

5.7 GREENHOUSE GAS EMISSIONS

This section of the Draft Environmental Impact Report (Draft EIR) evaluates the potential for the proposed Section 31 Specific Plan Project (“Section 31 Specific Plan” or “Project”) to generate greenhouse gas (GHG) emissions that may have a significant effect on the environment or to conflict with plans and policies adopted for the purpose of reducing greenhouse gas emissions. Various federal, State, regional, and local programs and regulations related to greenhouse gas emissions are discussed in this Section.

A quantified estimate of the GHG emissions that could result from the development of the land uses that would be allowed by the Project is provided. Modeling datasheets for global climate change emissions are included as part of the air quality modeling in **Appendix B: Air Quality and Greenhouse Gas Emissions Model Output**. Please see **Section 9.0: Terms, Definitions, and Acronyms** for a glossary of terms, definitions, and acronyms used in this Draft EIR.

A. ENVIRONMENTAL SETTING

1. Existing Conditions

Greenhouse Gases and Climate Change

Global Context

GHGs are global pollutants that have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere for a long enough time to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule depends on multiple variables and cannot be pinpointed, more CO₂ is currently emitted into the atmosphere than is avoided or sequestered. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through photosynthesis and dissolution, respectively. These are two of the most common processes of CO₂ sequestration. Of the total annual human-caused CO₂ emissions, approximately 54 percent is sequestered within a year through ocean uptake, northern hemisphere forest regrowth, and other terrestrial sinks; the remaining 46 percent of human-caused CO₂ emissions are stored in the atmosphere.

Similarly, the effects of GHGs are borne globally (sea-level rise, hurricanes, droughts, etc.), as opposed to the localized air quality effects of criteria air pollutants and toxic air contaminants (TACs). The quantity of GHGs that it takes to ultimately result in climate change is not precisely known, but that quantity is enormous. No single project would be expected to measurably contribute to a noticeable incremental change in the global average temperature, or to global, local, or microclimates. However, it is the combined GHG contributions per project that create an impact.

Greenhouse Effect

GHGs play a critical role in determining the Earth's surface temperature because these gases absorb solar radiation. Solar radiation enters the Earth's atmosphere from space. A portion of the radiation is absorbed by the Earth's surface, and a smaller portion of this radiation is reflected back into space. The radiation absorbed by the Earth is reradiated as lower-frequency infrared radiation, which is then selectively absorbed by GHGs in the Earth's atmosphere. As a result, the greater the amount of GHGs in the atmosphere, the greater the amount of infrared radiation trapped, resulting in a warming of the atmosphere. This phenomenon is commonly referred to as the "greenhouse effect." Scientists have speculated that increased GHG emissions from human activity (anthropogenic) could lead to a less habitable climate. Anthropogenic GHG emissions leading to atmospheric levels in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the Earth's atmosphere and oceans, with corresponding effects on global air and water circulation patterns and climate. CO₂ emissions associated with fossil fuel combustion are the primary contributors to human-induced emissions.

Climate Change Effects for California

Climate change could affect environmental conditions in California in a variety of ways. One effect of climate change is rising sea levels. Sea levels along the California coast rose approximately 7 inches during the last century, and they are predicted to rise an additional 7 to 22 inches by 2100, depending on the future levels of GHG emissions. The effects of a rise in sea level could include increased coastal flooding, saltwater intrusion (especially a concern in the low-lying Sacramento–San Joaquin Delta, where pumps delivering potable water to Southern California could be threatened), and disruption of wetlands.

As the State's climate changes over time, the range of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the State if suitable conditions are no longer available. Additional concerns associated with climate change include a reduction in the snowpack, leading to less overall water storage in the mountains (the largest "reservoir" in the State), and increased risk of wildfires caused by changes in rainfall patterns and plant communities. Changes in the climate can also impact California's weather patterns and rainfall, causing droughts in certain areas and flooding in others.

Sources of Greenhouse Gas Emissions

GHGs are the result of both natural and anthropogenic activities. With respect to anthropogenic activities, motor vehicle travel, air travel, consumption of fossil fuels for power generation, industrial processes, heating and cooling, landfills, agriculture, and wildfire are the primary sources of GHG emissions.

Additionally, land use decisions and future development projects pursuant to implementation of a general plan can affect the generation of GHG emissions from multiple sectors, resulting in direct or indirect GHG emissions. For example, electricity consumed in the lighting and heating of buildings is an indirect source of GHG emissions because it requires electricity from power plants, which emits GHG directly into the atmosphere. Conversely, tailpipe emissions from the use of vehicles generates direct GHG emissions.

GHGs are a group of emissions that include CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, and nitrogen trifluoride (NF₃). Carbon dioxide is the most abundant GHG. As stated above, other GHGs are less abundant, but have higher global warming potential than CO₂. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO₂; denoted as CO₂e. A general description of GHGs discussed is provided in **Table 5.7-1: Description of Identified Greenhouse Gases.**

Table 5.7-1
Description of Identified Greenhouse Gases

GHG	General Description
Carbon Dioxide (CO₂)	An odorless, colorless GHG that has both natural and anthropocentric sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human caused) sources of CO ₂ are burning coal, oil, natural gas, and wood.
Methane (CH₄)	A flammable gas and is the main component of natural gas. When one molecule of CH ₄ is burned in the presence of oxygen, one molecule of CO ₂ and two molecules of water are released. A natural source of CH ₄ is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH ₄ , which is extracted for fuel. Other sources are from landfills, fermentation of manure, and cattle.
Nitrous Oxide (N₂O)	A colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N ₂ O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, race cars, and as an aerosol spray propellant.
Hydrofluorocarbons (HFCs)	Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH ₄ or ethane (C ₂ H ₆) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. Because they destroy stratospheric ozone, the production of CFCs was stopped as required by the Montreal Protocol in 1987. HFCs are synthetic man-made chemicals that are used as substitute for CFCs as refrigerants. HFCs deplete stratospheric ozone, but to a much lesser extent than CFCs.

GHG	General Description
Perfluorinated Chemicals (PFCs)	PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semi-conduction manufacturing.
Sulfur Hexafluoride (SF₆)	An inorganic, odorless, colorless, nontoxic, and nonflammable gas. SF ₆ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.
Nitrogen Trifluoride (NF₃)	An inorganic, nontoxic, odorless, nonflammable gas. NF ₃ is used in the manufacture of semiconductors, as an oxidizer of high energy fuels, for the preparation of tetrafluoro hydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers.

^a GHGs identified in this table are ones identified in the Kyoto protocol and other synthetic gases recently added to the IPCC's Fifth Assessment Report.

Greenhouse Gas Emissions Inventory and Trends

Existing Statewide GHG Emissions

In 2016, California produced 429.4 million metric tons of carbon dioxide equivalents (MMTCO₂e), including imported electricity and excluding combustion of international fuels and carbon sinks or storage. The major source of GHGs in California is transportation, contributing to 37 percent of the State's total GHG emissions. Industrial generation is the second largest source, contributing to 21 percent of the State's GHG emissions. The Statewide inventory of GHGs by sector is shown in **Table 5.7-2: California GHG Inventory 2008–2016**.

Table 5.7-2
California GHG Inventory 2008–2016

Main Sector	Emissions (MMTCO _{2e})								
	2008	2009	2010	2011	2012	2013	2014	2015	2016
Transportation ^a	188.59	188.53	177.58	170.40	165.07	161.51	161.22	157.99	159.53
Industrial ^b	90.54	87.90	91.50	90.94	91.07	93.73	93.96	91.58	89.61
Electric power	120.14	101.37	90.34	88.06	95.09	89.65	88.24	83.67	68.58
Commercial and residential	43.52	43.63	45.05	45.50	42.89	43.54	37.37	37.94	39.36
Agriculture	35.79	33.50	34.27	34.89	36.08	34.61	35.95	34.41	33.84
High GWP ^{c,d}	11.65	12.29	13.52	14.54	15.54	16.65	17.70	18.93	19.78
Recycled and waste	8.11	8.27	8.37	8.47	8.49	8.52	8.59	8.73	8.81
Total Emissions	487.3	457.3	448.1	443.9	450.4	447.6	444.1	441.4	429.4

Source: California Air Resources Board (CARB) (2018),

https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_sum_2000-16.pdf

a Includes equipment used in construction, mining, oil drilling, industrial and airport ground operations.

b Reflects emissions from combustion of natural gas, diesel, and lease fuel plus fugitive emissions.

c These categories are listed in the Industrial sector of CARB's GHG Emission Inventory sectors.

d This category is listed in the Electric Power sector of CARB's GHG Emission Inventory sectors.

Regional Emissions

The breakdown of GHG emissions within the Coachella Valley follows the statewide pattern with the most significant sources of GHGs being transportation and fuel combustion, and electricity generation. On-road transportation and fuel combustion account for 94 percent of GHGs in the Coachella Valley. The Coachella Valley region produced 4.31 MMTCO_{2e} GHGs in 2005 from direct emissions.¹

Project Site

The Project Site consists of vacant desert land. Consequently, no GHG emissions are currently generated from the Project Site.

1 South Coast Air Quality Management District, *Greenhouse Gas (GHG) Inventories for the Coachella Valley*, prepared for the Coachella Valley Association of Governments, June 2011, 5.

2. Regulatory Setting

Federal

Federal Clean Air Act

The US Supreme Court ruled in *Massachusetts v. Environmental Protection Agency*² that carbon dioxide (CO₂) and other GHGs are pollutants under the federal Clean Air Act (CAA), which the US Environmental Protection Agency (USEPA) must regulate if it determines they pose an endangerment to public health or welfare.³ The Court did not mandate that the USEPA enact regulations to reduce GHG emissions. Instead, the Court found that the USEPA could avoid taking action if it found that GHGs do not contribute to climate change or if it offered a “reasonable explanation” for not determining that GHGs contribute to climate change.

On April 17, 2009, the USEPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171.⁴ The USEPA stated that high atmospheric levels of GHGs “are the unambiguous result of human emissions and are very likely the cause of the observed increase in average temperatures and other climatic changes.” The USEPA further found that “atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act.” The final rule was effective on January 14, 2010.⁵ While these findings alone did not impose any requirements on industry or other entities, this action was a prerequisite to regulatory actions by the USEPA, including, but not limited to, GHG emissions standards for light-duty vehicles.

In response, the USEPA promulgated a regulation to require reporting of all GHG emissions from all sectors of the economy. The final rule applies to fossil fuel suppliers and industrial gas suppliers, direct greenhouse gas emitters and manufacturers of heavy-duty and off-road vehicles and engines. The rule

2 Massachusetts v. Environmental Protection Agency, 127 S.Ct. 1438 (2007).

3 Perry W. Payne and Sara Rosenbaum, “Massachusetts et al. v Environmental Protection Agency: Implications for Public Health Policy and Practice,” *Public Health Reports* 122 No. 6 (2007): 817–819, <https://doi.org/10.1177/003335490712200614>.

4 Federal Register, “Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act” (December 15, 2009), accessed May 2019, <https://www.federalregister.gov/documents/2009/12/15/E9-29537/endangerment-and-cause-or-contribute-findings-for-greenhouse-gases-under-section-202a-of-the-clean>.

5 United States Environmental Protection Agency (USEPA), “Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act,” accessed May 2019, <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean/>.

does not require control of greenhouse gases; rather, it requires only that sources above certain threshold levels monitor and report emissions.⁶

Corporate Average Fuel Economy (CAFE) Standards

In response to the *Massachusetts v. Environmental Protection Agency* ruling, the George W. Bush administration issued Executive Order 13432 in 2007, directing the USEPA, the US Department of Transportation (USDOT), and the US Department of Energy (USDOE) to establish regulations that reduce GHG emissions from motor vehicles, nonroad vehicles, and nonroad engines by 2008.⁷ In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011; in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.⁸

In 2010, President Obama issued a memorandum directing the USEPA, USDOT, USDOE, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles.⁹ The proposed standards projected to achieve 163 grams/mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022 – 2025 in a future rulemaking. On April 2, 2018 the USEPA signed the Mid-term Evaluation Final Determination, which finds that the model year 2022–2025 greenhouse gas standards are not appropriate and should be revised.¹⁰ The Final Determination serves to initiate a notice to further consider appropriate standards for model year 2022–2025 light duty vehicles. On August 24, 2018, the USEPA and NHTSA published a proposal to freeze the model year 2020 standards

6 Federal Register, “Mandatory Reporting of Greenhouse Gases” (October 30, 2009), <https://www.gpo.gov/fdsys/pkg/FR-2009-10-30/pdf/E9-23315.pdf>.

7 US Government Publishing Office, Administration of George W. Bush, “Executive Order 13432—Cooperation Among Agencies in Protecting the Environment With Respect to Greenhouse Gas Emissions From Motor Vehicles, Nonroad Vehicles, and Nonroad Engines,” 631 (May 14, 2007), <https://www.gpo.gov/fdsys/pkg/WCPD-2007-05-21/pdf/WCPD-2007-05-21-Pg631.pdf>.

8 USEPA, “Regulations for Greenhouse Gas Emissions from Commercial Trucks & Buses” (December 27, 2017), <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-greenhouse-gas-emissions-commercial-trucks>.

9 USEPA, “Presidential Announcements and Letters of Support related to Greenhouse Gas Emissions” (August 28, 2017), <https://www.epa.gov/regulations-emissions-vehicles-and-engines/presidential-announcements-and-letters-support-related>.

10 Federal Register, *Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022 – 2025 Light-Duty Vehicles*, April 13, 2018, accessed May 2019, <https://www.federalregister.gov/documents/2018/04/13/2018-07364/mid-term-evaluation-of-greenhouse-gas-emissions-standards-for-model-year-2022-2025-light-duty>.

through model year 2026 and to revoke California's waiver under the Clean Air Act to establish more stringent standards.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2016, the USEPA and NHTSA finalized Phase 2 standards for medium and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. If implemented, the Phase 2 standards would be expected to lower CO₂ emissions by approximately 1.1 billion metric tons (MT), save vehicle owners fuels costs of about \$170 billion.¹¹ But as discussed above, the USEPA and NHTSA have proposed to roll back GHG and fuel economy for cars and light-duty trucks, which suggest a similar rollback of Phase 2 standards for medium and heavy-duty vehicles may be pursued.

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:¹²

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of renewable fuel in 2022, with at least 16 billion gallons from cellulosic biofuels and a cap of 15 billion gallons for corn-starch ethanol;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks; and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks, and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."¹³

11 USEPA, *EPA and NHTSA Adopt Standards to Reduce GHG and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond*, August 2016.

12 USEPA, "Summary of the Energy Independence and Security Act," <https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act>.

13 A green job, as defined by the United States Department of Labor, is a job in business that produce goods or provide services that benefit the environment or conserve natural resources.

State

Executive Orders

Executive Order S-3-05

Executive Order S-3-05, signed by Governor Arnold Schwarzenegger and issued in June 2005, proclaimed that California is vulnerable to the impacts of climate change.¹⁴ It declared that increased temperatures could reduce the Sierra snowpack, further exacerbate California’s air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established the following total GHG emission targets:

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

However, in adopting the California Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32 (Pavley), discussed below, the Legislature did not adopt the 2050 horizon-year goal from Executive Order No. S-3-05 and, in the 2006 legislative session, rejected legislation to enact the Executive Order’s 2050 goal.

Executive Order S-01-07

Executive Order S-1-07, the Low Carbon Fuel Standard (issued on January 18, 2007), requires a reduction of at least 10 percent in the carbon intensity of California’s transportation fuels by 2020.¹⁵ Regulatory proceedings and implementation of the Low Carbon Fuel Standard have been directed to the California Air Resources Board (CARB). The Low Carbon Fuel Standard has been identified by CARB as a discrete early action item in the adopted Climate Change Scoping Plan (discussed below). CARB expects the Low Carbon Fuel Standard to achieve the minimum 10 percent reduction goal; however, many of the early action items outlined in the Climate Change Scoping Plan work in tandem with one another. Other specific emission reduction measures included are the Million Solar Roofs Program¹⁶ and Assembly Bill (AB) 1493 (Pavley I), Vehicle Emissions: Greenhouse Gases, which establishes motor vehicle GHG emissions standards.¹⁷ To

14 National Resources Conservation Service, “Emerging Issues Committee Members,” https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_008701.pdf.

15 Office of the Governor, Executive Order S-01-07 (January 18, 2007), <https://www.arb.ca.gov/fuels/lcfs/eos0107.pdf>.

16 US Department of Energy, “Laying the Foundation for Solar America: The Million Solar Roofs Initiative” (October 2016), <https://www.nrel.gov/docs/fy07osti/40483.pdf>.

17 The standards enacted in Pavley I are the first GHG standards in the nation for passenger vehicles and took effect for model years starting in 2009 and going through 2016. Pavley I could potentially result in 27.7 million metric tons CO₂e reduction in 2020. Pavley II will cover model years 2017 to 2025 and potentially result in an additional reduction of 4.1 million metric tons CO₂e.

avoid the potential for double-counting emission reductions associated with AB 1493, the Climate Change Scoping Plan has modified the aggregate reduction expected from the Low Carbon Fuel Standard to 9.1 percent. In accordance with the Climate Change Scoping Plan, this analysis incorporates the modified reduction potential for the Low Carbon Fuel Standard. CARB released a draft version of the Low Carbon Fuel Standard in October 2008. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the Low Carbon Fuel Standard became effective on the same day.

Executive Order B-30-15

Executive Order B-30-15, signed by Governor Edmund Gerald “Jerry” Brown and issued in April 29, 2015, established a new Statewide policy goal to reduce GHG emissions to 40 percent below their 1990 levels by 2030. Reducing GHG emissions by 40 percent below 1990 levels in 2030, and by 80 percent below 1990 levels by 2050 (consistent with Executive Order S-3-05), aligns with scientifically established levels needed to limit global warming to less than 2 degrees Celsius.¹⁸

Assembly Bill 32 and Related Legislation

AB 32, the Global Warming Solutions Act of 2006, requires a sharp reduction of GHG emissions to 1990 levels by 2020. To achieve these goals, which are consistent with the California Climate Action Team, which works to coordinate statewide efforts to implement global warming emission reduction programs and the state's Climate Adaptation Strategy after the passing of AB 32, AB 32 mandates that CARB establish a quantified emissions cap and institute a schedule to meet the cap; implement regulations to reduce Statewide GHG emissions from stationary sources consistent with the California Climate Action Team strategies; and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. To reach the reduction targets, AB 32 requires CARB to adopt—in an open, public process—rules and regulations that achieve the maximum technologically feasible and cost-effective GHG reductions.

The California Climate Action Team stated that “smart land use” is an umbrella term for strategies that integrate transportation and land-use decisions.¹⁹ Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient

18 Office of the Governor, “Governor Brown Established Most Ambitious Greenhouse Gas Reduction Target in North America” (April 29, 2015), <https://www.gov.ca.gov/2015/04/29/news18938/>.

19 California Energy Commission, “The Role of Land Use in Meeting California’s Energy and Climate Change Goals” (June 2007), <http://www.energy.ca.gov/2007publications/CEC-600-2007-008/CEC-600-2007-008-SD.PDF>.

land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. “Intelligent transportation systems” is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and the movement of people, goods, and service.²⁰

Climate Change Scoping Plan

CARB approved a Climate Change Scoping Plan (Scoping Plan) on December 11, 2008, as required by AB 32. The Scoping Plan proposed a “comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health.”²¹ The Scoping Plan had a range of GHG reduction actions, including direct regulations; alternative compliance mechanisms; monetary and nonmonetary incentives; voluntary actions; market-based mechanisms, such as a cap-and-trade system; and an AB 32 implementation regulation to fund the program.

The Scoping Plan called for a “coordinated set of strategies” to address all major categories of GHG emissions.²² Transportation emissions were to be addressed through a combination of higher standards for vehicle fuel economy, implementation of the Low Carbon Fuel Standard, and greater consideration to reducing trip length and generation through land use planning and transit-oriented development. Buildings, land use, and industrial operations were encouraged and, sometimes, required to implement energy efficiency practices. Utility energy supplies will change to include more renewable energy sources through implementation of the Renewables Portfolio Standard. Established in 2002 under Senate Bill (SB) 1078, the California Renewables Portfolio Standards (RPS) were accelerated in 2006 under SB 107, which required that, by 2010, at least 20 percent of electricity retail sales come from renewable sources. In April 2016, the California Energy Commission (CEC) updated the RPS pursuant to SB 350, intended to set the new target 50 percent renewables by 2030.²³ This will be complemented with emphasis on local generation, including rooftop photovoltaics and solar hot water installations. Additionally, the Scoping Plan emphasized opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicated that substantial savings of electricity and natural gas would be accomplished through improving energy efficiency.

20 California Environmental Protection Agency, *Climate Action Team Report to Governor Schwarzenegger and the Legislature* (March 2006), 58.

21 CARB, *Climate Change Scoping Plan: A Framework for Change* (December 2008), https://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf.

22 CARB, *Climate Change Scoping Plan*, p. ES-7.

23 California Energy Commission, *Enforcement Procedures for the Renewables Portfolio Standards for Local Publicly Owned Electric Utilities: Amended Regulations* (April 12, 2016), <http://www.energy.ca.gov/2016publications/CEC-300-2016-002/CEC-300-2016-002-CMF.pdf>.

Subsequent to the adoption of the Scoping Plan, a lawsuit was filed challenging CARB's approval of the Scoping Plan Functional Equivalent Document (Supplemental FED). On May 20, 2011 (Case No. CPF-09-509562), the court found that the environmental analysis of the alternatives in the Supplemental FED to the Scoping Plan was not sufficient under CEQA. CARB staff prepared a revised and expanded environmental analysis of the alternatives, and the Supplemental FED to the Scoping Plan was approved on August 24, 2011. The Supplemental FED to the Scoping Plan indicated that the potential exists for adverse environmental impacts associated with implementation of the various GHG emission reduction measures recommended in the Scoping Plan.

CARB updated the Scoping Plan in May 2014 (2014 Scoping Plan). The 2014 Scoping Plan²⁴ adjusted the 1990 GHG emissions levels to 431 million metric tons of carbon dioxide equivalents (MMTCO_{2e}); the updated 2020 GHG emissions forecast is 509 MMTCO_{2e}, which credited for certain GHG emission reduction measures already in place (e.g., the RPS). The 2014 Scoping Plan also recommended a 40 percent reduction in GH emissions from 1990 levels by 2030, and a 60 percent reduction in GHG emissions from 1990 levels by 2040.

The 2017 Scoping Plan,²⁵ approved on December 14, 2017, builds on previous programs and takes aim at the 2030 target established by the 2016 SB 32 (Pavley), which is further discussed below. The 2017 Scoping Plan outlines options to meet California's aggressive goals to reduce GHGs by 40 percent below 1990 levels by 2030. In addition, the Scoping Plan incorporates the State's updated RPS requiring utilities to procure 50 percent of their electricity from renewable energy sources by 2030. It also raises the State's Low Carbon Fuel Standard and aims to reduce emissions of methane and hydrofluorocarbons by 40 percent from 2013 levels by 2030 and emissions of black carbon by 50 percent from 2013 levels.

Advanced Clean Cars Regulations

In 2012, CARB approved the Advanced Clean Cars (ACC) program, a new emissions-control program for vehicle model years 2017–2025. The program combines the control of smog, soot, and GHGs with requirements for greater number of zero-emission vehicles. By 2025, when the rules will be fully implemented, automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.²⁶

24 CARB, *First Update to the Climate Change Scoping Plan: Building on the Framework* (May 2014).

25 CARB, *California's 2017 Climate Change Scoping Plan* (November 2017), https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

26 CARB, *The Advanced Clean Cars Program* (January 18, 2018), <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program>.

AB 197: Statewide GHG Emissions Limit

On September 8, 2016, Governor Brown signed AB 197, which requires CARB to approve a Statewide GHG emissions limit equivalent to the Statewide GHG emission level in 1990 to be achieved by 2020.²⁷ AB 197 requires the CARB to prepare and approve a scoping plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions. The bill became effective on January 1, 2017.

Senate Bills

Senate Bill 375

SB 375, signed into law in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocations.²⁸ The act requires metropolitan planning organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS) that prescribes land use allocation in that MPO's regional transportation plan (RTP). CARB, in consultation with MPOs, provided regional reduction targets for GHGs for the years 2020 and 2035.

Senate Bill X1-2: 2020 Renewable Portfolio Standard

On April 12, 2011, California governor Jerry Brown signed SB X1-2.²⁹ This bill supersedes the 33 percent by RPS created by Executive Order S-14-08, previously signed by Governor Schwarzenegger. The RPS required that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020. A number of significant changes are made in SB X1-2. It extends application of the RPS to all electric retailers in the State, including municipal and public utilities, and community choice aggregators.

SB X1-2 creates a three-stage compliance period for electricity providers to meet renewable energy goals: 20 percent of retail sales must be renewable energy products by 2013, 25 percent of retail sales must be renewable energy products by 2016, and 33 percent of retail sales must be renewable energy products by 2020. The 33 percent level must be maintained in the years that follow. This three-stage compliance period requires the RPS to be met increasingly with renewable energy that is supplied to the California grid and is located within or directly proximate to California. SB X1-2 mandates that renewables from this category make up:

- At least 50 percent for the 2011–2013 compliance period;

27 California Legislative Information, Assembly Bill No. 197 (September 8, 2016), https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB197.

28 California Legislative Information, Senate Bill No. 375 (September 30, 2008), https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB375.

29 California Energy Commission, Renewable Portfolio, <http://www.energy.ca.gov/portfolio>.

- At least 65 percent for the 2014–2016 compliance period; and
- At least 75 percent for 2016 and beyond.

SB X1-2 sets rules for the use of Renewable Energy Credits (RECs) as follows:

- Establishes a cap of no more than 25 percent unbundled RECs going toward the RPS between 2011 and 2013, 15 percent from 2014 to 2016, and 10 percent thereafter;
- Does not allow for the grandfathering of tradable REC contracts executed before 2010, unless the contract was (or is) approved by the California Public Utilities Commission (CPUC);
- Allows banking of RECs for 3 years only; and
- Allows energy service providers, community choice aggregators, and investor-owned utilities with 60,000 or fewer customers to use 100 percent RECs to meet the RPS.

SB X1-2 also eliminates the Market Price Referent, which was a benchmark to assess the above-market costs of RPS contracts based on the long-term ownership, operating, and fixed-price fuel costs for a new 500-megawatt (mW) natural-gas-fired, combined-cycle gas turbine.

Senate Bill 350: Clean Energy and Pollution Reduction Act

SB 350, the Clean Energy and Pollution Reduction Act of 2015, was signed on October 7 of that year.³⁰ SB 350 implements some of the goals of Executive Order B-30-15 described above. The objectives of SB 350 are: (1) to increase the procurement of our electricity from renewable sources from 33 percent to 50 percent; and (2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.³¹

Senate Bill 32 and Assembly Bill 197

Enacted in 2016, SB 32 (Pavley, 2016) codifies the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that Statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. The reduction of GHG emissions is a priority for development projects throughout the State and is achieved through a combination of policies, planning, direct regulations, market approaches, incentives, and voluntary efforts. Generally speaking, the focus of GHG emission reductions is on energy production and motor vehicles.

SB 32 was coupled with a companion bill: AB 197 (Garcia, 2016). Designed to improve the transparency of CARB's regulatory and policy-oriented processes, AB 197 created the Joint Legislative Committee on

30 California Legislative Information, Senate Bill No. 350 (October 7, 2015), https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350.

31 Senate Bill 350 (2015–2016 Reg, Session) Stats 2015, ch. 547.

Climate Change Policies, a committee with the responsibility to ascertain facts and make recommendations to the Legislature concerning Statewide programs, policies and investments related to climate change. AB 197 also requires CARB to make certain GHG emissions inventory data publicly available on its website; consider the social costs of GHG emissions when adopting rules and regulations designed to achieve GHG emission reductions; and include specified information in all Scoping Plan updates for the emission reduction measures contained therein.

Center for Biological Diversity v. California Department of Fish and Wildlife

The California Supreme Court’s decision published on November 30, 2015, in *Center for Biological Diversity v. California Department of Fish and Wildlife* (Case No. 217763; the Newhall Ranch case) reviewed the methodology used to analyze GHG emissions in an EIR prepared for a project that proposed 20,885 dwelling units with 58,000 residents on 12,000 acres of undeveloped land in a rural area of the City of Santa Clara.³² That EIR used the “business as usual” (BAU) methodology to determine whether the project would impede the State of California’s compliance with statutory emissions reduction mandate established by the AB 32 Scoping Plan. The Court did not invalidate the BAU approach entirely, but did hold that:

*The Scoping Plan nowhere related that statewide level of reduction effort to the percentage of reduction that would or should be required from individual projects and nothing Department of Fish and Wildlife or Newhall have cited in the administrative record indicates the required percentage reduction from business as usual is the same for an individual project as for the entire state population and economy.*³³

The California Supreme Court suggested regulatory consistency as a pathway to compliance, stating that a Lead Agency might assess consistency with AB 32’s goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities. The Court recognized that to the extent a project’s design features comply with or exceed the regulations outlined in the Scoping Plan, and adopted by CARB or other State agencies, a Lead Agency could appropriately rely on their use as showing compliance with performance-based standards adopted to fulfill a Statewide plan for the reduction or mitigation of greenhouse gas emissions. This approach is consistent with CEQA Guidelines Section 15064, which provides that a determination that an impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including plans or

32 California Department of Fish and Wildlife, *Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan*, <https://www.wildlife.ca.gov/regions/5/newhall>.

33 Center for Biological Diversity et al. v. California Department of Fish and Wildlife (2015) (62 Cal.4th 204, 195 Cal.Rptr.3d 247, 361 P.3d 342).

regulations for the reduction of greenhouse gas emissions. Importantly, the Supreme Court also suggested “a lead agency may rely on existing numerical thresholds of significance for greenhouse gas emissions (*brightline threshold approach*).”³⁴

California Energy Commission

California Building Energy Efficiency Standards (Title 24, Part 6)

California’s Energy Efficiency Standards for Residential and Nonresidential Buildings, found in Title 24, Part 6 of the California Code of Regulations (CCR) and commonly referred to as “Title 24,” were established in 1978 in response to a legislative mandate to reduce California’s energy consumption. Title 24 requires the design of building shells and components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.³⁵

An update to Title 24 was adopted by the CEC on April 23, 2008. The 2008 Title 24 standards applied to building permits for which an application was submitted on or after January 1, 2010. The CEC adopted the changes made in 2008 to the Building Energy Efficiency Standards to respond to the mandates of AB 32 and to pursue California energy policy that energy efficiency is the resource of first choice for meeting California’s energy needs. The CEC adopted the Title 24 standards as well as the 2016 Title 24 standards, which became effective on January 1, 2017, and are applicable to the Project.³⁶ The 2016 standards will continue to improve upon prior Title 24 standards for new construction of, and additions and alterations to, residential and nonresidential buildings.³⁷

34 The South Coast Air Quality Management District (SCAQMD), *Interim CEQA Greenhouse Gas (GHG) Significance Thresholds*, draft guidance document (October 2008), Attachment E, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf).

35 California Energy Commission, “2016 Building Energy Efficiency Standards,” <http://www.energy.ca.gov/title24/2016standards/>.

36 See California Energy Commission, “2016 Building Energy Efficiency Standards” for additional information.

37 See California Energy Commission, “2016 Building Energy Efficiency Standards.”

California Green Building Standards (Title 24, Part 11)

The most recent update to the California Green Building Code (CCR, Title 24, Part 11), commonly referred to as the CALGreen Code, went into effect on January 1, 2017. It is important to note the 2019 California Green Building Standards would be effective January 1, 2020. Most mandatory measure changes in the 2016 CALGreen Code from the previous 2013 CALGreen Code were related to the definitions and to the clarification or addition of referenced manuals, handbooks, and standards. For example, several definitions related to energy were added or revised affect electric vehicle chargers and charging and hot water recirculation systems. For new multifamily dwelling units, the residential mandatory measures were reviewed to provide additional electric vehicle charging space requirements, including quantity, location, size, single and multiple EV spaces, and identification.³⁸ For non-residential mandatory measures, the number of required EV charging spaces has been revised in its entirety. Compliance with CALGreen is enforced through the building permitting process.³⁹

California Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608)

The 2016 Appliance Efficiency Regulations, adopted by the CEC, include standards for new appliances, equipment, and lighting if are sold or offered for sale in California. These standards include minimum levels of operating efficiency and other cost-effective measures to promote the use of energy- and water-efficient appliances.⁴⁰

Regional and Local

Southern California Association of Governments

Sustainable Communities Strategy

The City is a member agency of the Southern California Association of Governments (SCAG). To fulfill its commitments as an MPO under the Sustainable Communities and Climate Protection Act, SCAG adopted the *2016–2040 Regional Transportation Plan/Sustain Communities Strategy* (2016–2040 RTP/SCS). The 2016–2040 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. It is designed to reduce GHG emissions from passenger vehicles by 8 percent per capita by 2020, 18 percent by 2035, and 21 percent by 2040. The 18 percent reduction by 2035 over 2005 levels represents a 2 percent greater reduction compared to the projection

38 California Building Standards Commission, 2016 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 4-Residential Mandatory Measures (effective January 1, 2017).

39 California Building Standards Commission, 2016 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, Chapter 5-Nonresidential Mandatory Measures (effective January 1, 2017).

40 California Energy Commission, 2016 Appliance Efficiency Regulations (January 2017), <http://www.energy.ca.gov/2017publications/CEC-400-2017-002/CEC-400-2017-002.pdf>.

contained in the 2012–2035 RTP/SCS. The 2016–2040 RTP/SCS reaffirms the land use policies that were incorporated into the 2012–2035 RTP/SCS. The SCS focuses the majority of new regional housing and job growth in high-quality transit areas and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs/housing balance and more opportunities for TOD. Many of Los Angeles’s transportation corridors are SCS high-quality transit areas.

The SCS identifies several GHG emission reduction actions and strategies for the State, SCAG, and local jurisdictions. The SCS recommends that local jurisdictions (1) update zoning codes to accelerate adoption of SCS land use strategies; (2) prioritize transportation investments to support compact infill development that includes a mix of land uses and housing options; (3) develop infrastructure plans and educational programs that promote active transportation options; (4) emphasize active transportation projects as part of complying with the Complete Streets Act of 2008 (AB 1358); and (5) increase the efficiency of existing transportation systems.

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) adopted a “Policy on Global Warming and Stratospheric Ozone Depletion” on April 6, 1990.⁴¹ The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan (AQMP). In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds. Within its October 2008 document, SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 MT of GHG per year. On

41 SCAQMD, “SCAQMD’s Historical Activity on Climate Change,” <http://www.aqmd.gov/nav/about/initiatives/climate-change>.

December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for stationary source/industrial projects where SCAQMD is the Lead Agency.⁴²

Coachella Valley Association of Governments

The Coachella Valley Association of Governments (CVAG) recently received a grant from the Southern California Edison Company to prepare a Regional Greenhouse Gas Inventory for the Coachella Valley in conjunction with SCAQMD.⁴³ This inventory provides the most recent estimate of greenhouse gas generation for the Agua Caliente Band of Cahuilla Indians (Tribe), the Cabazon Band of Mission Indians, and each City within the CVAG planning area. CVAG intends to continue supporting planning for GHG reduction by pursuing additional grants to develop a model Climate Action Plan reduction plan to assist the Tribe and cities in the Coachella Valley served by Southern California Edison in developing individual plans.

Valley-wide Voluntary Green Building Program

The Voluntary Green Building Program was designed to help builders, developers and homeowners to go above and beyond California's Energy Code in terms of energy efficiency. As part of this Program, cities have committed to making it easier for those voluntarily participating in the Program to process their plans through the planning and building departments. The Voluntary Program and the California Building Code are based upon standards and measurements, the Voluntary Program includes an extensive checklist of specific actions, and how they are counted toward a more energy efficient building.⁴⁴

County of Riverside

The County of Riverside adopted a Climate Action Plan (CAP) for the unincorporated areas in the County in 2012. The CAP establishes a programmatic approach to reducing GHG emissions associated with the continued growth of the County and set a framework for a comprehensive plan that addresses the GHG impacts of future development and County operations. Through the CAP, the County has established goals and policies that incorporate environmental responsibility into its daily management of residential, commercial and industrial growth, education, energy and water use, air quality, transportation, waste reduction, economic development, and open space and natural habitats.

42 SCAQMD, "Greenhouse Gases: CEQA Significance Thresholds," <http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds>.

43 SCAQMD/CVAG, Draft Regional Greenhouse Gas Inventory for the Coachella Valley, June 2011.

44 CVAG, A Guide to the Valley-Wide Voluntary Green Building Program, accessed May 2019, https://www.cvag.org/library/pdf_files/enviro/Voluntary%20Green%20Building%20Program%20Guide.pdf.

As part of the CAP, the County of Riverside published a guidance document entitled “Greenhouse Gas Emissions, Screening Tables, County of Riverside, California”. As part of this guidance, the County established a threshold of GHG emission levels required for analysis. the Screening Tables or alternate emissions analysis method. The County determined that projects with emission less than 3,000 million metric tons of carbon dioxide equivalents (MTCO_{2e}) 3,000 MT CO_{2e} per year, when combined with modest energy efficiency measures (i.e., energy efficient at least five percent greater than 2010 Title 24 requirements and water conservation measures that match the January 2011 California Green Building Code) are considered less than significant and do not require any further analysis.

If the project exceeds 3,000 MT CO_{2e} per year, then: (i) project emissions need to be reduced by 25 percent from year 2011 emissions levels or (ii) alternatively, the project would need to achieve a minimum of 100 points pursuant to the CAP Screening Tables. The Screening Tables also allow developers to tailor their mitigation measures to the project’s needs, rather than have them be subject to “one-size fits all” mitigation measures that may not be appropriate.

City of Rancho Mirage

Rancho Mirage Energy Action Plan

The City’s Energy Action Plan (ePlan) provides a roadmap of actions within the City’s Municipal operations, to help reduce energy consumption, to reduce operation costs and increase energy awareness. The ePlan’s goals focuses on three areas: retrofit and expansion of municipal facilities, upgrading the municipal fleet and consideration of municipal programs and actions that will help reduce municipal and community-wide energy use and GHG emissions.⁴⁵

Rancho Mirage Sustainability Plan

In March 2013, the City adopted the 2013 Sustainability Action Plan: Leadership in Energy Efficiency (Sustainability Plan) in order to set GHG reduction goals and measures. The Sustainability Plan is a framework for the documenting and implementation of policies and programs that will reduce the City’s GHG emissions, working towards the Statewide target of 1990 levels by 2020, set by AB 32. For the City to achieve this goal, it would have to reduce emissions by 54,272 MTCO_{2e}, a 19.8 percent reduction. The measures presented within the Sustainability Plan will reduce City’s GHG emissions by 60,411, which is an additional 6,139 MTCO_{2e} over the targeted amount.

45 City of Rancho Mirage, Rancho Mirage Energy Action Plan, March 2013, accessed May 2019, <https://ranchomirageca.gov/wp-content/uploads/2019/01/Energy-Action-Plan.pdf>.

The Sustainability Plan targets key areas for advancing sustainability. These areas, represented as spheres of activity related to daily activities include:⁴⁶

- **Where We Live (LIVE)**: Focuses on house energy and water conservation and efficiency, waste management and recycling, renewable energy systems, and community education.
- **Where We Work (WORK)**: Focuses on workplace energy and water conservation and efficiency, materials management and recycling, and transportation and telecommuting.
- **How We Build (BUILD)**: Focuses on green building materials, codes and standards, land use policy, renewable energy system integration, and lighting, HVAC systems etc.
- **How We Get Around (MOBILITY)**: Looks at alternative fuels, trip reduction and optimization, biking and walking, transit-oriented development and infrastructure, and efficient driving habits.
- **How We Govern (GOVERN)**: Discusses energy management, land use policies, codes, and ordinances, economic development, and regional collaboration.
- **Where We Visit and Play (RECREATE)**: Discusses spa resorts, hotels, and restaurants, golf courses and parks, desert-appropriate landscaping, water efficiency, and enhanced visitor transportation.
- **How We Teach and Learn (LEARN)**: Focuses on student education, community centers and youth programs, workforce development, and demonstration projects and community outreach.

B. ENVIRONMENTAL IMPACTS

1. Thresholds of Significance

To assist in determining whether the proposed Project would have a significant effect on the environment, the City finds the proposed Project may be deemed to have a significant impact related to greenhouse gas emissions if it would:

Threshold 5.7-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Threshold 5.7-2: Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Pursuant to State CEQA Guidelines Section 15064.4, the methods suitable for analysis of GHG emissions are:

⁴⁶ City of Rancho Mirage, Rancho Mirage Sustainability Plan, March 2013, accessed May 2019, <https://ranchomirageca.gov/wp-content/uploads/2019/01/Sustainability-Plan.pdf>

1. Use a model or methodology to quantify greenhouse gas emissions resulting from a project. The Lead Agency has discretion to select the model it considers most appropriate provided it supports its decision with substantial evidence. The Lead Agency should explain the limitation of the particular model or methodology selected for use.
2. Rely on a qualitative analysis or performance-based standards.

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions and has not formally adopted a local plan for reducing GHG emissions. Nor have SCAQMD, OPR, CARB, CAPCOA, or any other state or regional agency adopted a numerical significance threshold for assessing GHG emissions that is applicable to the Project. Since there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the methodology for evaluating the Project's impacts related to GHG emissions focuses on its consistency with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigation GHG emissions. This evaluation of consistency with such plans is the sole basis for determining the significance of the Project's GHG-related impacts on the environment.

Riverside County has a CAP that addresses GHG emissions reduction in concert with AB 32. The CAP provides a methodology for determining whether implementation of a project will result in significant GHG emissions and air quality impacts. As previously discussed, the SCAQMD unofficially recommended a 3,000 MTCO₂e initial screening threshold for individual projects. This screening criterion was incorporated into the CAP but does not apply to large-scale developments, such as the proposed Specific Plan. For those projects exceeding the 3,000 MTCO₂e screening criterion, or those that are too large to evaluate against a simple metric, the CAP offers the screening table assessment to demonstrate compliance with AB 32.

The screening table method assigns points for each option incorporated into a project as mitigation or a project design feature (collectively referred to as "feature"). The point values correspond to the minimum emissions reduction expected from each feature. The menu of features allows maximum flexibility and options for how development projects can implement the GHG reduction measures. Projects that garner at least 100 points will be consistent with the reduction quantities anticipated in the County's CAP. As such, those projects that garner a total of 100 points or greater would not require quantification of project-specific GHG emissions. Consistent with CEQA Guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.

South Coast Air Quality Management District Efficiency Measures

In April 2008, SCAQMD convened a Working Group to develop GHG significance threshold. On December 5, 2008, the SCAQMD Governing Board adopted its staff proposal for an interim CEQA GHG significance

criteria for industrial stationary source projects where the SCAQMD is the lead agency. As to all other projects, where the SCAQMD is not the lead agency, the Board has, to date, not adopted any thresholds. The Working Group has not convened since the fall of 2010 and there is no plan to recommence the process. The proposed approach includes a tiered series of thresholds to be applied based on the amount of GHG emissions generated by a proposed project and the type of project, as described below:

Tier 1: Does the project qualify for any applicable statutory or categorical exemption under CEQA? If yes, no further action is required, and climate change impacts would be less than significant.

Tier 2: Is the project consistent with a GHG reduction plan? (The project must be consistent with CEQA Guidelines Sections 15064(h)(3), 15125(d), or 15152(s).) If yes, there is a presumption of less than significant impacts with respect to climate change.

Tier 3: Is the project's incremental increase in GHG emissions below or mitigated to less than the significance screening level (10,000 MTCO₂E per year for industrial projects; 3,000 MTCO₂E for residential projects/commercial projects; 3,500 MTCO₂E for mixed use projects)? If yes, there is a presumption of less than significant impacts with respect to climate change.

Tier 4: Does the project meet one of the following performance standards? If yes, there is a presumption of less than significant impacts with respect to climate change.

Option #1: Achieve some percentage reduction in GHG emissions from a base case scenario, including land use sector reductions from AB 32 (e.g., 16 percent reduction as recommended by the CARB 2014 Updated Scoping Plan).

Option #2: For individual projects, achieve a project-level efficiency target of 4.8 MTCO₂E per service population by 2020 or a target of 3.0 MTCO₂E per service population by 2035. For plans, achieve a plan-level efficiency target of 6.6 MTCO₂E per service population by 2020 or a target of 4.1 MTCO₂E per service population by 2035.

Option #3: Early compliance with AB 32 through early implementation of CARB's 2008 Scoping Plan Measures. The intent of this option is to accelerate GHG emission reduction from the various sectors subject to CARB's 2008 Scoping Plan to eliminate GHG emissions.

Tier 5: Projects should obtain GHG emission offsets to reduce significant impacts. Offsets in combination with any mitigation measures should achieve the target thresholds for any of the above Tiers. Otherwise, project impacts would remain significant.

Although not directly applicable to the Project, the SCAQMD recommendations provide useful mechanisms for evaluating GHG emissions per service population. Specifically, the SCAQMD Tier 4 option is to utilize an efficiency target. Option 3 has been modified to incorporate the Bay Area AQMD's concept of efficiency-based threshold for two target dates: 2020 and 2035. Relative to the 2020 target date, SCAQMD staff agrees with the methodology for establishing the efficiency threshold value of 6.6 and 4.1 MTCO₂ per year for plans because this number is based on statewide service population in 2020 and 2035, respectively. Relative to the 2035 target date, this target date was selected to be consistent with the GHG reduction target date of SB 375. Overall, GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent, resulting in an efficiency threshold for plan of 4.1 MTCO₂e per year.

Consistency Analysis

For purposes of assessing consistency with, applicable plans, policy, or regulations, the SCAG RTP/SCS GHG emission reduction plan for land use and transportation emissions is the applicable plan in assessing whether the project conflicts with an applicable plan adopted for the purpose of reducing GHG emissions. The OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

The Project's GHG impacts are evaluated by assessing the Project's consistency with applicable Statewide, regional, and local GHG reduction plans and strategies. The SCAG RTP/SCS GHG emission reduction plan for land use and transportation emissions is the applicable plan in assessing whether the project conflicts with an applicable plan adopted for the purpose of reducing GHG emissions. In addition, the City's Sustainability Plan summarizes policies that support the City's GHG reduction measures and won't contribute to GHG reductions and sustainable practices.

On a regional level, the SCAG 2016 RTP/SCS contains measures to achieve VMT reductions required under SB 375. Thus, if the Project complies with these plans, policies, regulations, and requirements, the Project would result in a less than significant impact because it would be consistent with the overarching state, regional, and local plans for GHG reduction

2. Methodology

Methodologies for Evaluating Significance

The analysis of the Project's GHG emissions consists of a quantitative analysis of the GHG emissions generated by the Project and a qualitative analysis of the Project's consistency with adopted GHG-related legislation, plans, and policies. This approach is in accordance with CEQA Guidelines Section 15064.4(a), which affirms the discretion of a lead agency to determine, in the context of a particular project, whether to use quantitative and/or qualitative methodologies to determine the significance of a project's impacts.

Emissions Inventory Modeling

The California Emissions Estimator Model Version 2016.3.2, known as CalEEMod, is the California Air Resources Board (CARB)–approved computer program model recommended by SCAQMD for use in the quantification of air quality emissions, including GHG emissions. CalEEMod was developed under the auspices of SCAQMD, with input from other California air districts. CalEEMod utilizes widely accepted models for emissions estimates combined with appropriate data that can be used if site-specific information is not available. For example, CalEEMod incorporates USEPA-developed emission factors; CARB’s on-road and off-road equipment emission models, such as EMFAC and OFFROAD;⁴⁷ and studies commissioned by other California agencies, such as the CEC and CalRecycle. Proposed Project development would generate GHG emissions from a number of individual sources during both construction and postconstruction (operational) use of the buildings and related activities (e.g., landscape maintenance). These individual sources collectively are hereafter referred to as the Proposed Project’s GHG emissions inventory.

CalEEMod version 2016.3.2 was used to quantify the Project’s GHG emissions. CalEEMod provides a platform to calculate both construction emissions and operational emissions from a land use development project. The following GHG emission sources covered by CalEEMod model include:

- One-time construction emissions associated with grading, utility installation, building construction, application of architectural coatings (e.g., paint), and paving from emission sources that include both off-road construction equipment and on-road mobile equipment associated with workers, hauling, and the delivery of construction materials to the Project Site. Construction emissions associated with dust control and disposal of waste at landfills were also included.
- Operational emissions associated with the occupancy of development, such as on-road mobile vehicle traffic generated by the land uses; off-road emissions from landscaping equipment; energy (i.e., electricity and natural gas) and water usage in the buildings.

Riverside County CAP Screening Table

The CAP Screening Tables⁴⁸ includes a discussion of how the 100-point minimum relates to the County’s emission reduction target. Using the emission reductions within the Screening Table, the amount of emission reductions afforded new development is segregated out of the aggregate total. Once the process

47 EMFAC is an emissions factor model used to calculate emissions rates from on-road vehicles (e.g., passenger vehicles; haul trucks). OFFROAD is an emissions factor model used to calculate emission rates from off-road mobile sources (e.g., construction equipment). CalEEMod version 2016.3.2 utilizes CARB’s 2014 version of EMFAC.

48 County of Riverside, *Greenhouse Gas Emissions Screening Tables, Table 1 Screening Table for GHG Implementation Measures for Residential Development*, March 2015. http://planning.rctlma.org/Portals/0/genplan/general_plan_2016/climate_action_plan/Appendix%20F.pdf?ver=2016-04-01-101218-630, accessed August 2018.

of segregating new development out of the aggregate reduction totals is completed, the points are then proportioned by residential unit or square feet of commercial/industrial uses. This is accomplished by taking the predicted growth in households and commercial/industrial uses and proportioning the appropriate Implementation Measure reduction quantities for new development to the residential and commercial/industrial land use sectors within the Screening Table. These calculations create point values that are allocated by residential unit or commercial/industrial square footage (measured in 1,000 square feet). Because of this, the size of the project is not relevant to the Screening Table. Regardless of size, each project needs to garnish 100 points to demonstrate consistency with the Technical Report. Efficiency, not size of the project is critical.

Therefore, projects that achieve at least 100 points are determined to be consistent with the reduction quantities anticipated in the County's GHG Technical Report. As such, further project-specific GHG quantification is not required. Consistent with the CEQA guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.

3. Project Design Features

The following Project Design Features (PDF) are included in the Project and would reduce the potential greenhouse gas emission impacts thereof. These features were taken into account in the analysis of potential impacts.

PDF 5.7-1: Implement as much of the mandatory 2016 California Green Building Standards as practicable, including, but not limited to the following voluntary measures:

- Active and passive solar design for non-residential buildings;
- The use of water-permeable surfaces;
- High efficiency heating and cooling systems;
- Graywater irrigation systems when available;
- Storm-water runoff capture;
- Water-conserving faucets and fixtures shall be included in all buildings;
- In compliance with State law, residences will include solar panels. Buildings would be designed to facilitate and accommodate sustainable alternative power generation; and

- Electric vehicle use shall be facilitated through project design features, and vehicle charging units shall be located within major parking fields in the Town Center and resort areas.

PDF 5.7-1: Established sustainable best management practices, such as Leadership in Energy and Environmental Design (LEED) certification, ComfortWise and EnergyStar Home, shall be pursued to the maximum extent feasible throughout the Specific Plan area. The comprehensiveness of these certification programs guarantees, for their respective types of development, the achievement of a high minimum standard. For maximum flexibility, however, developers and builders may implement sustainable building and development practices most appropriate to the specific context within the Coachella Valley.

PDF 5.7-3: Builders shall, to the greatest extent feasible, participate in programs offered or sponsored by local utilities such as California EnergyStar New Homes Program, Residential Property Development Program, California Home Energy Efficiency Rating System (CHEERS) Program, and Savings by Design Program.

4. Project Impacts

Threshold 5.7-1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction

Construction activity impacts are relatively short in duration, they contribute a relatively small portion of the total lifetime GHG emissions of a project. The combustion of fossil fuels in construction equipment results in GHG emissions of CO₂ and smaller amounts of CH₄ and N₂O. Emissions of GHG would also result from the combustion of fossil fuels from haul trucks and vendor trucks delivering materials, and construction worker vehicles commuting to and from the Project Site. Typically, light-duty and medium-duty automobiles and trucks would be used for worker trips and heavy-duty trucks would be used for vendor trips. The vast majority of motor vehicles used for worker trips rely on gasoline as an energy source while motor vehicles used for vendor trips would primarily rely on diesel as an energy source. In addition, GHG emissions-reduction measures for construction equipment are relatively limited. Therefore, in its *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Thresholds*, the SCAQMD recommends that construction emissions be amortized over a 30-year project lifetime so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies. That method is used in this analysis.

The Project is anticipated to be constructed with a grading for the entire Project Site first followed by approximately 11 years of development that includes building construction, architectural coatings, and paving. Construction assumptions used in the analysis of GHG emissions conservatively assume that the Project would be constructed with the most intensive activities occurring on a daily basis. The total emissions from construction of the Project are shown in **Table 5.7-3: Construction Annual Greenhouse Gas Emissions**. As recommended by SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine annual construction emissions estimate that can be added to the Project's operational emissions) in order to determine the Project's annual GHG emissions inventory.⁴⁹ Total GHG emissions from the construction activities are 40,300 MTCO_{2e}. The total GHG emissions were amortized over 30-year project lifetime at 1,343 MTCO_{2e} per year.

**Table 5.7-3
Construction Annual Greenhouse Gas Emissions**

Year ^a	MTCO _{2e}
Grading	2,125
Year 1	3,708
Year 2	3,639
Year 3	3,549
Year 4	3,450
Year 5	3,427
Year 6	3,341
Year 7	3,277
Year 8	3,221
Year 9	3,415
Year 10	3,427
Year 11	3,721
Overall Total	40,300
30-Year Annual Amortized Rate	1,343

Source: Refer to **Appendix B, Section 2.1 Overall Construction**

Note: Totals in table may not appear to add exactly due to rounding in the computer model calculations.

^a Emissions for each year were taken from the concurrent run as emissions associated with construction were higher to prevent a more conservative estimate.

GHG = greenhouse gas; MTCO_{2e} = metric tons of carbon dioxide equivalent

49 SCAQMD Governing Board Agenda Item 31, December 8, 2008.

Operation

Emissions from mobile and area sources and indirect emissions from energy and water use, wastewater, as well as waste management would occur every year after full development of the uses allowed by the Project. This section addresses operational GHG emissions.

Area Sources

The area source GHG emissions included in this analysis result primarily from natural gas fireplaces with additional emissions from landscaping-related fuel combustion sources, such as lawn mowers. GHG emission due to natural gas combustion in buildings other than from fireplaces are excluded from area sources since they are included in the emissions associated with building energy use.

Consumer products are various solvents used in non-industrial applications which emit Reactive Organic Gases (ROGs) during their product use. Consumer products include cleaning supplies, kitchen aerosols, cosmetics, and toiletries. All land use buildings are assumed to be repainted at a rate of 10 percent of area per year. This is based on the assumptions used by SCAQMD. However, CalEEMod does not consider architectural coatings and consumer products to be sources of GHG.

The GHG emissions for the Project were calculated using CalEEMod. All fireplaces were assumed to be natural gas burning, based on SCAQMD Rule 445. CalEEMod defaults were used for landscape maintenance emissions. Area source emissions are shown in **Table 5.7-4: Area Source Greenhouse Gas Emissions**. As shown in **Table 5.7-4**, Project emissions would result in 65 MTCO₂ per year from area sources. It is important to note, implementing the SCAQMD voluntary electric lawn mower program⁵⁰ would require the Project promote the use of electric lawnmowers, leafblowers, and chainsaws during landscaping activities. Implementation of the voluntary program would reduce GHG emissions related to landscaping by approximately 8 MTCO₂e per year.

Table 5.7-4
Area Source Greenhouse Gas Emissions

Source	Unmitigated MTCO ₂ e per year
Architectural Coating	0
Consumer Products	0
Hearth	41

⁵⁰ SCAQMD, Electric Lawn Mower Rebate Program, accessed July 2019, <http://www.aqmd.gov/home/programs/community/electric-lawn-mower-rebate-program>.

Source	Unmitigated MTCO ₂ e per year
Landscaping	24
TOTAL	65

Source: Refer to **Appendix B** for Air Quality/Greenhouse Gas Emission Output.

Energy Sources

GHGs are emitted as a result of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits CO₂ and other GHGs directly into the atmosphere; when this occurs in a building, it is a direct emission source associated with that building. GHGs are also emitted during the generation of electricity from fossil fuels. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; electricity use in a building generally causes emission in an indirect manner.

Estimated emissions from the combustion of natural gas and other fuels from the implementation of the Project are calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable emissions factors chosen by the utility company. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG intensity factors for Southern California Edison were selected in CalEEMod. Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as plug-in appliances. CalEEMod calculates energy use from systems covered by Title 24 (e.g., heating, ventilation, and air conditioning [HVAC] system, water heating system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources not covered by Title 24 or lighting.

Energy source emissions are shown in **Table 5.7-5: Energy Source Greenhouse Gas Emissions**. As shown in **Table 5.7-5**, the Project would result in 8,357 MTCO₂e per year for electricity and 4,359 MTCO₂e per year for natural gas. Therefore, the total energy source emissions for the Project would be 12,716 MTCO₂e per year.

Table 5.7-5
Energy Source Greenhouse Gas Emissions

Land Use	Electricity	Natural Gas
	Unmitigated MTCO ₂ e per year	Unmitigated MTCO ₂ e per year
Multifamily	1,215	661
Hotel	3,3689	1,871

Land Use	Electricity	Natural Gas
	Unmitigated MTCO ₂ e per year	Unmitigated MTCO ₂ e per year
Lagoon	0	0
Retail	707	21
Single-family	3,066	1,807
TOTAL	8,357	4,359

Source: Refer to **Appendix B** for Air Quality/Greenhouse Gas Emission Output.

Mobile Sources Emissions

Vehicle trips generated by growth within the Project Site vicinity would result in operational emissions through the combustion of fossil fuels. CO₂ emissions were determined based on the trip rates from the Traffic Study, attached as **Appendix I.1** to the Draft EIR. The trip rate takes into account internal and external trips. The City is served by multiple transit operators, specifically within the vicinity of the Project Site, with networks connecting different communities within and outside of City boundaries. The primary transit operator is SunLine Transit Authority, which provides local transit throughout Coachella Valley, including the City and the City of Palm Desert. The Project's mobile source emissions would result in 25,060 MTCO₂e per year (refer to **Appendix B**). As discussed in **Section 5.15: Traffic and Transportation**, the Project's configuration of the new neighborhoods would reduce VMT in comparison to the average for the City and surrounding area. These results are considered reasonable given the Project's mix of land uses and increased accessibility provided through the Project Site.

Solid Waste Emissions

Solid waste generation and associated emissions are calculated based on the square footage of the Project Area, using default data found in CalEEMod for the proposed land uses. The program quantifies the GHG emissions associated with the decomposition of the waste which generates methane based on the total amount of degradable organic carbon. Disposal of organic waste in landfills can lead to the generation of CH₄, a potent GHG. By generating solid waste, the Project would contribute to the emission of fugitive CH₄ from landfills, as well as CO₂ and N₂O from the operation of trash collection vehicles. It is important to note, the Recreational Swimming Pool land use was utilized in the CalEEMod program to represent the proposed lagoon use. This use is described in CalEEMod as a typical recreational swimming pool that is associated with community centers, parks, swim clubs and other similar uses calculating solid waste generation by the number of visitors. This designation in CalEEMod program vastly overstates the amount of solid waste that will be generated by Grand Oasis lagoon because the total number of users will be

extremely small on a per acre basis. . As shown in **Table 5.7-6: Solid Waste Source Greenhouse Gas Emissions**, GHG emissions resulting from solid waste would be 5,373 MTCO₂ per year.

**Table 5.7-6
Solid Waste Source Greenhouse Gas Emissions**

Land Use	Unmitigated MTCO₂e per year
Multifamily	192
Hotel	110
Lagoon	4,245
Retail	92
Single-family	733
TOTAL	5,373

Source: Refer to **Appendix B** for Air Quality/Greenhouse Gas Emission Output.

Water Consumption and Wastewater Emissions

California's water conveyance system is energy intensive, with electricity used to pump and treat water. The Project will result in indirect GHG emissions due to water consumption and wastewater generation. Water consumption and wastewater generation, and their associated emissions, are calculated based on the square footage of the Project Site, using CalEEMod data. As shown in **Table 5.7-7: Water Source Greenhouse Gas Emissions**, the Project's water and wastewater GHG emissions would be 1,425 MTCO₂ per year.

**Table 5.7-7
Water Source Greenhouse Gas Emissions**

Land Use	Unmitigated MTCO₂e per year
Multifamily	421
Hotel	60
Lagoon	288
Retail	100
Single-family	556
TOTAL	1,425

Source: Refer to **Appendix B** for Air Quality/Greenhouse Gas Emission Output.

Total Emissions

Relevant to the Project, the SCAQMD Tier 4 option utilizes an efficiency target of 4.1 MTCO₂e per service population by the year 2035. As discussed in **Section 5.12: Population and Housing**, the Project forecasts a total of 3,922 residents and 1,038 employees, with a total service population of 4,960. As shown in **Table 5.7-8: Total Greenhouse Gas Emissions**, the Project's GHG emissions would result in a total of 45,982 MTCO₂e annually and 9.3 MTCO₂e per service population during buildout.

Reduction from compliance with local and State standards, as well as implementation and enforcement of the Project Design Features **PDF 5.7-1** through **PDF 5.7-3**, which includes designs consistent with the Project's Sustainability Design Guidelines, and Mitigation Measures **MM 5.7-1** through **5.7-9**, would further reduce emissions that are not quantifiable in the CalEEMod model, providing additional reduction not originally accounted. However, according to the quantitative method discussed in this section, impacts would be considered significant and unavoidable because the reductions in GHG emissions scheduled through the Project Design Features and Mitigation Measures cannot be accurately quantified at this time.

Table 5.7-8
Total Greenhouse Gas Emissions

Source	Unmitigated MTCO ₂ e per year
Construction (amortized)	1,343
Area	65
Energy	12,716
Mobile	25,060
Waste	5,373
Water	1,425
TOTAL	45,982
Estimated Service Population (Residents and Employees)	4,960
GHG Efficiency MTCO ₂ e/yr/SP	9.3

Source: CalEEMod Emissions calculations are provided in **Appendix B: Air Quality and Greenhouse Gas Emissions Modeling**

Note: Abbreviation: MTCO₂e = metric tons of carbon dioxide emissions.

Threshold 5.7-2: Would the project conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

County of Riverside CAP

GHG emissions are greater than screening threshold for land use projects, as shown in **Table 5.7-8** above. Because of this, one of the two Riverside County CAP options is required to assess GHG impacts. For the purposes of this analysis, the option selected to determine GHG impacts is an analysis pursuant to the Screening Tables, as shown in **Table 5.7-9: County of Riverside Greenhouse Gas Screening Table**.

Based on the proposed features for residential and commercial projects, the Project would result in a minimum total of 104 points. It is important to note, the Project would also include GHG reduction features that do not have assigned point values in the Screening Table. Such features require documentation of the energy efficiency of innovative designs and point values are given based upon the proven efficiency beyond Title 24 Energy Efficiency Standards. In addition, the proposed residential developments within walking and biking distance of local retail helps to reduce vehicle trips and/or vehicle miles travelled. However, projects that garner at least 100 points are determined to be consistent with the reduction quantities anticipated in the County's CAP and are determined to have a less than significant individual and cumulative impact for GHG emissions.

The Project would incorporate measures that reduce GHG emissions compared to a conventional project of similar size and scope. The Project would incorporate energy and water efficiency design features to enhance efficiency in all aspects of the buildings' life cycle. These designs would increase the structures' energy efficiency, water efficiency, and overall sustainability. The Project would also exceed Title 24 energy requirements consistent with the residential features identified in the County's CAP screening table. These measures and features are consistent with existing recommendations to reduce GHG emissions. The Project would also include a comprehensive system of pedestrian, neighborhood electric vehicle (NEV), golf cart, and bicycle travel throughout the Project Site and into the surrounding community to reduce vehicle miles traveled by personal vehicle use. Landscaping for the Project would involve the use of desert-appropriate and drought-tolerant plants. Based on the incorporation of these features and given that the Project garners more than 100 points (by including enough GHG-reducing elements), the Project would be consistent with the County's plan for reducing emissions.

**Table 5.7-9
County of Riverside Greenhouse Gas Screening Table**

Feature	Description	Project Consistency	Points
E1.A.4 Air Infiltration	Minimizing leaks in the building envelope is as important as the insulation properties of the building. Insulation does not effectively if there is excess air leakage. Air barrier applied to the exterior walls, calking, and visual such as the HERS Verified Quality Insulation Installation (QII or equivalent)	The Project will satisfy this measure by adhering to the requirement of the 2016 CalGreen Building Code by providing certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.	10
E1.B.1 Heating/Cooling Distribution System	Modest Duct insulation (R-6)	The Project will satisfy this measure by installing duct insulation rated R-6	7
E1.B.4 Daylighting	Daylighting is the ability of each room within the building to provide outside light during the day reducing the need for artificial lighting during daylight hours. All rooms within the living space have daylight (through the use of windows, solar tubes, skylights, etc.)	The Project will satisfy this measure by installing daylighting such that all of the conditioned space will have daylight via windows, solar tubes, skylight or equivalents. In addition, Riverside County General Plan Policy AQ 5.4 encourages the incorporation of energy-efficient design elements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.	1
E1.B.6 Appliances	Energy Star Refrigerator (new) Energy Star Dish Washer (new) Energy Star Washing Machine (new)	The Project will satisfy this measure by adhering to the Riverside County General Plan Energy Efficiency and Conservation policy AQ 5.2 which adopts incentives and/or regulations to enact energy conservation requirements for private and public developments.	1 1 1
E1.C.3 Energy Star Homes	EPA Energy Star for Homes	The Project will satisfy this measure by adhering to the Riverside County General Plan Energy Efficiency and Conservation policy AQ 5.2 which adopts incentives and/or regulations to enact energy conservation requirements for private and public developments.	25
E2.A.1 Photovoltaic	Solar Photovoltaic panels installed on individual homes or in collective neighborhood arrangements such that the power provided augments:	The Project will satisfy this measure by providing solar photovoltaic panels, adhering to the State mandate and	10

Feature	Description	Project Consistency	Points
	10 percent of the power needs of the Project	requirement in the 2019 Title 24, Part 6, Building Energy Efficiency Standards.	
E5.B.6 Artificial Lighting	High efficiency lights (50 percent of in-unit fixture are high efficacy)	The project will satisfy this measure by adhering to the requirements of the 2016 CalGreen Building Code Section 150 by permanently installing lighting within the interior common areas in the buildings that are high efficacy luminaries, controlled by an occupant sensor.	9
W1.A.1 Water Efficient Landscaping	Only California Native Plants that requires no irrigation or some supplemental irrigation	The project will satisfy this measure through compliance with the landscaping plan that identifies the use of drought tolerant plants and California Native Plants only.	8
W1.A.2 Water Efficient Irrigation Systems	Weather based irrigation control systems or moisture sensors (demonstrate 20 percent reduced water use)	The Project will satisfy this measure by adhering to the requirements of the 2016 CalGreen Building Code Section 4.304.1 and complying with the Model Water Efficient Landscape Ordinance (MWELO) as required by Riverside County Ordinance Section 859.2, resulting in a minimum of 20 percent reduced water use for outdoor irrigation.	3
W1.B.1 Showers	Water Efficient Showerheads (2.0 gpm)	The Project will satisfy this measure by adhering to the requirements of the 2016 CalGreen Building Code Section 4.303.1 by installing showerheads not exceeding 2.0 gpm at 80 psi	3
W1.B.2 Toilets	Water Efficient Toilets (1.5 gpm)	The Project will satisfy this measure by adhering to the requirements of the 2016 CalGreen Building Code Section 4.303.1 by installing water efficient toilets less than or equal to 1.28 gal/flush	3
W1.B.3 Faucets	Water Efficient faucets (1.28 gpm)	The Project will satisfy this measure by adhering to the requirements of the 2016 CalGreen Building Code Section 4.303.1 by installing water efficient faucets for the lavatories, metering, and kitchen.	3
W1.B.4 Dishwasher	Water Efficient Dishwasher (6 gallons per cycle or less)	The Project will satisfy this measure by adhering to the requirements of the 2016 CalGreen Building Code Section 110.1 to install dishwashers that meet or exceed the ENERGY STAR Program requirements	1

Feature	Description	Project Consistency	Points
W1.B.5 Washing Machine	Water Efficient Washing Machine (Water factor <5.5)	The Project will satisfy this measure by adhering to the requirements of the 2016 CALGreen Building Code by installing water efficient washing machines.	1
T7.A.1 Electric Vehicle Recharging	Provide circuit and capacity in garages of residential units for installation of electric vehicle charging stations	The Project will satisfy this measure by adhering to the requirements of the 2016 CalGreen Building Code Section 4.106.4.1 to install a raceway to accommodate a dedicated 208/240-volt branch circuit for each dwelling unit.	1
L2.A.1 Landscape Equipment	Electric lawn equipment including lawn mowers, leaf blowers and vacuums, shredders, trimmers, and chain saws are available. When electric landscape equipment is used in place of conventional gas-powered equipment, direct GHG emissions from natural gas combustion are replaced with indirect GHG emissions associated with the electricity used to power the equipment. Project provides electrical outlets on the exterior of all building walls so that electric landscaping equipment is compatible with all built facilities	The Project will satisfy this measure by providing outlets on the exterior of all building walls	8
SW1.A.1 Recycling	County initiated recycling program diverting 80 percent of waste requires coordination in neighborhoods to realize this goal. The following recycling features will help the County fulfill this goal: Provide green waste composing bins at each residential unit	The Project will satisfy this measure by providing green waste composing bins at each residential unit.	4
SW2.A.1 Recycling of Construction/Demolition Debris	Recycle 65 percent of debris	The Project will satisfy this measure by adhering to Chapter 4: Residential Mandatory Measure of the 2016 CalGreen Building Standards Section 4.408.1 by recycling and/or salvaging for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste or meet a more stringent local construction and demolition waste management ordinance.	4
TOTAL			103

Rancho Mirage Sustainability Plan

The Rancho Mirage Sustainability Plan summarizes key general plan policies that support the City's GHG reduction measures and would contribute to GHG reductions and sustainable practices in the City. A discussion of the applicable key areas for advancing sustainability is provided below. As discussed, the Project would be consistent with the City's Sustainability Plan through compliance and adherence to local regulations.

Where We Live (LIVE)

As identified in Project Design Feature **PDF 5.7-3**, the Project would promote sustainable and energy efficient development by utilizing EnergyStar utilities for energy efficient lighting. These appliances and systems use less natural gas and electricity while providing more control. In addition, the Project would include prominent sustainability features such as less energy-intensive lighting systems, and an energy grid designed to minimize peak loads and provide efficient energy storage. This includes minimizing light pollution through encouragement of LED light fixtures for outdoor lighting infrastructure.

Where We Work (WORK)

The Project would create sustainable office and work environments. As mentioned above, with implementation of Project Design Feature **PDF 5.7-3**, the Project would include prominent sustainability features such as less energy-intensive lighting systems, and an energy grid designed to minimize peak loads and provide efficient energy storage.

How We Build (BUILD)

The Green for Life Voluntary Green Building program serve as a catalyst in the process of creating collaborative solutions to lower costs, promote healthy living, and enhance efficiencies. The Project's landscape design guidelines include broad canopy trees to provide shade for sidewalks and vehicles and shading devices, such as roof overhangs, market umbrellas, and arcades into buildings, parking courts, and outdoor spaces to minimize unnecessary solar heat gain.

How We Get Around (MOBILITY)

In Rancho Mirage, emissions from transportation represent the second largest source of emissions, behind electricity. Development of the Project would ensure that mobility and accessibility for people and goods would be maximized. The Section 31 Specific Plan takes a multi-modal approach to circulation system planning within the Project Site and encourages a balanced and safe mix of vehicular, pedestrian, bicycle, golf cart, and NEV transit throughout the interior and perimeter of the Project Site. The Project would include six multi-use connectivity roadways, pathways and corridors including: Grand Oasis

Promenade, Lagoon Multi-Use Corridor, Residential Multi-Use Path, Town Center Multi-Use Path, Multi-Use Paseo, and Landscaped Edge Multi-Use Path. These components would provide access and accommodate various modes of transportation such as golf carts and bicycles.

How We Govern (Govern)

Municipal operations in the City of Rancho Mirage are responsible for less than 1 percent of total community emissions. The Project would comply with the voluntary “Solar Ready” ordinance that would require all new construction to be prepared for solar, including pre-wiring while roof joists and walls are exposed.

Where We Visit and Play (RECREATE)

The City recognizes the value of golf courses, resorts, hotels, clubs, and special events to the City. These amenities will continue to be key elements in the City’s sustainable future. The goal of this Plan is to promote efficiency, cut costs, and reduce emissions. As discussed in **Section 3.0: Project Description**, the Project’s objective includes to design a high-quality, master-planned community featuring residential, hotel, mixed-use and commercial development oriented around a Grand Oasis Crystal Lagoon offering substantial new public recreational opportunities to extend the tourism season in Rancho Mirage.

SCAG RTP/SCS 2016 – 2040

The 2016 RTP/SCS is expected to help SCAG reach its GHG reduction goals, as identified by CARB, with reductions in per capita passenger vehicle GHG emissions of 9 percent by 2020 and 16 percent by 2035.⁵¹ Furthermore, although there are no per capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the 2016 RTP/SCS GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040.⁵²

The 2016 RTP/SCS would result in an estimate 8 percent decrease in per capita passenger vehicle GHG emissions by 2020, 18 percent decrease in per capita passenger vehicle GHG emissions by 2035, and 21 percent decrease in per capita passenger vehicle GHG emissions by 2040. In March 2018, CARB adopted updated targets requiring a 19 percent decrease in VMT for the SCAG region by 2035. As the CARB targets were adopted after the 2016 RTP/SCS, it is expected that the updated targets will be incorporated into the next RTP/SCS. The 2016 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State’s GHG emission reduction goals.

51 CARB, *Regional Greenhouse Gas Emission Reduction Targets Pursuant to SB 375*, Resolution 10-31.

52 SCAG, *Final 2016–2040 RTP/SCS*, April 2016, p. 153.

In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2016 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2016 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use.

Integrated Growth Forecast

The 2016 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. As discussed in **Section 5.12: Population and Housing**, total population projected from buildout of the Project Site would add up to 1,932 additional residential units and 3,913 new residents to the City of Rancho Mirage. The population increase associated with the Project would account for approximately 57 percent of the remaining capacity for population growth anticipated in the City's General Plan by 2035 and approximately 35 percent of the remaining capacity anticipated across the City and its Sphere of Influence (SOI) combined by 2035. Further, the Project-generated population increase would represent approximately 1 percent of the anticipated increase in residents within the CVAG region between 2020 and 2040. Accordingly, the Project would not result in a population increase in substantial excess of what is anticipated by the City.

The Project characteristics listed below are consistent with the CAPCOA guidance document, *Quantifying Greenhouse Gas Mitigation Measures*, which identifies the VMT and vehicle trips reductions for the site. Measures applicable to the Project include the following; a brief description of the Project's relevance to the measure is also provided.

- **CAPCOA Measure LUT-1 – Increase Density:** Increased density, measured in terms of persons, jobs, or dwelling units per unit area, reduced emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies, such as enhanced transit services.
- **CAPCOA Measure LUT-3 – Increase Diversity of Urban and Suburban Developments:** The Project would introduce new uses at the site, including high-quality residential neighborhoods with a range of housing opportunities that are compatible in character with the existing surrounding neighborhoods. Moreover, the Project would introduce higher density, mixed-use residential development within the Town Center Planning Area in the northeastern portion of the site. The Project would improve access to the existing and future neighborhoods by promoting alternative forms of transportation through a multi-modal pathway that will serve pedestrians, bicyclists, and golf carts.

- **CAPCOA Measure SDT-1 – Provide Pedestrian Network Improvements:** The Project would improve access to the existing and future neighborhoods by promoting alternative forms of transportation through a multi-modal pathway that will serve pedestrians, bicyclists, and golf carts.
- **CAPCOA Measure SDT-3 – Implement a Neighborhood Electric Vehicle Network:** The Section 31 Specific Plan takes a multi-modal approach to circulation system planning within the Project Site and encourages a balanced and safe mix of vehicular, pedestrian, bicycle, golf cart, and neighborhood electric vehicle (NEV) transit throughout the interior and perimeter of the Project Site.
- **CAPCOA Measure WUW-3 – Design Water-Efficient Landscapes:** The Landscape Plan included in the Section 31 Specific Plan draws from the natural desert context of the City using desert and low-water-use plant materials. The Landscape Plan is designed to maximize water efficiency while maintaining a pleasing environment for residents of and visitors to the community.

Section 5.10: Land Use and Planning, presents the Project’s consistency with the RTP/SCS. Guiding policies in the RTP/SCS focus on SCAG’s priorities for investment and strategies to preserve, maintain and optimize the transportation system. The analysis contained in **Table 5.10-2** provides an assessment of the Project’s relationship to regional goals pertaining to issues of environmental concern contained in various chapters of the RTP/SCS. The analysis contained in **Table 5.10-2** concludes that the Project would be consistent with the RTP/SCS goals. Therefore, implementation of the Project would not result in significant impacts related to greenhouse gases due to inconsistency with the RTP/SCS goals. Accordingly, impacts would be less than significant, according to this qualitative analysis.

5. Cumulative Impacts

GHG emissions and global climate change remain an existing significant cumulative issue. To achieve Statewide goals, CARB is in the process of establishing and implementing regulations to reduce Statewide GHG emissions. Currently, no generally accepted methodology exists to determine whether GHG emissions associated with a specific project represent new emissions or existing and/or displaced emissions.

The Project would minimize its GHG emissions to the greatest extent feasible through the incorporation of Project Design Features **PDF 5.7-1** through **PDF 5.7-3**, which include designs consistent with the Project’s Sustainability Design Guidelines, and Mitigation Measures **MM 5.7-1** through **5.7-9**, which would further reduce emissions. However, as these measures are not currently quantifiable in this analysis, the Project is shown to exceed SCAQMD’s Tier 3 threshold for incremental increases in GHG emissions. Therefore, consistent with CEQA Guidelines Section 15064h(3) and given the status of GHG emissions and global climate change as an existing significant cumulative issue, the City, acting as Lead Agency, has made the conservative determination that the Project’s contribution to cumulative GHG emission and global climate change would be significant and unavoidable.

C. MITIGATION MEASURES

In addition to the Project Design Features identified above, the following Mitigation Measures, along with mitigation which are also identified in **Section 5.2: Air Quality**, would reduce greenhouse gas impacts:

- MM 5.7-1:** Prior to issuance of each building permit, the applicant shall provide a list to the Planning Department of the green building practices and design elements used in building that reduce GHG emissions. The green building practices and design elements shall be consistent with the current standards in the Voluntary Green Building Program and any other green building standards subsequently adopted by the City of Rancho Mirage (City).
- MM 5.7-2:** Prior to the issuance of each building permit, the applicant shall provide evidence of its use of energy-efficient designs meeting and/or consistent with the standards in the current Voluntary Green Building Program and any other green building standards adopted by the City. In accordance with the Voluntary Green Building Program, all residential buildings shall, at a minimum, exceed Title 24 (2008) by 15 percent and all non-residential buildings shall, at a minimum, exceed Title 24 (2008) by 15 percent. This measure does not exempt buildings from meeting future energy efficiency obligations that may result from future revisions to the Title 24 standards. Furthermore, the Project shall commit to exceeding future Title 24 standards as close to the 15 percent target for residential and commercial buildings as possible, to the extent that it is feasible to do so based on technological and financial feasibility factors at the time of permit application.
- MM 5.7-3:** Prior to the issuance of each building permit, the applicant shall provide evidence to the Planning Department of its use of energy efficient lighting, heating and cooling systems, appliances, equipment, and control systems, including the installation of ENERGY STAR-certified products, consistent with the standards in the Voluntary Green Building Program and any other energy efficiency standards adopted by the City.
- MM 5.7-4:** Prior to the issuance of each building permit, the applicant shall provide evidence to the appropriate Planning Department of the use of “cool” roofs or “green” roofs, and cool pavements for all roofs and pavements to the extent that such products are commercially available for the implementing Project.
- MM 5.7-5:** Prior to the issuance of each building permit, the applicant shall provide evidence to the appropriate Planning Department of the use of automatic covers, efficient pumps and motors, and solar heating for all pools and spas to the extent that such products are commercially available for the implementing Project.

MM 5.7-6: Prior to the issuance of each building permit, the applicant shall provide evidence to the Planning Department of the use of water efficient irrigation systems and devices, such as soil-based irrigation controls and use water-efficient irrigation methods consistent with measures recommended in the Voluntary Green Building Program, and any other green building standards adopted by the City, and the Coachella Valley Water District water efficiency goals. In accordance with the appropriate program, the applicant shall provide evidence that building is consistent with the following Specific Plan-wide water conservation measures and/or does not prevent or conflict with the Specific Plan's ability to meet the following water conservation measures:

- 90 percent of all builder-installed plumbing devices in each residential building shall be low-flow and water-efficient.
- 90 percent of all builder-installed plumbing devices in each non-residential building shall be low-flow and water-efficient.
- Turf shall not exceed 10 percent of the total landscaped area of each lot, with the exception of parks and recreation centers.
- 80 percent of public and common landscape areas shall use smart irrigation systems per project.
- 80 percent of public and common landscape areas shall use drought-tolerant, native, and/or water-efficient plant materials per project.

MM 5.7-7: Prior to grading for the Project, the applicant or their contractor shall submit to the Public Works Department for review and approval of a site construction management plan for the reuse and recycle construction and demolition waste (including soil, vegetation, concrete, lumber, metal, and cardboard).

MM 5.7-8: Prior to the issuance of each building permit, the applicant shall provide evidence to the Planning Department of reuse and recycling measures in residential, industrial, and commercial projects consistent with measures recommended in the Voluntary Green Building Program or any other green building standards adopted by the City. In accordance with the adopted green building program, the applicant shall provide evidence that the building is consistent with the following Specific Plan-wide recycling and waste reduction measures and/or does not prevent or conflict with the Specific Plan's ability to meet the following recycling and waste reduction measures:

- Provide recycling containers within all single- and multifamily residential communities and all commercial and office buildings.

MM 5.7-9: Prior to the issuance of each building permit, the applicant shall provide evidence to the Planning Department the use of employment-based trip and vehicle miles traveled (VMT) policies that encourage the use of alternative transportation. Comprehensive employment-based trip and VMT reduction policy measures shall be in compliance with City mass transit programs and include but are not limited to the measures listed below:

- Seek approval from the appropriate Planning Department(s) to waive minimum parking requirements and reduce parking from the minimum standards by as much as 20 percent for projects within a quarter mile of a transit station.
- Use shared and/or centralized parking facilities consistent with a “park once” approach.
- Require that employers provide information on public transportation options to employees.
- Require that large employers (250 or more employees at a single work-site location) and encourage small employers (less than 250 employees at a single work-site location) to provide bicycle parking facilities, employee break rooms with refrigerators and microwaves, and automated teller machines (ATMs).
- Require that large employers (250 or more employees at a single work-site location) provide a transportation demand management program, such as vanpools/carpools, ride-sharing/ride-matching, and/or “guaranteed ride home” services that allow employees who use public transit to get a free ride home if they need to stay at work late.
- Consistent with City standards, require that the requisite number of electric vehicle (EV) charging stations be provided based on the total number of parking spaces required for a given use, including one EV charging station for 1–50 parking spaces, two for 51-200 parking spaces, and four for 201 parking spaces and over.

D. LEVEL OF SIGNIFICANCE OF MITIGATION

The Project would be consistent with the goals of the County's CAP and BMPs, which aim to reduce vehicle miles traveled (VMT) through integrating land use and transportation and requiring buildings to be more energy efficient than required by existing regulations. Reduction from compliance with local and state standards, as well as implementation and enforcement of the Project Design Features **PDF 5.7-1** through **PDF 5.7-3**, which includes designs consistent with the Project's Sustainability Design Guidelines, and Mitigation Measures **MM 5.7-1** through **5.7-9**, would further reduce emissions that are not quantifiable in the CalEEMod model, providing additional reduction not originally accounted. However, impacts would be considered significant and unavoidable.