

## 5. Environmental Analysis

### 5.7 GREENHOUSE GAS EMISSIONS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the proposed project to cumulatively contribute to greenhouse gas (GHG) emissions impacts. Because no single project is large enough to result in a measurable increase in global concentrations of GHG, climate change impacts of a project are considered on a cumulative basis.

This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (SCAQMD). Modeling of GHG emissions was conducted using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2, the California Air Resources Board's (CARB) EMFAC2017, Version 1.0.2, and CARB's OFFROAD2017 (Orion Web Database), Version 1.0.1. Model outputs are in Appendix C1 of this DEIR.

#### Terminology

The following are definitions for terms used throughout this section.

- **Greenhouse gases (GHG).** Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- **Global warming potential (GWP).** Metric used to describe how much heat a molecule of a greenhouse gas absorbs relative to a molecule of carbon dioxide (CO<sub>2</sub>) over a given period of time (20, 100, and 500 years). CO<sub>2</sub> has a GWP of 1.
- **Carbon dioxide-equivalent (CO<sub>2</sub>e).** The standard unit to measure the amount of greenhouse gases in terms of the amount of CO<sub>2</sub> that would cause the same amount of warming. CO<sub>2</sub>e is based on the GWP ratios between the various GHGs relative to CO<sub>2</sub>.
- **MTCO<sub>2</sub>e.** Metric ton of CO<sub>2</sub>e.
- **MMTCO<sub>2</sub>e.** Million metric tons of CO<sub>2</sub>e.

#### 5.7.1 Environmental Setting

##### 5.7.1.1 GREENHOUSE GASES AND CLIMATE CHANGE

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The “greenhouse effect” is the natural process that retains heat in the troposphere, which is the bottom layer of the atmosphere. Without the greenhouse effect, thermal energy would escape into space resulting in a much colder and inhospitable planet. GHGs are the components of the atmosphere responsible for the greenhouse effect. The amount of heat that is retained is proportional to the concentration of GHGs in the atmosphere. As more GHGs are released into the atmosphere, GHG concentrations increase and the atmosphere retains more heat, increasing the effects of climate change.

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The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and ozone (O<sub>3</sub>)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).<sup>1,2</sup> The major GHGs applicable to the proposed project are briefly described.

- **Carbon dioxide (CO<sub>2</sub>)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH<sub>4</sub>)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in landfills and water treatment facilities.
- **Nitrous oxide (N<sub>2</sub>O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 5.7-1. The GWP is used to convert GHGs to CO<sub>2</sub>-equivalence (CO<sub>2</sub>e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fourth Assessment Report (AR4), GWP values for CH<sub>4</sub>, 10 MT of CH<sub>4</sub> would be equivalent to 250 MT of CO<sub>2</sub>.

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<sup>1</sup> Water vapor (H<sub>2</sub>O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant because it is considered part of the feedback loop rather than a primary cause of change.

<sup>2</sup> Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017a). However, state and national GHG inventories do not include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

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**Table 5.7-1 GHG Emissions and Their Relative Global Warming Potential Compared to CO<sub>2</sub>**

GHGs	Second Assessment Report Atmospheric Lifetime (Years)	Fourth Assessment Report Atmospheric Lifetime (Years)	Second Assessment Report Global Warming Potential Relative to CO <sub>2</sub> <sup>1</sup>	Fourth Assessment Report Global Warming Potential Relative to CO <sub>2</sub> <sup>1</sup>
Carbon Dioxide (CO <sub>2</sub> )	50 to 200	50 to 200	1	1
Methane <sup>2</sup> (CH <sub>4</sub> )	12 (±3)	12	21	25
Nitrous Oxide (N <sub>2</sub> O)	120	114	310	298

Source: IPCC 1995, 2007.

Notes: The IPCC published updated GWP values in its Fifth Assessment Report (2013) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO<sub>2</sub>. However, GWP values identified in AR4 are used by SCAQMD to maintain consistency in statewide GHG emissions modeling. In addition, the 2014 Scoping Plan Update was based on the GWP values in AR4.

<sup>1</sup> Based on 100-year time horizon of the GWP of the air pollutant compared to CO<sub>2</sub>.

<sup>2</sup> The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO<sub>2</sub> is not included.

### California's GHG Sources and Relative Contribution

In 2019, the statewide GHG emissions inventory was updated for 2000 to 2017 emissions using the GWPs in IPCC's AR4.<sup>3</sup> Based on these GWPs, California produced 424.10 MMTCO<sub>2e</sub> GHG emissions in 2017. CARB categorizes GHG generation into the following seven sectors (CARB 2019b).

- **Transportation.** Consists of direct tailpipe emissions from on-road vehicle and direct emissions from off-road transportation mobile sources, intrastate aviation, rail, and watercraft. Emissions are generated from the combustion of fuels in on- and off-road vehicles in addition to aviation, rail, and ships.
- **Electric.** Includes emissions from instate power generation (including the portion of cogeneration emissions attributed to electricity generation) and emissions from imported electricity.
- **Industrial.** Includes emissions primarily driven by fuel combustion from sources that include refineries, oil and gas extraction, cement plants, and the portion of cogeneration emissions attribute to thermal energy output.
- **Commercial and Residential.** Accounts for emissions generated from combustion of natural gas and other fuels for household and commercial business use, such as space heating, cooking, and hot water or steam generation. Emissions associated with electricity usage are accounted for in the Electric Sector.
- **Recycling and Waste.** Consists of emissions generated at landfills and from commercial-scale composting.
- **Agriculture.** Primarily includes methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) emissions generated from enteric fermentation and manure management from livestock. Also accounts for emissions associated with crop production (fertilizer use, soil preparation and disturbance, and crop residue burning) and fuel

<sup>3</sup> Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (2006).

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combustion associated with stationary agricultural activities (e.g., water pumping, cooling or heating buildings).

- **High Global Warming Potential Gasses.** Associated with ozone depleting substance (ODS) substitutes, emissions from electricity transmission and distribution system, and gases emitted in the semiconductor manufacturing process. ODS substitutes are used in refrigeration and air conditioning equipment, solvent cleaning, foam production, fire retardants, and aerosols.

California's transportation sector was the single largest generator of GHG emissions, producing 40.1 percent of the state's total emissions. Industrial sector emissions made up 21.1 percent, and electric power generation made up 14.7 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (9.7 percent), agriculture and forestry (7.6 percent) high GWP (4.7 percent), and recycling and waste (2.1 percent) t (CARB 2019a).

California's GHG emissions have followed a declining trend since 2007. In 2017, emissions from routine GHG emitting activities statewide were 424 MMTCO<sub>2e</sub>, 5 MMTCO<sub>2e</sub> lower than 2016 levels. This represents an overall decrease of 14 percent since peak levels in 2004 and 7 MMTCO<sub>2e</sub> below the 1990 level and the state's 2020 GHG target. During the 2000 to 2017 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14.0 MTCO<sub>2e</sub> per capita to 10.7 MTCO<sub>2e</sub> per capita in 2017, a 24 percent decrease. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining, representing a 41 percent decline since the 2001 peak, while the state's GDP has grown 52 percent during this period. For the first time since California started to track GHG emissions, California uses more electricity from zero-GHG sources (hydro, solar, wind, and nuclear energy). (CARB 2019b).

### Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities. The amount of CO<sub>2</sub> in the atmosphere has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation (IPCC 2007). These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants (CAT 2006). In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime (IPCC 2007).

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on

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different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty. For example, there are varying degrees of certainty on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

### Potential Climate Change Impacts for California

Observed changes over the last several decades across the western United States reveal clear signs of climate change. Statewide, average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada (CCCC 2012). The years from 2014 through 2016 have shown unprecedented temperatures with 2014 being the warmest (OEHHA 2018). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1 to 8.6°F, depending on emissions levels (CCCC 2012).

In California and western North America, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures; 2) a smaller fraction of precipitation falling as snow; 3) a decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones; 4) advanced shift in the timing of snowmelt of 5 to 30 days earlier in the spring; and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms (CAT 2006). Overall, California has become drier over time, with five of the eight years of severe to extreme drought occurring between 2007 and 2016, with unprecedented dry years occurring in 2014 and 2015 (OEHHA 2018). Statewide precipitation has become increasingly variable from year to year, with the driest consecutive four years occurring from 2012 to 2015 (OEHHA 2018). According to the California Climate Action Team—a committee of state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 5.7-1), and the inertia of the Earth's climate system could produce as much as 0.6°C (1.1°F) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table

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5.7-2, and include impacts to public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy.

**Table 5.7-2 Summary of GHG Emissions Risks to California**

Impact Category	Potential Risk
Public Health Impacts	Heat waves will be more frequent, hotter, and longer Fewer extremely cold nights Poor air quality made worse Higher temperatures increase ground-level ozone levels
Water Resources Impacts	Decreasing Sierra Nevada snow pack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation
Agricultural Impacts	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	Accelerated sea level rise Increasing coastal floods Shrinking beaches Worsened impacts on infrastructure
Forest and Biological Resource Impacts	Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity Increasing threats from pest and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species
Energy Demand Impacts	Potential reduction in hydropower Increased energy demand

Sources: CEC 2006; CEC 2009; CCCC 2012; CNRA 2014.

### 5.7.1.2 REGULATORY BACKGROUND

This section describes the federal, state, and local regulations applicable to GHG emissions.

#### Federal

The US Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 US Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not themselves impose any emission reduction requirements but allowed the EPA to finalize the GHG standards proposed in

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2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons, perfluorocarbons, and SF<sub>6</sub>—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the proposed project's GHG emissions inventory because they constitute the majority of GHG emissions; per SCAQMD guidance, they are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

### *US Mandatory Reporting Rule for GHGs (2009)*

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MTCO<sub>2e</sub> or more per year are required to submit an annual report.

### *Update to Corporate Average Fuel Economy Standards (2010/2012)*

The current Corporate Average Fuel Economy (CAFE) standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers were required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be deemed in compliance with state requirements. The federal government issued new standards in 2012 for model years 2017 to 2025 that will require a fleet average of 54.5 miles per gallon in 2025. While the EPA is reexamining the 2017–2025 emissions and CAFE standards, a consortium of automakers and California have agreed on a voluntary framework to reduce emissions that can serve as an alternative path forward for clean vehicle standards nationwide. Automakers who agreed to the framework are Ford, Honda, BMW of North America and Volkswagen Group of America. The framework supports continued annual reductions of vehicle greenhouse gas emissions through the 2026 model year, encourages innovation to accelerate the transition to electric vehicles, and provides industry the certainty needed to make investments and create jobs. This commitment means that the auto companies party to the voluntary agreement will only sell cars in the United States that meet these standards (CARB 2019d).

### *EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)*

Pursuant to its authority under the Clean Air Act, the EPA has been developing regulations for new, large, stationary sources of emissions, such as power plants and refineries. Under former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. On June 19, 2019, the EPA issued the final Affordable Clean Energy (ACE) rule which became effective on August 19, 2019. The ACE rule was crafted under the direction of President Trump's Energy Independence Executive Order. It officially rescinds the Clean Power Plan rule issued during the Obama Administration and sets emissions guidelines for states in developing plans to limit CO<sub>2</sub> emissions from coal-fired power plants.

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#### State

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Orders S-03-05 and B-30-15; Assembly Bill (AB) 32; Senate Bill (SB) 32; and SB 375.

#### *Executive Order S-03-05*

Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

#### *Assembly Bill 32, the Global Warming Solutions Act (2006)*

State of California guidance and targets for reductions in GHG emissions are generally embodied in the Global Warming Solutions Act, adopted with passage of AB 32. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 emissions reduction goal established in Executive Order S-03-05.

#### *CARB 2008 Scoping Plan*

The first Scoping Plan was adopted by the California Air Resources Board (CARB) on December 11, 2008. The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be 596 MMTCO<sub>2e</sub> in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 MMTCO<sub>2e</sub> (471 million tons) for the state (CARB 2008). To effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 MTCO<sub>2e</sub> per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

#### *First Update to the Scoping Plan*

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan, adopted May 22, 2014, highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 GWPs, and the 427 MMTCO<sub>2e</sub> 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, are slightly higher at 431 MMTCO<sub>2e</sub> (CARB 2014).

As identified in the Update to the Scoping Plan, California is on track to meet the goals of AB 32. The update also addresses the state's longer-term GHG goals in a post-2020 element. The post-2020 element provides a high-level view of a long-term strategy for meeting the 2050 GHG goal, including a recommendation for the state to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide



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goals (CARB 2014). CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014).

### *Executive Order B-30-15*

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions in the state to 40 percent below 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaptation strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

### *Senate Bill 32 and Assembly Bill 197*

In September 2016, Governor Brown signed Senate Bill 32 and Assembly Bill 197, making the Executive Order goal for year 2030 into a statewide, mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

### *2017 Climate Change Scoping Plan*

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB approved the 2017 Climate Change Scoping Plan Update, which outlines potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 MMTCO<sub>2e</sub> for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017b).

California's climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conserve agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutants and TACs emissions limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZE buses and trucks;
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).

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- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency by 25 percent by 2030 and utilizes near-zero emissions technology and deployment of ZE trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- Continued implementation of SB 375.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the state's long-term GHG reduction goals and recommended local actions to reduce GHG emissions—for example, statewide targets of no more than 6 MTCO<sub>2e</sub> or less per capita by 2030 and 2 MTCO<sub>2e</sub> or less per capita by 2050. CARB recommends that local governments evaluate and adopt robust and quantitative locally appropriate goals that align with the statewide per capita targets and sustainable development objectives, and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the state's 1990 emissions limit established under AB 32. For CEQA projects, CARB states that lead agencies have discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population) consistent with the Scoping Plan and the state's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from vehicle miles traveled (VMT), and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.

The Scoping Plan scenario is set against what is called the “business as usual” yardstick—that is, what would the GHG emissions look like if the state did nothing at all beyond the policies that are already required and in place to achieve the 2020 limit, as shown in Table 5.7-3. It includes the existing renewables requirements, advanced clean cars, the “10 percent” LCFS, and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 MMTCO<sub>2e</sub> above the target in 2030. If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-

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2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

**Table 5.7-3 2017 Climate Change Scoping Plan Emissions Reductions Gap**

Modeling Scenario	2030 GHG Emissions MMTCO <sub>2</sub> e
Reference Scenario (Business-as-Usual)	389
With Known Commitments	320
2030 GHG Target	260
Gap to 2030 Target	60

Source: CARB 2017b.

Table 5.7-4 provides estimated GHG emissions by sector, compared to 1990 levels, and the range of GHG emissions for each sector estimated for 2030.

**Table 5.7-4 2017 Climate Change Scoping Plan Emissions Change by Sector**

Scoping Plan Sector	1990 MMTCO <sub>2</sub> e	2030 Proposed Plan Ranges MMTCO <sub>2</sub> e	% Change from 1990
Agricultural	26	24-25	-8% to -4%
Residential and Commercial	44	38-40	-14% to -9%
Electric Power	108	30-53	-72% to -51%
High GWP	3	8-11	267% to 367%
Industrial	98	83-90	-15% to -8%
Recycling and Waste	7	8-9	14% to 29%
Transportation (including TCU)	152	103-111	-32% to -27%
Net Sink <sup>1</sup>	-7	TBD	TBD
Sub Total	431	294-339	-32% to -21%
Cap-and-Trade Program	NA	34-79	NA
<b>Total</b>	<b>431</b>	<b>260</b>	<b>-40%</b>

Source: CARB 2017b.

Notes: TCU = Transportation, Communications, and Utilities; TBD = To Be Determined.

<sup>1</sup> Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.

### Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. Pursuant to the recommendations of the Regional

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Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

#### *SCAG's 2016-2040 RTP/SCS*

SB 375 requires the MPOs to prepare a sustainable communities strategy in their regional transportation plan. For the SCAG region, the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) was adopted on April 7, 2016, and is an update to the 2012 RTP/SCS (SCAG 2016). In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce VMT from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

SCAG's targets for the 2016-2040 RTP/SCS were 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010). The 2016-2040 RTP/SCS projects that the SCAG region will meet or exceed the passenger per capita targets set in 2010 by CARB. It is projected that VMT per capita in the region for year 2040 would be reduced by 7.4 percent with implementation of the 2016-2040 RTP/SCS compared to a no-plan year 2040 scenario. Under the 2016-2040 RTP/SCS, SCAG anticipates lowering GHG emissions 8 percent below 2005 levels by 2020, 18 percent by 2035, and 21 percent by 2040. The 18 percent reduction by 2035 over 2005 levels represents a 2 percent increase in reduction compared to the 2012 RTP/SCS projection. Overall, the SCS is meant to provide growth strategies that will achieve the regional GHG emissions reduction targets. Land use strategies to achieve the region's targets include planning for new growth around high quality transit areas and livable corridors, and creating neighborhood mobility areas to integrate land use and transportation and plan for more active lifestyles (SCAG 2016). However, the SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS; instead, it provides incentives to governments and developers for consistency.

#### *2017 Update to the SB 375 Targets*

CARB is required to update the targets for the MPOs every eight years. CARB adopted revised SB 375 targets for the MPOs in March 2018. The updated targets become effective on October 1, 2018; and are therefore, applicable for the 2019 RTP/SCS update being initiated by SCAG. CARB's updated SB 375 targets for the SCAG region are an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018a).

The targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update (for SB 32), while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks relative to 2005; this excludes reductions anticipated from implementation of state technology and fuels strategies, and any potential future state strategies, such as statewide road user pricing. The proposed targets call for greater per-capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted

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SCS to achieve the SB 375 targets. CARB foresees that the additional GHG emissions reductions in 2035 may be achieved from land use changes, transportation investment, and technology strategies (CARB 2018a).

### *Transportation Sector Specific Regulations*

#### ***Assembly Bill 1493***

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles (see also the discussion on the update to the Corporate Average Fuel Economy standards under *Federal Laws*, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases with requirements for greater numbers of ZE vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

#### ***Executive Order S-01-07***

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in CO<sub>2</sub>e gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

#### ***Executive Order B-16-2012***

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directed the number of ZE vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZE by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions 80 percent below 1990 levels.

#### ***Heavy-Duty (Tractor-Trailer) GHG Regulation***

The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and

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owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices.

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

- **SmartWay Transport Partnership:** Freight shippers, carriers, logistics companies and other stakeholders partner with EPA to measure, benchmark and improve logistics operations so they can reduce their environmental footprint.
- **SmartWay Brand:** Through SmartWay technology verification and branding, EPA has accelerated availability, adoption and market penetration of fuel-saving technologies and operational practices while helping companies save fuel, lower costs and reduce adverse environmental impact.
- **SmartWay Global Collaboration:** EPA works with a broad range of national and global organizations to harmonize sustainability accounting methods in the freight sector. SmartWay also provides support to global policy makers that wish to model transportation sustainability programs after the SmartWay program. (USEPA 2019a)

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

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

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- Federal excise tax exemptions. (USEPA 2019b)

### ***Phase I and 2 Heavy-Duty Vehicle GHG Standards***

CARB has adopted a new regulation for GHG emissions from heavy-duty trucks and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the USEPA rule for new trucks and engines nationally. Existing heavy-duty vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer Greenhouse Gas Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation.

In September 2011, the USEPA adopted their new rule for heavy-duty trucks and engines. The USEPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements begin with model year (MY) 2014 with stringency levels increasing through MY 2018. The rule organizes truck compliance into three groupings, which include a) heavy-duty pickups and vans; b) vocational vehicles; and c) combination tractors. The USEPA rule does not regulate trailers.

CARB staff has worked jointly with the USEPA and the National Highway Traffic Safety Administration (NHTSA) on the next phase of federal GHG emission standards for medium- and heavy-duty vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later model year heavy-duty vehicles, including trailers.

The USEPA and NHTSA issued a Notice of Proposed Rulemaking for Phase 2 in June 2015 and published the final rule in October 2016. On February 8, 2018 the Board approved the proposed Phase 2 standards, with direction to staff to make additional 15-day changes (CARB 2019c, USEPA 2019c).

### ***Renewables Portfolio – Carbon Neutrality Regulations***

#### ***Senate Bills 1078, 107, X1-2, and Executive Order S-14-08***

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects, because electricity production from renewable sources is generally considered carbon neutral.

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#### ***Senate Bill 350***

Senate Bill 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

#### ***Senate Bill 100***

On September 10, 2018, Governor Brown signed SB 100, which raises California’s RPS requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

#### ***Executive Order B-55-18***

Executive Order B-55-18, signed September 10, 2018, sets a goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO<sub>2e</sub> from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

#### ***Energy Efficiency Regulations***

##### ***California Building Code: Building Energy Efficiency Standards***

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2016 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards, which were recently adopted on May 9, 2018, and went into effect starting January 1, 2020.

The 2016 Standards improve upon the previous 2013 Standards for new construction of and additions and alterations to residential and nonresidential buildings. Under the 2016 Standards, residential and nonresidential buildings are generally 28 and 5 percent more energy efficient than the 2013 Standards, respectively (CEC 2015). Although the 2016 standards do not achieve zero net energy, they get very close to the state’s goal and take important steps toward changing residential building practices in California.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories



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and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

### ***California Building Code: CALGreen***

On July 17, 2008, the California Building Standards Commission adopted the nation’s first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as “CALGreen”) was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.<sup>4</sup> The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011, and were last updated in 2016. The 2016 Standards became effective on January 1, 2017. The CEC adopted the voluntary standards of the 2019 CALGreen on October 3, 2018. The 2019 CALGreen standards become effective January 1, 2020.

### ***2006 Appliance Efficiency Regulations***

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

### ***Solid Waste Diversion Regulations***

#### ***AB 939 – Integrated Waste Management Act of 1989***

California’s Integrated Waste Management Act of 1989 (AB 939, Public Resources Code §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

#### ***AB 341***

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of

<sup>4</sup> The green building standards became mandatory in the 2010 edition of the code.

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the CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

#### ***AB 1327***

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

#### ***AB 1826***

In October of 2014 Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

#### *Water Efficiency Regulations*

#### ***SBX7-7***

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed “SBX7-7.” SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

#### ***AB 1881 – Water Conservation in Landscaping Act***

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

#### *Short-Lived Climate Pollutant Reduction Strategy*

#### ***Senate Bill 1383***

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and CH<sub>4</sub>. Black carbon is the

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light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 requires the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also establishes targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB 2017a). In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. SCAQMD is one of the air districts that requires air pollution control technologies for chain-driven broilers, which reduces their particulate emissions by over 80 percent (CARB 2017a). Additionally, SCAQMD Rule 445 limits installation of new fireplaces in the South Coast Air Basin.

### Local

#### *City of Ontario Climate Action Plan*

The City adopted the Community Climate Action Plan (CAP) in November 2014. The primary purpose of the City's Community CAP is to design a feasible strategy to reduce GHG emissions generated by community activities that is consistent with statewide Scoping Plan GHG reduction efforts. Community activities are those activities occurring in association with the land uses and activities within the City's jurisdictional boundary, generally from sources of emissions that the City's community can influence or control. The GHG emissions reduction target established under the CAP is 30 percent under year 2020 business-as-usual (BAU) levels. This goal is consistent with CARB's 2008 Scoping Plan, which was developed to implement AB 32 and provide a recommended GHG reduction target of 15 percent below "current" (2005-2008) levels to local communities by the year 2020 (Ontario 2014).

The City's Community CAP includes local measures in addition to existing state measures that would result in GHG emissions reductions.<sup>5</sup> To supplement statewide initiatives, the City has identified a series of reduction measures that are either currently being implemented or would be implemented by the City before 2020. The reduction measures are grouped into nine broad sectors that would affect emissions throughout community activities. The measures include programs that improve building energy efficiency, increase use of public and active transit and decrease VMT, increase use of alternative-fueled vehicles, increase use of renewable energy, reduce water consumption, and reduce waste (Ontario 2014).

The measures described in the Community CAP would, when fully implemented, result in 2020 emissions of 30 percent below 2020 BAU levels, resulting in a reduction total of 942,000 metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>). Approximately 64 percent of the reductions needed to achieve the City's GHG

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<sup>5</sup> Currently, the only federal mandate that would specifically reduce GHG emissions in Ontario is the Corporate Average Fuel Economy standards. These standards were adopted to be consistent with previously passed California vehicle-efficiency standards per AB 1493. As a result, these standards are incorporated in the state regulations.

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reduction goal are achieved through state- and county-level programs, and 36 percent through City-level programs. The largest GHG reductions are in the areas of building energy (both energy efficiency and renewable energy), agriculture, and transportation (Ontario 2014).

#### 5.7.1.3 EXISTING CONDITIONS

The Project Site contains an operational dairy farm and onsite residences. Operation of this land use generates GHG emissions from natural gas used for energy, heating, and cooking; electricity usage; vehicle trips for employees and residents; and area sources such as landscaping and agricultural equipment and consumer cleaning products. Other sources are generated from the livestock onsite through enteric fermentation and any manure waste that might be present onsite. Currently, the existing dairy farm has 2,000 mature dairy cows, 600 young cattle, and 100 grazing beef cattle that are present year-round. Emissions associated with the livestock and energy usage are shown in Table 5.7-5.

**Table 5.7-5 Existing Operations GHG Emissions Inventory**

Source	GHG Emissions
	MTCO <sub>2e</sub> Per Year
Energy <sup>1</sup>	195
Livestock <sup>2</sup>	18,115
<b>Project Total All Sectors</b>	<b>18,309</b>

Source: CalEEMod, Version 2016.3.2.

Notes: Totals may not equal 100 percent due to rounding.

<sup>1</sup> Based on electricity usage between November 2018 and October 2019. Emissions from natural gas use are based on natural gas use reported for October 2019 multiplied by 12 months.

<sup>2</sup> Accounts for emissions from enteric fermentation and manure management associated with 2,000 mature dairy cows, 600 young cattle, and 100 grazing beef cattle that are present year-round.

### 5.7.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

#### South Coast Air Quality Management District

SCAQMD has adopted a significance threshold of 10,000 MTCO<sub>2e</sub> per year for permitted (stationary) sources of GHG emissions for which SCAQMD is the designated lead agency. To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) in September 2010, SCAQMD identified a tiered approach for

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evaluating GHG emissions for development projects where SCAQMD is not the lead agency (SCAQMD 2010a). This following tiered approach has not been formally adopted by SCAQMD.

- **Tier 1.** If a project is exempt from CEQA, project-level and contribution to significant cumulative GHG emissions are less than significant.
- **Tier 2.** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project’s geographic area (e.g., city or county), project-level and contribution to significant cumulative GHG emissions are less than significant.
- **Tier 3.** If GHG emissions are less than the screening-level criterion, project-level and contribution to significant cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. Project-related GHG emissions include on-road transportation, energy use, water use, wastewater generation, solid waste disposal, area sources, off-road emissions, and construction activities. The SCAQMD Working Group identified that because construction activities would result in a “one-time” net increase in GHG emissions, construction activities should be amortized into the operational phase GHG emissions inventory based on the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation. The SCAQMD identified a screening-level threshold of 3,000 MTCO<sub>2e</sub> annually for all land use types. This interim bright-line screening-level criteria are based on a review of the Governor’s Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line threshold. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, less than cumulatively considerable impact on GHG emissions. Between the three identified thresholds, SCAQMD recommends use of the 3,000 MTCO<sub>2e</sub> interim bright-line screening-level criterion for all project types (SCAQMD 2010b).

- **Tier 4.** If emissions exceed the screening threshold, a more detailed review of the project’s GHG emissions is warranted.

SCAQMD has identified an efficiency target for projects that exceed the bright-line threshold: a 2020 efficiency target of 4.8 MTCO<sub>2e</sub> per year per service population (MTCO<sub>2e</sub>/year/SP) for project-level analyses and 6.6 MTCO<sub>2e</sub>/year/SP for plan-level projects (e.g., general plans). Service population is generally defined as the sum of residential and employment population of a project. The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB’s 2008 Scoping Plan.<sup>6</sup>

<sup>6</sup> SCAQMD took the 2020 statewide GHG reduction target for “land use only” GHG emissions sectors and divided it by the 2020 statewide employment for the land use sectors to derive a per capita GHG efficiency metric that coincides with the GHG reduction targets of AB 32 for year 2020.

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#### City of Ontario

The Community CAP includes reducing 39,769 MTCO<sub>2e</sub> resulting from new development by the year 2020. This would require new development to be 25 percent more efficient than current development. To ensure new development projects are consistent with the Community CAP, the Community CAP includes implementation of a Development Review Process (DRP) to reduce GHG emissions associated with new development. The DRP procedures for evaluating GHG impacts and determining significance for CEQA purposes would be streamlined by (1) applying an emissions level that is determined to be less than significant for small projects, and (2) using the Screening Table to mitigate project GHG emissions that exceed the threshold level (Community CAP, Appendix B, Greenhouse Gas Emissions CEQA Thresholds and Screening Tables).

- **Projects with 3,000 MTCO<sub>2e</sub> or Less.** The City determined the size of development that is too small to be able to provide the level of GHG emission reductions expected from the Screening Tables based upon the 90th percentile capture rate concept developed by the South Coast Air Quality Management District's (SCAQMD) GHG Working Group. Projects that generate 3,000 MTCO<sub>2e</sub> or less would have less than significant GHG emissions and would not need to use the Screening Tables to mitigate project-related GHG, although they would be required to implement best management practices.
- **Projects that Exceed 3,000 MTCO<sub>2e</sub>:** If the project is above 3,000 MTCO<sub>2e</sub> then the applicants for future development project within the City would need either to use the "Screening Tables" in the CAP, or quantify GHG emissions and provide additional mitigation that achieves a 25 percent reduction. The Screening Tables provide a menu of options that both ensures implementation of the reduction strategies and flexibility.

#### Summary

The City has the adopted Community CAP, which establishes a community-wide reduction target for up to year 2020 only. As part of the Community CAP program, subsequent updates shall be prepared to establish GHG reduction targets for the City to achieve for latter years post-2020. However, as of current, an updated Community CAP to address post-2020 reduction targets has not yet been adopted. Thus, because the proposed project has an anticipated opening year post-2020 (year 2022), the bright-line screening-level criterion of 3,000 MTCO<sub>2e</sub>/yr is used as the significance threshold for this project. Therefore, if the project operation-phase emissions exceed the 3,000 MTCO<sub>2e</sub>/yr threshold, GHG emissions would be considered potentially significant in the absence of mitigation measures.

#### Mass Emissions and Health Effects

On December 24, 2018, in the case, *Sierra Club et al. v. County of Fresno et al.* (Friant Ranch), the California Supreme Court determined that the EIR for the proposed Friant Ranch project failed to adequately analyze the project's air quality impacts on human health. The EIR prepared for the project, which involved a master planned retirement community in Fresno County, showed that project-related mass emissions would exceed the San Joaquin Valley Air Pollution Control District's (SJVAPCD) regional significance thresholds. In its findings, the California Supreme Court affirmed the holding of the Court of Appeal that EIRs for projects

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must not only identify impacts to human health, but also provide an “analysis of the correlation between the project's emissions and human health impacts” related to each criteria air pollutant that exceeds the regional significance thresholds or explain why it could not make such a connection. In general, the ruling focuses on the correlation of emissions of toxic air contaminants and criteria air pollutants and their impact to human health.

In 2009, the US EPA issued an endangerment finding for six GHGs (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>) in order to regulate GHG emissions from passenger vehicles. The endangerment finding is based on evidence that shows an increase in mortality and morbidity associated with increases in average temperatures, which increase the likelihood of heat waves and ozone levels. The effects of climate change are identified in Table 5.7-2. While these identified effects such as sea level rise and increased in extreme weather, can indirectly impact human health, neither the EPA nor CARB has established ambient air quality standards for GHG emissions. The state’s GHG reduction strategy outlines a path to avoid the most catastrophic effects of climate change. Yet the state’s GHG reduction goals and strategies are based on the state’s path toward reducing statewide cumulative GHGs as outlined in AB 32, SB 32, and Executive Order S-03-05. As described further below, the two significance thresholds that the City uses to analyze GHG impacts are based on achieving those statewide GHG reduction goals (Impact 5.7-1, relying on the SCAQMD’s recommended bright-line screening-level criterion; and Impact 5.7-1, relying on consistency with policies or plans adopted to reduce GHG emissions). Further, because no single project is large enough to result in a measurable increase in global concentration of GHG emissions, climate change impacts of a project are considered on a cumulative basis. Without federal ambient air quality standards for GHG emissions and given the cumulative nature of GHG emissions and the City’s significance thresholds that are tied to reducing the state’s cumulative GHG emissions, it is not feasible at this time to connect the project’s specific GHG emission to the potential health impacts of climate change.

### 5.7.3 Plans, Programs, and Policies

#### Plans, Programs, and Policies

- PPP GHG-1 New buildings are required to achieve the current California Building Energy Efficiency Standards (Title 24, Part 6) and California Green Building Standards Code (CALGreen) (Title 24, Part 11). The 2019 Building Energy Efficiency Standards become effective on January 1, 2020. The Building Energy Efficiency Standards and CALGreen are updated tri-annually with a goal to achieve zero net energy for residential buildings by 2020 and non-residential buildings by 2030.
- PPP GHG-2 New buildings are required to adhere to the California Green Building Standards Code (CALGreen) requirement to provide bicycle parking for new non-residential buildings, or meet local bicycle parking ordinances, whichever is stricter (CALGreen Sections 5.106.4.1, 14.106.4.1, and 5.106.4.1.2).
- PPP GHG-3 California’s Green Building Standards Code (CALGreen) requires the recycling and/or salvaging for reuse at minimum of 65 percent of the nonhazardous construction and

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demolition waste generated during most “new construction” projects (CALGreen Sections 4.408 and 5.408). Construction contractors are required to submit a construction waste management plan that identifies the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project, or salvaged for future use or sale and the amount (by weight or volume).

- PPP GHG-4 Construction activities are required to adhere to Title 13 California Code of Regulations Section 2499, which requires that nonessential idling of construction equipment is restricted to five minutes or less.
- PPP GHG-5 New buildings are required to adhere to the California Green Building Standards Code and Water Efficient Landscape Ordinance requirements to increase water efficiency and reduce urban per capita water demand.
- PPP GHG-6 CARB’s Renewable Portfolio Standard (RPS) is a foundational element of the State’s emissions reduction plan. These mandates apply directly to investor-owned utilities, which in the case of the proposed project is Southern California Edison. On September 10, 2018, Senate Bill 100 was signed into law and established the following RPS targets: 50 percent renewable resources target by December 31, 2026, and 60 percent target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030.
- PPP GHG-7 On January 18, 2007, Governor Arnold Schwarzenegger issued Executive Order S-1-07 requiring the establishment of a Low Carbon Fuel Standard (LCFS) for transportation fuels. The LCFS was amended in 2011 and readopted in 2015. This statewide goal requires that California’s transportation fuels reduce their carbon intensity by at least 10 percent by 2020.
- PPP GHG-8 The 2007 Energy Bill creates new federal requirements for increases in fleetwide fuel economy for passenger vehicles and light trucks under the Federal Corporate Average Fuel Economy Standards. The federal legislation requires a fleetwide average of 35 miles per gallon (mpg) to be achieved by 2020. The National Highway Traffic Safety Administration is directed to phase in requirements to achieve this goal. Analysis by CARB suggests that this will require an annual improvement of approximately 3.4 percent between 2008 and 2020.
- PPP GHG-9 On July 22, 2002, Governor Gray Davis signed Assembly Bill 1493 (Pavley) requiring CARB to develop and adopt regulations designed to reduce greenhouse gases emitted by passenger vehicles and light-duty trucks beginning with the 2009 model year. The standards set within the Pavley regulations are expected to reduce GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016. California had petitioned the USEPA in December 2005 to allow these more stringent standards and California executive agencies have repeated their commitment to higher mileage standards. On July 1,



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2009, the USEPA granted California a waiver that will enable the state to enforce stricter tailpipe emissions on new motor vehicles.

- PPP GHG-10 SB 375 requires the reduction of GHG emissions from light trucks and automobiles through land use and transportation efforts that will reduce vehicle miles traveled. In essence, SB 375's goal is to control GHGs by curbing urban sprawl and through better land use planning. SB 375 essentially becomes the land use contribution to the GHG reduction requirements of AB 32, California's global warming bill enacted in 2006, and SB 32.
- PPP GHG-11 The heavy-heavy duty tractors and trailers (i.e., trucks that are 53-foot or longer) must use US EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies in accordance with CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation. Owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. Trailers must have low rolling resistance tires and aerodynamic devices.
- PPP GHG-12 The medium-duty and heavy-duty vehicle engines are required to comply with the USEPA's GHG and fuel efficiency standards. The federal and California Phase 1 standards took effect with model year 2014 tractors, vocational vehicles, and heavy-duty pick-up trucks and vans and the engines powering such vehicles (the Phase 1 standards excludes trailers). The federal Phase 2 standards cover model years 2018-2027 for certain trailers and model years 2021-2027 for semi-trucks and large pick-up trucks, vans and all types and sizes of buses and work trucks. California is aligned with the federal Phase 2 standards in structure, timing, and stringency, but with some minor California differences. The California Phase 2 regulations became effective April 1, 2019.

### Project Design Features

- PDF GHG-1 Indoor material handling equipment used throughout the project area would be electric and would not be propane or diesel-powered.
- PDF GHG-2 The tilt-up concrete warehouse buildings would have rooftops that can support tenant improvements for solar panels (i.e., solar ready).
- PDF GHG-3 All outdoor water demands would be served with recycled water.

## 5.7.4 Environmental Impacts

### 5.7.4.1 METHODOLOGY

This GHG evaluation was prepared in accordance with the requirements of CEQA to determine if significant GHG impacts are likely in conjunction with the proposed project. The SCAQMD has published guidelines that are intended to provide local governments with guidance for analyzing and mitigating

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environmental impacts and which were used in this analysis. The analysis in this section is based on buildout of the proposed project for the following sectors:

- **Transportation:** The annual VMT is based on the average daily trip (ADT) generation and average trip distance traveled for trucks and passenger vehicles was provided by Urban Crossroads. Overall, the proposed project would generate up to 4,328 weekday ADTs (non-passenger equivalent) consisting of 3,532 passenger vehicle ADTs and 796 medium- and heavy-heavy duty truck ADTs. Passenger vehicles are anticipated to average 16.5 miles per trip. Medium- (2 to 4 axle) and heavy-heavy duty trucks (4+-axle trucks) are anticipated to average 40 miles per trip. For further details, refer to Appendix A of Appendix L1. Project-related on-road GHG emissions are based on calendar year 2022 emission rates. The default CalEEMod emissions rates for year 2022 were updated with emission rates derived from EMFAC2017, Version 1.0.2, and CalEEMod methodology. The primary source of mobile-source GHG emissions is tailpipe exhaust emissions from the combustion of fuel (i.e., gasoline and diesel).
- **Transport Refrigeration Units.** Emissions from transport refrigeration units (TRUs) are based on the operation of 69 trucks with TRUs per day, 30 minutes of idling per unit per day, and calendar year 2022 aggregated Instate Trailer TRU emission rates obtained from OFFROAD2017, Version 1.0.1.
- **Area Sources.** Area source emissions from use of landscaping equipment are based on CalEEMod default values and the square footage of the proposed buildings and surface parking lot areas.
- **Off-Road Equipment.** It is anticipated the proposed project would utilize up to 125 electric forklifts and 7 yard trucks for daily operations. The yard trucks would consist of 3 units powered by diesel and 4 units powered by compressed natural gas (CNG) with each that would operate for 4 hours per day and 365 days per year.<sup>7</sup> Diesel- and CNG-powered yard truck emissions are based on calendar year 2022 OFFROAD2017, Version 1.0.1, emission factors for a 175 horsepower rail yard tractor and an airport fuel truck, respectively.
- **Energy:** Emissions of GHG from energy use (electricity and natural gas) are based on the CalEEMod defaults for electricity and natural gas usage by nonresidential land uses. New buildings are modeled to comply with the 2019 Building Energy Efficiency Standards, which are 30 percent more energy efficient for non-residential buildings than the 2016 Building Energy Efficiency Standards.
- **Solid Waste Disposal:** Indirect emissions from waste generation are based on CalRecycle solid waste generation rates (see Table 5.17-10, *Estimate Solid Waste Generation*, for further details).
- **Water/Wastewater:** Emissions from this sector are based on domestic and recycled water demand rates specified in City's Urban Water Management Plan (see Table 5.17-4, *Water Demand Estimate for the Proposed Development*). Emissions of GHG are associated with the embodied energy used to supply, treat, and distribute water. All outdoor water demand is anticipated to be supplied by recycled water.

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<sup>7</sup> Based on 3.6 yard trucks per million square feet of building space (SCAQMD 2014).

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- **Construction:** Construction of the proposed project is anticipated to commence October 2020 and be completed in December 2022, a duration of approximately 26 calendar months (see Table 5.3-9, *Construction Activities, Phasing, and Equipment*). Emissions of GHG would primarily be from operation of off-road construction equipment in addition to construction worker, vendor, and haul vehicles.

Life cycle emissions are not included in this analysis because not enough information is available for the proposed project, and therefore life cycle GHG emissions would be speculative.<sup>8</sup> Black carbon emissions are not included in the GHG analysis because CARB does not include this pollutant in the state's AB 32 inventory but treats this short-lived climate pollutant separately.<sup>9</sup> GHG modeling is included in Appendix C1 of this Draft EIR.

### 5.7.4.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.7-1: Operation of the proposed project would generate emissions from mobile and other sources that would exceed the bright-line significance threshold and would have a significant impact on the environment. [Threshold GHG-1]**

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**Impact Analysis:** Implementation of a development project could contribute to global climate change through direct emissions of GHGs from onsite area sources and vehicle trips generated by the project, and indirectly through offsite energy production required for onsite activities, water use, and waste disposal. Because no single project is large enough to result in a measurable increase in global concentrations of GHG emissions, climate change impacts of a project are considered on a cumulative basis.

Annual GHG emissions were calculated for construction and operation of the proposed project and are shown in Table 5.7-6. The project operational phase emissions are from operation of the proposed land uses, off-road equipment used for daily operations, and from project-related vehicle trips. Construction emissions were amortized into the operational phase in accordance with SCAQMD's proposed methodology (SCAQMD 2009).

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<sup>8</sup> Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

<sup>9</sup> Particulate matter emissions, which include black carbon, are analyzed in Section 5.3, *Air Quality*. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The State's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2017a).

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**Table 5.7-6 Operational Phase GHG Emissions**

Source	GHG Emissions	
	MTCO <sub>2</sub> e Per Year	Percent Change
Area	<1	<1%
Energy <sup>1</sup>	3,928	15%
Mobile – Passenger Vehicles <sup>2</sup>	6,303	23%
Mobile – Transport Trucks <sup>2</sup>	13,924	52%
Transport Refrigeration Units <sup>3,4</sup>	16	<1%
Off-Road Equipment <sup>5</sup>	285	1%
Solid Waste	2,236	8%
Water	151	1%
Construction-Amortized <sup>6</sup>	63	<1%
<b>Project Total All Sectors</b>	<b>26,906</b>	<b>100%</b>
<b>Existing Emissions</b>	<b>18,309</b>	<b>NA</b>
<b>Net Change</b>	<b>8,596</b>	<b>NA</b>
Proposed SCAQMD Bright-Line Threshold	3,000 MTCO <sub>2</sub> e	NA
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>NA</b>

Source: CalEEMod, Version 2016.3.2.

Notes: Totals may not equal 100 percent due to rounding.

<sup>1</sup> Buildings constructed after January 1, 2020 are required to meet the 2019 Building Energy Efficiency Standards. Modeling also includes applicable water efficiency improvements required under CALGreen.

<sup>2</sup> Based on calendar year 2022 aggregated emission rates derived EMFAC2017 Version 1.0.2 and CalEEMod methodology.

<sup>3</sup> Based on calendar year 2022 aggregated Instate Trailer TRU emission rates obtained from OFFROAD2017 Version 1.0.1.

<sup>4</sup> Based on 69 trucks with TRUs per day and 30 mins of idling per truck per day.

<sup>5</sup> Based on three diesel-powered and four CNG-powered yard trucks at the facility operating for four hours per day. Emissions based on calendar year 2022 emission rates for a 175 horsepower diesel-powered rail yard tractor and CNG-powered airport fuel truck derived from OFFROAD2017 Version 1.0.1.

<sup>6</sup> Construction emissions are amortized over a 30-year project lifetime per recommended SCAQMD methodology.

As shown in the table, the project would generate 26,906 MTCO<sub>2</sub>e per year. The primary sources of project-related emissions would be from mobile-source emissions generated from the project-related passenger vehicles and trucks. The next largest sources of emissions would be from energy usage followed by solid waste. Overall, development of the proposed project would result in a net increase in GHG emissions of 8,596 MTCO<sub>2</sub>e per year when compared to the existing conditions, and would exceed the bright-line threshold of 3,000 MTCO<sub>2</sub>e per year. Therefore, GHG emissions generated by the project would be considered to cumulatively contribute to statewide GHG emissions and impacts are potentially significant.

**Level of Significance Before Mitigation:** Potentially Significant.

**Impact 5.7-2: Implementation of the proposed project would conflict with the City's Community Climate Action Plan. [Threshold GHG-2]**

**Impact Analysis:** Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan, SCAG's 2016-2040 RTP/SCS, and the City's CAP. A consistency analysis with these plans is presented below:

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### CARB Scoping Plan

CARB's Scoping Plan is the State's strategy to achieve the GHG emissions reduction goals under AB 32 and SB 32, as well as a long-term strategy to achieve the state's overall carbon neutrality goals for 2050 under Executive Order S-03-05. The CARB Scoping Plan is applicable to state agencies but is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require the City to adopt policies, programs, or regulations to reduce GHG emissions). However, new regulations adopted by the state agencies outlined in the Scoping Plan result in GHG emissions reductions at the local level. As a result, local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that affect a local jurisdiction's emissions inventory from the top down.

### *Transportation Sector*

#### *Trucks*

Approximately 76 percent of the project's emissions are from the transportation sector, and over 50 percent of the project's emissions are associated with VMT generated by trucks<sup>10</sup>. In general, the state strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast to the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals.

Emissions associated with heavy duty trucks involved in goods movements are generally controlled on the technology side and through fleet turnover of older trucks and engines to newer and cleaner trucks and engines. The first battery-electric heavy-heavy duty trucks are being tested this year and SCAQMD is looking to integrate this new technology into large-scale truck operations (SCAQMD 2019). The following state strategies reduce GHG emissions from the medium and heavy duty trucks:

- CARB's Mobile Source Strategy focuses on reducing GHGs through the transition to zero and low emission vehicles and from medium-duty and heavy-duty trucks (CARB 2017b).
- CARB's Sustainable Freight Action Plan establishes a goal to improve freight efficiency by 25 percent by 2030, deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030 (CARB 2017b).
- CARB's Emissions Reduction Plan for Ports and Goods Movement (Goods Movement Plan) in California focuses on reducing heavy-duty truck-related emissions focus on establishment of emissions standards for trucks, fleet turnover, truck retrofits, and restriction on truck idling (CARB 2006). While the focus of Goods Movement Plan is to reduce criteria air pollutant and air toxic emissions, the strategies to reduce these pollutants would also generally have a beneficial effect in reducing GHG emissions.

<sup>10</sup> Approximately 1 percent is from fuel used for TRUs and yard equipment.

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Thus, these strategies would contribute in controlling heavy duty truck GHG emissions associated with the proposed project. The proposed project would not conflict with the statewide strategies. Trucks onsite are required to comply with CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation, which requires SmartWay tractor trailers that include idle-reduction technologies, aerodynamic technologies, and low-rolling resistant tires that would reduce fuel consumption and associated GHG emissions. Furthermore, Mitigation Measure AQ-6 implemented to reduce GHG emissions under Impact 5.7-1, would require use of 2014 or newer trucks, which is also consistent with the state's goal to expedite turnover of older trucks with newer, more efficient trucks.

#### *Passenger Vehicles*

Approximately 23 percent of the emissions associated with the project are associated with VMT generated by passenger vehicles. Statewide strategies to reduce GHG emissions from passenger vehicles and the transportation sector in general include the LCFS and changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley California Advanced Clean Cars program).

#### *Energy / Commercial-Residential Sector*

Energy use generated by the project represents the second largest source of emissions (15 percent) after the transportation sector. New buildings under the proposed project would meet the current CALGreen and Building Energy Efficiency standards and would be solar-ready (PDF GHG-2). In addition to being energy-efficient, over the long-term, energy demand generated by the project would continue to meet with energy from sources with lower carbon intensity as a result of the state's carbon neutrality goals established under Executive Order B-55-18. SB 100 sets the RPS at 60 percent by 2030 and 100 percent by 2040. As a result, over time, GHG emissions from the energy sector will decrease. As evidenced by CARB's documentation of GHG emissions trends, in 2017 California generated more electricity from zero-GHG sources than GHG-emitting sources (CARB 2019b). Therefore, the proposed project would be consistent with the state's goals for this sector.

#### *Other Sources*

Other sources of GHG emissions represent approximately 9 percent of the emissions inventory, with the vast majority from solid waste disposal (8 percent), which is associated with landfilling municipal solid waste. The amount of methane emitted to the atmosphere as a fraction of the total amount of methane generated from the decomposition of accumulated waste has gradually declined over time as more landfills install landfill gas collection and control systems and existing systems are operated more efficiently as a result of CARB's Landfill Methane Control Measure (CARB 2019b). Therefore, the proposed project would be consistent with the state's goals for the recycling and waste sector.

Development projects accommodated under the proposed project are required to adhere to the programs and regulations identified by the Scoping Plan and implemented by state, regional, and local agencies to achieve the statewide GHG reduction goals of AB 32 and SB 32. These future individual development projects would comply with these statewide GHG emissions reduction measures. Project GHG emissions shown in

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Table 5.7-6 include reductions associated with statewide strategies that have been adopted since AB 32 and SB 32. Therefore, the proposed project would not obstruct implementation of the CARB Scoping Plan.

### SCAG's Regional Transportation Plan/Sustainable Communities Strategy

SCAG's RTP/SCS is Southern California's regional transportation plan to achieve the passenger vehicle emissions reductions identified under SB 375. SCAG's 2016-2040 RTP/SCS was adopted April 7, 2016. The RTP/SCS identifies multimodal transportation investments, including bus rapid transit, light rail transit, heavy rail transit, commuter rail, high-speed rail, active transportation strategies (e.g., bike ways and sidewalks), transportation demand management strategies, transportation systems management, highway improvements (interchange improvements, high-occupancy vehicle lanes, high-occupancy toll lanes), arterial improvements, goods movement strategies, aviation and airport ground access improvements, and operations and maintenance to the existing multimodal transportation system.

SCAG's RTP/SCS identifies that land use strategies that focus on new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The overarching strategy in the 2016-2040 RTP/SCS is to allow the southern California region to grow in more compact communities in existing urban areas; provide neighborhoods with efficient and plentiful public transit and abundant and safe opportunities to walk, bike, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands (SCAG 2016). The 2016-2040 RTP/SCS contains transportation projects to help more efficiently distribute population, housing, and employment growth as well as a forecast development that is generally consistent with regional-level general plan data. The projected regional development pattern—when integrated with the proposed regional transportation network identified in the RTP/SCS—would reduce per capita vehicular-travel-related GHG emissions and achieve the GHG reduction per capita targets for the SCAG region. The RTP/SCS does not require that local general plans, specific plans, or zoning be consistent with the RTP/SCS, but provides incentives for consistency for governments and developers.

Table 5.7-7 provides an evaluation of the proposed project in comparison to the three-primary transportation-land-use strategies in the 2016-2040 RTP/SCS. As shown in the table, the proposed project would be consistent with the applicable strategies. Additionally, as demonstrated in Table 5.11-3, *Consistency with SCAG's 2016–2040 RTP/SCS Goals*, of Section 5.11, *Land Use and Planning*, the proposed project would be consistent with the 2016-2040 RTP/SCS goals. Furthermore, as discussed in Sections 5.13.1.1 and 5.13.6 of this DEIR, implementation of the proposed project would improve the jobs-housing balance for the City by providing more employment opportunities for the local community. Moreover, VMT associated with heavy duty trucks involved in goods movement is outside the realm of the RTP/SCS, which primarily focuses on VMT associated with passenger vehicles. The following is the list of RTP/SCS goods-movement strategies that are applicable to the proposed warehousing project:

- Regional Clean Freight Corridor System. Establishing a system of truck-only lanes extending from the San Pedro Bay Ports to downtown Los Angeles along Interstate 710, connecting to the State Route 60 east-west segment and finally reaching Interstate 15 in San Bernardino County

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- **Truck Bottleneck Relief Strategy.** Working to relieve the top 50 truck bottlenecks. Examples of bottleneck relief strategies include ramp metering, extension of merging lanes, ramp and interchange improvements, capacity improvements and auxiliary lane additions
- **Good Movement Environmental Strategy and Action Plan.** Reducing environmental impacts by supporting the deployment of commercially available low-emission trucks and locomotives. Advancing technologies to implement a zero- and near zero-emission freight system.

Therefore, overall, implementation of the proposed project would not interfere with SCAG’s ability to implement the regional strategies outlined in the 2016–2040 RTP/SCS.

**Table 5.7-7 Proposed Project Consistency with SCAG’s 2016-2040 RTP/SCS**

SCAG Transportation-Land Use Strategies	Implementing Policies/Strategies	Consistency
<p><b>Focus new growth around high quality transit areas (HQTA).</b> The 2016 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region’s QTAs. The 2016 RTP/SCS assumes that 46 percent of new housing and 55 percent of new employment locations developed between 2012 and 2040 will be in QTAs, which comprise only 3 percent of the total land area in the SCAG region (SCAG 2016).</p>	<p>Additional local policies that ensure that development in QTAs achieve the intended reductions in VMT and GHG emissions include:</p> <ul style="list-style-type: none"> <li>• Affordable housing requirements.</li> <li>• Reduced parking requirements.</li> <li>• Adaptive reuse of existing structures.</li> <li>• Density bonuses tied to family housing units such as three- and four-bedroom units.</li> <li>• Mixed-use development standards that include local serving retail.</li> <li>• Increased Complete Streets investments around QTAs.</li> </ul>	<p><b>Consistent:</b> The project area is in a designated HQTA (SCAG 2017a). Implementation of the proposed Specific Plan would increase the development intensities in the HQTA. Additionally, an objective of the proposed project is to provide employment opportunities for community residents. As discussed in Sections 5.13.1.2 and 5.13.5 of this DEIR, it is anticipated that implementation of the proposed project and the employment opportunities it would provide would improve the jobs-housing balance in the City.</p>
<p><b>Plan for growth around livable corridors.</b> SCAG’s livable-corridors strategy seeks to revitalize commercial strips through integrated transportation and land use planning that results in increased economic activity and improved mobility options.</p>	<p>Additional livable corridors strategies include:</p> <ul style="list-style-type: none"> <li>• Transit improvements, including dedicated lane bus rapid transit (BRT) or semi dedicated BRT-light. The remaining corridors have the potential to support other features that improve bus performance (enhanced bus shelters, real-time travel information, off-bus ticketing, all door boarding, and longer distances between stops to improve speed and reliability).</li> <li>• Active transportation improvements: Livable corridors include increased investments in complete streets to make these corridors and the intersecting arterials safe for biking and walking.</li> <li>• Land use policies: Livable corridor strategies include the development of mixed-use retail centers at key nodes along the corridors, increasing neighborhood-oriented retail at more intersections, and zoning that allows for the replacement of underperforming auto-oriented strip retail between nodes with higher density residential and employment.</li> </ul>	<p><b>Consistent:</b> The proposed project would provide multipurpose trails on the east side of Euclid Avenue, the south side of Eucalyptus Avenue, and north side of Merrill Avenue. The Ontario Plan Mobility Element also specifies a Class II bikeway on the north side of Merrill Avenue. In addition to the trails and bikeways improvements, the City is coordinating with regional transit agencies to implement BRT service that would include the segment of Euclid Avenue along the western boundary of the Plan Area.</p>
<p><b>Provide more options for short trips in</b></p>	<p>Neighborhood mobility area land use strategies</p>	<p><b>Consistent:</b> Implementation of the</p>



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**Table 5.7-7 Proposed Project Consistency with SCAG's 2016-2040 RTP/SCS**

SCAG Transportation-Land Use Strategies	Implementing Policies/Strategies	Consistency
<p><b>neighborhood mobility areas and complete communities.</b> Neighborhood mobility areas have a high intersection density, low to moderate traffic speeds, and robust residential retail connections. These areas are suburban in nature, but can support slightly higher density in targeted locations. The land use strategies include shifting retail growth from large centralized retail strip malls to smaller distributed centers throughout a neighborhood mobility area.</p>	<p>include pursuing local policies that encourage replacing motor vehicle use with neighborhood electric vehicle (NEV) use. NEVs are a federally designated class of passenger vehicle rated for use on roads with posted speed limits of 35 miles per hour or less. Steps needed to support NEV use include providing state and regional incentives for purchases, local planning for charging stations, designating a local network of low speed roadways, and adopting local regulations that allow smaller NEV parking stalls.</p> <p>Complete communities strategies include creation of mixed-use districts through a concentration of activities with housing, employment, and a mix of retail and services in close proximity to each other. Focusing a mix of land uses in strategic growth areas creates complete communities wherein most daily needs can be met within a short distance of home, providing residents with the opportunity to patronize their local area and run daily errands by walking or cycling rather than traveling by automobile.</p>	<p>proposed Specific Plan would increase the development intensity in the area. Additionally, an objective of the proposed project is to provide employment opportunities for community residents. As discussed in Sections 5.13.1.2 and 5.13.5 of this DEIR, it is anticipated that implementation of the proposed project would provide employment opportunities for the local communities and would improve the jobs-housing balance in the City.</p>

Source: SCAG 2016.

### City of Ontario Community Climate Action Plan

The primary purpose of the City's Community CAP is to design a feasible strategy to reduce GHG emissions generated by community activities that is consistent with statewide Scoping Plan GHG reduction efforts. The GHG emissions reduction target established under the CAP is 30 percent under year 2020 business-as-usual (BAU) levels. To meet this goal and to supplement statewide initiatives, the City has identified a series of reduction measures to be implemented by the City before 2020. These reduction measures include programs that improve building energy efficiency, increase use of public and active transit and decrease VMT, increase use of alternative-fueled vehicles, increase use of renewable energy, reduce water consumption, and reduce waste.

Table 5.7-8 evaluates the consistency of the proposed project to the applicable measures of the Community CAP. As discussed in the table, the proposed project would generally be consistent with the applicable measures. For example, the proposed project would construct recycled water infrastructure and utilize recycled water for 40 percent of its total water demand and 100 percent of its outdoor use. In addition, approximately 90 percent of the demolition debris generated from project-related demolition activities is anticipated to be reprocessed and reused. However, as discussed in Table 5.7-8, the proposed project would be inconsistent with Measure PS-1, which requires projects that exceed 3,000 MTCO<sub>2</sub>e/yr to reduce emissions by 25 percent. As discussed below in Section 5.7.8 of this DEIR, the identified mitigation measures

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would reduce overall project-related emissions by 1.1 percent. Therefore, the project would be inconsistent with measure no. PS-1.

The CAP Appendix B, Greenhouse Gas Emissions CEQA Thresholds and Screening Tables (CAP Screening Tables) establishes a points system that assigns values for each GHG emissions mitigation design element or operational program feature incorporated into a given development project. The CAP Screening Tables point values correspond to the minimum GHG emissions reduction expected from each feature. Projects with features that yield at least 100 Screening Table points are considered consistent with the reduction quantities anticipated in the City’s CAP. Such projects would be determined to have a less than significant individual and cumulative GHG emissions impact.

**Table 5.7-8 Consistency with the Community Climate Action Plan**

Community CAP Measure No.	Community CAP Measure Description	Consistency
<b>Performance Standard For New Development</b>		
PS-1	<b>Performance Standard for New Development:</b> New projects emitting more than 3,000 MTCO <sub>2</sub> e per year need to reduce emissions by 25 percent.	<b>Inconsistent:</b> As discussed in Section 5.7.8 of this DEIR, incorporation of mitigation measures would reduce project-related emissions by only 1.1 percent.
BMP-1	<b>Performance Standard for New Development; Best Management Practices:</b> New projects emitting less than 3,000 MTCO <sub>2</sub> e per year to exceed Title 24 Energy Efficiency Standards by at least 5 percent, or equivalent level of GHG emission reduction.	<b>Not Applicable:</b> The project is subject to measure PS-1 as it would generate emissions exceeding 3,000 MTCO <sub>2</sub> e/yr.
<b>Building Energy</b>		
Energy-1	<b>CAP Consistency:</b> Ensure that the City's local Climate Action, Land Use, Housing, and Transportation Plans are aligned with, support, and enhance any regional plans that have been developed consistent with state guidance to achieve reductions in GHG emissions.	<b>Inconsistent:</b> As discussed in Section 5.7.8 of this DEIR, incorporation of mitigation measures would reduce project-related emissions by only 1.1 percent and would be inconsistent with PS-1 of the Community CAP.
Energy-2	<b>Regional Cooperation:</b> Coordinate with special districts, nonprofits, and other public organizations to share resources, achieve economies of scale, and develop green building policies and programs that are optimized on a regional scale.	<b>Not Applicable:</b> This measure is not applicable to individual land use development projects.
Energy-3	<b>Energy Efficiency Funding for Existing Low-Income Residents:</b> Partner with community services agencies to fund energy efficiency projects, including heating, ventilation, air conditioning, lighting, water-heating equipment, insulation, and weatherization, for low-income residents. Provide permitting-related and other incentives for energy-efficient building project.	<b>Not Applicable:</b> This measure is not applicable to individual land use development projects.
Energy-4	<b>Energy Efficiency Incentives and Programs to Promote Retrofits for Existing Residential Buildings:</b> Incentivize or otherwise support voluntary energy-efficiency retrofits of existing residential buildings to achieve reductions in natural gas and electricity usage. Adopt standards and/or promote voluntary programs that retrofit indoor lights, electric clothes dryers, energy-star thermostats, window seals, duct sealing, air sealing, and attic insulation.	<b>Not Applicable:</b> This measure is applicable to existing buildings only.
Energy-5	<b>Energy Efficiency Incentives and Programs to Promote Retrofits for Existing Non-Residential Buildings:</b> Voluntary programs for existing non-residential facilities will improve building-wide energy efficiency by 20 percent by 2020.	<b>Not Applicable:</b> This measure is applicable to existing buildings only.

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**Table 5.7-8 Consistency with the Community Climate Action Plan**

Community CAP Measure No.	Community CAP Measure Description	Consistency
Energy-6	<b>Streetlights:</b> Adopt outdoor lighting standards to reduce electricity consumption. Require 40 percent reduction in energy use from traffic signals and streetlights by 2020.	<b>Not Applicable:</b> This action is to be taken at the City level.
<b>Renewable Energy</b>		
Renewable Energy-1	<b>Solar Installation for Existing Non-Residential for Major Rehabilitations or Expansions:</b> Install solar photovoltaic panels on nonresidential buildings greater or equal to 25,000 square feet in size requiring discretionary permits for major rehabilitations or expansions (additions of 25,000 square feet of office retail/commercial or 100,000 square feet of industrial/warehouse floor area).	<b>Not Applicable:</b> This measure is applicable to existing buildings only.
Renewable Energy-2	<b>Solar Installation in Existing Single Family Housing:</b> Install solar panels on 22 percent of existing single-family homes by 2020.	<b>Not Applicable:</b> This measure is applicable to existing buildings only.
Renewable Energy-3	<b>Solar Installation in Existing Nonresidential Buildings:</b> Install solar panels on 32 percent of existing nonresidential buildings by 2020.	<b>Not Applicable:</b> This measure is applicable to existing buildings only.
<b>Wastewater Treatment</b>		
Wastewater-1	<b>Recycled Water:</b> Require 50 percent of all water used for nonpotable sources to be recycled water by 2020. Require all new parks and schools to use 100 percent recycled water for nonpotable outdoor uses, as feasible. Develop public educational materials that support and encourage the use of recycled water. Adopt a City Municipal facility goal of 50 percent use of recycled water for nonpotable sources.	<b>Consistent:</b> The proposed project would construct and be connected to recycled water infrastructure. It is projected that 100 percent of total outdoor water demand of the project would be served by recycled water.
Wastewater-2	<b>Waste-to-Energy/Methane Recovery:</b> Encourage the Inland Empire Utilities Agency (IEUA) to implement waste-to-energy projects at the IEUA RP-1 wastewater treatment plant by 2020, and to utilize collected gas to fuel onsite stationary sources.	<b>Not Applicable:</b> The proposed project involves development of general light industrial and commercial uses.
<b>Solid Waste Management</b>		
Waste-1	<b>Waste Diversion:</b> Divert 75 percent of city-generated waste from landfills.	<b>Consistent:</b> The proposed project would be subject to all applicable local, state, and federal waste diversion requirements (see Impact 5.17-6).
Waste-2	<b>Construction and Demolition Waste Recovery Ordinance:</b> Implement an ordinance requiring building projects to recycle or reuse at least 50 percent of unused or leftover building materials.	<b>Consistent:</b> The proposed project is anticipated to recycle and reuse approximately 90 percent of the 3,378 tons of demolition debris it would generate.

## 5. Environmental Analysis GREENHOUSE GAS EMISSIONS

**Table 5.7-8 Consistency with the Community Climate Action Plan**

Community CAP Measure No.	Community CAP Measure Description	Consistency
<b>On-Road Transportation</b>		
Trans-1	<b>Expand Public Transportation Infrastructure:</b> Work with appropriate agencies to create an interconnected transportation system that allows a shift in travel from private passenger vehicles to alternative modes, including public transit, ride sharing, car-sharing, bicycling, and walking.	<b>Not Applicable:</b> The proposed project involves development of general light industrial and commercial uses. However, the proposed project would provide multipurpose trails on the east side of Euclid Avenue, the south side of Eucalyptus Avenue, and north side of Merrill Avenue. The Ontario Plan Mobility Element also specifies a Class II bikeway on the north side of Merrill Avenue. In addition to the trails and bikeways improvements, the City is coordinating with regional transit agencies to implement BRT service that would include the segment of Euclid Avenue along the western boundary of the Plan Area. Furthermore, provision of interior and exterior bicycle storage consistent with CALGreen is included as a sustainable design strategy under the proposed project.
Trans-2	<b>Transit Frequency and Speed:</b> To the extent feasible, support shorter transit-passenger travel time through reduced headways and increased speed. Support regional transit operators to reduce average fleet travel time by 5 minutes.	<b>Not Applicable:</b> The proposed project involves development of general light industrial and commercial uses.
Trans-3	<b>“Smart Bus” Technology:</b> Collaborate with LA Metro, Metrolink, and Omnitrans to implement “Smart Bus” technology.	<b>Not Applicable:</b> The proposed project involves development of general light industrial and commercial uses. Implementation of the proposed project would not interfere with the City of Ontario in the coordination of implementing “Smart Bus” technology.
Trans-4	<b>Expand Public Transportation Participation:</b> Collaborate with regional transit operators on programs to increase use of the City’s public transportation system.	<b>Not Applicable:</b> The proposed project involves development of general light industrial and commercial uses.
Trans-5	<b>Low- and Zero-Emission Vehicles:</b> Support and promote the use of low- and zero-emission vehicles in the City.	<b>Consistent:</b> The proposed project would install 71 parking stalls for electric vehicles and 101 clean air/vanpool parking stalls in the Specific Plan Area.
Trans-6	<b>Vehicle Idling:</b> Prohibit idling of heavy-duty trucks (greater than 26,000 gross vehicle weight) for longer than 3 minutes.	<b>Not Applicable:</b> This measure is not directly applicable to the proposed project as the measure pertains to a City action to adopt an ordinance. However, the current idling limit adopted by CARB and local air district regulations is 5 minutes (Rule 2485). Compliance with CARB airborne toxic control measures that reduce diesel emissions would also reduce heavy-duty truck exhaust associated with the proposed project to the extent feasible.

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GREENHOUSE GAS EMISSIONS

**Table 5.7-8 Consistency with the Community Climate Action Plan**

Community CAP Measure No.	Community CAP Measure Description	Consistency
Trans-7	<b>Parking Policy:</b> Adopt a comprehensive parking policy that encourages carpooling and the use of alternative transportation, including providing parking spaces for car-share vehicles at convenient locations accessible by public transportation. Consider requirements for the following to reduce vehicle miles traveled (VMT) within the City by 2 percent. Designate 5 percent of downtown parking spaces for ride-sharing vehicles.	<b>Consistent:</b> The proposed project would install 71 parking stalls for electric vehicles and 101 clean air/vanpool parking stalls in the Specific Plan Area.
Trans-8	<b>Event Parking:</b> Consider establishing policies and programs to reduce onsite parking demand and promote ride-sharing during events at the Ontario Convention Center and other event venues. Consider a goal to reduce VMT at major events by 2 percent.	<b>Not Applicable:</b> The proposed project would develop general light industrial and commercial uses and not an event venue.
Trans-9	<b>Roadway Management:</b> Implement traffic and roadway management strategies to improve mobility and efficiency and reduce associated emissions. Consider a goal to reduce community vehicle fuel consumption by 2 percent.	<b>Consistent:</b> The proposed project would provide multipurpose trails on the east side of Euclid Avenue, the south side of Eucalyptus Avenue, and north side of Merrill Avenue. The Ontario Plan Mobility Element also specifies a Class II bikeway on the north side of Merrill Avenue. In addition to the trails and bikeways improvements, the City is coordinating with regional transit agencies to implement BRT service that would include the segment of Euclid Avenue along the western boundary of the Plan Area.
Trans-10	<b>Signal Synchronization:</b> Evaluate potential efficiency gains from further signal synchronization. Synchronize traffic signals throughout the City and with adjoining cities while allowing free flow of mass transit systems. Require continuous maintenance of the synchronization system. Consider a goal to reduce City-wide vehicle fuel consumption by 2 percent.	
Trans-11	<b>School Transit Plan:</b> Encourage local school districts to develop school transit plans to substantially reduce automobile trips to, and congestion surrounding, schools. (According to some estimates, parents driving their children to school account for 20–25 percent of the morning commute.) Plans may address, e.g. necessary infrastructure improvements and potential funding sources, replacing older diesel buses with low- or zero-emission vehicles, mitigation fees to expand school bus service, Safe Routes to School programs, and other formal efforts to increase walking and biking by students. Although this measure is not within the City's authority, Ontario can work with local school districts to develop these plans.	<b>Not Applicable:</b> The proposed project would develop general light industrial and commercial uses and is not a school project.

## 5. Environmental Analysis GREENHOUSE GAS EMISSIONS

**Table 5.7-8 Consistency with the Community Climate Action Plan**

Community CAP Measure No.	Community CAP Measure Description	Consistency
Trans-12	<p><b>Ridesharing Programs:</b> Coordinate with local agencies to promote ridesharing programs in Ontario. Although the City does not have the legal authority to impose trip-demand management programs on project applicants or employers, Ontario can work with local agencies to develop these programs. Consider a goal to reduce City-wide VMT by 2 percent through mode-shifts from single-occupancy vehicles to carpools. Facilitate employment opportunities that minimize the need for private vehicle trips. The City could also work with the county to participate in their rideshare measure, which includes exploring financial programs for the purchase or lease of rideshare vehicles, encouraging community car sharing through city employers, and encouraging creation of community rideshare incentives (gas cards, commuter-tax benefits, guaranteed ride home programs, etc.).</p>	<p><b>Not Applicable:</b> The proposed project involves development of general light industrial and commercial uses.</p>
Trans-13	<p><b>Bicycle and Pedestrian Infrastructure Plan:</b> Adopt a comprehensive bicycle and pedestrian infrastructure plan to expand the City's bicycle and pedestrian network. This plan would encourage residents and employees to use bicycles and walking as a method of transportation. Consider a goal to reduce City-wide VMT by 2 percent through mode-shifts from single-occupancy vehicles to bicycles.</p>	<p><b>Consistent:</b> The proposed project would provide multipurpose trails on the east side of Euclid Avenue, the south side of Eucalyptus Avenue, and north side of Merrill Avenue. The Ontario Plan Mobility Element also specifies a Class II bikeway on the north side of Merrill Avenue. In addition to the trails and bikeways improvements, the City is coordinating with regional transit agencies to implement BRT service that would include the segment of Euclid Avenue along the western boundary of the Plan Area.</p>
Trans-14	<p><b>Development Standards for Bicycles:</b> Establish standards for new development and redevelopment projects to support bicycle use. Consider a goal to reduce VMT resulting from new development by 4 percent through mode-shifts from single-occupancy vehicles to bicycles.</p>	<p><b>Consistent:</b> The proposed project includes a Circulation Plan to provide connectivity to the trails and bikeway corridors identified in the Ontario Multipurpose Trails and Bikeway Corridor Plan. Specifically, the proposed project includes and identifies installation of a Class II bikeway along Merrill Avenue and multipurpose trails along Euclid, Eucalyptus, and Merrill Avenues.</p>
Trans-15	<p><b>Smart Growth and Infill:</b> Encourage high-density, mixed-use, infill development, and creative reuse of brownfield, underutilized, and/or defunct properties within the urban core. Consider a goal to reduce VMT resulting from new development by 5 percent.</p>	<p><b>Consistent:</b> Implementation of the proposed Specific Plan would increase the development intensities in the HQTAs. Additionally, an objective of the proposed project is to provide employment opportunities for community residents. As discussed in Sections 5.13.1.2 and 5.13.5 of this DEIR, it is anticipated that implementation of the proposed project and the employment opportunities it would provide would improve the jobs-housing balance in the City.</p>
Trans-16	<p><b>Transit-Oriented Development:</b> Identify transit centers appropriate for mixed-use development and promote transit-oriented, mixed-use development within these targeted areas. Consider a goal to reduce VMT resulting from new development by 2 percent.</p>	<p><b>Not Applicable:</b> The proposed project involves development of general light industrial and commercial uses.</p>

## 5. Environmental Analysis GREENHOUSE GAS EMISSIONS

**Table 5.7-8 Consistency with the Community Climate Action Plan**

Community CAP Measure No.	Community CAP Measure Description	Consistency
<b>Off-Road Equipment</b>		
Off Road-1	<b>Idling Ordinance:</b> Prohibit idling of heavy-duty off-road construction vehicles to no more than 3 minutes.	<b>Consistent:</b> This measure is not directly applicable to the proposed project as the measure pertains to a City action to adopt an ordinance. However, the current idling limit adopted by CARB and local air district regulations is 5 minutes (see Rule 2485). Compliance with CARB airborne toxic control measures that reduce diesel emissions would also reduce construction vehicle exhaust associated with the proposed project to the extent feasible.
Off Road-2	<b>Landscaping Equipment:</b> Support landscape equipment replacement programs to replace 75 percent of all landscaping equipment with electric equipment (945 total pieces of landscaping equipment replaced).	<b>Not Applicable:</b> The proposed project involves development of general light industrial and commercial uses.
<b>Agriculture</b>		
Agriculture-1	<b>Methane Emissions Reduction for Animal Operations:</b> Support dairies (and other animal operations) to consider existing and new technologies and methods to control emissions from enteric fermentation and manure management, and assess the feasibility and cost-effectiveness of these technologies. Animal operations should strive to capture as much methane from manure management as feasible. Captured biogas can also be used in place of natural gas for heating, converted to vehicle fuel, used to replace gasoline and diesel, or combusted in a generator to produce renewable electricity.	<b>Not Applicable:</b> The proposed project would develop general light industrial and commercial uses.
<b>Water Transport, Distribution, and Treatment</b>		
Water-1	<b>Water Conservation for Existing Buildings:</b> Implement a program to renovate existing buildings to a higher level of water efficiency. Require 25 percent of existing buildings within the community to achieve a 25 percent reduction in water use. This measure will reduce both indoor and outdoor water use.	<b>Not Applicable:</b> This measure is applicable to existing buildings only.
Water-2	<b>Irrigation Monitoring and Management System (Outdoor):</b> Install a water monitoring and management system (Smart controllers, etc.) for all of the City's irrigation needs to reduce the City's water consumption by 10 percent by 2020. This measure will reduce outdoor water use.	<b>Not Applicable:</b> This measure is not applicable to non-City related individual land use development projects. However, the proposed project calls for use of drought tolerant landscaping with drip irrigation, use of captured runoff to augment irrigation systems when possible, use of irrigation systems that respond to changing weather conditions, irrigation by hydrozone, and that use micro-irrigation techniques as part of its Sustainable Design Strategies.

## 5. Environmental Analysis GREENHOUSE GAS EMISSIONS

**Table 5.7-8 Consistency with the Community Climate Action Plan**

Community CAP Measure No.	Community CAP Measure Description	Consistency
Water-3	<b>Water System Efficiency:</b> Maximize efficiency at drinking water treatment, pumping, and distribution facilities, including development of off-peak demand schedules for heavy commercial and industrial users. Design and implement peak load management and demand response programs for water supply, treatment, and distribution, including interface with existing automated systems for building energy management and supervisory control and data acquisition (SCADA) systems.	<b>Not Applicable:</b> The proposed project would develop general light industrial and commercial uses.
Water-4	<b>SB X7:</b> Urban water agencies throughout California are required to increase water conservation to achieve a statewide goal of a 20 percent reduction in urban per capita use by 2020, per SB X7. The Ontario 2010 Urban Water Management Plan outlines the approaches to achieving that reduction.	<b>Consistent:</b> The proposed project would construct and be connected to recycled water infrastructure. It is projected that 40 percent of the total water demand of the project would be served by recycled water.
<b>Miscellaneous</b>		
Misc-1	<b>Climate Change Awareness:</b> Utilize a variety of media outlets to promote climate change awareness and GHG reduction.	<b>Not Applicable:</b> This measure is not directly applicable to individual land use development projects.
Misc-2	<b>Carbon Sequestration:</b> Establish a City-wide carbon sequestration project and a sequestration goal of 1,000 metric tons of CO <sub>2</sub> per year.	<b>Not Applicable:</b> This measure is not directly applicable to individual land use development projects.
Misc-3	<b>Shade Tree Planting:</b> Plant 1,000 trees per year from 2012–2020 for a total of 9,000 trees by 2020.	<b>Consistent:</b> The Landscape Design guidelines under the proposed project identifies use of shade trees throughout the project area including the median of Euclid Avenue and landscape/parkway strips along Euclid, Eucalyptus, and Merrill Avenues.
Misc-4	<b>Refrigeration and Air Conditioning Disposal:</b> Institute an ordinance requiring residences, businesses, and city facilities to practice responsible appliance disposal (RAD) for all decommissioned units, including refrigerators/freezers, window air-conditioning units, and dehumidifiers.	<b>Not Applicable:</b> This measure is not directly applicable to the proposed project as the measure pertains to a City action to adopt an ordinance.
Misc-5	<b>Pervious Paving:</b> Promote the use of pervious concrete for pavement projects. Explore grant funding opportunities for pervious concrete.	<b>Not Applicable:</b> The proposed project would develop general light industrial and commercial uses. However, the proposed Storm Drainage Plan and Sustainable Design Strategies of the project incorporates low impact development strategies that includes permeable surface designs in parking lots and areas with low traffic and parking lots that drain to landscaped areas to provide treatment, retention, and infiltration.
Misc-6	<b>Infiltration:</b> Promote onsite infiltration, as required by the National Pollutant Discharge Elimination System (NPDES) Permit. Promote the use of pervious concrete and asphalt for pavement and parking lot projects.	<b>Consistent:</b> As discussed in Impact 5.10-2, the proposed project would be constructed and operated in accordance with the San Bernardino County MS4 Permit (Order No. R8-2010-0036, NPDES No. CAS618036). The proposed project also includes the Storm Drainage Plan

Source: Ontario 2014

Notes: MTCO<sub>2</sub>e: metric tons of carbon dioxide equivalent



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The CAP also includes an update commitment beginning in 2018. At the time of this analysis, the City's CAP update is underway. However, potential timeframes for approval and adoption of the City CAP update are unknown. The updated CAP will establish GHG emissions reduction targets for 2030, 2040, and 2050 scenarios. The established targets will be consistent with broader State and federal GHG emissions reduction targets and will reflect current scientific understanding of GHG emissions reduction strategies.

As discussed within the CAP, projects that generate less than 3,000 MTCO<sub>2</sub>e/yr. would have a less-than-significant GHG emissions impact. Conversely, projects that generate more than 3,000 MTCO<sub>2</sub>e/yr. are presumed to have a potentially significant GHG emissions impact. Project GHG emissions would exceed the CAP 3,000 MTCO<sub>2</sub>e/yr. significance threshold. Per the CAP, this is a potentially significant impact.

***Level of Significance Before Mitigation:*** Potentially Significant.

### 5.7.5 Cumulative Impacts

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under Impact 5.7-1 are not project-specific impacts, but the proposed project's contribution to cumulative GHG impact. As discussed in Section 5.7.8 below, incorporation of mitigation would contribute in minimizing emissions. However, implementation of the proposed project would still result in net annual emissions that exceed the GHG emissions significance threshold of 3,000 MTCO<sub>2</sub>e/yr. Therefore, project-related GHG emissions and their contribution to global climate change would be cumulatively considerable, and GHG emissions impacts would be significant.

### 5.7.6 Level of Significance Before Mitigation

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.7-1** Operation of the proposed project would generate emissions from mobile and other sources that would exceed the bright-line significance threshold and would have a significant impact on the environment.
- **Impact 5.7-2** Implementation of the proposed project would conflict with the City's Community Climate Action Plan.

### 5.7.7 Mitigation Measures

#### Impact 5.7-1

##### *Transportation Sector*

GHG-1 The applicant/developer shall design the proposed surface parking lots to provide parking for low-emitting, fuel-efficient, and carpool/van vehicles. At minimum, the number of preferential parking spaces shall equal to the Tier 2 Nonresidential Voluntary Measures of California's Green Building Standards Code Section A5.106.5.1.2.

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### GREENHOUSE GAS EMISSIONS

GHG-2 The applicant/developer shall design the proposed surface parking lots to provide electric vehicle (EV) charging stations. At minimum, the number of EV charging stations shall equal to the Tier 2 Nonresidential Voluntary Measures of California's Green Building Standards Code Section A5.106.5.3.2.

Mitigation Measures AQ-5 through AQ-10 from Section 5.3, *Air Quality*, apply and would reduce GHG emissions of the proposed project.

#### *Off-Road Equipment*

AQ-5 Only electric-powered off-road equipment (e.g., yard trucks/hostlers) shall be utilized onsite for daily warehouse and business operations. The project developer/facility owner shall disclose this requirement to all tenants/business entities prior to the signing of any lease agreement. In addition, the limitation to use only electric-powered off-road equipment shall be included all leasing agreements.

Prior to issuance of a Business License for a new tenant/business entity, the project developer/facility owner and tenant/business entity shall provide to the City of Ontario Planning Department and Business License Department a signed document (verification document) noting that the project development/facility owner has disclosed to the tenant/business entity the requirement to use only electric-powered equipment for daily operations. This verification document shall be signed by authorized agents for the project developer/facility owner and tenant/business entities. In addition, if applicable, the tenant/business entity shall provide documentation (e.g., purchase or rental agreement) to the City of Ontario Planning Department and Business License Department to verify, to the City's satisfaction, that any off-road equipment utilized will be electric-powered.

#### *Transport Trucks and Transport Refrigeration Units*

AQ-6 All truck/dock bays that serve cold storage facilities within the proposed buildings shall be electrified to facilitate plug-in capability and support use of electric standby and/or hybrid electric transport refrigeration units. All site and architectural plans submitted to the City of Ontario Planning Department shall note all the truck/dock bays designated for electrification. Prior to the issuance of a Certificate of Occupancy, the City of Ontario Building Department shall verify electrification of the designated truck/dock bays.

AQ-7 To reduce idling emissions from transport trucks, signage shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations (e.g., Rule 2485). At minimum, each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict non-essential idling to no more than two (2) consecutive minutes; and 3) telephone numbers of the building facilities manager and CARB to report violations. All signage shall be made of weather-proof materials. All site and architectural plans submitted to the City of Ontario Planning Department shall note the locations of

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these signs. Prior to issuance of the Certificate of Occupancy, the City of Ontario Building Department shall verify the installation of these signs.

### *Landscaping Equipment*

AQ-8 All landscaping equipment (e.g., leaf blower) used for property management shall be electric-powered only. The property manager/facility owner shall provide documentation (e.g., purchase, rental, and/or services agreement) to the City of Ontario Planning Department to verify, to the City's satisfaction, that all landscaping equipment utilized will be electric-powered.

### Impact 5.7-2

GHG-3 All individual projects accommodated under the proposed project shall be designed in such a manner to include features that achieve at minimum, 100 cumulative points on the City of Ontario Community Climate Action Plan GHG Screening Threshold Table (Community CAP, Appendix B, Greenhouse Gas Emissions CEQA Thresholds and Screening Tables). Prior to discretionary approval, the project applicant shall provide the completed GHG Screening Threshold Table and supporting documentation to the City of Ontario Planning Department for verification of a project achieving the minimum 100 points.

## 5.7.8 Level of Significance After Mitigation

### Impact 5.7-1

Table 5.7-9 shows the project's emissions inventory with incorporation of mitigation. Specifically, incorporation of Mitigation Measure AQ-5, which would limit all off-road equipment used for daily operations to electric-powered equipment only, would reduce emissions by 285 MTCO<sub>2e</sub>/yr. Furthermore, implementation of Mitigation Measures AQ-6, GHG-1, and GHG-2 would reduce GHG emissions to the extent feasible. However, because the number of people who may utilize alternative modes of transportation and the number of trucks that would utilize electric-powered TRUs is uncertain, the total reductions that the services provided through these mitigation measures would provide cannot be quantified.

**Table 5.7-9 Operational Phase GHG Emissions With Mitigation**

Source	GHG Emissions	
	MTCO <sub>2e</sub> Per Year	Percent Change
Area	<1	<1%
Energy <sup>1</sup>	3,928	15%
Mobile – Passenger Vehicles <sup>2</sup>	6,303	24%
Mobile – Transport Trucks <sup>2</sup>	13,924	52%
Transport Refrigeration Units	16	<1%
Off-Road Equipment <sup>3</sup>	0	0%
Solid Waste	2,236	8%
Water	151	1%
Construction-Amortized <sup>4</sup>	63	<1%

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### GREENHOUSE GAS EMISSIONS

**Table 5.7-9 Operational Phase GHG Emissions With Mitigation**

Source	GHG Emissions	
	MTCO <sub>2</sub> e Per Year	Percent Change
<b>Total All Sectors</b>	<b>26,621</b>	<b>100%</b>
<b>Existing Emissions</b>	<b>18,309</b>	<b>NA</b>
<b>Net Change</b>	<b>8,311</b>	<b>NA</b>
Proposed SCAQMD Bright-Line Threshold	3,000 MTCO <sub>2</sub> e	NA
<b>Exceeds Threshold?</b>	<b>Yes</b>	<b>NA</b>

Source: CalEEMod, Version 2016.3.2.

Notes: Totals may not equal 100 percent due to rounding.

<sup>1</sup> Buildings constructed after January 1, 2020 are required to meet the 2019 Building Energy Efficiency Standards. Modeling also includes applicable water efficiency improvements required under CALGreen.

<sup>2</sup> Based on calendar year 2022 aggregated emission rates derived from EMFAC2017 Version 1.0.2 and CalEEMod methodology.

<sup>3</sup> Incorporates Mitigation Measure AQ-5, which only allows use of electric-powered off-road equipment.

<sup>4</sup> Construction emissions are amortized over a 30-year project lifetime per recommended SCAQMD methodology.

Overall, incorporation of mitigation would reduce project-related emissions by about 1.1 percent (i.e., 285 MTCO<sub>2</sub>e/yr) from 26,906 MTCO<sub>2</sub>e/yr down to 26,621 MTCO<sub>2</sub>e/yr. However, neither the project applicant nor the lead agency (City of Ontario) can substantively or materially affect reductions in project mobile-source emissions beyond the regulatory requirements. Because the net change in emissions of 8,311 MTCO<sub>2</sub>e/yr would still exceed 3,000 MTCO<sub>2</sub>e/yr, Impact 5.7-1 would remain ***significant and unavoidable***.

#### Impact 5.7-2

Implementation of Mitigation Measure GHG-3 would require future individual projects accommodated under the proposed project to be designed to achieve at least 100 points on the City's GHG Screening Threshold Table. This measure would ensure that future individual projects are consistent with the City's Community CAP and would reduce Impact 5.7-2 to less than significant. However, there is the potential for the project to generate GHG emissions that would result in significant impacts on the environment. Pending adoption of the City CAP update; a determination that the City CAP as updated is consistent with applicable State and regional GHG emissions reduction plans; and a determination that the proposed project is consistent with the CAP as updated, the potential for project GHG emissions to result in a significant impact on the environment is conservatively considered to be a ***significant and unavoidable*** impact

#### 5.7.9 References

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