R-38) Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38) Greatly Enhanced Insulation (spray foam insulated walls R-15 or higher, roof/attic R-38 or higher) 	0 points 9 points 11 points 12 points	12
EE10.A.2 Windows	<ul style="list-style-type: none"> 2016 Title 24 Windows (0.57 U-factor, 0.4 SHGC) Modestly Enhanced Window Insulation (0.4 U-factor, 0.32 SHGC) Enhanced Window Insulation (0.32 U-factor, 0.25 SHGC) Greatly Enhanced Window Insulation (0.28 or less U-factor, 0.22 or less SHGC) 	0 points 4 points 5 points 7 points	5
EE10.A.3 Cool Roofs	<ul style="list-style-type: none"> Modest Cool Roof (CRRC Rated 0.15 aged solar reflectance, 0.75 thermal emittance) Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance) Greatly Enhanced Cool Roof (CRRC Rated 0.35 aged solar reflectance, 0.75 thermal emittance) 	7 points 8 points 10 points	10
EE10.A.4 Air Infiltration	Minimizing leaks in the building envelope is as important as the insulation properties of the building. Insulation does not work effectively if there is excess air leakage. <ul style="list-style-type: none"> Air barrier applied to exterior walls, caulking, and visual inspection such as the HERS Verified Quality Insulation Installation (QII or equivalent) Blower Door HERS Verified Envelope Leakage or equivalent 	7 points 6 points	7
EE10.A.5 Thermal Storage of Building	Thermal storage is a design characteristic that helps keep a constant temperature in the building. Common thermal storage devices include strategically placed water filled columns, water storage tanks, and thick masonry walls. <ul style="list-style-type: none"> Modest Thermal Mass (10% of floor or 10% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood, or other insulating materials) Enhanced Thermal Mass (20% of floor or 20% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood, or other insulating materials) Enhanced Thermal Mass (80% of floor or 80% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood, or other insulating materials) 	2 points 4 points 14 points	4

CEQA THRESHOLDS AND SCREENING TABLES

Feature	Description	Assigned Point Values	Project Points
EE10.B Indoor Space Efficiencies			
EE10.B.1 Heating/Cooling Distribution System	<ul style="list-style-type: none"> Minimum Duct Insulation (R-4.2 required) Modest Duct insulation (R-6) Enhanced Duct Insulation (R-8) Distribution loss reduction with inspection (HERS Verified Duct Leakage or equivalent) 	0 points 5 points 6 points 8 points	
EE10.B.2 Space Heating/Cooling Equipment	<ul style="list-style-type: none"> 2016 Title 24 Minimum HVAC Efficiency (EER 13/75% AFUE or 7.7 HSPF) Improved Efficiency HVAC (EER 14/78% AFUE or 8 HSPF) High Efficiency HVAC (EER 15/80% AFUE or 8.5 HSPF) Very High Efficiency HVAC (EER 16/82% AFUE or 9 HSPF) 	0 points 4 points 5 points 7 points	5
EE10.B.3 Commercial Heat Recovery Systems	Heat recovery strategies employed with commercial laundry, cooking equipment, and other commercial heat sources for reuse in HVAC air intake or other appropriate heat recovery technology. Point values for these types of systems will be determined based upon design and engineering data documenting the energy savings.	TBD	
EE10.B.4 Water Heaters	<ul style="list-style-type: none"> 2016 Title 24 Minimum Efficiency (0.57 Energy Factor) Improved Efficiency Water Heater (0.675 Energy Factor) High Efficiency Water Heater (0.72 Energy Factor) Very High Efficiency Water Heater (0.92 Energy Factor) Solar Pre-heat System (0.2 Net Solar Fraction) Enhanced Solar Pre-heat System (0.35 Net Solar Fraction) 	0 points 8 points 10 points 11 points 2 points 5 points	8
EE10.B.5 Daylighting	Daylighting is the ability of each room within the building to provide outside light during the day reducing the need for artificial lighting during daylight hours. <ul style="list-style-type: none"> All peripheral rooms within building have at least one window or skylight All rooms within building have daylight (through use of windows, solar tubes, skylights, etc.) All rooms daylighted 	0 points 1 point 1 point	1
EE10.B.6 Artificial Lighting	<ul style="list-style-type: none"> Efficient Lights (25% of in-unit fixtures considered high efficiency. High efficiency is defined as 40 lumens/watt for 15 watt or less fixtures; 50 lumens/watt for 15-40 watt fixtures, 60 lumens/watt for fixtures >40watt) High Efficiency Lights (50% of in-unit fixtures are high efficiency) Very High Efficiency Lights (100% of in-unit fixtures are high efficiency) 	5 points 7 points 8 points	5
EE10.B.7 Appliances	<ul style="list-style-type: none"> Energy Star Commercial Refrigerator (new) Energy Star Commercial Dishwasher (new) Energy Star Commercial Clothes Washer 	2 points 2 points 2 points	
EE10.C Miscellaneous Commercial Building Efficiencies			
EE10.C.1 Building Placement	North/south alignment of building or other building placement such that the orientation of the buildings optimizes conditions for natural heating, cooling, and lighting.	4 points	4
EE10.C.2 Shading	At least 90% of south-facing glazing will be shaded by vegetation or overhangs at noon on Jun 21st.	6 points	6
EE10.C.3 Other	This allows innovation by the applicant to provide design features that increase the energy efficiency of the project not provided in the table. Note that engineering data will be required documenting the energy efficiency of innovative designs and point values given based upon the proven efficiency beyond Title 24 Energy Efficiency Standards.	TBD	

CEQA THRESHOLDS AND SCREENING TABLES

Feature	Description	Assigned Point Values	Project Points
EE10.C.4 Existing Commercial Buildings Retrofits	<p>The applicant may wish to provide energy efficiency retrofit projects to existing commercial buildings to further the point value of their project. Retrofitting existing commercial buildings within the unincorporated County is a key reduction measure that is needed to reach the reduction goal. The potential for an applicant to take advantage of this program will be decided on a case-by-case basis and shall have the approval of the Riverside County Planning Department. The decision to allow applicants to participate in this program will be evaluated based upon, but not limited to, the following:</p> <ul style="list-style-type: none"> • Will the energy efficiency retrofit project benefit low income or disadvantaged communities? • Does the energy efficiency retrofit project provide co-benefits important to the County? • Point value will be determined based upon engineering and design criteria of the energy efficiency retrofit project. 	TBD	
Reduction Measure R2-CE1: Clean Energy			
CE1.B Commercial/Industrial Renewable Energy Generation			
CE1.B.1 Photovoltaic	<p>Solar Photovoltaic panels installed on commercial buildings or in collective arrangements within a commercial development such that the total power provided augments:</p> <ul style="list-style-type: none"> • 30 percent of the power needs of the project • 40 percent of the power needs of the project • 50 percent of the power needs of the project • 60 percent of the power needs of the project • 70 percent of the power needs of the project • 80 percent of the power needs of the project • 90 percent of the power needs of the project • 100 percent of the power needs of the project 	8 points 12 points 16 points 19 points 23 points 26 points 30 points 34 points	
CE1.B.2 Wind Turbines	<p>Some areas of the County lend themselves to wind turbine applications. Analysis of the areas capability to support wind turbines should be evaluated prior to choosing this feature.</p> <p>Wind turbines as part of the commercial development such that the total power provided augments:</p> <ul style="list-style-type: none"> • 30 percent of the power needs of the project • 40 percent of the power needs of the project • 50 percent of the power needs of the project • 60 percent of the power needs of the project • 70 percent of the power needs of the project • 80 percent of the power needs of the project • 90 percent of the power needs of the project • 100 percent of the power needs of the project 	8 points 12 points 16 points 19 points 23 points 26 points 30 points 34 points	
CE1.B.3 Off-site Renewable Energy Project	<p>The applicant may submit a proposal to supply an off-site renewable energy project such as renewable energy retrofits of existing residential or existing commercial/industrial. These off-site renewable energy retrofit project proposals will be determined on a case-by-case basis accompanied by a detailed plan documenting the quantity of renewable energy the proposal will generate. Point values will be based upon the energy generated by the proposal.</p>	TBD	

CEQA THRESHOLDS AND SCREENING TABLES

Feature	Description	Assigned Point Values	Project Points
CE1.A.4 Other Renewable Energy Generation	The applicant may have innovative designs or unique site circumstances (such as geothermal) that allow the project to generate electricity from renewable energy not provided in the table. The ability to supply other renewable energy and the point values allowed will be decided based upon engineering data documenting the ability to generate electricity.	TBD	
Reduction Measure R2-W2: Exceed Water Efficiency Standards			
W2.D Irrigation and Landscaping			
W2.D.1 Water Efficient Landscaping	<ul style="list-style-type: none"> Eliminate conventional turf from landscaping Only moderate water using plants Only low water using plants Only California Native landscape that requires no or only supplemental irrigation 	0 points 2 points 3 points <u>5 points</u>	5
W2.D.2 Water Efficient Irrigation Systems	<ul style="list-style-type: none"> Low precipitation spray heads < .75"/hr or drip irrigation Weather based irrigation control systems combined with drip irrigation (demonstrate 20% reduced water use) 	1 point <u>3 points</u>	3
W2.D.3 Stormwater Reuse Systems	Innovative on-site stormwater collection, filtration, and reuse systems are being developed that provide supplemental irrigation water and provide vector control. These systems can greatly reduce the irrigation needs of a project. Point values for these types of systems will be determined based upon design and engineering data documenting the water savings.	TBD	
W2.E Potable Water			
W2.E.1 Showers	Water Efficient Showerheads (2.0 gpm)	<u>2 points</u>	2
W2.E.2 Toilets	<ul style="list-style-type: none"> Water Efficient Toilets/Urinals (1.5 gpm) Waterless Urinals (note that commercial buildings having both waterless urinals and high efficiency toilets will have a combined point value of 6 points) 	<u>3 points</u> 3 points	3
W2.E.3 Faucets	Water Efficient faucets (1.28 gpm)	<u>2 points</u>	2
W2.E.4 Commercial Dishwashers	Water Efficient dishwashers (20% water savings)	2 points	
W2.E.5 Commercial Laundry Washers	<ul style="list-style-type: none"> Water Efficient laundry (15% water savings) High Efficiency laundry Equipment that captures and reuses rinse water (30% water savings) 	2 points 4 points	
W2.E.6 Commercial Water Operations Program	Establish an operational program to reduce water loss from pools, water features, etc., by covering pools, adjusting fountain operational hours, and using water treatment to reduce draw down and replacement of water. Point values for these types of plans will be determined based upon design and engineering data documenting the water savings.	TBD	
W2.F Increase Commercial/Industrial Reclaimed Water Use			
W2.F.1 Recycled Water	Graywater (purple pipe) irrigation system on site	5 points	

CEQA THRESHOLDS AND SCREENING TABLES

Feature	Description	Assigned Point Values	Project Points
Reduction Measure R2-T3: Ride-Sharing and Bike-to-Work Programs within Businesses			
T3.A.1 Alternative Scheduling	Encouraging telecommuting and alternative work schedules reduces the number of commute trips and therefore VMT traveled by employees. Alternative work schedules could take the form of staggered starting times, flexible schedules, or compressed work weeks. <ul style="list-style-type: none"> Provide flexibility in scheduling such that at least 30% of employees participate in 9/80 work week, 4-day/40-hour work week, or telecommuting 1.5 days/week. 	5 points	
T3.A.2 Car/Vanpools	<ul style="list-style-type: none"> Car/vanpool program Car/vanpool program with preferred parking Car/vanpool with guaranteed ride home program Subsidized employee incentive car/vanpool program <i>Note: combine all applicable points for total value</i>	1 point 2 points 3 points 5 points	
T3.A.3 Employee Bicycle/ Pedestrian Programs	<ul style="list-style-type: none"> Complete sidewalk to residential within ½ mile Complete bike path to residential within 3 miles Bike lockers and secure racks Showers and changing facilities Subsidized employee walk/bike program <i>Note: combine all applicable points for total value</i>	1 point 1 point 1 point 2 points 3 points	
T3.A.4 Shuttle/Transit Programs	<ul style="list-style-type: none"> Local transit within ¼ mile Light rail transit within ½ mile Shuttle service to light rail transit station Guaranteed ride home program Subsidized Transit passes <i>Note: combine all applicable points for total value</i>	1 point 3 points 5 points 1 points 2 points	
T3.A.5 Commute Trip Reduction	Employer based Commute Trip Reduction (CTR). CTRs apply to commercial, offices, or industrial projects that include a reduction of vehicle trip or VMT goal using a variety of employee commutes trip reduction methods. The point value will be determined based upon a TIA that demonstrates the trip/VMT reductions. Suggested point ranges: <ul style="list-style-type: none"> Incentive based CTR Programs (1–8 points) Mandatory CTR programs (5–20 points) 	TBD	
T3.A.6 Other Trip Reduction Measures	Point values for other trip or VMT reduction measures not listed above may be calculated based on a TIA and/or other traffic data supporting the trip and/or VMT reductions.	TBD	
Reduction Measure R2-T1: Alternative Transportation Options			
T1.E Mixed-Use Development			
T1.E.1 Mixed-Use	Mixes of land uses that complement one another in a way that reduces the need for vehicle trips can greatly reduce GHG emissions. The point value of mixed-use projects will be determined based upon traffic studies that demonstrate trip reductions and/or reductions in vehicle miles traveled.	TBD	
T1.E.2 Local Retail Near Residential (Commercial only Projects)	Having residential developments within walking and biking distance of local retail helps to reduce vehicle trips and/or vehicle miles traveled. The point value of residential projects in close proximity to local retail will be determined based upon traffic studies that demonstrate trip reductions and/or reductions in vehicle miles traveled.	TBD	

CEQA THRESHOLDS AND SCREENING TABLES

Feature	Description	Assigned Point Values	Project Points
T1.F Preferential Parking			
T1.F.1 Parking	<ul style="list-style-type: none"> Provide reserved preferential parking spaces for car-share, carpool, and ultra-low or zero emission vehicles. Provide larger parking spaces that can accommodate vans used for ride-sharing programs and reserve them for vanpools and include adequate passenger waiting/loading areas. 	<p>1 point</p> <p>1 point</p>	2
T1.G Signal Synchronization and Intelligent Traffic Systems			
T1.G.1 Signal Improvements	<p>Techniques for improving traffic flow include: traffic signal coordination to reduce delay, incident management to increase response time to breakdowns and collisions, Intelligent Transportation Systems (ITS) to provide real-time information regarding road conditions and directions, and speed management to reduce high free-flow speeds.</p> <ul style="list-style-type: none"> Synchronize signals along arterials used by project. Connect signals along arterials to existing ITS. 	<p>1 point/signal</p> <p>3 points/signal</p>	
T1.H Increase Public Transit			
T1.H.1 Public Transit	<p>The point value of a projects ability to increase public transit use will be determined based upon a Transportation Impact Analysis (TIA) demonstrating decreased use of private vehicles and increased use of public transportation.</p> <ul style="list-style-type: none"> Increased transit accessibility (1-15 points) 	TBD	
Reduction Measure R2-T2: Adopt and Implement a Bicycle Master Plan to Expand Bike Routes around the County			
T2.B.1 Sidewalks	<ul style="list-style-type: none"> Provide sidewalks on one side of the street (required) Provide sidewalks on both sides of the street Provide pedestrian linkage between commercial and residential land uses within 1 mile 	<p>0 points</p> <p>1 point</p> <p>3 points</p>	
T2.B.2 Bicycle Paths	<ul style="list-style-type: none"> Provide bicycle paths within project boundaries Provide bicycle path linkages between commercial and other land uses Provide bicycle path linkages between commercial and transit 	<p>1 point</p> <p>2 points</p> <p>5 points</p>	
Reduction Measure R2-T4: Electrify the Fleet			
T4.B.1 Electric Vehicle Recharging	<ul style="list-style-type: none"> Provide circuit and capacity in garages/parking areas for installation of electric vehicle charging stations. Install electric vehicle charging stations in garages/parking areas 	<p>2 points/area</p> <p>8 points/station</p>	10
T4.B.2 Neighborhood Electric Vehicle (NEV) Infrastructure	<p>NEVs are electric vehicles usually built to have a top speed of 25 miles per hour, and a maximum loaded weight of 3,000 pounds.</p> <ul style="list-style-type: none"> Provide NEV safe routes within the project site. Provide NEV safe routes between the project site and other land uses. 	<p>3 points</p> <p>5 points</p>	
Reduction Measure R2-S1: Reduce Waste to Landfills			
S1.B.1 Recycling	<p>County initiated recycling program diverting 80% of waste requires coordination with commercial development to realize this goal. The following recycling features will help the County fulfill this goal:</p> <ul style="list-style-type: none"> Provide separated recycling bins within each commercial building/floor and provide large external recycling collection bins at central location for collection truck pick-up Provide commercial/industrial recycling programs that fulfills an on-site goal of 80% diversion of solid waste 	<p>2 points</p> <p>5 points</p>	7

CEQA THRESHOLDS AND SCREENING TABLES

Feature	Description	Assigned Point Values	Project Points
Other GHG Reduction Feature Implementation			
O.B.1 Other GHG Emissions Reduction Features	This allows innovation by the applicant to provide commercial design features that the GHG emissions from construction and/or operation of the project not provided in the table. Note that engineering data will be required documenting the GHG reduction amount and point values given based upon emission reductions calculations using approved models, methods, and protocols.	TBD	
Total Points Earned by Commercial/Industrial Project:			101