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## 5.2 Air Quality

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This section analyzes the potential air quality impacts associated with the proposed Project in terms of short-term (construction) impacts and long-term (operational) impacts. Information in this section is based on the Air Quality and Greenhouse Gas Assessment (Air Quality Assessment) prepared by Illingworth & Rodkin, Inc. dated September 1, 2017. The analysis of greenhouse gas emissions is included separately as Section 5.6 of this DEIR. The complete Air Quality and Greenhouse Gas Assessment, including appendices, is included herein as Appendix D.

### 5.2.1 Existing Conditions

The Project site is located in Napa County within the San Francisco Bay Area Air Basin (SFBAAB). The Project site is at the southern boundary of the City of Napa and in a largely built-out area. The Project site is a vacant, previously graded parcel within the Napa Valley Commons, a commercial/industrial corporate park. Napa Valley is bordered by mountains with an average ridgeline height of approximately 2,000 feet, with some peaks approaching 3,000 to 4,000 feet. The mountains provide a barrier to the prevailing northwesterly winds.

#### 1. Climate

The climate in and around the Project area during the summer months ranges from average maximum temperatures in the low 80s at the southern end of the valley to the low 90s at the northern end. Winter temperatures range from the high 50s/low 60s to the high to mid-30s with slightly cooler temperatures in the northern end of the valley.

The prevailing winds flow up valley from the south approximately half the time, drawing air in from the San Francisco Bay during warm summer afternoons. Daytime winds occasionally flow down valley from the north. During winter evenings, down valley drainage often occurs. Wind speeds are generally low, with almost 50% of the winds at less than 4 miles per hour (mph). Only 5% of the winds are between 16 and 18 mph during strong summertime up-valley wind events and winter storms.

#### 2. Baseline Air Quality

The Project is in an area currently designated non-attainment for the state 1-hour and 8-hour ozone standards, non-attainment for the state 24-hour and annual PM<sub>10</sub> standards, and non-attainment for the state annual PM<sub>2.5</sub> standard. It is also designated as non-attainment for the national 8-hour ozone standard and non-attainment for the national 24-hour PM<sub>2.5</sub> standard.

The air pollution potential in the Napa Valley could be high if there were sufficient sources of air contaminants nearby. Summer and fall prevailing winds transport ozone precursors northward from the Carquinez Strait Region to the Napa Valley, effectively trapping and concentrating the pollutants when stable conditions are present. The local upslope and downslope flows created by the surrounding mountains may also recirculate pollutants already present, contributing to buildup of air pollution.

### **3. Air Pollutants of Concern**

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>), which react under certain conditions to form high ozone levels. The highest ozone levels in the SFBAAB occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort.

Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM<sub>10</sub>) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM<sub>2.5</sub>). Elevated particulate concentrations are the result of regionwide (cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer) and result in reduced lung function growth in children.

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (cancer causing). TACs include, but are not limited to, criteria air pollutants and are found in ambient air, especially in urban areas. They are caused by industry, agriculture, fuel combustion, and commercial operations such as dry cleaners. TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). TACs are regulated at the regional, state, and federal level because chronic exposure can result in adverse health effects.

Based on the SFBAAB average, diesel exhaust represents approximately three-quarters of the cancer risk from TACs and is the predominant TAC in urban environments. According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles, making the evaluation of health effects a complex scientific issue. Some of the chemicals in diesel exhaust identified as TACs by the CARB such as benzene and formaldehyde are listed as carcinogens either under the state's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

#### **5.2.2 Regulatory Setting**

The Project is located in the Bay Area Air Quality Management District (BAAQMD). The BAAQMD comprises nine San Francisco Bay Area counties including Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, Napa, southwestern Solano, and southern Sonoma counties. BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards (AAQS) and California Ambient Air Quality Standards (CAAQS). The BAAQMD also has permit authority over most types of stationary equipment utilized for the proposed Project. The BAAQMD is responsible for permitting and inspection of stationary sources, enforcement of regulations, including setting fees, levying fines and enforcement actions and ensuring that public nuisances are minimized.

#### **1. Federal Regulations**

The United States Environmental Protection Agency (EPA) sets nationwide emissions standards for mobile sources, which include on-road (highway) motor vehicles such as

trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California also has the ability to set motor vehicle emissions standards and standards for fuel used in California, as long as they are the same or more stringent than the federal standards.

In the past decade, the EPA has established a number of emissions standards for on-road and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of nitrogen oxides (NO<sub>x</sub>) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and because the EPA has identified diesel particulate matter as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce PM and NO<sub>x</sub> emissions from diesel engines up to 95% in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.<sup>1</sup>

In concert with the diesel engine emissions standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97% for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99% for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD), is currently required for use by all vehicles in the U.S.

All of the above federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or requiring earlier implementation dates.

The federal Clean Air Act Amendments (CAAA) of 1990 required that the EPA review all national AAQS in light of known health effects. The EPA was charged with modifying existing standards or initiating new standards, where appropriate. The EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small-diameter particulate matter (PM<sub>2.5</sub>).

## 2. State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.<sup>2</sup> In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90%, a significant component of the plan involves application of emissions control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the federal on-road and non-road diesel

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1 EPA, 2000. Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements. EPA420-F-00-057. December.

2 California Air Resources Board, 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.

engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and PM<sub>2.5</sub> emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road, or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO<sub>x</sub> emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO<sub>x</sub> exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment to achieve specified fleet-averaged emissions rates. Implementation of this regulation, in conjunction with stringent federal off-road equipment engine emissions limits for new vehicles, will significantly reduce emissions of DPM and NO<sub>x</sub>.

### **3. Bay Area Air Quality Management District (BAAQMD)**

As noted herein, the BAAQMD has jurisdiction over the Bay Area and is the lead agency in developing plans to address attainment and maintenance of the National AAQS and California AAQS. AAQS are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare of those people most susceptible to further respiratory distress and known as “sensitive receptors.” Sensitive receptors include asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. CARB has identified the following air pollutants as having ambient air quality standards.

- Particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>)
- Ozone (O<sub>3</sub>)
- Nitrogen dioxide (NO<sub>2</sub>)
- Sulfates
- Carbon monoxide (CO)
- Sulfur dioxide (SO<sub>2</sub>)
- Lead
- Hydrogen sulfide (H<sub>2</sub>S)
- Vinyl chloride
- Visibility reducing particles

The BAAQMD CEQA Air Quality Guidelines (BAAQMD Guidelines) were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The Guidelines are discussed further herein in Section 5.2.3, Thresholds of Significance (beginning on page 5.2.3 below).

#### 4. City of Napa General Plan

The City of Napa General Plan includes a discussion of Air Quality in Chapter 7, Natural Resources. That section notes that the BAAQMD imposes regulations to address stationary and mobile sources of air emissions, while the City incorporates policies throughout its General Plan to coordinate land use to support regional efforts at improving air quality. The following policies relate to air quality generally and are applicable to the proposed Project.

- **NR-5.1** – The City shall encourage the use of mass transit, bicycle facilities and pedestrian walkways in order to decrease use of private vehicles and thereby reduce emissions from mobile sources.
- **NR-5.2** – The City shall encourage land use patterns and management practices that conserve air and energy resources, such as mixed use development and provisions for local-serving commercial uses adjacent to neighborhoods.
- **NR-5.4** – The City shall, during discretionary review, require that development proposals comply with federal and state air quality standards, or make findings that the project has overriding benefits to the community that outweigh nonattainment of the standards.
- **NR-5.5** – The City shall, during early consultation with project proponents, encourage project design that minimizes direct and indirect air emissions. Projects should consider the following air quality concerns:
  - a) Land use and design measures to encourage alternatives to the automobile and to conserve energy,
  - b) Land use and design measures to minimize exposure of sensitive receptors to odors, toxics, and criteria pollutants, and
  - c) Applicable Bay Area Air Quality Management District rules, regulations, and permit requirements.

Appendix E to the General Plan, Policies and Programs Related to Air Quality, contains a compilation of policies and implementation programs that address air quality. The policies found in the Natural Resources section of the General Plan have been included. Following are additional policies pertinent to the proposed Project that are found in other sections of the General Plan.

- **LU-8.1** – The City shall promote efficient use of larger vacant parcels and vacant areas of the city by encouraging mixed use development.
- **T-6.8** – The City shall provide for bicycle storage and access in future development.

- **T-6.9** – The City shall promote bicycle access in the site planning and design of all residential subdivisions over 20 units and of all commercial or industrial projects over 20,000 square feet.

### 5.2.3 Thresholds of Significance

The State of California encourages local agencies to adopt their own thresholds, but it is not required. In addition to BAAQMD thresholds detailed herein, the City of Napa utilizes the thresholds of significance found in Appendix G of the CEQA Guidelines for air quality, which state:

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- Conflict with or obstruct implementation of the applicable air quality plan?
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
- Expose sensitive receptors to substantial pollutant concentrations?
- Create objectionable odors affecting a substantial number of people?

#### 1. Bay Area Air Quality Management District

The BAAQMD CEQA Guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. The significance thresholds identified by BAAQMD and used in this analysis are summarized in Table 5.2-1 below.

**Table 5.2-1 Air Quality Significance Thresholds**

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (pounds per day)	Average Daily Emissions (pounds per day)	Annual Average Emissions (tons per year)
<b>Criteria Air Pollutants</b>			
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub>	82 (Exhaust)	82	15
PM <sub>2.5</sub>	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not applicable	

Note: ROG = reactive organic gases, NO<sub>x</sub> = nitrogen oxides, PM<sub>10</sub> = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM<sub>2.5</sub> = fine particulate matter or particulates with an aerodynamic diameter of 2.5 µm or less; and GHG = greenhouse gas.

The BAAQMD's adoption of significance thresholds contained in the 2011 CEQA Air Quality Guidelines was called into question by an order issued March 5, 2012 in *California Building Industry Association (CBIA) v BAAQMD* (Alameda Superior Court Case No. RG10548693). The order requires the BAAQMD to set aside its approval of the thresholds until it has conducted environmental review under CEQA. The ruling made in the case concerned the environmental impacts of adopting the thresholds and how the thresholds would indirectly affect land use development patterns. In August 2013, the Appellate Court struck down the lower court's order to set aside the thresholds (Cal. Court of Appeal, First Appellate District, Case Nos. A135335 and A136212). CBIA sought review by the California Supreme Court on three issues, including an appellate court's decision to uphold the BAAQMD's adoption of the thresholds, and the Court granted review on just one: Under what circumstances, if any, does CEQA require an analysis of how existing environmental conditions will impact future residents or users of a proposed project? In December 2015, the Supreme Court determined that an analysis of the impacts of the environment on a project – known as "CEQA-in-reverse" – is only required under two limited circumstances: 1) when a statute provides an express legislative directive to consider such impacts; and 2) when a proposed project risks exacerbating environmental hazards or conditions that already exist (Cal. Supreme Court Case No. S213478). The Supreme Court reversed the Court of Appeal's decision and remanded the matter back to the appellate court to reconsider the case in light of the Supreme Court's ruling. Because the Supreme Court's holding concerns the effects of the environment on a project (as contrasted to the effects of a proposed project on the environment), and not the science behind the thresholds, the significance thresholds contained in the 2017 CEQA Air Quality Guidelines are applied to this project.

## 2. Sensitive Receptors

Sensitive receptors are groups of people more affected by air pollution than others. These population groups include asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can generally tolerate occasional exposure to air pollutant levels considerably above the minimum standards before adverse effects result. For cancer risk assessments, children are the most sensitive receptors, because they are more susceptible to cancer-causing TACs. Locations that may contain high concentrations of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. As noted in the Air Quality Assessment, a review of the Project area did not reveal the presence of any sensitive receptors in the vicinity of the Project site.

### 5.2.4 Project Impacts Prior to Mitigation

Air quality impacts can be categorized as either primary or secondary. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact.

Secondary pollutants, by comparison, require time to transform from a more benign form to a more unhealthful contaminant. The impact occurs regionally far from the source. Analysis of significance of such emissions is based on a specified amount of emissions (e.g., pounds, tons)

even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Local air quality impacts/emissions are usually divided into short-term and long-term impacts. Short-term impacts are normally the result of demolition, construction, or grading operations. Long-term impacts are associated with the built-out condition of the proposed Project and are the result of day-to-day operation and maintenance, use of consumer products, natural gas use, and vehicle trips associated with residents, visitors, and employees.

## **1. Construction Emissions – Short-Term Impacts**

Construction emissions are difficult to quantify, because the exact type and amount of equipment that will be used or the acreage that may be disturbed on any given day is generally not known with any reasonable certainty. The emphasis in environmental documents relative to construction activity emissions impacts has, therefore, been to minimize the emissions as fully as possible through comprehensive mitigation, even if the exact amount of emissions cannot be precisely quantified.

Dust is typically the primary concern during construction, but because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions.” Due to the inherent uncertainty in the predictive factors for estimating fugitive dust generation, regulatory agencies typically use one universal “default” factor based on the area disturbed, assuming that all other input parameters into emission rate prediction fall into midrange average values. State and local regulations generally require the use of “best available control measures” for fugitive dust from construction activities, which can reduce fugitive dust emissions to 1 to 2 pounds per day per acre disturbed.

Emissions during the phases of construction were calculated using the California Emissions Estimator Model 2016.3.1 (CalEEMod) computer program developed by CARB, which provides emission estimates for on-site and off-site construction activities. The model also calculates emissions for operation of various projects.

On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. CalEEMod considers the following phases in its calculation of construction emissions: demolition, site preparation, grading, building construction, paving, and painting. The acreage, duration of each construction phase, and other key elements of the Project were input into the CalEEMod program to generate the estimated emissions. The proposed Project land uses for the 11.55-acre site were input and are described as follows:

- A dual-branded hotel that would be constructed as a single building. To account for the different trip rates associated with the extended stay and the AC Hotel, 153 rooms (AC Hotel) were modeled as “Motel,” and 100 rooms (Residence Inn) were modeled as “Hotel.”
- The proposed 29,878-square-foot office building was modeled as “General Office Building.”
- The 26,214 square feet of winery was modeled as “Manufacturing.”
- 441 parking spaces were modeled as “Parking Lot.”

The CalEEMod default construction schedule assumes that the Project would be built out over a period of approximately 19 months or an estimated 418 construction workdays (assuming an average of 22 construction days per month). The model assumed that construction for the Project would begin in September 2017. Average daily emissions were computed by dividing the total construction emissions by the number of construction days. Table 5.2-2 shows average daily construction emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> during construction of the Project. As shown in the table, predicted construction period emissions would not exceed the BAAQMD significance thresholds.

**Table 5.2-2 Construction Period Emissions**

Scenario	ROG	NO <sub>x</sub>	Exhaust – PM <sub>10</sub>	Exhaust – PM <sub>2.5</sub>
Total construction emissions (tons)	1.84 tons	6.86 tons	0.33 tons	0.31 tons
Average daily emissions (pounds)*	8.9 lbs.	32.8 lbs.	1.6 lbs.	1.5 lbs.
BAAQMD Thresholds (pounds per day)	54 lbs.	54 lbs.	82 lbs.	54 lbs.
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

\*Assumes 418 workdays.

During site preparation and grading, construction activities would temporarily generate fugitive dust in the form of PM<sub>10</sub> and PM<sub>2.5</sub>. Sources of fugitive dust include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after the mud dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if feasible mitigation measures are implemented to reduce the generation of fugitive dust. Mitigation Measures are included in Section 5.2.5 (page 5.2-11).

In 1998, the California Air Resources Board (CARB) identified particulate matter from diesel-fueled engines (diesel particulate matter or DPM) as a Toxic Air Contaminant (TAC). It is assumed that most of the heavy construction equipment utilized during the construction phase of the Project would be diesel fueled and emit DPM.

Impacts from toxic substances are related to cumulative exposure and are assessed over a 70-year period. Cancer risk is expressed as the maximum number of new cases of cancer projected to occur in a population of one million people due to exposure to the cancer-causing substance over a 70-year lifetime (California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Guide to Health Risk Assessment). Peak diesel exhaust emissions will occur during the grading phase of the Project, which is expected to take approximately 60 days. Total construction is anticipated to be completed in approximately 19 months. Due to the relatively short duration of construction compared with a 70-year lifespan, diesel emissions resulting from the construction of the Project, including construction truck traffic, are not anticipated to be significant.

## 2. Operational Emissions – Long-Term Impacts

Operational air emissions would be generated primarily from automobiles driven by hotel/winery/office building employees and hotel patrons. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are

typical emissions from these types of uses. CalEEMod was used to estimate emissions from operation of the proposed Project, assuming full build-out. The above-described project land uses were input to CalEEMod to assess operational emissions.

### **Traffic Impacts**

The primary source of emissions generated by the Project will be from motor vehicles. Emissions associated with vehicle travel depend on the year of analysis, because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest full year projected for Project build-out and operation would be 2020. Emissions associated with build-out later than 2020 would be lower.

Carbon monoxide (CO) is a localized gas that dissipates very quickly under normal meteorological conditions. As such, CO concentrations decrease substantially as distance from the source (intersection) increases. Since exhaust fumes from vehicles are the primary source of CO, there is a relationship between traffic/circulation congestion and CO impacts. Intersections are areas of the highest CO concentrations and have the potential to create pockets of elevated levels of CO which are called “hot spots.”

CalEEMod allows for the user to enter specific vehicle trip generation rates, which were input to the model using the daily trip generation rate provided in the project trip generation table in the traffic analysis for net Project trips. The default trip lengths and trip types specified by CalEEMod were used.

The Project area is in attainment for CO based on state and national standards. Carbon monoxide was the pollutant of primary concern near intersections, and exceedances of the standards would result in a significant local air quality impact. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of CO. The Project would add approximately 184 peak hour trips. Air pollutant monitoring data indicate that CO levels have been at healthy levels in the Bay Area since the early 1990s. The highest measured level over any 8-hour averaging period in the Bay Area during the last 3 years is less than 3.0 ppm, compared to the ambient air quality standard of 9.0 ppm.

### **Energy/Other Impacts**

CalEEMod defaults for energy use were used, which are assumed to include 2013 Title 24 Building Standards. Default model assumptions for emissions associated with solid waste generation and water/wastewater use were applied to the Project. Table 5.2-3 below identifies the anticipated emissions as compared with the BAAQMD thresholds.

**Table 5.2-3 Operational Emissions**

Scenario		ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Operational Emissions	Hotel <sup>1</sup>	0.96 tons	2.52 tons	0.99 tons	0.29 tons
	Winery and Other	0.36 tons	0.45 tons	0.32 tons	0.09 tons
	Total	1.32 tons	2.97 tons	1.31 tons	0.38 tons
<i>BAAQMD Thresholds (tons/year)</i>		<i>10 tons</i>	<i>10 tons</i>	<i>15 tons</i>	<i>10 tons</i>
<b>Exceed Threshold?</b>		<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
Average Daily Net Project Operational Emissions (pounds) <sup>2</sup>		7.2 lbs.	16.3 lbs.	7.2 lbs.	2.1 lbs.
<i>BAAQMD Thresholds (pounds/day)</i>		<i>54 lbs.</i>	<i>54 lbs.</i>	<i>82 lbs.</i>	<i>54 lbs.</i>
<b>Exceed Threshold?</b>		<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

<sup>1</sup> Assumes 80% occupancy

<sup>2</sup> Assumes 365-day operation

As shown in the table, the Project operational emissions related to ozone and particulate matter are below the BAAQMD thresholds for all criterion pollutants. Therefore, the Project will not result in a significant regional air impact, and mitigation is not required to reduce operational emissions.

### Cumulative Emissions

BAAQMD screening guidance indicates that the Project would have a less than significant impact with respect to CO levels if Project traffic projections indicate that traffic levels would not increase at any affected intersection to more than 44,000 vehicles per hour.<sup>3</sup> As shown on Table 5.2-3 above, the Project is significantly below the BAAQMD thresholds for ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Mitigation has been included to ensure that emissions due to construction activities remain below thresholds.

### 3. Sensitive Receptors

Project impacts related to increased community risk can occur either by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the Project vicinity. Review of the Project area did not reveal any sensitive receptors in the vicinity (within 1,000 feet) of the Project site.

#### 5.2.5 Mitigation Measures

##### 1. Standard Mitigation Measures

None required. The City of Napa Policy Resolution 27 does not include mitigation measures in the area of Air Quality.

<sup>3</sup> For a land-use project type, the BAAQMD CEQA Air Quality Guidelines state that a proposed project would result in a less than significant impact to localized carbon monoxide concentrations if the project would not increase traffic at affected intersections to more than 44,000 vehicles per hour.

## 2. Special Mitigation Measures

### Short-Term Impacts

It is anticipated that fugitive dust will result from soil disturbance and truck transport of soils during grading and site preparation activities. In compliance with the BAAQMD CEQA Air Quality Guidelines, the following mitigation measures are included to implement the BAAQMD-recommended construction best management practices to reduce emissions to a less than significant level.

MM AQ-1	<p>During Project construction, the applicant shall ensure that best management practices for dust control as set forth in the BAAQMD CEQA Air Quality Guidelines are implemented. These include:</p> <ol style="list-style-type: none"><li data-bbox="470 651 1438 766">1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.</li><li data-bbox="470 766 1438 840">2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.</li><li data-bbox="470 840 1438 955">3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.</li><li data-bbox="470 955 1438 1029">4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).</li><li data-bbox="470 1029 1438 1144">5. All roadways, driveways and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.</li><li data-bbox="470 1144 1438 1333">6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.</li><li data-bbox="470 1333 1438 1480">7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.</li><li data-bbox="470 1480 1438 1682">8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District’s phone number shall also be visible to ensure compliance with applicable regulations.</li></ol>
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## Long-Term Impacts

The Air Quality Assessment did not identify any long-term operational emissions that exceed the BAAQMD Thresholds for ROG, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> or carbon monoxide (CO) for the Project components, either individually or cumulatively. Therefore, no mitigation measures are necessary for operational emissions.

### 5.2.6 Level of Significance after Mitigation

An air quality assessment must discuss any inconsistencies between the proposed Project and applicable General Plans and regional plans (California Environmental Quality Act (CEQA) Guidelines §15125). Regional plans that apply to the Project include the Bay Area Air Quality Management District CEQA Air Quality Guidelines (BAAQMD Guidelines) and the County of Napa General Plan. The purpose of the consistency analysis is to identify issues related to the assumptions and objectives of the BAAQMD Guidelines and whether the Project would interfere with the region's ability to comply with federal and state air quality standards. Mitigation measures can be provided to reduce or eliminate any inconsistencies.

The Air Quality Assessment analysis responds to the California CEQA Guidelines, Appendix G Checklist as follows.

- a) The Project will not conflict with or obstruct implementation of an applicable air quality plan. The Project is located in the San Francisco Bay Area Air Basin.

The most recent clean air plan is the 2017 Clean Air Plan that was adopted by BAAQMD in April 2017. The proposed Project would not conflict with the latest Clean Air planning efforts since the Project would have emissions below the BAAQMD thresholds and implementation of the Project would not be considered growth-inducing. The Project is too small to exceed any of the criteria pollutant significance thresholds and, thus, it is not required to incorporate project specific transportation control measures listed in the latest Clean Air Plan.

- b) The proposed Project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation. CalEEMod Version 2016.3.1 was used to estimate emissions from construction and operation of the Project assuming full build-out using Project land use types and size and anticipated construction schedules based on CalEEMod defaults for a similar sized project. Based on the analysis, construction activity emissions are well below the BAAQMD thresholds and are considered less than significant if BAAQMD recommended best management practices (BMPs) are implemented. The BMPs have been included herein as Mitigation Measure MM AQ-1.

Operational emissions for the Project were input for the Project land uses, trip generation rates for daily trips, energy use, solid waste generation, and water/wastewater use. Two model runs were conducted – one for hotel uses and one for office and winery uses. Operating year 2020 was used for the earliest full year of build-out. The modeling for operational impacts showed that all emissions are well below the BAAQMD thresholds. Therefore, operational emissions are less than significant, and no mitigation is required.

The Project will have emissions below the significance thresholds adopted by the BAAQMD related to ozone and particulate matter. Therefore, the Project would not contribute substantially to existing or projected violations of those standards. Carbon monoxide emissions from traffic generated by the Project would be the pollutant of greatest concern at the local level. However, the region has been designated as attainment for the carbon monoxide standard. Based on trip generation rates, the Project would not adversely affect high-volume intersections that have the potential to result in exceedance of an ambient air quality standard for carbon monoxide. BAAQMD screening guidance indicates that the Project would have a less than significant impact with respect to carbon monoxide levels if traffic projects indicate that traffic levels would not increase at any affected intersection to more than 44,000 vehicles per hour. Because cumulative traffic volumes at all intersections affected by the Project would have fewer than 44,000 vehicles per hour, the Project will have a less than significant effect with respect to carbon monoxide emissions.

- c) The Project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable State or federal ambient air quality standard.

The Bay Area is considered a non-attainment area for ground-level ozone and PM<sub>2.5</sub> under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM<sub>10</sub> under the California Clean Air Act. Federal and state ambient air quality standards have been attained for carbon monoxide. In an effort to attain and maintain ambient air quality standards for ozone and PM<sub>10</sub>, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. The thresholds are for ozone precursor pollutants (ROG and NO<sub>x</sub>), PM<sub>10</sub> and PM<sub>2.5</sub>. The thresholds apply to both construction and operational impacts.

- d) The proposed Project will not expose sensitive receptors to substantial pollutant concentrations.

Project impacts related to community risk can occur either by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs or by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity. The Project would not introduce new receptors and would not be a substantial source of community risk during Project operation because Project operational impacts are below thresholds. The Project does not propose any stationary TAC sources such as emergency back-up generators.

During construction of the project, diesel exhaust would be a temporary source of TACs that could affect sensitive receptors in the project vicinity. The BAAQMD recommends using a 1,000-foot screening distance for identifying areas of potentially significant impact. That is, if there are no sensitive receptors within a 1,000-foot radius of the project site, community risk from construction of the project is expected to be less than significant. A review of the project area did not reveal any sensitive receptors within 1,000 feet of the Project site. Therefore, it is concluded that community risk from the Project would be below thresholds contained in Table 5.2-1. The Project would have a *less-than-significant impact* with respect to exposure of receptors to substantial pollutant concentrations because no new sensitive receptors will

result from the Project and there are no sensitive receptors identified within 1,000 feet of the project site. The Project would also not contribute cumulatively to a significant community risk impact.

- e) The Project will not create objectionable odors affecting a substantial number of people.

The Project would generate localized emissions of diesel exhaust during construction equipment operation and truck activity. These emissions could be noticeable from time to time at adjacent industrial and commercial developments. However, the emissions would be localized and short-term, and would not adversely affect people off-site. Long-term operations will include treatment of the industrial wastewater by on-site wastewater treatment equipment. The waste will be piped from the winery to a tank beneath the winery building and transferred through an underground pipe system to the treatment area. The treatment will occur in three cylindrical storage tanks and the treated water will be dispersed through the landscape irrigation system. No open drainage areas or storage tanks will be used, and the wastewater will be completely contained until it is purified and used for landscaping. No odors will occur since the wastewater will be enclosed in pipes and tanks during the entire process.

The Project will not include any sources of significant odors that would result in complaints from or impacts to surrounding uses. Therefore, the impact is considered less than significant.

As detailed herein, the Project will not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment. Implementation of Mitigation Measure MM AQ-1 will reduce site preparation fugitive dust emissions to less than significant, and no other threshold for criteria pollutants is anticipated to be exceeded for either short-term construction or long-term operation. The Project will not expose sensitive receptors to substantial pollutant concentrations or create objectionable odors affecting a substantial number of people.

In addition to BAAQMD standards and policies, the proposed Project is consistent with the policies of both the Napa County General Plan and the City of Napa General Plan. Project-specific air quality impacts have been identified, and the Project will not exceed thresholds established by BAAQMD. Construction activities will comply with the BAAQMD Clean Air Plan, and emissions will be below specified thresholds. Design features will be incorporated into the Project to reduce or eliminate air quality impacts during construction and operational phases. Bicycle racks/storage will be available, and bicycle lanes on internal streets within the industrial park will be maintained. Air quality impacts due to construction and operation will be less than significant with implementation of the Mitigation Measures identified herein and compliance with policies identified in the County and City General Plans.

### **5.2.7 Cumulative Impacts**

The two major projects within the immediate vicinity of the proposed Project are the Meritage Commons development and the Napa Pipe development. Environmental documents have been prepared for both projects, and mitigation measures have been adopted to reduce impacts due to short-term construction and long-term operation. It was determined in the IS/MND that the Meritage Commons project was below BAAQMD significance thresholds for construction and operational emissions. The Napa Pipe project EIR concluded that the Project would have unavoidable significant impacts related to air quality during remediation and grading based on the BAAQMD significance thresholds. The Napa Pipe project is currently in the remediation phase prior to construction. Cumulative contributions from the Napa Pipe and Meritage Commons developments, combined with the proposed Project, could be significant due to the emissions exceedance of the adjacent Napa Pipe project. However, the Project's contribution alone to the cumulative condition would not be considerable. The proposed Project would not result in impacts that are cumulatively considerable.

### **5.2.8 Unavoidable Adverse Impacts**

The air quality analysis demonstrates that the Project will not result in a significant air quality impact during either short-term construction or long-term operation. Project impacts will remain below the BAAQMD thresholds and no unavoidable adverse impacts will occur related to air quality.