

4.5 GREENHOUSE GAS EMISSIONS

4.5.1 Introduction and Methodology

The following discussion summarizes the greenhouse gas (GHG) emissions analysis for The Inns at Buena Vista Creek project (proposed project) that was prepared by Dudek in July 2016. The purpose of GHG emissions analysis is to estimate and evaluate the potential GHG impacts associated with implementation of the proposed project. The City of Oceanside has not established thresholds of significance for GHG emissions. In the absence of such guidance, the County of San Diego's (County's) guidance has been followed for this analysis (County of San Diego 2013). The analysis includes a quantitative analysis of project-related GHG emissions resulting from construction and operation of the proposed project. The complete report is included as Appendix G of this environmental impact report (EIR).

4.5.2 Existing Conditions

Environmental Setting

The Greenhouse Effect and Greenhouse Gases

Climate change refers to any substantial change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer). Gases that trap heat in the atmosphere are often called GHGs. The greenhouse effect traps heat in the troposphere through a threefold process, as follows: short-wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long-wave radiation; and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. This “trapping” of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature. Without it, the temperature of the Earth would be about 0°F (–18°C) instead of its present 57°F (14°C). Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect (National Climatic Data Center 2015).

Principal GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone (O₃), and water vapor (H₂O). Some GHGs, such as CO₂, CH₄, and N₂O, occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely byproducts of fossil fuel combustion, whereas CH₄ results mostly from off-gassing associated with agricultural practices and landfills. Man-made GHGs, which have a much greater heat-absorption potential than CO₂, include fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃), which are associated with certain industrial products and processes (CAT 2006).

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the earth (e.g., affect cloud formation or albedo) (EPA 2016). The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014a). The reference gas used is CO₂; therefore, GWP-weighted emissions are measured in metric tons of CO₂ equivalent (MT CO₂E).

The California Air Pollution Control Officers Association's California Emissions Estimator Model (CalEEMod) assumes that the GWP for CH₄ is 21 (which means that emissions of 1 MT CH₄ are equivalent to emissions of 21 MT CO₂), and the GWP for N₂O is 310, based on the IPCC Second Assessment Report (1995). The IPCC has released subsequent Assessment Reports with updated GWPs, and statewide documents are beginning to transition to the use of the GWPs in the IPCC Fourth Assessment Report (2007). GWP used in the U.S. Environmental Protection Agency's (EPA's) 2016 Inventory of U.S. Greenhouse Gas Emissions and Sinks and CARB's California 2016 GHG Emissions Inventory are based on the IPCC Fourth Assessment Report, which includes 1 for CO₂, 25 for CH₄, and 298 for N₂O (IPCC 2007). Nonetheless, the use of the different GWPs would not substantially change the overall project-generated GHG emissions, which are primarily CO₂. As such, for the purposes of this analysis, it is appropriate to use the hardwired GWP values in CalEEMod from the IPCC Second Assessment Report (1995).

Contributions to Greenhouse Gas Emissions

Per EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2014 (2016 report), total U.S. GHG emissions were approximately 6,870.5 million metric tons (MMT) CO₂E in 2014 (EPA 2016). The primary GHG emitted by human activities in the United States was CO₂, which represented approximately 80.9% of total GHG emissions (5,556.0 MMT CO₂E). The largest source of CO₂, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 93.7% of CO₂ emissions in 2014 (5,208.2 MMT CO₂E). Total U.S. GHG emissions have increased by 7.4% from 1990 to 2014, and emissions increased from 2013 to 2014 by 1.0% (70.5 MMT CO₂E). Since 1990, U.S. GHG emissions have increased at an average annual rate of 0.3%; however, overall, net emissions in 2014 were 8.6% below 2005 levels (EPA 2016).

According to the California's 2000–2014 GHG emissions inventory (2016 edition), California emitted 441.5 MMT CO₂E in 2014, including emissions resulting from out-of-state electrical generation (CARB 2016). The sources of GHG emissions in California include transportation,

industry, electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high-GWP substances, and recycling and waste. The California GHG emission source categories and their relative contributions in 2014 are presented in Table 4.5-1.

**Table 4.5-1
GHG Emissions Sources in California**

Source Category	Annual GHG Emissions (MMT CO ₂ E)	% of Total ^a
Transportation	159.53	36%
Industrial uses	93.32	21%
Electricity generation ^b	88.24	20%
Residential and commercial uses	38.34	9%
Agriculture	36.11	8%
High GWP substances	17.15	4%
Recycling and waste	8.85	2%
Total	441.54	100%

Source: CARB 2016.

Notes: Emissions reflect 2014 California GHG inventory.

GHG = greenhouse gas; MMT CO₂E = million metric tons of carbon dioxide equivalent; GWP = global warming potential.

^a Percentage of total has been rounded and total may not sum due to rounding.

^b Includes emissions associated with imported electricity, which account for 36.51 MMT CO₂E annually.

During the 2000 to 2014 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 13.9 MT per person to 11.4 MT per person in 2014, representing an 18% decrease. In addition, total GHG emissions in 2014 were 2.8 MMT CO₂E lower than 2013 emissions. The declining trend in GHG emissions, coupled with programs that will continue to provide additional GHG reductions going forward, demonstrates that California is on track to meet the 2020 target of 431 MMT CO₂E (CARB 2016). Table 4.5-2 presents the City of Oceanside's 2005 community-wide GHG emissions and the percent contribution of each emissions sector (commercial/industrial, residential, solid waste, transportation, and wastewater).

**Table 4.5-2
City of Oceanside Baseline Community-Wide GHG Emissions Inventory (2005)**

Source Category	Annual GHG Emissions (MT CO ₂ E)	Percent of Total
Commercial/industrial	159,784	17%
Residential	187,401	20%
Solid waste	31,423	3%
Transportation	579,873	60%
Wastewater	1,292	0%
Totals	959,772	100%

Source: City of Oceanside 2005.

Notes: GHG = greenhouse gas; MT CO₂E = metric tons of carbon dioxide equivalent.

As shown in Table 4.5-2, approximately 17% of the City of Oceanside’s community-wide GHG emissions in 2005 were attributed to commercial and industrial uses. Residential uses accounted for approximately 20%, transportation sources accounted for 60%, solid waste accounted for 3%, and wastewater accounted for the less than 1% of the City of Oceanside’s community-wide GHG emissions.

Potential Effects of Human Activity on Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 IPCC Synthesis Report indicated that warming of the climate system is unequivocal, and many of the observed changes since the 1950s are unprecedented. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, and rising sea levels (IPCC 2014b).

In California, climate change impacts have the potential to affect sea level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply (CCCC 2006). The primary effect of global climate change has been a 0.36°F (0.2°C) rise in average global tropospheric temperature per decade, determined from meteorological measurements worldwide between 1990 and 2005. Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. A warming of about 0.36°F (0.2°C) per decade is projected, and there are identifiable signs that global warming could be taking place.

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The average temperatures in California have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010a).

An increase in annual average temperature is a reasonably foreseeable effect of climate change. Observed changes over the last several decades across the western United States reveal clear signals of climate change. Statewide average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada (CCCC 2012). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1°F to 8.6°F, depending on emissions levels. Springtime warming—a critical influence on snowmelt—

will be particularly pronounced. Summer temperatures will rise more than winter temperatures, and the increases will be greater in inland California, compared to the coast. Heat waves will be more frequent, hotter, and longer. There will be fewer extremely cold nights (CCCC 2012). A decline of Sierra snowpack, which accounts for approximately half of the surface water storage in California, by 30% to as much as 90% is predicted over the next 100 years (CAT 2006).

Model projections for precipitation over California continue to show the Mediterranean pattern of wet winters and dry summers with seasonal, year-to-year, and decade-to-decade variability. For the first time, however, several of the improved climate models shift toward drier conditions by the mid-to-late twenty-first century in Central and, most notably, Southern California. By late-century, all projections show drying, and half of them suggest 30-year average precipitation will decline by more than 10% below the historical average (CCCC 2012).

Wildfire risk in California will increase as a result of climate change. Earlier snowmelt, higher temperatures, and longer dry periods over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning. However, human activities will continue to be the biggest factor in ignition risk. It is estimated that the long-term increase in fire occurrence associated with a higher emissions scenario will be substantial, with increases in the number of large fires statewide ranging from 58% to 128% above historical levels by 2085. Under the same emissions scenario, estimated burned area will increase by 57% to 169%, depending on location (CCCC 2012).

Reduction in the suitability of agricultural lands for traditional crop types may occur. Although effects may occur, adaptation could allow farmers and ranchers to minimize potential negative effects on agricultural outcomes through adjusting timing of plantings or harvesting and changing crop types. In addition, public-health-related effects of increased temperatures and prolonged temperature extremes, including heat stroke, heat exhaustion, and exacerbation of existing medical conditions, could be particular problems for the elderly, infants, and those who lack access to air conditioning or cooled spaces (CNRA 2009a).

Regulatory Setting

Federal Activities

Massachusetts vs. EPA. In *Massachusetts v. EPA* (April 2007), the Supreme Court directed the EPA Administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA Administrator is required to follow the language of Section 202(a) of the Clean Air Act. On

December 7, 2009, the Administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The Administrator found that elevated concentrations of GHGs—CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the “endangerment finding.”
- The Administrator further found the combined emissions of GHGs—CO₂, CH₄, N₂O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the “cause or contribute finding.”

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions:

1. Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
2. Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and directs National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
3. Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

EPA and NHTSA Joint Final Rules for Vehicle Standards. On April 1, 2010, the EPA and NHTSA announced a joint final rule to establish a national program consisting of new standards for light-duty vehicles model years 2012 through 2016 (April 2010) that is intended to reduce GHG emissions and improve fuel economy. The EPA approved the first-ever national GHG emissions standards under the Clean Air Act, and NHTSA approved Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act (75 FR 25324–25728), which became effective on July 6, 2010. The EPA’s GHG standards require new passenger cars, light-duty trucks, and medium-duty passenger vehicles to meet an estimated combined average emissions level of 250 grams of CO₂ per mile in model year 2016. The CAFE standards for passenger cars and light trucks will be phased in between 2012 and 2016. The rules will

simultaneously reduce GHG emissions, improve energy security, increase fuel savings, and provide clarity and predictability for manufacturers (EPA 2013). In August 2012, the EPA and NHTSA approved a second round of GHG and CAFE standards for model years 2017 and beyond (77 FR 62624–63200). These standards will reduce motor vehicle GHG emissions for cars and light-duty trucks by model year 2025.

Clean Power Plan and New Source Performance Standards for Electric Generating Units. On October 23, 2015, EPA published a final rule (effective December 22, 2015) establishing Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO₂ emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units and (2) stationary combustion turbines. Concurrently, EPA published a final rule (effective October 23, 2015) establishing Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (80 FR 64661–65120). The rule prescribes CO₂ emission standards for newly constructed, modified, and reconstructed affected fossil fuel-fired electric utility generating units. Implementation of the Clean Power Plan has been stayed by the U.S. Supreme Court pending resolution of several lawsuits.

State of California

Title 24. Title 24 of the California Code of Regulations was established in 1978, and serves to enhance and regulate California’s building standards. Although not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure that new and existing buildings in the State of California achieve energy efficiency and preserve outdoor and indoor environmental quality. The California Energy Commission (CEC) is required by law to adopt standards every 3 years that are cost effective for homeowners over the 30-year lifespan of a building. These standards are updated to consider and incorporate new energy-efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

~~The current Title 24 standards are the 2013 standards, which became effective on July 1, 2014. Buildings constructed in accordance with the 2013 standards will use 25% less energy for lighting, heating, cooling, ventilation, and water heating than the 2008 standards (CEC 2012). The previous Title 24 standards were the 2016 Title 24 building energy efficiency standards, which will be effective January 1, 2017, will further reduce energy used and associated GHG emissions. In general, single family homes built to the 2016 standards are anticipated to use about 28% less~~

energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and non-residential buildings built to the 2016 standards will use an estimated 5% less energy than those built to the 2013 standards (CEC 2016). The 2019 Title 24 building energy standards became effective January 1, 2020. Although the project would be required to comply with ~~2016–2019~~ Title 24 standards because it is anticipated to be constructed during or after ~~2017~~2020, this analysis conservatively does not quantify the increased energy efficiency associated with the more stringent ~~2016–2019~~ Title 24 standards.

Title 24 also includes Part 11, known as California’s Green Building Standards (CALGreen). The CALGreen standards took effect in January 2011, and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The mandatory standards require the following:

- 20% mandatory reduction in indoor water use.
- Diversion of 50% of construction and demolition waste from landfills.
- Mandatory inspections of energy systems to ensure optimal working efficiency.
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle board.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen’s Tier 1 standards call for a 15% improvement in energy requirements, stricter water conservation, 65% diversion of construction and demolition waste; 10% recycled content in building materials, 20% permeable paving, 20% cement reduction, and cool/solar-reflective roofs. CALGreen’s more rigorous Tier 2 standards call for a 30% improvement in energy requirements; stricter water conservation, 75% diversion of construction and demolition waste, 15% recycled content in building materials, 30% permeable paving, 30% cement reduction, and cool/solar-reflective roofs.

The California Building Standards Commission approved amendments to the voluntary measures of the CALGreen standards in December 2018. The 2019 CALGreen standards became effective January 1, 2020. As with the 2019 Title 24 standards, the 2019 CALGreen standards focus on building energy efficiency.

Assembly Bill 939 and Assembly Bill 341. In 1989, Assembly Bill (AB) 939, known as the Integrated Waste Management Act (California Public Resources Code, Section 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were

required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000. AB 341 (Chapter 476, Statutes of 2011 (Chesbro)) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state’s policy goal. CalRecycle conducted several stakeholder workshops and in May 2012 published a discussion document titled California's New Goal: 75 Percent Recycling, which identifies concepts that CalRecycle believes would assist the state in reaching the 75% goal by 2020.

Assembly Bill 1493. In a response to the transportation sector accounting for more than half of California’s CO₂ emissions, AB 1493 (Pavley) was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near term (2009–2012) standards will result in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30%.

Senate Bill 1078. SB 1078 (Sher) (September 2002) established the Renewables Portfolio Standard (RPS) program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010 (see “Senate Bill 107,” “Executive Order S-14-08,” and “Executive Order S-21-09”).

Executive Order S-3-05. Executive Order S-3-05 (June 2005) established the following goals: GHG emissions should be reduced to 2000 levels by 2010, GHG emissions should be reduced to 1990 levels by 2020, and GHG emissions should be reduced to 80% below 1990 levels by 2050. Under Executive Order S-3-05, the California Environmental Protection Agency is directed to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry. The Climate Action Team was formed, which subsequently issued the 2006 Climate Action Team Report to Governor Schwarzenegger and the Legislature (CAT 2006).

The 2009 Climate Action Team Biennial Report (CAT 2010b) expands on the policy outlined in the 2006 assessment. The 2009 report identifies the need for additional research in several different aspects that affect climate change in order to support effective climate change strategies. Subsequently, the 2010 Climate Action Team Report to Governor Schwarzenegger and the

California Legislature (CAT 2010a) reviews past climate action milestones including voluntary reporting programs, GHG standards for passenger vehicles, the Low Carbon Fuel Standard (LCFS), a statewide renewable energy standard, and the cap-and-trade program.

Assembly Bill 32. In furtherance of the goals established in Executive Order S-3-05, the legislature enacted AB 32 (Núñez and Pavley), the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020, representing a reduction of approximately 15% below emissions expected under a “business-as-usual” scenario.

AB 32 directs CARB to develop programs and requirements necessary to achieve the AB 32 goals, to adopt regulations requiring the reporting and verification of statewide GHG emissions, and to monitor compliance with and enforce any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted. AB 32 also directs the Climate Action Team to coordinate the efforts set forth under Executive Order S-3-05 to continue its role in coordinating overall climate policy. Pursuant to AB 32, CARB must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. Reductions in GHG emissions will come from virtually all sectors of the economy and will be accomplished from a combination of policies, planning, direct regulations, market approaches, incentives, and voluntary efforts. These efforts target GHG emission reductions from cars and trucks, electricity production, fuels, and other sources. The full implementation of AB 32 will help mitigate risks associated with climate change, while improving energy efficiency, expanding the use of renewable energy resources, achieving cleaner transportation, and reducing waste.

As required under AB 32, on December 6, 2007, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 MMT CO₂E. In addition to the 1990 emissions inventory, CARB also adopted regulations requiring mandatory reporting of GHGs for the large facilities that account for 94% of GHG emissions from industrial and commercial stationary sources in California. AB 32 requires CARB to develop a Scoping Plan that lays out California’s strategy for meeting the goals and that must be updated every 5 years. On December 11, 2008, CARB approved the initial Climate Change Scoping Plan: A Framework for Change (Scoping Plan) (CARB 2008) to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for a suite of measures that will be adopted to sharply reduce California’s GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan include the following:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards
- Achieving a statewide renewable energy mix of 33%

- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California’s GHG emissions
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets
- Adopting and implementing measures pursuant to existing state laws and policies, including California’s clean car standards, goods movement measures, and the LCFS
- Creating targeted fees, including a public goods charge on water use, fees on high-GWP gases, and a fee to fund the administrative costs of the State of California’s long-term commitment to AB 32 implementation

In May 2014, CARB approved the First Update to the Climate Change Scoping Plan (Scoping Plan Update), which builds on the initial Scoping Plan with new strategies and recommendations and identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. Based on updated information, the Scoping Plan Update revises the 2020 emissions target to 431 MMT CO₂E (based on updated GWPs for GHGs) (CARB 2014).

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in S-3-05. The Governor called on California to pursue a new and ambitious set of strategies, in line with the five climate change pillars from his inaugural address, to reduce GHG emissions and prepare for the unavoidable impacts of climate change. In the summer of 2016, the Legislature affirmed the importance of addressing climate change through passage of SB 32 (Pavley, Chapter 249, Statutes of 2016).

In December 2017, CARB adopted the 2017 Climate Change Scoping Plan Update (2030 Scoping Plan) (CARB 2017). The 2030 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target and define the state’s climate change priorities to 2030 and beyond. The strategies’ “known commitments” include implementing renewable energy and energy efficiency (including the mandates of SB 350), increased stringency of the Low Carbon Fuel Standard, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, it recommends continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20%.

For local governments, the 2030 Scoping Plan replaced the initial Scoping Plan’s 15% reduction goal with a recommendation to aim for a community-wide goal of no more than 6 MT CO₂E per capita by 2030 and no more than 2 MT CO₂E per capita by 2050, which are consistent with the state’s long-term goals. These goals are also consistent with the Global Climate Leadership Memorandum of Understanding (Under 2 MOU) and the Paris Agreement, which are developed around the scientifically based levels necessary to limit global warming below two degrees Celsius. The 2030 Scoping Plan recognized the benefits of local government GHG planning (e.g., through climate action plans (CAPs)) and provide more information regarding tools CARB is working on to support those efforts. It also recognizes the CEQA streamlining provisions for project level review where there is a legally adequate CAP.¹

The 2030 Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, SB 32, and EO S-3-05, and establishes an overall framework for the measures that will be adopted to reduce California’s GHG emissions. A project is considered consistent with the statutes and EOs if it meets the general policies in reducing GHG emissions in order to facilitate the achievement of the state’s goals and does not impede attainment of those goals. As discussed in several cases, a given project need not be in perfect conformity with every planning policy or goal to be consistent. Rather, a project would be consistent if it furthers the objectives and does not obstruct their attainment.

The Scoping Plan Update highlights California’s progress toward meeting the near-term 2020 GHG emission reduction goals defined in the initial Scoping Plan, summarizes the latest climate change science, defines CARB’s climate change priorities for the next 5 years, and provides direction on how to achieve long-term emission reduction goals described in Executive Orders S-3-05 and B-16-12 (see “Executive Order B-16-12”). The Scoping Plan Update identified nine key focus areas: energy, transportation, agriculture, water, waste management, natural and working lands, short lived climate pollutants, green buildings, and the cap and trade program. The update also recommends that a statewide mid-term target and mid-term and long-term sector targets be established toward meeting the 2050 goal established by Executive Order S-3-05 (i.e., reduce California’s GHG emissions to 80% below 1990 levels), although no specific recommendations are made.

Senate Bill 107. SB 107 (Simitian) (September 2006) requires investor-owned utilities such as Pacific Gas and Electric, Southern California Edison, and San Diego Gas & Electric (SDG&E) to generate 20% of their electricity from renewable sources by 2010. Previously, state law required that this target be achieved by 2017 (see “Senate Bill 1078”).

¹ Sierra Club v. County of Napa (2004) 121 Cal.App.4th 1490; San Francisco Tomorrow et al. v. City and County of San Francisco (2015) 229 Cal.App.4th 498; San Franciscans Upholding the Downtown Specific Plan v. City & County of San Francisco (2002) 102 Cal.App.4th 656; Sequoiah Hills Homeowners Assn. V. City of Oakland (1993) 23 Cal.App.4th 704, 719.

Senate Bill 1368. SB 1368 (September 2006) requires the CEC to develop and adopt regulations for GHG emissions performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC). This effort will help protect energy customers from financial risks associated with investments in carbon-intensive power generation by allowing new capital investments in power plants whose GHG emissions are as low or lower than new combined-cycle natural gas plants, by requiring imported electricity to meet GHG performance standards in California, and by requiring that the standards be developed and adopted in a public process.

Executive Order S-1-07. Executive Order S-1-07 (January 2007) sets a declining LCFS for GHG emissions measured in CO₂E grams per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources such as algae, wood, and agricultural waste. In addition, the LCFS would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles. The LCFS is anticipated to replace 20% of the fuel used in motor vehicles with alternative fuels by 2020.

Senate Bill 97. SB 97 (Dutton) (August 2007) directs the Governor's Office of Planning and Research (OPR) to develop guidelines under the California Environmental Quality Act (CEQA) for the mitigation of GHG emissions. OPR was tasked to develop proposed guidelines by July 1, 2009, and the California Natural Resources Agency (CNRA) was directed to adopt guidelines by January 1, 2010. On June 19, 2008, OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents (OPR 2008). The advisory indicated that a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities, should be identified and estimated. The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures that are necessary to reduce GHG emissions to a less than significant level.

On April 13, 2009, OPR submitted to the CNRA its proposed amendments to the CEQA Guidelines (14 CCR 15000 et seq.) relating to GHG emissions. On July 3, 2009, the CNRA commenced the Administrative Procedure Act rulemaking process for certifying and adopting the proposed amendments, starting the public comment period. The CNRA adopted CEQA Guidelines Amendments on December 30, 2009, and transmitted them to the Office of Administrative Law on December 31, 2009. On February 16, 2010, the Office of Administrative Law completed its review and filed the amendments with the secretary of state. The amendments became effective on March 18, 2010.

The adopted amendments do not establish a GHG emission threshold; instead, they allow a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts.² CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions.³

Senate Bill 375. SB 375 (Steinberg) (September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. Regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, as determined by CARB, are required to consider the emission reductions associated with vehicle emission standards (see “Senate Bill 1493”), the composition of fuels (see “Executive Order S-1-07”), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations will be responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 provides incentives for streamlining CEQA requirements by substantially reducing the requirements for “transit priority projects,” as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the SCS or Alternative Planning Strategy.

On September 23, 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for the San Diego Association of Governments (SANDAG) are a 7% reduction in emissions per capita by 2020 and a 13% reduction by 2035, as established in SANDAG's RTP (SANDAG 2011). SANDAG completed and adopted its 2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) in October 2011. In November 2011, CARB accepted by resolution SANDAG's GHG emissions quantification analysis and determination that, if implemented, the SCS would achieve CARB's 2020 and 2035 GHG emission reduction targets for the region.

² “The CEQA Guidelines do not establish thresholds of significance for other potential environmental impacts, and SB 97 did not authorize the development of a statement threshold as part of this CEQA Guidelines update. Rather, the proposed amendments recognize a lead agency's existing authority to develop, adopt and apply their own thresholds of significance or those developed by other agencies or experts” (CNRA 2009b, p. 84).

³ “A project's compliance with regulations or requirements implementing AB 32 or other laws and policies is not irrelevant. Section 15064.4(b)(3) would allow a lead agency to consider compliance with requirements and regulations in the determination of significance of a project's greenhouse gas emissions” (CNRA 2009b, p. 100).

After SANDAG’s 2050 RTP/SCS was adopted, a lawsuit was filed by the Cleveland National Forest Foundation and others. In November 2014, Division One of the Fourth District Court of Appeal issued its decision in *Cleveland National Forest Foundation v. SANDAG*, Case No. D063288. In its decision, the Fourth District held that SANDAG abused its discretion when it certified the EIR for the 2050 RTP/SCS because it did not adequately analyze and mitigate GHG emission levels after Year 2020. The 2050 RTP/SCS EIR complied with CARB’s AB 32-related GHG reduction target through 2020, but the EIR found that plan-related emissions would substantially increase after 2020 and through 2050. The majority of the Fourth District in the *Cleveland National Forest* decision found SANDAG’s EIR deficient because, although the EIR used three significance thresholds authorized by CEQA Guidelines Section 15064.4(b), it did not assess the 2050 RTP/SCS’s consistency with the 2050 GHG emissions goal identified in Executive Order S-03-05, which the majority construed as “state climate policy.” The Fourth District did not require the set-aside of SANDAG’s 2050 RTP/SCS itself. In March 2015, the California Supreme Court granted SANDAG’s petition for review of the Fourth District’s decision (Case No. S223603), and the matter currently is pending before the state’s highest court.

Although the EIR for SANDAG’s 2050 RTP/SCS is still pending before the California Supreme Court, SANDAG recently adopted the next iteration of its RTP/SCS in accordance with statutorily mandated timelines. More specifically, in October 2015, SANDAG adopted *San Diego Forward: The Regional Plan*. Like the 2050 RTP/SCS, this planning document meets CARB’s 2020 and 2035 reduction targets for the region.

Executive Order S-13-08. Executive Order S-13-08 (November 2008) is intended to hasten California’s response to the impacts of global climate change, particularly sea-level rise. It directs state agencies to take specified actions to assess and plan for such impacts. It directs CNRA, in cooperation with the California Department of Water Resources, CEC, California’s coastal management agencies, and the Ocean Protection Council, to request that the National Academy of Sciences prepare a Sea Level Rise Assessment Report by December 1, 2010. The Ocean Protection Council, California Department of Water Resources, and CEC, in cooperation with other state agencies, are required to conduct a public workshop to gather information relevant to the Sea Level Rise Assessment Report. The Business, Transportation, and Housing Agency was ordered to assess within 90 days of issuance of the executive order the vulnerability of the state’s transportation systems to sea-level rise. OPR and CNRA are required to provide land use planning guidance related to sea-level rise and other climate change impacts. The order also required the other state agencies to develop adaptation strategies by June 9, 2009, to respond to the impacts of global climate change that are predicted to occur over the next 50 to 100 years. A discussion draft adaptation strategies report was released in August 2009, and the final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009a). To assess the state’s vulnerability, the report summarizes key climate change impacts to the state for the following areas: public health, ocean and coastal resources, water supply and flood protection, agriculture,

forestry, biodiversity and habitat, and transportation and energy infrastructure. The report then recommends strategies and specific responsibilities related to water supply, planning and land use, public health, fire protection, and energy conservation.

Executive Order S-14-08. Executive Order S-14-08 (November 2008) focuses on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This Executive Order requires that all retail suppliers of electricity in California serve 33% of their load with renewable energy by 2020. Furthermore, the order directs state agencies to take appropriate actions to facilitate reaching this target. The Resources Agency, through collaboration with the CEC and California Department of Fish and Wildlife (formerly California Department of Fish and Game), is directed to lead this effort. Pursuant to a Memorandum of Understanding between the CEC and California Department of Fish and Wildlife creating the Renewable Energy Action Team, these agencies will create a “one-stop” process for permitting renewable energy power plants.

Executive Order S-21-09. Executive Order S-21-09 (September 2009) directed CARB to adopt a regulation consistent with the goal of Executive Order S-14-08 by July 31, 2010. CARB is further directed to work with the CPUC and CEC to ensure that the regulation builds upon the RPS program and is applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB is to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health and can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB adopted regulations to implement a “Renewable Electricity Standard,” which would achieve the goal of the executive order with the following intermediate and final goals: 20% for 2012–2014, 24% for 2015–2017, 28% for 2018–2019, and 33% for 2020 and beyond. Under the regulation, wind, solar, geothermal, small hydroelectric, biomass, ocean wave, ocean thermal, tidal, landfill and digester gas, and biodiesel would be considered sources of renewable energy. The regulation would apply to investor-owned utilities and public (municipal) utilities.

Senate Bill X1 2. SB X1 2 (April 2011) expanded the RPS by establishing a goal of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current and that meets other specified requirements with respect to its location. In addition to the retail sellers covered by SB 107, SB X1 2 adds local publicly owned electric utilities to the RPS. By January 1, 2012, the CPUC is required to establish the quantity of electricity products from eligible renewable energy resources to be procured by retail sellers in order to achieve targets of 20% by December 31, 2013;

25% by December 31, 2016; and 33% by December 31, 2020. The statute also requires that the governing boards for local publicly owned electric utilities establish the same targets, and that the governing boards be responsible for ensuring compliance with these targets. The CPUC will be responsible for enforcement of the RPS for retail sellers, while the CEC and CARB will enforce the requirements for local publicly owned electric utilities.

Executive Order B-16-12. Executive Order B-16-12 (March 2012) directs state entities under the governor’s direction and control to support and facilitate development and distribution of zero-emission vehicles. This executive order also sets a long-term target of reaching 1.5 million zero-emission vehicles on California’s roadways by 2025. On a statewide basis, Executive Order B-16-2012 also establishes a GHG emissions reduction target from the transportation sector equaling 80% less than 1990 levels by 2050.

Executive Order B-18-12. Executive Order S-18-12 (April 2012) directs state agencies, departments, and other entities under the governor’s executive authority take actions to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. To accomplish these goals with respect to construction of new buildings or major renovations, Executive Order S-18-12 further orders state agencies to implement the following measures:

- All new state buildings and major renovations beginning design after 2025 shall be constructed as Zero Net Energy facilities, with an interim target for 50% of new facilities beginning design after 2020 to be Zero Net Energy.
- Any proposed new or major renovation of state buildings larger than 10,000 square feet shall use clean, on-site power generation, such as solar photovoltaic, solar thermal, and wind power generation, and clean back-up power supplies, if economically feasible.
- New or major renovated state buildings and build-to-suit leases larger than 10,000 square feet shall obtain Leadership in Energy and Environmental Design (LEED) “Silver” certification or higher.
- New buildings shall incorporate building commissioning to facilitate improved and efficient building operation.
- State agencies shall identify and pursue opportunities to provide electric vehicle charging stations, and accommodate future charging infrastructure demand, at employee parking facilities in new buildings.

Executive Order S-18-12 also established goals for existing state buildings for reducing grid-based energy purchases and water use.

Senate Bill 605. SB 605 (September 2014) requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state no later than January 1, 2016. As

defined in the statute, “short-lived climate pollutant” means “an agent that has a relatively short lifetime in the atmosphere, from a few days to a few decades, and a warming influence on the climate that is more potent than that of carbon dioxide.” SB 605, however, does not prescribe specific compounds as short-lived climate pollutants or add to the list of GHGs regulated under AB 32. In developing the strategy, CARB must complete an inventory of sources and emissions of short-lived climate pollutants in the state based on available data, identify research needs to address any data gaps, identify existing and potential new control measures to reduce emissions, and prioritize the development of new measures for short-lived climate pollutants that offer co-benefits by improving water quality or reducing other air pollutants that impact community health and benefit disadvantaged communities. The draft strategy released by CARB in September 2015 focuses on CH₄, black carbon, and fluorinated gases, particularly HFCs, as important short-lived climate pollutants. The draft strategy recognizes emission reduction efforts implemented under AB 32 (e.g., refrigerant management programs) and other regulatory programs (e.g., in-use diesel engines, solid waste diversion) along with additional measures to be developed.

Executive Order B-29-15. In response to the ongoing drought in California, Executive Order B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the executive order extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The executive order includes specific directives that set strict limits on water usage in the state. In response to the Executive Order B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Executive Order B-30-15. Executive Order B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under Executive Order S-3-05 and AB 32. Executive Order B-30-15 set an interim target goal of reducing GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050, as set forth in Executive Order S-3-05. To facilitate achievement of this goal, Executive Order B-30-15 calls for an update to CARB’s Scoping Plan to express the 2030 target in terms of MMT CO₂E. The executive order also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. Sector-specific agencies in transportation, energy, water, and forestry were required to prepare GHG reduction plans by September 2015, followed by a report on actions taken in relation to these plans in June 2016. Executive Order B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction threshold. It is important to note that Executive Order B-30-15 was not adopted by a public agency through a public review process that requires analysis pursuant to CEQA Guidelines

Section 15064.4 and that it has not been subsequently validated by a statute as an official GHG reduction target of the State of California. Executive Order B-30-15 itself states it is “not intended to create, and does not, create any rights of benefits, whether substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers employees, or any other person.”

Senate Bill 350. SB 350 (October 2015) expands the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or classes of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires CPUC, in consultation with CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

California Air Pollution Control Officers Association. The California Air Pollution Control Officers Association is the association of air pollution control officers representing all 35 air quality agencies throughout California. The California Air Pollution Control Officers Association is not a regulatory body, but has been an active organization in providing guidance in addressing the CEQA significance of GHG emissions and climate change as well as other air quality issues.

Local

City of Oceanside Climate Action Plan

On May 8, 2019, the City Council voted to adopt the Climate Action Pan (CAP) as a part of their General Plan Update, which also includes development of a policy framework to the Energy and Climate Action Element (ECAE). The CAP is intended to proactively support statewide efforts to cut GHG emissions by expanding local renewable energy generation, reducing energy use, promoting recycling and reuse, facilitating active transportation, and encouraging other sustainable practices. The CAP will build upon a variety of City projects that promote energy efficiency, increased renewable energy use, water conservation, and solid waste reduction. In conjunction with developing a CAP, the City has established efficiency metric thresholds, which projects are to use to evaluate impacts from GHG emissions, in order to help the City to meet state reduction targets for 2020 and 2030. Projects are required to meet an efficiency metric threshold of 4.0 MT CO₂e per service population per year (MT CO₂E/SP/yr) for year 2020 and an efficiency metric

threshold of 3.5 MT CO₂E/SP/yr for year 2025 (City of Oceanside 2019). Projects that meet these thresholds would be considered consistent with the City’s CAP.

City of Oceanside General Plan

The Land Use and Circulation Elements of the existing Oceanside General Plan (City of Oceanside 1989, 2012) include various policies related to climate change (both directly and indirectly) with the overall goal of reducing the City of Oceanside’s overall GHG emissions by improving energy efficiency, increasing the use of alternative modes of transportation, employing sustainable planning and design techniques, and providing environmentally sound landscaping practices. Applicable policies include those in the following sections.

Land Use Element

Landscaping

Policy C: Drought-tolerant materials, including native California plant species, shall be encouraged as a landscape type.

Bicycle Facilities

Policy A: Development shall provide Class II Bikeways (Bike Lanes) on all secondary, major, and prime arterials.

Policy D: The use of land shall integrate the Bicycle Circulation System with auto, pedestrian, and transit systems:

1. Development shall provide short-term bicycle parking and long-term bicycle storage facilities such as bicycle racks, pedestal posts, and rental bicycle lockers.
2. Development shall provide safe and convenient bicycle access to high activity land uses, such as schools, parks, shopping, employment, and entertainment centers.

Pedestrian

Policy A: The construction of five (5) foot wide sidewalks adjacent to the curb shall be required in all new developments and street improvements.

Transit System

Policy B: The City shall investigate the responsibilities of development in providing necessary on-site and off-site bus system improvements including bus shelters within new commercial, residential, and industrial developments.

Energy

Policy A: The City shall encourage the design, installation, and use of passive and active solar collection systems.

Policy B: The City shall encourage the use of energy efficient design, structures, materials, and equipment in all land developments or uses.

Policy C: The City shall encourage the use of long-term lower cost energy sources.

Circulation Element

Transportation Demand Management

Policy 4.1: The City shall encourage the reduction of vehicle miles traveled, reduction of the total number of daily and peak hour vehicle trips, and provide better utilization of the circulation system through development and implementation of TDM [transportation demand management] strategies. These may include, but not limited to, implementation of peak hour trip reduction, encourage staggered work hours, telework programs, increased development of employment centers where transit usage is highly viable, encouragement of ridesharing options in the public and private sector, provision for park-and-ride facilities adjacent to the regional transportation system, and provision for transit subsidies.

Policy 4.2: The City shall maintain and implement the policies and recommendations of the Bicycle Master Plan as part of the Recreational Trails Element. These facilities shall connect residential areas with schools, parks, recreation areas, major employment centers, and neighborhood commercial areas.

Policy 4.3: The City shall maintain and implement the policies and recommendations of the Pedestrian Master Plan as part of the Recreational Trails Element to ensure pedestrian access along streets and other locations throughout the City are properly maintained and provided.

Policy 4.4: The City shall support parking policies that increase the cost of parking and/or reduce the supply of off-street parking to encourage drivers to consider using alternative modes of transportation or carpool/vanpool opportunities where transit facilities are available.

Policy 4.5: The City shall encourage businesses to offer financial incentives to use modes of transportation other than the single occupant vehicle by way of subsidized transit, carpool/vanpool programs, bike to work programs, parking cash-out programs, or some combination of these.

Policy 4.6: The City shall encourage new developments to provide onsite facilities such as showers, lockers, carpool stalls, and bicycle racks.

Policy 4.7: The City shall coordinate with businesses and employers to organize and facilitate transportation commuter fairs that provide information on carpools, vanpools, transit, bicycling, and other alternative commute modes to the single occupant vehicle, as well as the advantages and costs savings of alternative forms of transportation.

Policy 4.8: The City shall support and promote SANDAG’s regional iCommute program that encourages the reduction of the use of the single occupancy vehicle.

Policy 4.9: The City shall look for opportunities to incorporate TDM programs into their Energy Roadmap that contributes to state and regional goals for saving energy and reducing greenhouse gas emissions.

Policy 4.10: The City shall maintain curb use priorities that consider, in descending order, the needs of through traffic, transit stops, bus turnouts, passenger loading needs, and short- and long-term parking.

City of Carlsbad Climate Action Plan

The City of Carlsbad adopted a Climate Action Plan (CAP) in September 2015, which serves as a comprehensive, long-term strategy guide to reduce GHG emissions in the City of Carlsbad and streamline environmental review of future development projects in the City in accordance with CEQA. The CAP outlines a comprehensive, citywide strategy with goals, policies, and actions to manage and reduce GHG emissions with emission targets through 2035; identifies actions that demonstrate the City of Carlsbad’s commitment to achieve state GHG reduction targets by creating enforceable measures; and establishes monitoring and reporting processes to ensure targets are met. The CAP also includes an inventory of the City of Carlsbad’s citywide and local government GHG emissions, and forecasts of future citywide and local government GHG emissions. Total City of Carlsbad GHG emissions for 2005 were estimated to be 630,310 MT CO₂E, and citywide emissions in 2011 were estimated to be 705,744 MT CO₂E.

The horizon year for the CAP (2035) corresponds with the horizon year of the City of Carlsbad’s General Plan Update, and the threshold is based on a linear trajectory in emissions reductions relating to the state’s 2020 and 2050 goals to determine the 2035 target. Using the 2005 GHG inventory as the baseline, a 15% reduction by 2020 would correspond with total citywide emissions of 535,763 MT CO₂E (reduction of 94,547 MT CO₂E) and a 49% reduction by 2035 would correspond with 321,458 MT CO₂ (reduction of 308,852 MT CO₂E) (City of Carlsbad 2015).

The CAP’s community inventory consists of emissions from six sectors: residential, commercial, industrial, transportation, solid waste, and wastewater. The CAP estimates emissions reductions due to state and federal actions, and General Plan policies and actions. Based on those estimates, the CAP identifies a “gap” that will require further GHG reduction measures. The CAP identifies

the following measures to close the emissions “gap,” which are generally presented as initiatives for the City of Carlsbad to pursue GHG reductions in these areas:

- Residential, commercial, and industrial photovoltaic (solar) system installations
- Building cogeneration (the simultaneous production of electricity and heat)
- Single-family, multi-family, and commercial efficiency retrofits
- Commercial commissioning (a quality assurance process to verify that building systems are performing according to design intentions)
- CALGreen building code requirements
- Solar water heater and heat pump installations
- Standards for efficient lights
- Increased zero-emissions vehicle travel
- Transportation demand management
- Citywide renewables projects
- Water delivery and conservation measures

As outlined in the CAP’s Implementation, Monitoring, and Reporting Chapter, for discretionary projects seeking to use CEQA streamlining provisions in an environmental document, the City of Carlsbad shall refer to the required measures in this CAP as mandatory conditions of approval or as mitigation. This will enable projects to benefit from CEQA streamlining provisions, while ensuring that the City of Carlsbad can achieve the reduction targets outlined in this plan.

City of Carlsbad General Plan Goals and Policies

The following goals and policies within the City of Carlsbad’s General Plan, Chapter 3: Mobility and Chapter 9: Sustainability (City of Carlsbad 2015), pertain to the reduction of GHG emissions in the City:

- 3-P.6** Utilize transportation demand management strategies, non-automotive enhancements (bicycle, pedestrian, transit, and connectivity), and traffic signal management techniques as long-term transportation solutions and traffic mitigation measures to carry out the Carlsbad Community Vision.
- 9-G.1** Through implementation of the policies and programs in the General Plan, maintain a long-term balance among the three dimensions of sustainability—environmental, economic, and social—to ensure a vibrant, healthy, and prosperous community.

- 9-G.2** Undertake initiatives to enhance sustainability by reducing the community’s greenhouse gas (GHG) emissions and fostering green development patterns—including buildings, sites, and landscapes.

4.5.3 Thresholds of Significance

Based on the significance criteria established by Appendix G of the CEQA Guidelines and the direction from the City of Oceanside, a significant impact related to GHG emissions would generally occur as a result of project implementation if the project would:

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

In addition, in June 2008 the OPR issued a Technical Advisory titled CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review, which states that “public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact” (OPR 2008, p. 4). Furthermore, the advisory document indicates in the third bullet item on page 6 that “in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a ‘significant impact,’ individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice.”

Local Guidance

~~The City of Oceanside has not established official thresholds of significance for GHG emissions. In the absence of a City-adopted threshold,~~ This assessment follows an approach used by the County of San Diego. In an effort to bring a degree of consistency and objectivity to the CEQA analyses prepared for pending projects, the County’s 2015 GHG Guidance: Recommended Approach to Addressing Global Climate Change in CEQA Documents, uses a screening threshold of 900 MT CO₂E per year (County of San Diego 2015). The screening criterion is established for a range of project types and sizes to identify smaller projects that would have less than cumulatively considerable GHG emissions effects. As outlined in detail in the County’s 2015 GHG Guidance, a project that exceeds the 900 MT CO₂E per year screening criterion requires further analysis in order to demonstrate that a project would not exceed the screening threshold. At this time, however, the County is working on the guidance for projects that exceed 900 MT CO₂E. Furthermore, as discussed in Section 4.5.2, the City has

established efficiency metric thresholds, which land use development projects can use to evaluate impacts from GHG emissions. Projects within the City of Oceanside are required to meet an efficiency metric threshold of 4.0 MT CO₂E/SP/yr for year 2020 and an efficiency metric threshold of 3.5 MT CO₂E/SP/yr for year 2025 (City of Oceanside 2019). The efficiency metric for 2020, 2025, and the interpolation for 2024 are illustrated below in Table 4.5-3. If the project achieves the 2024 efficiency metric, then the project’s cumulative contribution of GHG emissions would be considered less than significant.

Table 4.5-3
2024 Interpolated Efficiency Metric

	2020 Efficiency Metric (MT/SP/yr)	2025 Efficiency Metric (MT/SP/yr)	2024 Efficiency Metric (MT/SP/yr)
Efficiency Metric – City of Oceanside CAP	4.0	3.5	3.6

Sources: City of Oceanside Climate Action Plan (City of Oceanside 2019)

Notes: CAP = Climate Action Plan; MT = metric ton; SP = service population; yr = year

4.5.4 Environmental Impacts

1. *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Construction Impacts

Construction of the project would result in GHG emissions primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. GHG emissions were estimated using CalEEMod, Version 2013.2 (available online at www.caleemod.com). Emissions from construction of the proposed bridge were estimated using the Sacramento Metropolitan Air Quality Management District Road Construction Emission Model, Version 89.1.0 (SMAQMD 2016). For the purposes of estimating the proposed project’s emissions, it was assumed that construction of the hotel component of the proposed project would include the subphases described in Section 4.4, Air Quality.

For the purposes of estimating the project’s emissions, it was assumed that construction of the project would start in January 2018 and reach completion in April 2023.⁴ Total construction is expected to take approximately 23–28 months. The subphases

⁴ Because CalEEMod uses real dates (e.g., January 1, 2016) to calculate construction emissions, assumptions were made as to key dates for each phase. The analysis presented herein assumes a construction start date of January 1, 2018, which is the earliest date construction would commence. The earliest start date for construction represents the worst case scenario for GHG emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

described in Section 4.4 would experience overlap in order to meet this schedule. This overlap is accounted for in the construction emission estimates.

To discern primary project development phases in CalEEMod, construction worker and vendor trip assumptions were assigned to each building construction phase for Hotel Building 1 and Hotel Building 2; Hotel Building 3; and the parking structure. Construction worker and vendor trips for building construction were determined using CalEEMod default worker trip and vendor trip vehicle generation factors of 0.42 trips and 0.1639 trips, respectively, per 1,000 square feet of office/industrial space per day of construction.

The construction equipment mix was provided by the applicant and represents a reasonably conservative estimate of construction activity. For the analysis, it was generally assumed that heavy construction equipment would be operating at the site for approximately 8–10 hours per day, 5 days per week (22 days per month), during project construction.

Table 4.5-3-4 shows the estimated annual GHG construction emissions associated with the project, as well as the annualized construction emissions over a 20-year period per County guidance.

Table 4.5-3-4
Estimated Annual Construction GHG Emissions

Year	CO ₂	CH ₄	N ₂ O	CO ₂ E
	Metric Tons per Year			
2018 2021	1,790.322 097.50	0.370 .44	0.000 .00	1,799.652 108.46
2019 2022	1,187.078 36.92	0.250 .18	0.000 .00	1,164.488 40.68
2020 2023	17.69 17.29	0.000 .00	0.000 .00	17.70 17.31
Total	2,995.082951.71	0.620.62	0.000.00	2,981.832966.45
Annualized Construction Emissions				148.32149.09

Notes: See Appendix G for detailed results.

Construction emissions for ~~2017–2022~~ reflect emissions calculated through CalEEMod, which were added to bridge construction emissions, modeled separately through the Sacramento Air Quality Management District Road Construction Emission Model, Version ~~89.40~~.0.

Annualized emissions assumed over 20 years.

GHG = greenhouse gas; CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂E = carbon dioxide equivalent.

Operational Impacts

Operation of the project will result in GHG emissions from vehicular traffic, area sources, energy sources, water supply, and solid waste. To effectively analyze operational GHG emissions associated with the project, two scenarios were modeled. The first scenario, Without Regulatory Measures and Project Design Features (shown as “unmitigated” emissions in CalEEMod), estimates project emissions absent federal, state, and local measures and without project design features intended to reduce GHG emissions upon

project buildout for the year ~~2020~~2024. The second scenario, With Regulatory Measures and Project Design Features (shown as “mitigated” emissions in CalEEMod), represents project emissions with implementation of applicable federal, state, and local GHG reduction measures and project design features for the year ~~2020~~2024.

Statewide emission reduction measures proposed in CARB’s Scoping Plan (CARB 2008) that are applicable to the project, as well as proposed GHG emissions reduction features, are presented in Table 4.5-45.

Table 4.5-45
Regulatory Measures and Project Design Features
Addressing Reduction of GHG Emissions

Measure	Sector	Source
<i>Regulatory Measures</i>		
Pavley I Standards	Transportation	Mobile
LCFS	Transportation	Mobile
RPS (33% by 2020)	Energy Consumption (Electricity)	Energy
Residential and Commercial	Energy Consumption (Natural Gas)	Energy
RPS (33% by 2020)	Energy Consumption (Water Supply)	Water supply
Waste Diversion (75% reduction per AB 341)	Energy Consumption (Solid Waste)	Solid waste
Water Conservation Strategy (20% reduction in indoor water use per CALGreen and 25% reduction in outdoor water use per Executive Order B-29-15)	Energy Consumption (Water Supply)	Water supply
<i>Project Design Features</i>		
Electric shuttle service	Transportation	Mobile
Pedestrian and bicycle facility accommodations	Transportation	Mobile
Low-flow toilets and showers and drip irrigation	Energy Consumption (Water Supply)	Water supply

Sources: CARB 2008, 2014.

Notes: LCFS = Low Carbon Fuel Standard; RPS = Renewables Portfolio Standard; AB = Assembly Bill.

Mobile Sources

The project would result in GHG emissions through vehicular trips generated by the project. According to the traffic analysis conducted for the project (provided as Appendix B to the EIR), total project-generated daily traffic is estimated to be 4,260 trips per day (i.e., 10 trips per room). Annual GHG emissions from motor vehicle trips for full project buildout were quantified using CalEEMod.

Mobile Source Regulatory Measures

For both With and Without Regulatory Measures and Project Design Features modeling scenarios, reductions from Pavley I Standards and LCFS are incorporated into the mobile

source modeling assumptions in CARB’s mobile source emissions inventory tool, ~~EMFAC2011~~EMFAC2014, as used in CalEEMod Version ~~2013~~2016.23.2. See Section 4.5.2, Existing Conditions, under “Regulatory Setting,” for a discussion of anticipated GHG emission reductions associated with the Pavley Standards and the LCFS.

Mobile Source Project Design Features

The project would include electric shuttle service during project operations, which would reduce mobile emissions generated from project vehicular traffic. However, the reduction of GHGs from the implementation of this measure is not quantifiable and was not incorporated into the project GHG emissions calculations because the annual mileage of the electric shuttle service is currently unknown.

Area Sources

In addition to estimating mobile source emissions, CalEEMod was used to estimate GHG emissions from project area sources, which include emissions from landscape maintenance equipment. Consumer product use and architectural coatings result in reactive organic gas (ROG) emissions, which are analyzed in air quality analysis only (see Appendix F), and little to no GHG emissions. The project would not result in area source emissions associated with hearths because no hearths are proposed.

There were no regulatory measures or project design features identified that would reduce GHG emissions related to area sources.

Energy Sources

GHG emissions associated with energy demand were updated from CalEEMod default values, which were based on the land use type and total area (i.e., square footage) for each land use. The previous Title 24 standards are the 2016 Title 24 building energy efficiency standards, which became effective January 1, 2017. The 2019 Title 24 building energy standards became effective January 1, 2020. For this analysis, CalEEMod default Title 24 energy intensity factors for electricity and natural gas were adjusted to reflect the current 2013 California Building Energy Efficiency Standards (24 CCR, Part 6.) for The project would meet the 2016 California Building Energy Efficiency Standards (24 CCR, Part 6) at a minimum. Based on the project’s timeline, compliance with the 2019 Title 24 standards would be more likely. However, the project operational energy emissions were not adjusted to meet the 2019 Title 24 Standards, instead, 2016 Title 24 default in CalEEMod was assumed. ~~the With Regulatory Measures and Project Design Features modeled scenario. Annual natural gas and electricity GHG emissions were estimated using~~

the updated emissions factors for SDG&E, which would be the energy source provider for the proposed project.

Energy Source Regulatory Measures

As discussed in Section 4.5.2 under “Regulatory Setting,” SB X1 2 established a target of 33% from renewable energy sources for all electricity providers in California by 2020. The default energy intensity factors (CO₂, CH₄, and N₂O mass emissions per kilowatt hour) for SDG&E is based on the value for SDG&E’s energy mix in 2009. This analysis is based on the California Energy Commission 2017 Power Content Label for SDG&E in order to estimate the project’s GHG emissions. The CO₂, CH₄, and N₂O emissions intensity factors for utility energy use in CalEEMod was adjusted consistent with the SDG&E 2017 Power Content Label, which reported that SDG&E has delivered 45% of the electricity from RPS eligible resources (CEC 2018). A future energy intensity factor for project development after 2020 is based on an adjustment of the default energy intensity factor for CO₂ to reflect a power mix using 33% renewable energy, which is assumed to generate no GHG emissions; the default energy intensity factors for CH₄ and N₂O were used to simplify the calculations and because these GHGs are not substantial contributors to the overall GHG emissions from electrical usage. The adjusted CO₂ intensity factor was assumed for the With Regulatory Measures and Project Design Features scenario, and the CalEEMod default value was assumed for the Without Regulatory Measures and Project Design Features scenario.

Energy Source Project Design Features

No project design features were identified to reduce GHG emissions associated with energy sources.

Water Supply and Wastewater Generation

GHG emissions associated with water supply, treatment, and distribution⁵ and wastewater are classified as indirect emissions. GHG emissions were calculated based on the indoor and outdoor water use, electricity intensities, and utility intensity factors for the GHGs. Wastewater treatment also results in GHG emissions associated with the treatment system. All indoor water use was anticipated to require wastewater treatment; therefore, the electricity associated with wastewater treatment and associated emissions were estimated only for indoor potable water. Default values from CalEEMod were used to estimate the annual water use for the project.

⁵ Supplying water is bringing the water from its primary source, such as the ground, river, or snowpack, to the treatment plant. Distributing the water is bringing the water from the treatment plant to the end users (CAPCOA 2013).

Water Supply Regulatory Measures

CalEEMod models accounted for the GHG reductions in water conveyance associated with the RPS, as discussed in Table 4.5-4-5 and under “Energy Source Regulatory Measures.” As discussed in Section 4.5.2 under “Regulatory Setting,” a 20% reduction in indoor and outdoor water use is required per CALGreen ~~and 25% reduction in outdoor water use is required per Executive Order B-29-15~~. Additionally, landscaping for the proposed project would be in accordance with the model Water Efficient Landscape Ordinance (AB 1881) and the landscape plan prepared for the project.

Water Supply Project Design Features

The project would reduce GHG emissions associated with water supply through the installation of water-efficient irrigation systems and water-efficient water fixtures such as low-flow toilets and showerheads. The CalEEMod default outdoor water reduction from the use of such irrigation systems is 6.1%, and the default reduction for low-flow water fixtures is 20%.

Solid Waste

Indirect GHG emissions associated with disposal of solid waste in landfills was also calculated in CalEEMod. GHG emissions were estimated in CalEEMod based on the tons per year of solid waste per land use and on the landfill gas collection efficiency (percentage of no gas capture, capture gas flare, and capture gas energy recovery). Default values in CalEEMod were assumed to estimate project-generated solid waste GHG emissions.

Solid Waste Regulatory Measures

The project would be required to comply with statewide and local solid waste diversion requirements. Compliance with the 75% diversion rate by 2020 consistent with AB 341 (25% increase from the solid waste diversion requirements of AB 939, Integrated Waste Management Act) has been included in the GHG assessment for With Regulatory Measures and Project Design Features modeled scenario; it was not included in the Without Regulatory Measures and Project Design Features estimated emissions.

Solid Waste Project Design Features

No project design features were identified to reduce GHG emissions associated with solid waste.

Summary of GHG Emissions

The estimated GHG emissions associated with mobile sources, energy sources, area sources, water supply, and solid waste are shown in Table 4.5-56.

**Table 4.5-56
Estimated Annual Operational Project GHG Emissions**

Emission Source	CO ₂	CH ₄	N ₂ O	CO ₂ E
	Metric Tons per Year			
<i>Without Regulatory Measures and Project Design Features</i>				
Area	0.02	0.00	0.00	0.02
Energy	<u>2,805.872,532.50</u>	<u>0.100.08</u>	0.03	<u>2,818.312,543.84</u>
Mobile	<u>2,990.442,934.21</u>	<u>0.120.15</u>	0.00	<u>2,992.952,938.06</u>
Solid waste	48.10	2.84	0.00	<u>107.79119.16</u>
Water supply and wastewater	<u>58.6458.61</u>	0.38	0.01	<u>69.4270.82</u>
Total	<u>5,903.035,573.44</u>	<u>3.433.45</u>	0.04	<u>5,988.495,671.90</u>
Annualized construction emissions	N/A			<u>148.32149.09</u>
Operation + annualized construction total	N/A			<u>6,136.815,820.99</u>
<i>With Regulatory Measures and Project Design Features</i>				
Area	0.02	0.00	0.00	0.02
Energy	<u>2,387.711,944.83</u>	<u>0.100.08</u>	0.03	<u>2,400.071,956.17</u>
Mobile	<u>2,933.152,880.67</u>	<u>0.120.15</u>	0.00	<u>2,935.612,884.45</u>
Solid waste	12.02	0.71	0.00	<u>26.9529.79</u>
Water supply and wastewater	<u>34.4229.79</u>	0.30	0.01	<u>43.0639.56</u>
Total	<u>5,367.324,867.33</u>	<u>1.231.24</u>	0.04	<u>5,405.744,909.99</u>
Annualized construction emissions	N/A			<u>148.32149.09</u>
Operation + annualized construction total	N/A			<u>5,554.035,059.08</u>
<i>Threshold of 900 MT CO₂E/year exceeded?</i>	N/A			Yes
Project Service Person GHG Efficiency	N/A			<u>8.2</u>
<i>City of Oceanside Efficiency Metric of 3.6 MT CO₂E/SP/year exceeded?</i>	N/A			Yes

Notes: See Appendix G for detailed results.

CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂E = carbon dioxide equivalent; N/A = not applicable; SP = service population

"Without Regulatory Measures and Project Design Features" matches with CalEEMod unmitigated emissions.

"With Regulatory Measures and Project Design Features" matches with CalEEMod mitigated emissions.

As shown in Table 4.5-56, the estimated GHG emissions including annualized construction emissions would be 6,1375,820 MT CO₂E for the year 2020–2024 in the Without Regulatory Measures and Project Design Features scenario.

To assess the impact of the project’s GHG emissions, the project’s estimated GHG emissions are compared to the County’s screening threshold of 900 MT CO₂E per year

after accounting for applicable state GHG reduction measures and project design features. As shown in Table 4.5-56, with implementation of GHG reduction measures, the project would exceed the 900 MT CO₂E per year screening threshold, resulting in GHG emissions of approximately ~~5,554~~5,059 MT CO₂E per year. Furthermore, the project would accommodate an average of 395 guests, employ 152 full time jobs, and provide 68 part time/seasonal employees, resulting in a service population of 615 employees and guests. Estimated annual GHG emissions of 5,059 MT CO₂e per year divided by a service population of 615 people would be 8.2 MT CO₂E/SP/yr. As such, the project's GHG emissions would exceed the 2024 efficiency threshold of 3.6 MT CO₂E/SP/yr. This represents a potentially significant impact and mitigation is required (see Section 4.5.5, Mitigation Measures).

2. ***Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

The City of Oceanside adopted their CAP in May 2019, which is a long-term plan to reduce GHG emissions from municipal operations and community activities within the City. The CAP identifies a series of GHG reduction measures, which are designed with a specific implementation timeframe (0-2 years, 2-5 years, and 5+ years), useful life, and horizon year. The reduction measures were also evaluated qualitatively to assess the level of effort required for implementation. The level of effort associated with each reduction measure is based on the convention of low, moderate, or high accounting for the amount of staff time and the financial burden on the City. Reduction measures identified within the CAP to help guide the City are categorized into the following areas: energy and buildings, water and wastewater, solid waste, transportation and land use, and agriculture and forestry. Most of the GHG reduction measures outlined within the CAP are not explicitly intended for projects to determine consistency. Rather, these measures would serve to help the City develop and implement policies in order to make progress towards meeting the state's 2050 GHG reduction goal.

Table 4.5-7 provides an overview of measures within the CAP and the project's consistency with them. As shown in Table 4.5-7, the project does not conflict with any of the GHG-reducing measures or goals within the City's CAP.

Table 4.5-7
Project Consistency with the City of Oceanside Climate Action Plan

<u>CAP Measure</u>	<u>Project Consistency</u>
<u>Measure E1: Renewable Energy Procurement</u>	<i>Not Applicable.</i> The strategies proposed would not be implemented at the project-level. Overall, the goal of this measure would be for the City to procure 75% of local energy from renewable sources by 2030, exceeding the state's renewable portfolio standards mandate of 50% by 2030. However, the project would support this measure through the implementation of a variety of features. The energy needs for operation of the project would be minimized as the project would be designed to meet the applicable local and state energy efficiency requirements.
<u>Measure E2: Solar Photovoltaic Promotion Program</u>	<i>Not Applicable.</i> As discussed previously under Measure E1, while this measure does not include strategies intended for new development to implement at the project-level, the project would support this measure through the implementation of a variety of features. The energy needs for operation of the project would be minimized as the project would be designed to meet the applicable local and state energy efficiency requirements.
<u>Measure E3: Residential Energy Conservation and Disclosure Ordinance</u>	<i>Consistent.</i> The project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards.
<u>Measure E4: Promotion of Low-Income Financing Programs</u>	<i>Not Applicable.</i> This measure would provide financing options and other alternative financing for energy efficiency upgrades to low-income households.
<u>Measure E5: Non-Residential Building Energy Benchmarking and Disclosure</u>	<i>Not Applicable.</i> This measure promotes use of benchmarking and time-of-sale disclosure of energy use which would help increase the efficiency of the City's existing commercial and industrial building stock by increasing awareness of energy saving retrofits.
<u>Measure W1: Implementation of the Water Conservation Master Plan</u>	<i>Consistent.</i> The project would be required to comply with statewide water conservation requirements reducing water usage by 20%. Furthermore, the project would utilize low flow water fixtures such as low flow toilets, faucets, and showers. The project's irrigation system would be designed to conserve water in a manner consistent with, or more efficient than, the standards established by state water use regulations.
<u>Measure W2: Non-Residential Water Use Benchmarking and Disclosure</u>	<i>Not Applicable.</i> Water consumption benchmarking and time-of-sale disclosure of water use are voluntary measures in order to increase the efficiency of the City's existing commercial and industrial building stock by increasing awareness of water savings.
<u>Measure W3: Local Water Supply Development</u>	<i>Not Applicable.</i> This measure would provide capital improvements to the San Luis Rey Water Reclamation Facility to help increase the availability of recycled water. However, as discussed previously under Measure W1, the project would utilize low flow water fixtures such as low flow toilets, faucets, and showers. The project's irrigation system would be designed to conserve water in a manner consistent with, or more efficient than, the standards established by state water use regulations.
<u>Measure SW1: Implementation of Zero Waste Strategic Resource Plan</u>	<i>Consistent.</i> During both construction and operation, the project would comply with all local and state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During

Table 4.5-7
Project Consistency with the City of Oceanside Climate Action Plan

CAP Measure	Project Consistency
	construction, all wastes would be recycled to the maximum extent possible and would comply with CALGreen's requirement of 65% of construction and demolition waste being diverted from landfills.
<u>Measure SW2: Beyond 2020 – Enhanced Waste Diversion</u>	<u>Consistent.</u> During both construction and operation, the project would comply with all local and state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all wastes would be recycled to the maximum extent possible.
<u>Measure TL1: Smart Growth Policies</u>	<u>Not Applicable.</u> This measure would help the City identify and design communities that would be better integrated with land use and transportation planning. SANDAG performed studies of land use, housing, employment, and transit system densities to identify Smart Growth Opportunity Areas (SGOA) throughout the County of San Diego. SANDAG identifies three potential SGOAs in Oceanside including a community center within ¼ -mile of the Oceanside Blvd. and El Camino Real intersection, within ¼-mile of the Oceanside Blvd. and Rancho Del Oro Dr. intersection, and with ¼-mile of the Oceanside Blvd. and Melrose Dr. intersection. While not located within these three SGOAs, the project is located within CB-2, which is an area identified by SANDAG as a potential town center, located on Marron Rd.
<u>Measure TL2: Expanded Electric Vehicle Charging Infrastructure</u>	<u>Consistent.</u> The project would include dedicated parking spaces and infrastructure dedicated for electric vehicle (EV) charging in accordance with the City's requirements.
<u>Measure TL3: Preferential Parking Spaces for Zero Emission Vehicles</u>	<u>Consistent.</u> The project would include parking spaces and infrastructure dedicated for electric vehicle EV charging.
<u>Measure TL4: Expand Complete Streets</u>	<u>Consistent.</u> The project would promote walkability and alternative transportation by including a bike path constructed as part of the proposed bridge spanning Buena Vista Creek.
<u>Measure TL5: Transportation Demand Management Plans</u>	<u>Not applicable.</u> The project would not impair the City's ability to incorporate Transportation Demand Management (TDM) strategies to reduce vehicle use associated with commercial development. The project would include electric shuttle service during project operations, which would reduce mobile emissions generated from project-related vehicular traffic. In addition, the project would include a bike path constructed as part of the proposed bridge spanning Buena Vista Creek.
<u>Measure AF1: Urban Forestry Program</u>	<u>Consistent.</u> The project would create 1.51 acres of landscaped areas (includes water quality treatment areas and landscaping/pervious grasscrete fire access adjacent to the buffer) and 3.08 acres of riparian buffer area, and would preserve 2.62 acres of Buena Vista Creek.
<u>Measure AF2: Urban Agriculture and Community Gardens</u>	<u>Not applicable.</u> The project would not impair the City's ability to promote urban agriculture.
<u>Measure AF3: South Morro Hills Agricultural Lands Conservation Program</u>	<u>Not applicable.</u> The project would not result in the loss of agriculture lands.
<u>Measure AF4: Carbon Farming Program</u>	<u>Not Applicable.</u> This measure pertains to the City developing a carbon farming program to incentivize agricultural owners and business network.

Source: City of Oceanside 2019.

~~The City of Oceanside has not adopted a CAP or GHG reduction strategy; however, the City of Oceanside has adopted policies within multiple chapters of their General Plan that would help the City reduce GHG emissions. In addition, the City of Oceanside has adopted the Green Building Code (City Ordinance 13-ORO752-1, adopted December 4, 2013). The project would comply with the requirements of the General Plan and the Green Building Code.~~

As discussed in Section 4.5.2 under “State,” Executive Order S-3-05 established a goal to reduce statewide GHG emissions to the 1990 level by 2020, and to reduce statewide GHG emissions to 80% below the 1990 level by 2050.⁶ The executive orders do not require the City of Oceanside to set a specific numeric method in order to demonstrate that a project meets the state’s 2030 and 2050 GHG emissions reduction targets as expressed in Executive Orders S-3-05 and B-30-15, and the City has not yet done so. In addition, CARB notes in the First Update to the Scoping Plan that “California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32” (CARB 2014). The project would help support achievement of the executive order’s near-term 2020 goal (as codified in AB 32) and the long-term 2050 goal through the project’s in-fill, through project design features, and from implementation of Mitigation Measure (MM) GHG-1 (see Section 4.5.5).

At the regional level, SANDAG’s RTP/SCS has been adopted for the purpose of reducing GHG emissions attributable to passenger vehicles in the San Diego region. Although the EIR for SANDAG’s 2050 RTP/SCS is still pending before the California Supreme Court, SANDAG recently adopted the next iteration of its RTP/SCS in accordance with statutorily mandated timelines. More specifically, in October 2015, SANDAG adopted San Diego Forward: The Regional Plan. Like the 2050 RTP/SCS, this planning document meets CARB’s 2020 and 2035 reduction targets for the region. Although the RTP/SCS does not regulate land use or supersede the exercise of land use authority by SANDAG’s member jurisdictions (i.e., the City of Oceanside), the RTP/SCS is a relevant regional reference document for purposes of evaluating the intersection of land use and transportation patterns and the corresponding GHG emissions. The RTP/SCS is not directly applicable to the project because the underlying purpose of the RTP/SCS is to provide direction and guidance on future regional growth (i.e., the location of new residential and non-residential land uses) and transportation patterns throughout the City of Oceanside and greater San Diego County, as stipulated under SB 375. CARB has recognized that the approved RTP/SCS is consistent with SB 375 (CARB 2015). The project would be consistent with

⁶ In adopting AB 32, the legislature did not adopt the 2050 horizon-year goal from Executive Order S-3-05, and in the 2013–2014 legislative session, the legislature rejected bills proposing to enact the executive order’s 2050 goal (*Cleveland National Forest Foundation v. SANDAG* 2014; *Professional Engineers in California Government et al. v. Schwarzenegger and Chiang* 2010; OPR 2008).

existing zoning and land use designations within the jurisdictions in which the project is located after implementing changes to existing plans, including a City of Carlsbad General Plan Amendment, City of Carlsbad Zoning Change, City of Carlsbad LCP General Plan Amendment, and City of Carlsbad LCP Zone Change. In addition, the traffic generated by the project would not increase vehicle trips or land use intensities as provided in the RTP/SCS. Therefore, the project would not conflict with the intent of the RTP/SCS.

Finally, the SDAPCD has not adopted GHG reduction measures that would apply to the GHG emissions associated with the project.

Scoping Plan Greenhouse Gas Emission Reduction Strategies

As discussed in Section 4.5.1, Introduction and Methodology, the Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California’s GHG emissions. Table 4.5-6-8 highlights measures that have been or will be developed under the Scoping Plan and demonstrates the project’s consistency with Scoping Plan measures. However, CARB has adopted several statewide regulations to implement the strategies proposed in the Scoping Plan. To the extent these regulations are applicable to the project, its inhabitants, or uses, the project would comply with these regulations.

**Table 4.5-68
Project Consistency with Scoping Plan GHG Emission Reduction Strategies**

Scoping Plan Measure	Measure Number	Project Consistency
<i>Transportation Sector</i>		
Advanced Clean Cars	T-1	The project’s employees and patrons would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
LCFS	T-2	Motor vehicles driven by the project’s employees and patrons would use compliant fuels.
Regional Transportation-Related GHG Targets	T-3	The project includes design features intended to enhance transit orientation and encourage non-vehicular mobility to supplement ongoing statewide efforts to increase fuel efficiency standards, promote electric and hybrid vehicles, and promote vehicular fuels from renewable resources. The project would implement a bicycle and pedestrian network.
Advanced Clean Transit	N/A	Not applicable.
Last-Mile Delivery	N/A	Not applicable.
Reduction in VMT	N/A	Not applicable.

Table 4.5-68
Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low Friction Oil 4. Solar Reflective Automotive Paint and Window Glazing	T-4	<p>Motor vehicles driven by the project's employees and patrons and visitors would maintain proper tire pressure when their vehicles are serviced.</p> <p>The project's employees and patrons and visitors would replace tires in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.</p> <p>Motor vehicles driven by the project's employees and patrons and visitors would use low friction oils when their vehicles are serviced.</p> <p>The project's employees and patrons and visitors would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.</p>
Ship Electrification at Ports (Shore Power)	T-5	Not applicable.
Goods Movement Efficiency Measures 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction	T-6	Not applicable.
Heavy-Duty Vehicle GHG Emission Reduction 1. Tractor-Trailer GHG Regulation 2. Heavy Duty GHG Standards for New Vehicle and Engines (Phase I)	T-7	Heavy-duty trucks associated with the project would be in compliance with CARB standards that are in effect at the time of purchase.
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Project	T-8	The project would not conflict with the Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Project.
Medium and Heavy-Duty GHG Phase 2	<u>N/A</u>	<u>Not applicable.</u>
High-Speed Rail	T-9	Not applicable.
<i>Electricity and Natural Gas Sector</i>		
Energy Efficiency Measures (Electricity)	E-1	The project will comply with energy efficiency standards for electrical appliances and other devices at the time of building construction. In addition, the project is required to exceed 2013 <u>the current</u> Title 24 energy requirements by 30 <u>10</u> %.

Table 4.5-68
Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Energy Efficiency (Natural Gas)	CR-1	<u>The project will comply with energy efficiency standards for electrical appliances and other devices at the time of building construction. In addition, the project is required to exceed current Title 24 energy requirements by 10%. The project will comply with energy efficiency standards for natural gas appliances and other devices at the time of building construction. In addition, the project is required to exceed 2013 Title 24 energy requirements by 30%.</u>
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	Not applicable.
Combined Heat and Power	E-2	Not applicable.
RPS (33% by 2020)	E-3	This is a statewide measure that cannot be implemented by a project applicant or lead agency. SDG&E obtains 38 45% of its power supply from renewable sources such as solar and geothermal thus becoming the first California utility to meet the 33 50% by the Year 2020-2030 requirement. The project would purchase power that is composed of a greater amount of renewable sources.
<u>Renewables Portfolio Standard (50% by 2050)</u>	<u>N/A</u>	<u>This is a statewide measure that cannot be implemented by a project applicant or lead agency. SDG&E obtains 45% of its power supply from renewable sources such as solar and geothermal thus becoming the first California utility to meet the 50% by the year 2030 requirement. The project would purchase power that is composed of a greater amount of renewable sources.</u>
SB 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and earlier solar programs	E-4	Not applicable.
<i>Water Sector</i>		
Water Use Efficiency	W-1	The project would implement low-flow water fixtures including toilets and showers heads. The implementation of reclaimed water for outdoor irrigation, “drip” irrigation systems, would further reduce GHG emissions associated with water supply. Additionally, the project would include piping to support the conveyance of reclaimed water for outdoor irrigation.
Water Recycling	W-2	See W-1.
Water System Energy Efficiency	W-3	See W-1.
Reuse Urban Runoff	W-4	The project’s stormwater mitigation plan provides long-term operation and maintenance of permanent BMPs designed to control stormwater runoff and water quality impacts. Stormwater runoff generated from the project site would be treated on site via bioretention facilities, catch basin filter units, and flow-through planters prior to its ultimate discharge into Buena Vista Creek.
Renewable Energy Production	W-5	Not applicable.

Table 4.5-68
Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
<i>Green Buildings</i>		
1. State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	The project would be required to be constructed in compliance with state or local green building standards in effect at the time of building construction.
2. Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	The project would meet green building standards that are in effect at the time of design and construction.
3. Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-1	The project would be required to be constructed in compliance with local green building standards in effect at the time of building construction.
4. Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-1	Applicable for existing buildings only. Not applicable for the project except as future standards may become applicable to existing buildings.
<i>Industry Sector</i>		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	Not applicable.
Oil and Gas Extraction GHG Emission Reduction	I-2	Not applicable.
<u>Reduce GHG Emissions by 20% in Oil Refinery Sector</u>	<u>N/A</u>	<u>Not applicable.</u>
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	Not applicable.
Refinery Flare Recovery Process Improvements	I-4	Not applicable.
Work with the local air districts to evaluate amendments to their existing leak detection and repair rules for industrial facilities to include methane leaks.	I-5	Not applicable.
<i>Recycling and Waste Management Sector</i>		
Landfill Methane Control Measure	RW-1	Applicable for certain municipal solid waste landfills. Not applicable for the project.
Increasing the Efficiency of Landfill Methane Capture	RW-2	Applicable for certain municipal solid waste landfills. Not applicable for the project.
Mandatory Commercial Recycling	RW-3	Both construction and operations of the project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act as amended. During construction, all wastes would be recycled to the maximum extent possible.
Increase Production and Markets for Compost and Other Organics	RW-3	Not applicable.
Anaerobic/Aerobic Digestion	RW-3	Not applicable.
Extended Producer Responsibility	RW-3	Not applicable.
Environmentally Preferable Purchasing	RW-3	Not applicable.
<i>Forests Sector</i>		

Table 4.5-68
Project Consistency with Scoping Plan GHG Emission Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Sustainable Forest Target	F-1	Not applicable.
<i>High GWP Gases Sector</i>		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-professional Servicing	H-1	The project's employees would be prohibited from performing air conditioning repairs and required to use professional servicing.
SF ₆ Limits in Non-utility and Non-semiconductor Applications	H-2	Not applicable.
Reduction of PFCs in Semiconductor Manufacturing	H-3	Not applicable.
Limit High GWP Use in Consumer Products	H-4	The project's employees would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	Motor vehicles driven by the project's employees and patrons would comply with the leak test requirements during smog checks.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	Not applicable.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	Not applicable.
SF ₆ Leak Reduction Gas Insulated Switchgear	H-6	Not applicable.
<u>40% Reduction in Methane and Hydrofluorocarbon (HFC) Emissions</u>	<u>N/A</u>	<u>Not applicable.</u>
<u>50% Reduction in Black Carbon Emissions</u>	<u>N/A</u>	<u>Not applicable.</u>
<i>Agriculture Sector</i>		
Methane Capture at Large Dairies	A-1	Not applicable.

Source: CARB 2014/2017.

Notes: GHG = greenhouse gas; LCFS = Low Carbon Fuel Standard; CARB = California Air Resources Board; RPS = Renewables Portfolio Standard; SDG&E = San Diego Gas & Electric; SB = Senate Bill; BMP = best management practice; SF₆ = sulfur hexafluoride; PFCs = perfluorocarbons; GWP = global warming potential.

Based on the analysis in Table 4.5-68, the project would be consistent with the applicable strategies and measures in the Scoping Plan.

The project was not found to conflict with or obstruct the Oceanside CAP and General Plan or the Carlsbad General Plan, Executive Orders S-3-05 and B-30-15, the 2050 RTP/SCS, or CARB's Scoping Plan. Therefore, the project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions. This impact is considered less than significant.

4.5.5 Mitigation Measures

MM-GHG-1 Greenhouse Gas (GHG) Emissions Reduction Measures. The following GHG emissions reduction measures shall be implemented:

- Use low-flow toilets and showers and drip irrigation (project design feature—quantified).
- Implement electric shuttle service (project design feature—not quantified).
- Maintain and manage a guaranteed return trip program for employees where vanpool- and carpool-reliant employees will be provided a free return trip (to the point of commute origin) when a personal emergency situation requires it.
- Require service fleet vehicles to be powered with alternative fuel technology where feasible.
- Provide preferential parking for carpool, shared, electric, and hydrogen vehicles.
- To encourage local community visitors to use pedestrian and bicycle modes of transportation to and from the site, provide sidewalks and crosswalks at all streets (along with general pedestrian connectivity throughout the project site) and integrate traffic-calming measures to promote reduced speeds on site.
- Exceed 2016 Title 24 Building Energy Efficiency Standards by 10%.
- Equip the pool(s) and spa(s) with active solar water-heating systems.
- Implement energy-efficient design practices such as high-performance glazing, Energy Star-compliant systems and appliances, radiant-heat roof barriers, insulation on all pipes, programmable thermostats, solar access, and sealed ducts.
- Prohibit use of chlorofluorocarbon refrigerants.
- Minimize turf areas and encourage alternative ground covers.
- ~~• Use native species and drought tolerant species for a minimum of 50% of the ornamental plant palette in non-turf areas to minimize water demand.~~
- Ensure recycling of construction debris and waste through administration by an on-site recycling coordinator and presence of recycling/separation areas.

4.5.6 Level of Significance After Mitigation

Implementation of MM-GHG-1 would minimize GHG emissions associated with project operations. The emission reductions associated with the measures listed in MM-GHG-1 have been quantified in CalEEMod to the extent feasible; however, most mitigation is not quantifiable and/or the extent to which some measures would apply to the project is unknown (e.g., whether high-GWP refrigerants would be used).

Approximately ~~54~~57% of the project's annual GHG emissions are from mobile emissions sources; consequently, to reduce GHG emissions to a less than significant level the project would need to reduce the number of available rooms by 89%, to a total of 45 rooms, to reduce the number of vehicle trips and associated GHG emissions generated by the project. Measures implemented that will help reduce the project's GHG emissions include energy consumption, waste, and water use. However, these sources account for 46% of the project's annual GHG emissions and would not provide a substantial enough reduction of the project's GHG emissions. Although reducing the number of rooms provided to 45 would lessen the severity of GHG emissions to levels below the 900 MT CO₂E screening threshold, this substantial reduction in the number of rooms would result in the project failing to meet the identified goals and objects, and the proposed project would not be financially feasible if such a reduction were made. Therefore, the project's GHG contribution would be cumulatively considerable and is significant and unavoidable.