

## 4.4 GREENHOUSE GAS EMISSIONS

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### 4.4.1 INTRODUCTION

This section discusses the existing global, national, and statewide conditions related to greenhouse gases (GHG) and global climate change and evaluates the potential impacts on global climate from the implementation of the proposed El Dorado Hills Apartments project (“proposed project”). The section also provides a discussion of the applicable federal, state, regional, and local agencies that regulate, monitor, and control GHG emissions. Information presented in this section is based on an *Air Quality and Greenhouse Gas Emissions Analysis* prepared by De Novo Planning Group, dated June, 2017. The report is included in **Appendix 4.1** of this Draft EIR.

### 4.4.2 ENVIRONMENTAL SETTING

#### 4.4.2.1 Background

Global climate change refers to any significant change in climate measurements, such as temperature, precipitation, or wind, lasting for an extended period (i.e., decades or longer). Climate change may result from:

- Natural factors, such as changes in the sun’s intensity or slow changes in the Earth’s orbit around the sun;
- Natural processes within the climate system (e.g., changes in ocean circulation, reduction in sunlight from the addition of GHG and other gases to the atmosphere from volcanic eruptions); and
- Human activities that change the atmosphere’s composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification).

In recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans. Impacts are due to observed climate change, irrespective of its cause, indicating the sensitivity of natural and human systems to changing climate (IPCC 2013). Continuing changes to the global climate system and ecosystems, and to California, are projected to include:

- Rapidly diminishing sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere’s ability to hold more water vapor at higher temperatures (IPCC 2013);
- Rising average global sea levels primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets;

- Changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones;
- Changing levels in snowpack, river flow and sea levels indicating that climate change is already affecting California's water resources (Cal EPA 2010);
- An increasing number of days conducive to ozone formation by 25 to 85 percent (depending on the future temperature scenario) in high ozone areas located in the Southern California area and the San Joaquin Valley by the end of the 21st century (Cal EPA 2006);
- Increasing potential for erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Delta and associated levee systems due to the rise in sea level (Cal EPA 2006);
- Dry seasons that start earlier and end later, evoking more frequent and intense wildland fires (Cal EPA 2010); and
- Increasing demand for electricity due to rising temperatures (Cal EPA 2010).

The natural process through which heat is retained in the troposphere<sup>1</sup> is called the "greenhouse effect." The greenhouse effect traps heat in the troposphere through a threefold process as follows: (1) short-wave radiation in the form of visible light emitted by the Sun is absorbed by the Earth as heat; (2) long-wave radiation is re-emitted by the Earth; and (3) GHGs in the upper atmosphere absorbing or trapping the long-wave radiation and re-emitting it back towards the Earth and into space. This third process is the focus of current climate change actions.

While water vapor and carbon dioxide (CO<sub>2</sub>) are the most abundant GHGs, other trace GHGs have a greater ability to absorb and re-radiate long-wave radiation. To gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-emit long-wave radiation over a specific period. The GWP of a gas is determined using CO<sub>2</sub> as the reference gas, which has a GWP of 1 over 100 years.<sup>2</sup> For example, a gas with a GWP of 10 is 10 times more potent than CO<sub>2</sub> over 100 years. The use of GWP allows GHG emissions to be reported using CO<sub>2</sub> as a baseline. The sum of each GHG multiplied by its associated GWP is referred to as "carbon dioxide equivalents" (CO<sub>2</sub>e). This essentially means that 1 metric ton of a GHG with a GWP of 10 has the same climate change impacts as 10 metric tons of CO<sub>2</sub>.

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<sup>1</sup> The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface from 6 to 7 miles.

<sup>2</sup> All Global Warming Potentials are given as 100-year values.

#### 4.4.2.2 Greenhouse Gases

State law defines GHGs to include the following six compounds:

- **Carbon Dioxide (CO<sub>2</sub>)**. Carbon dioxide primarily is generated by fossil fuel combustion from stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources over the past 250 years, the concentration of carbon dioxide in the atmosphere has increased 35 percent. Carbon dioxide is the most widely emitted GHG and is the reference gas (GWP of 1) for determining the GWP of other GHGs. In 2004, 82.8 percent of California's GHG emissions were carbon dioxide (California Energy Commission 2007).
- **Methane (CH<sub>4</sub>)**. Methane is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 21.
- **Nitrous Oxide (N<sub>2</sub>O)**. Nitrous oxide is produced by natural and human-related sources. Primary human-related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 310.
- **Hydrofluorocarbons (HFCs)**. HFCs typically are used as refrigerants in both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is growing particularly as the continued phase-out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The GWP of HFCs ranges from 140 for HFC-152a to 6,300 for HFC-236fa.
- **Perfluorocarbons (PFCs)**. Perfluorocarbons are compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing. Perfluorocarbons are potent GHGs with a GWP several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years) (Energy Information Administration 2007). The GWPs of PFCs range from 5,700 to 11,900.
- **Sulfur Hexafluoride (SF<sub>6</sub>)**. Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. Sulfur hexafluoride is the most potent GHG that has been evaluated by the Intergovernmental Panel on Climate Change, with a GWP of 23,900. However, its global warming contribution is not as high as the GWP would indicate due to its low mixing ratio, as compared to carbon dioxide (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm] of CO<sub>2</sub>)

#### 4.4.2.3 Contributions to Greenhouse Gas Emissions

##### *United States*

Based on 2012 data, United States was the number two producer of global GHG emissions. The primary GHG emitted by human activities in the United States was CO<sub>2</sub>, representing approximately 82 percent of

the total US GHG emissions (US EPA 2016a). Carbon dioxide from fossil fuel combustion, the largest source of GHG emissions, accounted for approximately 78 percent of US GHG emissions (IPCC 2014).

### *State of California*

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based on the current 2000-2014 GHG inventory data (published June 2016), in 2014 California emitted 441.5 MMTCO<sub>2e</sub>, including emissions resulting from imported electrical power (CARB 2016).

The primary contributors to GHG emissions in California are transportation, electric power production from both in-state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities.

Between 1990 and 2015, the population of California grew by approximately 9.3 million (from 29.8 to 39.1 million) (CCSCE 2016; DOF 2016a). This represents an increase of approximately 30 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from \$773 billion in 1990 to \$2.5 trillion in 2015, representing an increase of approximately 225 percent (over twice the 1990 gross state product) (DOF 2016b). Despite the population and economic growth, California's net GHG emissions grew by only 4.8 percent (approximately) between 1990 and 2014 (CARB 2016).

## **4.4.3 REGULATORY CONSIDERATIONS**

### **4.4.3.1 Intergovernmental Panel on Climate Change**

The World Meteorological Organization (WMO) and United Nations Environmental Program (UNEP) established the IPCC in 1988. The goal of the IPCC is to evaluate the risk of climate change caused by human activities. Rather than performing research or monitoring climate, the IPCC relies on peer-reviewed and published scientific literature to make its assessment. While not a regulatory body, the IPCC assesses information (i.e., scientific literature) regarding human-induced climate change and the impacts of human-induced climate change, and recommends options to policy makers for the adaptation and mitigation of climate change. The IPCC reports its evaluations in special reports called "assessment reports." The latest assessment report (i.e., Fifth Assessment Report, consisting of three working group reports and a synthesis report based on the first four Assessment Reports) was published in 2013.<sup>3</sup> In its 2013 report, the IPCC stated that "Each of the last three decades has been successively warmer at the

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<sup>3</sup> The IPCC's Fifth Assessment Report is available online at <https://www.ipcc.ch/report/ar5/>

Earth's surface than any preceding decade since 1850. In the Northern Hemisphere, 1938-2012 was *likely* the warmest 30-year period of the last 1,400 years" (IPCC 2013).

#### 4.4.3.2 Federal

In *Massachusetts vs. EPA*, the Supreme Court held that the United States Environmental Protection Agency (US EPA) has the statutory authority under Section 202 of the Clean Air Act (CAA) to regulate GHGs from new motor vehicles. The court did not hold that the US EPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs from motor vehicles cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare. Upon the final decision, the President signed Executive Order 13432 on May 14, 2007, directing the US EPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responded to the Supreme Court's decision.

#### *Energy Independence and Security Act*

Signed on December 19, 2007 by President Bush, the Energy Independence and Security Act of 2007 (EISA) was enacted "[t]o move the United States toward greater energy independence and security, to increase the production of clean renewable fuels, to protect consumers, to increase the efficiency of products, buildings, and vehicles, to promote research on and deploy greenhouse gas capture and storage options, and to improve the energy performance of the Federal Government, and for other purposes."

As stated in an EPA summary, "EISA reinforces the energy reduction goals for federal agencies put forth in Executive Order 13423, as well as introduces more aggressive requirements" (US EPA 2016b). Key EISA provisions include the Corporate Average Fuel Economy standards, the combined fuel economy average standards, the renewable fuel standards, the appliance/lighting efficiency standards, and repeal of oil and gas tax incentives. Highlights of these key provisions include the following:

- Corporate Average Fuel Economy (CAFE). The law authorized the Secretary of the Department of Transportation to establish a corporate average fuel economy (CAFE) trading program that allows manufacturers whose automobiles exceed prescribed average fuel economy standards to earn credits that can be sold to other manufacturers or applied within their fleets to categories of automobiles that fail to achieve such standards.
- Combined fuel economy standard. The law required the combined fuel economy average for model year 2020 to be at least 35 miles per gallon for the total fleet of passenger and non-passenger automobiles manufactured in the US for that model year.
- Renewable Fuels Standard (RFS). The RFS program is a national policy that requires a certain volume of renewable fuel to replace or reduce the quantity of petroleum-based transportation fuel, heating oil

or jet fuel. The program applies to refiners or importers of gasoline or diesel fuel. The law set a modified standard for total renewable fuels that starts at 11.1 billion gallons in 2009 and rises to 36 billion gallons by 2022.

- **Energy Efficiency Equipment Standards.** The law includes a variety of new standards for lighting and for residential and commercial appliance equipment. The equipment includes residential refrigerators, freezers, refrigerator-freezers, metal halide lamps, and commercial walk-in coolers and freezers.
- **Repeal of Oil and Gas Tax Incentives.** The law includes repeal of two tax subsidies in order to offset the estimated cost to implement the CAFE provision. (US EPA 2016b)

### *Executive Order 13514*

On October 5, 2009, the President signed Executive Order (EO) 13514, which provided a strategy for sustainability and greenhouse gas reductions for federal agencies. That EO has since been revoked and replaced by EO 13693, which is described in detail below.

### *Clean Air Act*

On December 7, 2009, the US EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator found that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

While these findings did not impose additional requirements on industry or other entities, this action was a prerequisite to finalizing the US EPA's proposed GHG emissions standards for light-duty vehicles, which were jointly proposed by the US EPA and DOT. On April 1, 2010, the US EPA and NHTSA issued final rules requiring that by the 2016 model-year, manufacturers must achieve a combined average vehicle emission level of 250 grams of CO<sub>2</sub> per mile, which is equivalent to 35.5 miles per gallon as measured by US EPA standards. These agencies are currently in the process of developing similar regulations for the 2017 through 2025 model years.

### 4.4.3.3 State

#### *Title 24 Building Standards Code*

The California Energy Commission first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The latest revisions were adopted in 2013 and became effective on July 1, 2014.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to “improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality (California Building Standards Commission 2010). The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). Part 11 was last updated in 2013 and the updated CALGreen Code became effective July 1, 2015. Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code.

#### *Assembly Bill 1493*

In response to the transportation sector’s contribution of more than half of California’s CO<sub>2</sub> emissions, Assembly Bill 1493 (AB 1493, Pavley) was enacted on July 22, 2002. AB 1493 requires ARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles whose primary use is noncommercial personal transportation. ARB adopted the standards in September 2004. The new standards were to be phased in during the 2009 through 2016 model years. The near term (2009–2012) standards were expected to result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the midterm (2013–2016) standards were expected to result in a reduction of about 30 percent.

Before these regulations may go into effect, the US EPA must grant California a waiver under the federal CAA, which ordinarily preempts state regulation of motor vehicle emission standards. On June 30, 2009, the US EPA formally approved California's waiver request. However, in light of the September 15, 2009, announcement by the US EPA and NHTSA regarding the national program to reduce vehicle GHG emissions, California and states adopting California emissions standards have agreed to defer to the proposed national standard through model year 2016 if granted a waiver by the US EPA. The 2016 endpoint of the two standards is similar, although the national standard ramps up slightly more slowly than required under the California standard. The Pavley standards require additional reductions in CO<sub>2</sub> emissions beyond 2016 (referred to as Phase II standards). While the Phase II standards have yet to be fully developed, CARB has made it clear that the state intends to pursue additional reductions from motor vehicles in the 2017 through 2025 timeframe under AB 32.

### ***Executive Order S-3-05 and the Climate Action Team***

In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: GHG emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050. The Secretary of Cal/EPA is required to coordinate efforts of various agencies in order to collectively and efficiently reduce GHGs. Some of the agency representatives involved in the GHG reduction plan include the Secretary of the Business, Transportation, and Housing Agency; the Secretary of the Department of Food and Agriculture; the Secretary of the Resources Agency; the Chairperson of ARB; the Chairperson of the CEC; and the President of the Public Utilities Commission.

Representatives from each of the aforementioned agencies comprise the Climate Action Team. The Cal/EPA secretary is required to submit a biannual progress report from the Climate Action Team to the governor and state legislature disclosing the progress made toward GHG emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, coastline, and forests, and reporting possible mitigation and adaptation plans to combat these impacts. Some strategies currently being implemented by state agencies include ARB introducing vehicle climate change standards and diesel anti-idling measures, the CEC implementing building and appliance efficiency standards, and the Cal/EPA implementing their green building initiative. The Climate Action Team also recommends future emission reduction strategies, such as using only low-GWP refrigerants in new vehicles, developing ethanol as an alternative fuel, reforestation, solar power initiatives for homes and businesses, and investor-owned utility energy efficiency programs. According to the report, implementation of current and future emission reduction strategies have the potential to achieve the goals set forth in Executive Order S-3-05.

## ***Assembly Bill 32***

In furtherance of the goals established in Executive Order S-3-05, the legislature enacted Assembly Bill 32 (AB 32, Nuñez and Pavley), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006. AB 32 represents the first enforceable statewide program to limit GHG emissions from all major industries, with penalties for noncompliance. AB 32 requires the state to undertake several actions. The major requirements are discussed below.

### **CARB Early Action Measures**

CARB is responsible for carrying out and developing the programs and requirements necessary to achieve the goal of AB 32—the reduction of California's GHG emissions to 1990 levels by 2020. The first action under AB 32 resulted in ARB's adoption of a report listing three specific early-action greenhouse gas emission reduction measures on June 21, 2007. On October 25, 2007, CARB approved six additional early-action GHG reduction measures under AB 32. ARB has adopted regulations for all early action measures. The early-action measures are divided into three categories:

- Group 1 – GHG rules for immediate adoption and implementation
- Group 2 – Several additional GHG measures under development
- Group 3 – Air pollution controls with potential climate co-benefits

The first three early-action regulations, adopted June 21, 2007, meeting the narrow legal definition of “discrete early-action GHG reduction measures” are:

- A low-carbon fuel standard to reduce the “carbon intensity” of California fuels;
- Reduction of refrigerant losses from motor vehicle air conditioning system maintenance to restrict the sale of “do-it-yourself” automotive refrigerants; and
- Increased methane capture from landfills to require broader use of state-of-the-art methane capture technologies.

The six additional early-action regulations, adopted on October 25, 2007, also meeting the narrow legal definition of “discrete early-action GHG reduction measures,” are:

- Reduction of aerodynamic drag, and thereby fuel consumption, from existing trucks and trailers through retrofit technology;
- Reduction of auxiliary engine emissions of docked ships by requiring port electrification;
- Reduction of perfluorocarbons from the semiconductor industry;

- Reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products);
- The requirement that all tune-up, smog check and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency; and
- Restrictions on the use of sulfur hexafluoride (sf<sub>6</sub>) from non-electricity sectors if viable alternatives are available.

### **State of California Greenhouse Gas Inventory (Assembly Bill 1803) and 2020 Limit**

Assembly Bill 1803 (AB 1803, codified at Health and Safety Code section 39607.4) made ARB responsible for developing and maintaining an inventory of GHG emissions. As required under AB 32 and AB 1803, on December 6, 2007, ARB approved the 1990 greenhouse gas emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 MMTCO<sub>2</sub>e. ARB also projected the state's 2020 GHG emissions under "business as usual" (BAU) conditions—that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. ARB used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels based on population and economic forecasts. The projected net emissions totaled approximately 596 MMTCO<sub>2</sub>e. Therefore, ARB established that the state must reduce its 2020 BAU emissions by approximately 29 percent in order to meet the 1990 target.

The inventory revealed that in 1990, transportation, with 35 percent of the state's total emissions, was the largest single sector, followed by industrial emissions, 24 percent; imported electricity, 14 percent; in-state electricity generation, 11 percent; residential use, 7 percent; agriculture, 5 percent; and commercial uses, 3 percent. AB 32 does not require individual sectors to meet their individual 1990 GHG emissions levels; the total statewide emissions are required to meet the 1990 threshold by 2020.

### **CARB Mandatory Reporting Requirements**

In addition to the 1990 emissions inventory, on December 6, 2007 ARB adopted regulations requiring the mandatory reporting of GHG emissions for large facilities. The mandatory reporting regulations require annual reporting from the largest facilities in the state, which account for approximately 94 percent of point source GHG emissions from industrial and commercial stationary sources in California. About 800 separate sources fall under the reporting rules and include electricity-generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and industrial sources that emit over 25,000 tons of carbon dioxide each year from on-site stationary combustion sources. Transportation sources, which account for 37 percent of California's total GHG emissions, are not covered by these regulations but will continue to be tracked through existing means.

### AB 32 Climate Change Scoping Plan

AB 32 requires CARB to adopt a scoping plan indicating how reductions in significant GHG sources will be achieved through regulations, market mechanisms, and other actions. After receiving public input on their discussion draft of the scoping plan, the CARB Governing Board approved the *Climate Change Scoping Plan (Scoping Plan)* on December 11, 2008. Key elements of the Scoping Plan include the following recommendations:

- expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- achieving a statewide renewable energy mix of 33 percent;
- developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- establishing targets for transportation-related GHG for regions throughout California and pursuing policies and incentives to achieve those targets;
- adopting and implementing measures pursuant to existing state laws and policies, including California’s clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the state’s long-term commitment to AB 32 implementation.

**Table 4.4-1, AB 32 Scoping Plan Measures (SPMs)**, lists ARB’s preliminary recommendations for achieving GHG emissions reductions under AB 32 along with a brief description of the requirements and applicability.

**Table 4.4-1  
AB 32 Scoping Plan Measures (SPMs)**

Scoping Plan Measure	Description
SPM-1: California Cap-and-Trade Program linked to Western Climate Initiative	Implement a broad-based cap-and-trade program that links with other Western Climate Initiative Partner programs to create a regional market system. Ensure California’s program meets all applicable AB 32 requirements for market-based mechanisms. Capped sectors include transportation, electricity, natural gas, and industry. Projected 2020 business-as-usual emissions are estimated at 512 metric tons of CO <sub>2</sub> equivalents (MTCO <sub>2e</sub> ); preliminary 2020 emissions limit under cap-and-trade program are estimated at 365 MTCO <sub>2e</sub> (29 percent reduction).
SPM-2: California Light-Duty Vehicle GHG Standards	Implement adopted Pavley standards and planned second phase of the program. AB 32 states that if the Pavley standards (AB 1493) do not remain in effect, ARB shall implement equivalent or greater alternative regulations to control mobile sources.
SPM-3: Energy Efficiency	Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts. The Scoping Plan considers green building standards as a framework to achieve reductions in other sectors, such as electricity.

Scoping Plan Measure	Description
<b>SPM-4:</b> Renewables Portfolio Standard	Achieve 33 percent Renewables Portfolio Standard by both investor-owned and publicly owned utilities.
<b>SPM-5:</b> Low Carbon Fuel Standard	ARB identified the Low Carbon Fuel Standard as a Discrete Early Action item and the final regulation was adopted on April 23, 2009. In January 2007, Governor Schwarzenegger issued Executive Order S-1-07, which called for the reduction of the carbon intensity of California's transportation fuels by at least 10 percent by 2020.
<b>SPM-6:</b> Regional Transportation-Related Greenhouse Gas Targets	Develop regional greenhouse gas emissions reduction targets for passenger vehicles. SB 375 requires ARB to develop, in consultation with metropolitan planning organizations (MPOs), passenger vehicle greenhouse gas emissions reduction targets for 2020 and 2035 by September 30, 2010. SB 375 requires MPOs to prepare a sustainable communities strategy to reach the regional target provided by ARB.
<b>SPM-7:</b> Vehicle Efficiency Measures	Implement light-duty vehicle efficiency measures. ARB is pursuing fuel-efficient tire standards and measures to ensure properly inflated tires during vehicle servicing.
<b>SPM-8:</b> Goods Movement	Implement adopted regulations for port drayage trucks and the use of shore power for ships at berth. Improve efficiency in goods movement operations.
<b>SPM-9:</b> Million Solar Roofs Program	Install 3,000 MW of solar-electric capacity under California's existing solar programs.
<b>SPM-10:</b> Heavy/Medium-Duty Vehicles	Adopt heavy- and medium-duty vehicle and engine measures targeting aerodynamic efficiency, vehicle hybridization, and engine efficiency.
<b>SPM-11:</b> Industrial Emissions	Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.
<b>SPM-12:</b> High Speed Rail	Support implementation of a high-speed rail (HSR) system. This measure supports implementation of plans to construct and operate a HSR system between Northern and Southern California serving major metropolitan centers.
<b>SPM-13:</b> Green Building Strategy	Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.
<b>SPM-14:</b> High GWP Gases	Adopt measures to reduce high global warming potential gases. The Scoping Plan contains 6 measures to reduce high-GWP gases from mobile sources, consumer products, stationary sources, and semiconductor manufacturing.
<b>SPM-15:</b> Recycling and Waste	Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.
<b>SPM-16:</b> Sustainable Forests	Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The federal government and California's Board of Forestry and Fire Protection have the regulatory authority to implement the Forest Practice Act to provide for sustainable management practices. This measure is expected to play a greater role in the 2050 goals.
<b>SPM-17:</b> Water	Continue efficiency programs and use cleaner energy sources to move water. California will also establish a public goods charge for funding investments in water efficiency that will lead to as yet undetermined reductions in greenhouse gases.
<b>SPM-18:</b> Agriculture	In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020. Increase efficiency and encourage use of agricultural biomass for sustainable energy production. ARB has begun research on nitrogen fertilizers and will explore opportunities for emission reductions.

Source: California Air Resources Board, *Climate Change Scoping Plan, 2008*

In October 2010, ARB identified ongoing programs and adopted regulations for 29 individual measures to reduce GHG emissions in accordance with Scoping Plan strategies. The Scoping Plan was re-approved

by ARB in August 2011. Subsequently, the *First Update to the Climate Change Scoping Plan* was approved in May 2014.

In September 2012, ARB adopted a California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms, which established the cap-and-trade program to manage greenhouse gas emissions for California. The cap-and-trade program is a key element that will enable California to achieve the GHG emission goals of AB 32. The cap-and-trade program is a market-based approach wherein the government determines an overall emission target or “cap” for a particular set of facilities. The cap is the total amount of emissions that all of the facilities can produce. Tradable emissions allowances totaling the overall emissions cap are distributed, either by auction or given out, amongst the particular set of facilities. The emissions allowances can be traded amongst the facilities.

The Renewables Portfolio Standard (RPS) Program was established in 2002 under Senate Bill (SB) 1078, which required 20 percent of the electricity used by California to come from renewable energy sources by 2017. This was accelerated by SB 107 in 2006, which required 20 percent of electricity retail sales to come from renewable energy sources by 2010, and then by Executive Order S-14-08 in 2008, which required 33 percent of electricity sold by retail sellers to be produced by renewable energy in 2020. In April 2011, SB X1-2 required that all electricity retailers adopt the new RPS goals and provide 20 percent renewable sources by the end of 2013, 25 percent by the end of 2016, and 33 percent by the end of 2020.

As previously mentioned, ARB approved the *First Update to the Climate Change Scoping Plan* on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions. The First Update defines ARB’s climate change priorities for the next five years and develops an integrated framework for achieving both air quality and climate goals in California beyond 2020. It also evaluates how to align the State’s “longer-term” GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

#### ***Senate Bill 97 (State CEQA Guidelines)***

In August 2007, the legislature enacted SB 97 (Dutton), which directed the Governor’s Office of Planning and Research (OPR) to develop guidelines under the California Environmental Quality Act (CEQA) for the mitigation of GHG emissions.

On June 19, 2008, OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents (OPR 2008). The advisory indicated that a project’s GHG emissions, including those associated with vehicular traffic and construction activities should be identified and estimated. The advisory further recommended that the lead agency determine significance of the impacts

and impose all mitigation measures that are necessary to reduce GHG emissions to a less than significant level. The advisory did not recommend a specific threshold of significance. Instead, OPR requested that ARB recommend a method for setting thresholds that lead agencies may adopt (OPR 2009).

To formulate CEQA Guideline Amendments for GHG emissions, OPR submitted the *Proposed Draft CEQA Guideline Amendments for Greenhouse Gas Emissions* to the Secretary for Natural Resources on April 13, 2009. The Natural Resources Agency conducted formal rulemaking procedures in 2009 and adopted the CEQA Guideline Amendments on December 30, 2009. They became effective in March 2010.

### ***Senate Bill 375***

The California legislature passed SB 375 (Steinberg) on September 1, 2008. SB 375 requires ARB to set regional GHG reduction targets after consultation with local governments. The target must then be incorporated within that region's regional transportation plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). SB 375 also requires each region's regional housing needs assessment (RHNA) to be adjusted based on the Sustainable Communities Strategy in its RTP. Additionally, SB 375 reforms the environmental review process to create incentives to implement the strategy, especially transit priority projects. The governor signed SB 375 into law on September 30, 2008.

On January 23, 2009, ARB appointed a Regional Targets Advisory Committee (RTAC) to provide recommendations and methodologies to be used in the target setting process. The RTAC provided its recommendations in a report to ARB on September 29, 2009. On August 9, 2010, ARB staff issued the *Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375* (ARB 2010). ARB staff proposed draft reduction targets for the four largest MPOs (Bay Area, Sacramento, Southern California, and San Diego) of 7 to 8 percent for 2020 and reduction targets between 13 to 16 percent for 2035. Of note, the proposed reduction targets explicitly exclude emission reductions expected from the AB 1493 and low carbon fuel standard regulations. ARB adopted the final targets on September 23, 2010.

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

On April 29, 2015, Governor Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. According to the state, California is on track to meet or exceed the current target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32. The new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent under 1990 levels by 2050, established by EO S-3-05.

***Senate Bill 350***

On October 7, 2015, Senate Bill 350: Clean Energy and Pollution Reduction Act (SB 350) was signed into law, establishing new clean energy, clean air and greenhouse gas reduction goals for 2030 and beyond. Building off of AB 32, SB 350 established California's 2030 greenhouse gas reduction target of 40 percent below 1990 levels. To achieve this goal, SB 350 set ambitious 2030 targets for energy efficiency and renewable electricity, among other actions aimed at reducing greenhouse gas emissions. SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard (RPS) eligible resources, including solar, wind, biomass, geothermal, and others. In addition, SB 350 requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030.

***Senate Bill 32***

Senate Bill 32 (SB 32) was signed into law on August 31, 2016. This bill requires CARB to adopt rules and regulations to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030.

***Assembly Bill 197***

On September 8, 2016, Assembly Bill 197 (AB 197) was signed into law. This bill requires CARB to make available the emissions of greenhouse gases, criteria pollutants, and toxic air contaminants for each facility that reports to the state board and air districts. In addition, this bill requires that CARB make available the emissions of greenhouse gases, criteria pollutants, and toxic air contaminants throughout the state, broken down to a local and sub-county level for stationary sources and to at least a county level for mobile sources, as specified.

**4.4.3.4 Regional Programs*****Sacramento Metropolitan Air Quality Management District***

The Sacramento Metropolitan Air Quality Management District's (SMAQMD) mission is to achieve clean air goals by leading the region in protecting public health and the environment through innovative and effective programs, dedicated staff, community involvement, and public education. To achieve this goal the SMAQMD interacts with the local, state, and federal government agencies, the local business community, environmental groups, and private citizens.

On October 27, 2005, the SMAQMD Board of Directors authorized staff to develop a Climate Change Protection Program that would include outreach and education, data collection and analysis, and provide

support and leadership for local, state, and national efforts to reduce GHG emissions. The AQMD Board of Directors adopted the Climate Change Protection Program on March 23, 2006. The Program addresses climate change within the context of the District's air quality mission.

On August 28, 2008, the SMAQMD Board of Directors authorized the District Air Pollution Control Officer to direct staff to begin program development on several enhancements to the District's Climate Protection Program. These enhancements include: (1) the creation of a GHG emissions bank; (2) the creation of a program to facilitate GHG mitigation for CEQA purposes; (3) an enhanced reporting system; and (4) assurances that climate protection measures do not cause increases in criteria pollutants.

The SMAQMD Board of Directors adopted GHG thresholds on October 23, 2014, via resolution AQMD2014-028. The threshold for land development and construction projects is 1,100 metric tons/year for both the construction and operational phase.

### ***Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy***

The Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy (SACOG MTP/SCS) provides a long-range framework to minimize transportation impacts on the environment, improve regional air quality, protect natural resources, and reduce GHG emissions. The MTP/SCS is consistent with SB 375, which requires SACOG to adopt an SCS that outlines policies to reduce per capita GHG emissions from passenger vehicles. The SCS policies include a mix of strategies that target smart growth, mixed-used design, alternative transportation, transit, mobility and access, network expansion, and transportation investment. Implementation of the SCS is intended to improve the efficiency of the transportation system and achieve a variety of housing types throughout the SACOG region that meet market demands in a balanced and sustainable manner.

#### **4.4.3.5 Local Plans and Policies**

##### ***County of El Dorado General Plan***

The County of El Dorado General Plan (2004) does not specifically include policies or goals to reduce GHG emissions. However, the General Plan provides county-wide goals and policies aimed at improving energy efficiency, improving transportation efficiency, and reducing air emissions, which could reduce or sequester GHGs. The following presents policies contained in the Transportation and Circulation and Public Services and Utilities elements:

**Transportation and Circulation Element**

**GOAL TC-1:** To plan for and provide a unified, coordinated, and cost-efficient countywide road and highway system that ensures the safe, orderly, and efficient movement of people and goods.

**Policy TC-1p** The County shall encourage street designs for interior streets within new subdivisions that minimize the intrusion of through traffic on pedestrians and residential uses while providing efficient connections between neighborhoods and communities.

**Policy TC-1q** The County shall utilize road construction methods that seek to reduce air, water, and noise pollution associated with road and highway development.

**Public Services and Utilities Element**

**GOAL 5.6: GAS, ELECTRIC, AND OTHER UTILITY SERVICES:** Sufficient utility service availability consistent with the needs of a growing community.

**OBJECTIVE 5.6.2: ENCOURAGE ENERGY-EFFICIENT DEVELOPMENT:** Encourage development of energy-efficient buildings, subdivisions, development, and landscape designs.

**Policy 5.6.2.1** Require energy conserving landscaping plans for all projects requiring design review or other discretionary approval.

**Policy 5.6.2.2** All new subdivisions should include design components that take advantage of passive or natural summer cooling and/or winter solar access, or both, when possible.

***Environmental Vision for El Dorado County Resolution No 29-2008***

The El Dorado County Board of Supervisors adopted Resolution No. 29-2008, the “Environmental Vision for El Dorado County,” on March 25, 2008. The resolution sets forth goals and calls for implementation of positive environmental changes to reduce global impact, improve air quality and reduce dependence on landfills, promote alternative energies, increase recycling, and encourage local governments to adopt green and sustainable practices. As it relates to global climate change and GHG emissions, the resolution establishes goals that include, but are not limited to:

**Transportation, Traffic, and Transit**

- Reduce carbon emissions and GHGs

- Promote carpooling and reduce vehicle miles traveled
- Promote pedestrian and bicycling commuting
- Expand transit opportunities
- Promote programs and designs that reduce traffic congestion

#### **Planning and Construction**

- Promote the design of sustainable communities
- Encourage pedestrian/cycling-incentive planning
- Encourage energy-efficient development

#### **Energy**

- Promote the use of alternative fuels and fuel conservation programs
- Promote clean, energy efficient heating and cooling

### **4.4.4 IMPACTS AND MITIGATION MEASURES**

#### **4.4.4.1 Significance Criteria**

The impacts related to GHG emissions resulting from the implementation of the proposed project would be considered significant if they would exceed the following significance criteria, in accordance with Appendix G of the *State CEQA Guidelines*:

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

Various Air Districts within the Sacramento region have recently updated their thresholds for evaluating the significance of a project's GHG emissions. The El Dorado County Air Quality Management District (EDCAQMD) recommends that GHG emissions thresholds from nearby Air Districts, such as the Placer County Air Pollution Control District (PCAPCD) be utilized in the environmental review of projects in El Dorado County. The PCAPCD thresholds were updated in 2016 by PCAPCD with the justification for the thresholds provided in the *PCAPCD CEQA Thresholds of Significance Justification Report* in October 2016. As noted in the justification report, these thresholds were developed by PCAPCD following a review of the GHG significance thresholds adopted by other air districts; a review of land development projects in

the County over the last thirteen years (2003-2015); a consideration of the statewide GHG emission reduction goal by 2030, and the special geographic features in Placer County. Due to general similarities between Placer and El Dorado Counties in their geographies and growth trends, and because the PCAPCD thresholds appropriately consider the State-targeted reduction of 40 percent below 1990 levels by 2030, EDCAQMD has determined that these thresholds are appropriate to use in order to evaluate the significance of GHG emissions of projects proposed in El Dorado County.

Based on correspondence with EDCAQMD, this analysis utilizes the recently updated greenhouse gas thresholds from the nearby PCAPCD for the purposes of GHG emissions analysis. The PCAPCD provides the following significance thresholds for evaluating a project's GHG impacts:

- Bright-line Threshold of 10,000 metric tons of CO<sub>2</sub>e per year for the construction and operational phases of land use projects as well as the stationary source projects,
- Efficiency Matrix for the operational phase of land use development projects when emissions exceed the De Minimis Level, and
- De Minimis Level for the operational phases of 1,100 metric tons of CO<sub>2</sub>e per year.

GHG emissions from projects that exceed 10,000 MTCO<sub>2</sub>e/yr would be deemed to have a cumulatively considerable contribution to global climate change. For a land use project, this level of emissions is equivalent to a project size of approximately 646 single-family dwelling units, or a 323,955 square feet commercial building.

The De Minimis Level for the operational phases of 1,100 MTCO<sub>2</sub>e/year represents an emissions level which can be considered as less than cumulatively considerable and be excluded from the further GHG impact analysis. This level of emissions is equivalent to a project size of approximately 71 single-family units, or a 35,635 square feet commercial building.

Projects with GHG emissions which exceed the De Minimis Level of 1,100 MTCO<sub>2</sub>e/year, but are less than 10,000 MTCO<sub>2</sub>e/year can still be found less than cumulatively considerable when the result of project related efficiency analysis would meet one of conditions in the efficiency matrix for the applicable land use setting and land use type provided. The efficiency matrix is provided in **Table 4.4-2, Greenhouse Gas Emissions Thresholds Efficiency Matrix**, below.

**Table 4.4-2  
Greenhouse Gas Emissions Thresholds Efficiency Matrix**

Residential		Non-residential	
Urban	Rural	Urban	Rural
MTCO <sub>2</sub> e/capita		MTCO <sub>2</sub> e/capita	
4.5	5.5	26.5	27.3

Source: EDCAQMD, 2017

Given that the proposed project is a residential project within an urban setting, the appropriate efficiency matrix threshold for the proposed project is 4.5 MTCO<sub>2</sub>e/capita/year.

#### 4.4.4.2 Issues adequately addressed in the Initial Study

All GHG emissions thresholds listed above are addressed below.

#### 4.4.4.3 Methodology

GHG emissions were computed for the full build out scenario of the proposed project. Specifically, construction emissions were computed for an assumed 15 month construction period (Summer 2018 to Fall 2019) and operational emissions were estimated for 2020, the first complete year of project occupancy. The California Emissions Estimator Model Version 2016.3.1 (CalEEMod) was used to estimate GHG emissions. Modeling output that includes assumptions is provided in **Appendix 4.1**.

#### 4.4.4.4 Project Impacts and Mitigation Measures

**Impact GHG-1:**            **The proposed project would generate greenhouse gas emissions, either directly or indirectly, that would not have a significant impact on the environment. (*Less than Significant*)**

#### Construction GHG Emissions

During construction, the proposed project would directly contribute to climate change through its contribution of GHGs from the exhaust of construction equipment and construction workers' vehicles. The manufacture of construction materials used by the proposed project would indirectly contribute to climate change (upstream emission source). Upstream emissions are emissions that are generated during the manufacture of products used for construction (e.g., cement, steel, and transport of materials to the region). The upstream GHG emissions for this project, which may also include perfluorocarbons and

sulfur hexafluoride, are not estimated in this impact analysis because they are not within the control of the County or the applicant and the lack of data precludes their quantification without speculation.

Total construction emissions are presented in **Table 4.4-3, Estimated Construction GHG Emissions.**

**Table 4.4-3  
Estimated Construction GHG Emissions**

Construction Year	CO <sub>2</sub> e
2018	288.24
2019	317.89
<b>Total</b>	<b>606.13</b>

*Source: De Novo Planning Group, 2017*

As shown above in **Table 4.4-3** construction activities would result in total emissions of 606.13 MTCO<sub>2</sub>e and would not exceed EDCAQMD's recommended mass emissions threshold of significance (bright-line threshold of 10,000 MTCO<sub>2</sub>e per year) for construction-phase GHG emissions. Therefore, GHG emissions from project-related construction would result in a less than significant impact.

### Operational GHG Emissions

The CalEEMod model was used to estimate operational GHG emissions associated with the proposed project. CalEEMod provides emissions for transportation (mobile), areas sources, electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste transport and disposal.

To estimate emissions, specifics on project size (number of units), construction data, information on sources such as fireplaces, and operations were "input" to the model. Default values for trip lengths were used in the model. Trip generation data used in the model was based on the project's traffic impact analysis. Various measures that reduce emissions (called "mitigation inputs" in the model) can be selected, including mix of uses, local serving transit, presence of bike and pedestrian facilities, affordable housing components, transportation demand management, parking supply, and on-road trucks. CalEEMod also allows corrections for pass-by trips and corrects for double-counting.

The modeling included mitigation inputs implemented by **Mitigation Measure AIR-2** for the year 2020, including the following:

**Mobile Source Mitigation**

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network
- Provide Traffic Calming Measures

**Energy Source Mitigation**

- Exceed Title 24 by 10 percent
- Install High Efficiency Lighting
- Install Energy Efficient Appliances

**Area Source Mitigation**

- Use only Natural Gas Hearths

**Water Mitigation**

- Install Low Flow Bathroom Faucets
- Install Low Flow Kitchen Faucets
- Install Low Flow Toilets
- Install Low Flow Showers
- Use Water Efficient Irrigation System

**Computed Operational GHG Emissions**

As shown in **Table 4.4-4, Operational GHG Emissions (2020)**, below, the proposed project would result in approximately 1,466.33 MTCO<sub>2</sub>e/year of GHG emissions with mitigation incorporated.

**Table 4.6-4  
Operational GHG Emissions (2020)**

Source	2020 Project Emissions (MTCO <sub>2e</sub> /year)
Area sources	155.26
Energy use	344.73
Mobile sources	875.58
Solid waste	49.51
Water	41.25
<b>Total Project Emissions</b>	<b>1,466.33</b>
Bright-line Threshold	10,000
	<i>Exceed?</i> No
De Minimis Level Threshold	1,100
	<i>Exceed?</i> Yes
GHG Per Capita Efficiency Threshold	4.5
Project Per Capita Emissions	2.98
	<i>Exceed?</i> No

Source: De Novo Planning Group, 2017

GHG emissions would not exceed the bright-line threshold but would exceed the De Minimis Level threshold. Therefore, this analysis estimated the GHG efficiency rate for the proposed project to compare to the GHG efficiency threshold (4.5 MTCO<sub>2e</sub>/capita) in 2020. The project would provide housing for an estimated 492 individuals (based on 214 units and 2.3 individuals per unit), but no land uses that provide employment.<sup>4</sup> The GHG emissions per service population for the proposed project would be 2.98 MTCO<sub>2e</sub>/capita in 2020 (1,466.33 MTCO<sub>2e</sub> divided by 492 persons), which would be lower than the efficiency threshold of 4.5 MTCO<sub>2e</sub>/capita. Thus, the project's operational emissions would result in a less than significant impact. Furthermore, the proposed project would implement **Mitigation Measure AIR-2** which would ensure that GHG emissions remain below levels considered significant.

**Mitigation Measures: Implement Mitigation Measure AIR-2.**

<sup>4</sup> Table 2-2, Land Use Densities and Residential Population Ranges in the Land Use Section of the General Plan sets Persons per Housing Unit for the Multi-Family Residential Land Use Designation at 2.3 persons per household.

**Significance after Mitigation:** Not applicable

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**Impact GHG-2:**            **The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. (*Less than Significant*)**

The County of El Dorado has not adopted a climate action plan or general plan policies specifically for the purpose of reducing GHG emissions. However, the County adopted Resolution 29-2008, and there are regional plans that are applicable to the County that are focused on the reduction of GHG emissions, as well as AB 32, the state law that requires the state as a whole to reduce GHG emissions. The project's consistency with these plans and laws, as well as the adopted resolution, is evaluated below.

#### **Environmental Vision for El Dorado County Resolution No 29-2008**

Although not specifically a plan to reduce GHG emissions, the Environmental Vision includes goals to address positive environmental changes. The Environmental Vision focuses on three primary areas relevant to GHG emissions: transportation, traffic, and transit; planning and construction; and energy.

##### ***Transportation, Traffic, and Transit***

The proposed project is an urban infill project located within the Town Center East area. The majority of the surrounding Town Center East is developed with commercial/retail establishments, offering an opportunity to reduce trips, as many destinations would be within walking distance. The project also includes bicycle infrastructure to promote the use of bikes for short trips. Combined, these transportation features would reduce vehicle miles traveled and traffic congestion. As such, the project is consistent with the transportation, traffic and transit goals.

##### ***Planning and Construction***

As noted in **Section 3.0**, the project would include a number of sustainable design features to minimize energy and water consumption, improve indoor environmental quality, minimize waste disposed in landfills, and minimize vehicular traffic and associated air pollutant emissions. The project would also have bicycle lockers for residents.

During construction, more than 55 percent of all demolition materials and construction debris will be recycled. Durable, non-combustible materials, and fire resistant roofing will be used. Low/no VOC paints

and coatings will be used in project construction and maintenance. Low VOC caulks, construction adhesives, and sealants will be used in project construction and maintenance.

### *Energy*

The project would promote energy efficiency. As noted in **Section 3.0**, as part of the proposed project, all buildings will exceed Title 24 energy requirements by a minimum of 10 percent. All apartments will be equipped with Energy Star certified appliances (dishwashers and refrigerators). Energy efficient LED light fixtures will be installed within the apartment buildings and for exterior lighting. All residential units will incorporate energy efficient Low-E windows. A minimum of 15 percent of the roof areas will be reserved for future photovoltaic (PV) solar installation. Infrastructure (conduit, structural elements, etc.) will be provided to facilitate the future PV solar installation. The parking garage will be designed for future Electric Vehicle (EV) charging station expansion. Temperature controllers will be installed for pool and spa heaters.

In sum, the proposed project would be consistent with the goals of the Environmental Vision.

### **SACOG MTP/SCS**

As noted above, the SACOG MTP/SCS provides a long-range framework to minimize transportation impacts on the environment, improve regional air quality, protect natural resources, and reduce GHG emissions. The MTP/SCS is consistent with SB 375, which requires SACOG to adopt an SCS that outlines policies to reduce per capita GHG emissions from passenger vehicles.

SACOG states that for the purposes of determining SCS consistency, the policies of the MTP/SCS are embedded in the metrics and growth forecast assumptions of the MTP/SCS. Projects consistent with the growth forecast assumptions of the MTP/SCS are consistent with the MTP/SCS and its policies (SACOG 2016). The MTP/SCS forecasts 70,813 new housing units in the unincorporated portion of El Dorado County by 2036. The majority of this growth, 35,149 housing units, would be located in Established Communities, as described in the MTP/SCS (SACOG 2016). The proposed project would be located in an Established Community. In addition, the project uses would be consistent with the general land use, density, and intensity information provided for this Community Type in Appendix E-3 of the MTP/SCS. Therefore, the project would be consistent with the MTP/SCS.

### **AB 32, SB 32 and SB 350**

AB 32 is the basis for reduction of GHG emissions statewide in California. Local agencies, such as the EDCAQMD, base their planning on the requirements included in AB 32, which include a reduction of GHG emissions to 1990 rates by 2020. The GHG significance thresholds used in this document are

specifically aimed at meeting AB 32 requirements, and so plans and projects that meet those thresholds can be assumed to meet the requirements of AB 32. As the per capita GHG emissions from the proposed project are below the efficiency threshold for project-level GHG emissions, the project is in compliance with AB 32. Furthermore, the proposed project is an infill project and would be located immediately adjacent to commercial/retail space, which would reduce vehicle trips by the project residents. In addition, the project includes the following energy reducing features that would provide greater energy efficiencies than factored into the calculation of the GHG emissions from the proposed project:

- All buildings would exceed Title 24 energy requirements by a minimum of 10 percent.
- Energy Star certified appliances (dishwashers and refrigerators).
- Energy efficient LED light fixtures would be installed within the buildings and for exterior lighting.

Therefore, the proposed project would be consistent with AB 32. With respect to more recent state laws (SB 32 and SB 350) which require that the state's 2030 emissions be further curtailed to be 40 percent below the state's 1990 emissions, CARB and EDCAQMD have not come forth with regulations and programs to address the new state laws, and any evaluation of the project's consistency with future regulations and programs would involve speculation. However, as noted earlier in this section, the thresholds of significance used in this Draft EIR were developed by PCAPCD taking into consideration the state mandates with respect to 2030 emissions. The analysis in **Impact GHG-1** shows that the project's per capita emissions would be substantially below the efficiency threshold. Furthermore, the proposed project would implement **Mitigation Measure AIR-2**, which would further ensure that the project's GHG emissions remain below levels considered significant. Therefore the proposed project would not conflict with SB 32 and SB 350.

In summary, the project not conflict with any plans, policies, or regulations for reducing GHG emissions, and the impact would be less than significant.

**Mitigation Measures:** Implement **Mitigation Measure AIR-2**.

**Significance after Mitigation:** Not applicable

#### 4.4.4.5 Cumulative Impacts and Mitigation Measures

##### **Cumulative Impact C-GHG-1: The proposed project would not result in a significant cumulative GHG impact. (*Less than Significant*)**

The impact from a project's GHG emissions is essentially an incremental contribution to a significant, worldwide cumulative impact. As the California Supreme Court has explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself. The challenge for CEQA purposes is to determine whether the impact of the project's emissions of greenhouse gases is cumulatively considerable, in the sense that 'the incremental effects of [the] individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.' ([Pub. Resources Code] § 21083, subd. (b)(2); see Guidelines, § 15064, subd. (h)(1).) 'With respect to climate change, an individual project's emissions will most likely not have any appreciable impact on the global problem by themselves, but they will contribute to the significant cumulative impact caused by greenhouse gas emissions from other sources around the globe. The question therefore becomes whether the project's incremental addition of greenhouse gases is "cumulatively considerable" in light of the global problem, and thus significant.'" (*CBD v. DFW, supra*, 62 Cal.4th at p. 219, quoting Crockett, *Addressing the Significance of Greenhouse Gas Emissions Under CEQA: California's Search for Regulatory Certainty in an Uncertain World* (July 2011) 4 Golden Gate U. Envtl. L.J. 203, 207–208.) The analysis under **Impact GHG-1** shows that the per capita GHG emissions associated with the proposed project would be substantially lower than the efficiency threshold set forth by the Air District. Therefore the project's contribution to the global cumulative impact would not be considerable. The impact would be less than significant. Furthermore, the proposed project would implement **Mitigation Measure AIR-2** which would further ensure that the project's GHG emissions remain below levels considered significant.

**Mitigation Measures:** Implement **Mitigation Measure AIR-2**.

**Significance after Mitigation:** Not applicable

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