4.6.1 INTRODUCTION

This resource section discusses PLAN Hermosa's contribution to greenhouse gas (GHG) emissions and the associated effects of climate change. Policies contained in the Land Use + Design, Mobility, Sustainability + Conservation, Parks + Open Space, and Infrastructure elements of PLAN Hermosa are intended to reduce the contribution of GHG emissions in Hermosa Beach from both community activities and municipal operations. The reader is referred to Section 4.2, Air Quality, for a discussion of project impacts associated with air quality.

NOP Comments: No comments were received in response to the Notice of Preparation (NOP) related to GHG emissions. Comments included written letters and oral comments provided at the NOP scoping meeting.

Reference Information: Information for this resource chapter is based on numerous sources, including the PLAN Hermosa Technical Background Report (TBR), the Hermosa Beach Sustainability Plan, the Hermosa Beach Carbon Neutral Scoping Plan, the 2015 City of Hermosa Beach GHG Inventory, Forecasting, Target-Setting Report for an Energy Efficiency Climate Action Plan, the Community Carbon Planning Tool, and other publicly available documents. The TBR is attached as **Appendix C-5**.

4.6.2 ENVIRONMENTAL SETTING

Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, the radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O).

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Methane traps over 21 times more heat per molecule than CO_2, and N_2O absorbs 310 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weigh each gas by its global warming potential. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

According to the California Association of Environmental Professionals (2015) Beyond 2020 whitepaper, scientific studies have demonstrated a causative relation between increasing man-made GHG emissions and a long-term trend in increasing global average temperatures. This conclusion is the consensus of the vast majority of climate scientists who publish in the field. The effects of past increases in temperature on the climate and the earth's resources are well documented in the scientific literature, which is best summarized in the Intergovernmental Panel on Climate Change's (IPCC) periodic reports, the latest of which is the Fifth Assessment Report, released in 2014.

The IPCC's work to model and evaluate future climatic conditions indicates that if GHG emissions to continue to increase at current rates, there will be substantial adverse effects to both humans and the natural environment. Many scientific bodies around the world have concluded that avoiding the most severe outcomes of climate change will require keeping global average temperatures to rising no more than two degrees Celsius by the end of the century and limiting

carbon dioxide emissions to below 450 parts per million (IPCC 2014). In order to limit global temperature increases to two degrees Celsius, the IPCC and organizations like the Union of Concerned Scientists have indicated that the United States and other developed countries would need to reduce greenhouse gas emissions anywhere from 78 to 95 percent below 1990 levels, with most organizations identifying an approximately 80 percent reduction below 1990 levels by 2050 to provide stabilization at the two degree Celsius threshold (IPCC 2014).

Although the State of California has taken action through legislation and executive orders to curb the generation or release of additional greenhouse gas emissions, the state still faces intensifying impacts of climate change in coming decades, as a result of emissions already released into the atmosphere (CNRA 2009a). The California Climate Adaptation Strategy indicates that California should expect overall hotter and drier conditions, with a continued reduction in winter snow (with concurrent increases in winter rains), as well as increased average temperatures and accelerating sea level rise. In addition to changes in average temperatures, sea level, and precipitation patterns, the intensity of extreme weather events is also changing (CNRA 2009a).

Climate change temperature projections identified in the 2009 California Climate Adaptation Strategy suggest the following:

- Average temperature increase is expected to be more pronounced in the summer than in the winter season.
- Inland areas are likely to experience more pronounced warming than coastal regions.
- Heat waves are expected to increase in frequency, with individual heat waves also showing a tendency toward becoming longer and extending over a larger area, thus more likely to encompass multiple population centers in California at the same time.
- Because GHGs remain in the atmosphere for decades, temperature changes over the next 30 to 40 years are already largely determined by past emissions. By 2050, temperatures are projected to increase by an additional 1.8 to 5.4°F [degrees Fahrenheit] (an increase one to three times as large as that which occurred over the entire twentieth century).
- By 2100, the models project temperature increases between 3.6 and 9°F. (CNRA 2009a)

According to the 2009 California Climate Adaptation Strategy, the impacts of climate change in California have the potential to include but are not limited to the areas discussed in **Table 4.6-1 (Potential Statewide Impacts from Climate Change)**.

TABLE 4.6-1
POTENTIAL STATEWIDE IMPACTS FROM CLIMATE CHANGE

Potential Statewide Impact	Description
Public Health	Climate change is expected to lead to an increase in ambient (i.e., outdoor) average air temperature, with greater increases expected in summer. Larger temperature increases are anticipated in inland communities as compared to the California coast. The potential health impacts from sustained and significantly higher than average temperatures include heat stroke, heat exhaustion, and the exacerbation of existing medical conditions such as cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Numerous studies have indicated that there are generally more deaths during periods of sustained higher temperatures. The elderly, infants, and socially isolated people with pre-existing illnesses who lack access to air conditioning or cooling spaces are among the most at risk during heat waves.

Potential Statewide Impact	Description
Floods and Droughts	The impacts of flooding may include population displacement, severe psychosocial stress with resulting mental health impacts, exacerbation of pre-existing chronic conditions, and infectious disease. Additionally, impacts can range from a loss of personal belongings, and the emotional ramifications from such loss, to direct injury and/or mortality. Drinking water contamination outbreaks in the United States are associated with extreme precipitation events. Runoff from rainfall is also associated with coastal contamination that can lead to contamination of shellfish and contribute to food-borne illness. Floodwaters may contain household, industrial, and agricultural chemicals, as well as sewage and animal waste. Flooding and heavy rainfall events can wash pathogens and chemicals from contaminated soils, farms, and streets into drinking water supplies. Flooding may also overload storm and wastewater systems, or flood septic systems, also leading to possible contamination of drinking water systems. Drought impacts develop more slowly over time. Risks to public health that Californians may face from drought include impacts on water supply and quality, food production (both agricultural and commercial fisheries), and risks of waterborne illness. As surface water supplies are reduced as a result of drought conditions, the amount of groundwater pumping is expected to increase to make up for the water shortfall. The increase in groundwater pumping has the potential to lower the water tables and cause land subsidence. Communities that utilize well water will be adversely affected by drops in water tables or through changes in water quality. Groundwater supplies have higher levels of total dissolved solids compared to surface waters. This introduces a set of effects for consumers, such as repair and maintenance costs associated with mineral deposits in water heaters and other plumbing fixtures, and on public water system infrastructure designed for lower salinity surface water supplies. Drought may also lead to increased concentration of contaminants in drinking water supplies.
Water Resources	The state's water supply system already faces challenges to provide water for California's growing population. Climate change is expected to exacerbate these challenges through increased temperatures and possible changes in precipitation patterns. The trends of the last century, especially increases in hydrologic variability, will likely intensify in this century. The state can expect to experience more frequent and larger floods and deeper droughts. Rising sea level will threaten the Delta water conveyance system and increase salinity in near-coastal groundwater supplies.
Forests and Landscapes	Global climate change has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, wildfire occurrence statewide could increase from 57 to 169 percent by 2085. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state.

Source: CNRA 2009a

EXISTING CONDITIONS

Global and US Emissions

Global emissions have continued to increase nearly every year since 2000, reaching 34.5 billion metric tons of carbon dioxide equivalents ($MTCO_2e$) in 2012. The six largest emitting countries/regions were China (29 percent), the United States (15 percent), the European Union (11 percent), India (6 percent), the Russian Federation (5 percent), and Japan (2 percent) (PBL Netherlands Environmental Assessment Agency 2013).

According to the National Oceanic and Atmospheric Administration (NOAA), in March 2015 the monthly global average carbon dioxide concentration surpassed 400 parts per million (ppm) for the first time since tracking was initiated (NOAA 2015). This is considered a significant milestone, as it shows that humans burning fossil fuels have caused global carbon dioxide concentrations to rise

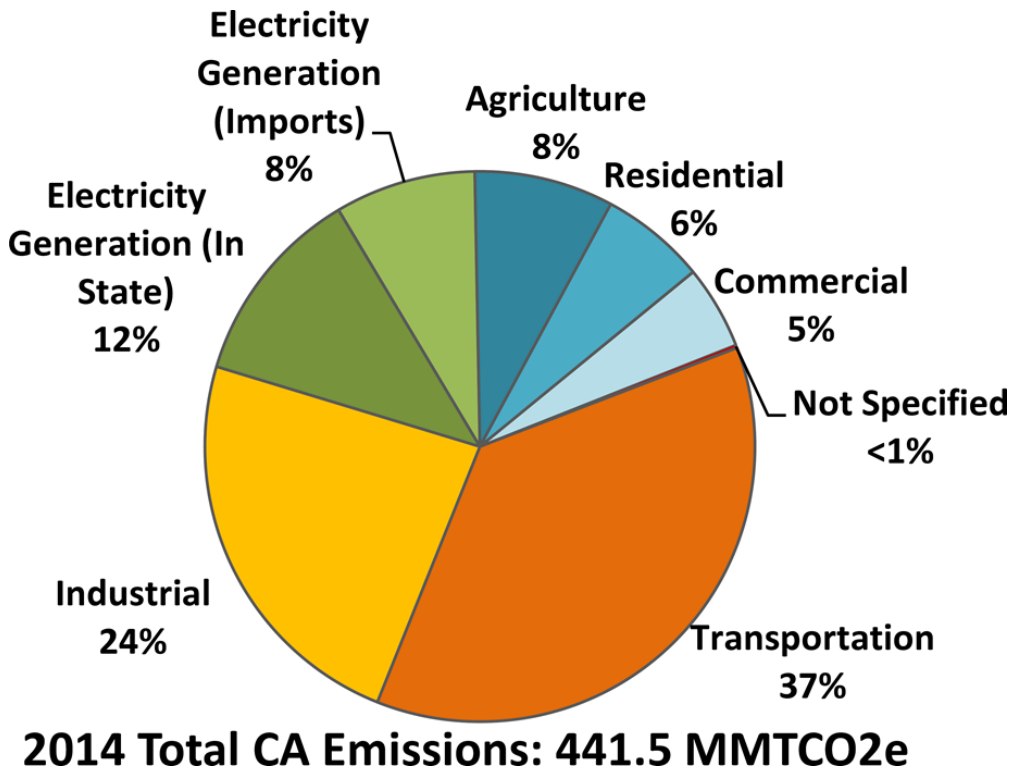
more than 120 ppm since pre-industrial times around the year 1800 (NOAA 2015). Half of this rise has occurred since 1980. By February 2016, the monthly average had risen to 404.02 ppm (NOAA 2016).

Recent assessments annual GHG emissions in the United States indicate that in 2014 emissions increased approximately 1 percent since 2013 to 6.8 billion $MTCO_2e$. While the 1 percent increase is attributed to increased fuel use and miles traveled, it still represents an approximately 9 percent decrease in emissions from 2005 levels (EPA 2016).

California Emissions

California produced 441 million metric tons of CO_2e ($MMTCO_2e$) in 2014 (CARB 2016), representing nearly 7 percent of all US emissions and 2 percent of global emissions. In 2014, the consumption of fossil fuels in the transportation sector was the single largest source of GHG emissions in California, accounting for 37 percent of total GHG emissions in the state (CARB 2016). This category was followed by the industrial sector (24 percent) and the electric power sector, including both in-state and out-of-state sources (20 percent) (CARB 2016).

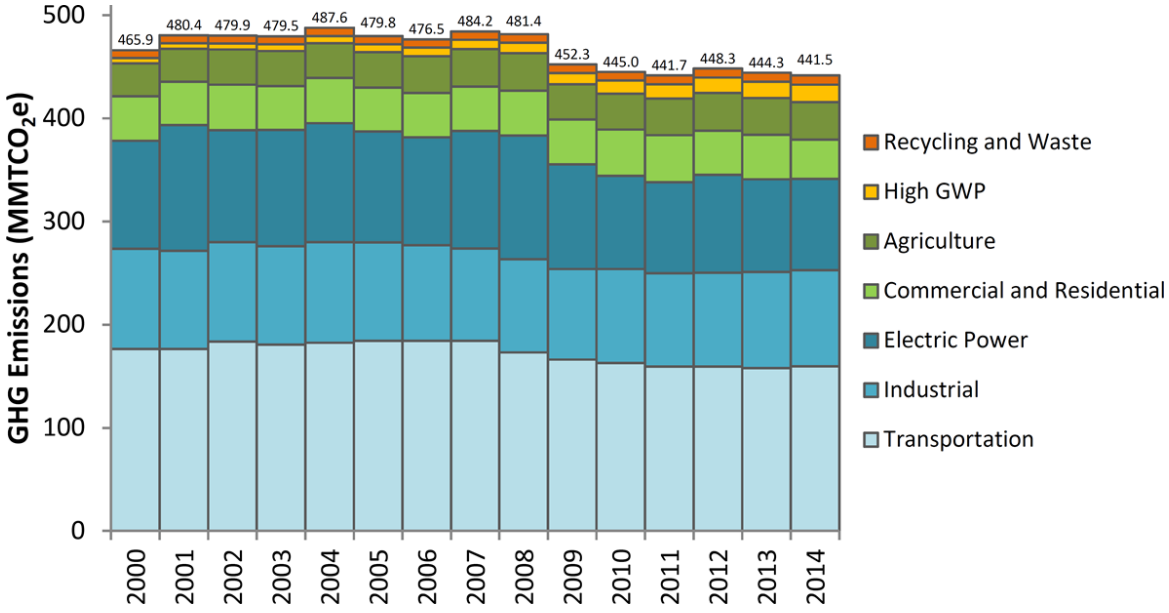
FIGURE 4.6-1
CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR, 2014



Source: CARB 2015

In 2014, total greenhouse gas emissions were 441.5 $MMTCO_2e$, representing an overall decrease of 9.4 percent since peak levels in 2004. During the 2000 to 2014 period, per capita GHG emissions in California continued to drop from a peak in 2001 of 13.9 $MTCO_2e$ per person to 11.4 $MTCO_2e$ per person in 2014, an 18 percent decrease (CARB 2016). To curb statewide emissions, the State of California has taken numerous legislative actions, described in the Regulatory Setting subsection, and implemented several incentive-based programs to reduce statewide greenhouse gas emissions over the last 10 years.

FIGURE 4.6-2
CALIFORNIA GREENHOUSE GAS EMISSIONS, 2000–2014



Source: CARB 2014a

The City of Hermosa Beach, working in conjunction with the South Bay Cities Council of Governments, prepared greenhouse gas inventories for 2005, 2007, 2010, and 2012 (City of Hermosa Beach 2015a). The inventories estimate emissions for on-road transportation, off-road equipment, residential and commercial energy use, solid waste generation, and water and wastewater emissions. The inventories were prepared consistent with industry protocols including the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, the Local Government Operations Protocol, and the California Association of Environmental Professionals whitepapers on inventorying, forecasting, and setting targets for GHG emissions.

Transportation sector emissions are the result of gasoline and diesel combustion in vehicles traveling to, from, or within Hermosa Beach, but exclude emissions associated with vehicles that pass through the city without stopping (City of Hermosa Beach 2015b). Residential and commercial energy use calculates the emissions generated by electricity and natural gas consumed by residences and commercial businesses within Hermosa Beach, while solid waste emissions are based on the amount of waste disposed in landfills, where it decomposes and generates methane. Finally, water and wastewater emissions are calculated by determining the energy needed to extract, transport, treat, and dispose of the water resources consumed by the community.

Table 4.6-2 (Hermosa Beach Greenhouse Gas Emissions by Sector, 2005, 2007, 2010, 2012) illustrates Hermosa Beach's GHG inventory for the years 2005, 2007, 2010, and 2012. In 2005, Hermosa Beach generated approximately 137,160 metric tons of CO_2e. On-road transportation, at 73,567 metric tons of CO_2e, represented the largest share of emissions at 54 percent. In 2007, the city generated approximately 132,768 metric tons of CO_2e, a 3.2 percent decrease from the total emissions in 2005. This decrease was attributed to fewer emissions from all emission categories. By 2012, the city had a reduction in emissions of 7.7 percent from the 2005 inventory, with emissions decreasing in most sectors. Between 2005 and 2012, the wastewater sector observed a small increase in emissions and the residential energy sector saw a nearly 5 percent increase in emissions.

TABLE 4.6-2
HERMOSA BEACH GREENHOUSE GAS EMISSIONS BY SECTOR, 2005, 2007, 2010, 2012

Sector	2005 ($MTCO_2e$)	% of Total	2007 ($MTCO_2e$)	% of Total	2010 ($MTCO_2e$)	% of Total	2012 ($MTCO_2e$)	% of Total
On-Road Transportation	73,567	54%	71,863	54%	70,277	55%	68,235	54%
Residential Energy	32,293	24%	31,964	24%	32,700	26%	33,808	27%
Commercial Energy	20,280	15%	19,792	15%	18,372	14%	17,830	14%
Solid Waste	6,015	4%	4,584	3%	3,510	3%	3,334	3%
Water	4,065	3%	3,942	3%	2,552	2%	2,600	2%
Off-road Sources	888	1%	588	<1%	419	<1%	745	<1%
Wastewater	52	<1%	35	<1%	59	<1%	59	<1%
Total	137,160		132,768		127,889		126,611	
Change from 2005			-3.2%		-6.8%		-7.7%	

Source: City of Hermosa Beach 2015b

On a per capita basis, the Hermosa Beach community generated 6.4 $MTCO_2e$ per year per resident in 2012, based on California Department of Finance estimates of 19,699 residents in 2012. The per capita estimates are lower than the California average of 11.9 $MTCO_2e$ per resident in 2014.

4.6.3 REGULATORY SETTING

State and local laws, regulations, and policies provide a regulatory framework for addressing GHG emissions under PLAN Hermosa. Key laws, regulations, and policies helping to reduce local emissions are summarized below.

STATE

- **The California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32 and Senate Bill [SB] 32):** AB 32 is the primary legislation that has driven GHG regulation and analysis in California between 2006 and 2016, by instructing the California Air Resource Board (CARB) to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. Based on CARB's calculations of emissions levels, California must reduce GHG emissions by approximately 15 percent below 2005 levels to achieve this goal. In September 2016, the Governor signed SB 32, which builds upon the statewide targets for 2020 by establishing a longer-term target so that "statewide greenhouse gas emissions are reduced to 40 percent below the 1990 levels by 2030." The bill further authorized CARB to adopt regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions.
- **California Executive Orders S-3-05 (2005) and B-30-15 (2015):** These two executive orders highlight longer-term GHG emissions reduction targets for the state, though such targets have not yet been adopted by the legislature and signed into law. Specifically, Executive Order (EO) S-3-05 seeks to achieve a reduction of GHG emissions of 80 percent below 1990 levels by 2050, consistent with the scientific consensus that developed regions will need to reduce emissions at least 80 percent below 1990 levels to limit global warming to two degrees Celsius. Executive Order B-30-15 seeks to establish an interim target, between the

2020 target established through AB 32 and the long-term targets in EO S-3-05, to achieve a reduction of GHG emissions of 40 percent below 1990 levels by 2030.

- **CEQA and Greenhouse Gas Emissions (Senate Bill 97):** In 2007, the Natural Resources Agency was directed by the legislature to prepare amendments to the California Environmental Quality Act (CEQA) Guidelines, providing direction to lead agencies on how to analyze and mitigate greenhouse gas emissions. According to the Governor's Office of Planning and Research, the amendments adopted in 2009 to the CEQA Guidelines helped to clarify the following:

  1) Lead agencies must analyze the greenhouse gas emissions of proposed projects and must reach a conclusion regarding the significance of those emissions. (See CEQA Guidelines Section 15064.4.)

  2) When a project's greenhouse gas emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions. (See CEQA Guidelines Section 15126.4(c).)

  3) Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. (See CEQA Guidelines Section 15126.2(a).)

  4) Lead agencies may significantly streamline the analysis of greenhouse gases on a project level by using a programmatic greenhouse gas emissions reduction plan meeting certain criteria. (See CEQA Guidelines Section 15183.5(b).)

  5) CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives. (See CEQA Guidelines Appendix F.)

These amendments essentially provided two pathways for lead agencies to conduct GHG emissions analysis: (1) individually analyze and mitigate the greenhouse gas emissions generated by any project subject to CEQA, or (2) develop, at the programmatic level, a Qualified GHG Reduction Strategy and require each project to demonstrate that the project is consistent with the strategy. The amendments to the CEQA Guidelines additionally outlined the components required for a public agency's GHG emissions reduction strategy in order to be deemed qualified. The requirements for a Qualified GHG Reduction Strategy should:

- Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.
- Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels.
- Be adopted in a public process following environmental review.

Rather than a state or regional agency determining whether a public agency's GHG reduction plan meets the requirements to be deemed qualified, to date, the responsibility has remained with each individual agency to demonstrate how its GHG reduction plan fulfills each component of the requirements. The City of Hermosa Beach anticipates that PLAN Hermosa, in conjunction with this Environmental Impact Report, is designed to meet the intent of a Qualified GHG Reduction Strategy and will elaborate how these documents are consistent with each component of the CEQA Guidelines under the discussion related to Impact 4.6-2.

LOCAL

- **South Coast Air Management District (SCAQMD).** To provide guidance to local lead agencies on determining the significance of greenhouse gas emissions in CEQA documents, SCAQMD staff is in the process of developing significance thresholds for criteria air pollutants and GHGs relative to general plans. A SCAQMD Working Group has proposed several possible thresholds, including thresholds for analysis of general plan impacts. On September 28, 2010, SCAQMD Working Group Meeting #15 considered use of a metric ton per service population metric as a threshold for plan-level analysis, though it has not adopted any thresholds for the land use sector to date. The first threshold corresponds to a 2020 service population metric of 6.6 metric tons of CO_2e per service population (residents plus employees) per year. The second proposed threshold is a 2035 service population metric of 4.1 metric tons of CO_2e per service population per year. These efficiency thresholds were developed based on the statewide GHG inventory and statewide emission reduction goals of AB 32.
- **Hermosa Beach 2011 Sustainability Plan.** The City is involved in a number of efforts to reduce GHG emissions. The City Council adopted the first Sustainability Plan for Hermosa Beach in 2011. The Sustainability Plan describes community and municipal GHG emissions, compares future emissions to the AB 32 emissions reduction target (15 percent below 2005 levels), and outlines a series of strategies and actions to reduce GHG emissions. The strategies address emissions from building energy (commercial, residential, and municipal), transportation, solid waste, and water consumption, determining that the suite of programs could reasonably reduce emissions 15 percent below 2005 levels. Although the Sustainability Plan qualitatively compared future emissions to the AB 32 emissions reduction target, it did not adopt targets for greenhouse gas emissions.
- **Municipal Carbon Neutral Plan.** In 2015, the City of Hermosa Beach codified a local goal to become a carbon neutral municipal organization no later than 2020 through adoption of the Municipal Carbon Neutral Plan. This plan sets the City up to demonstrate environmental leadership at the municipal level and identifies carbon reduction programs and initiatives to achieve the carbon neutral goal. By setting an aggressive municipal goal, the City hopes to set an example to the Hermosa Beach community and to other communities in the region to take bold action to reduce greenhouse gas emissions and limit the degree of catastrophic impacts that climate change could have in the future.

4.6.4 IMPACTS AND MITIGATION MEASURES

ANALYSIS APPROACH

The analysis of impacts is based on the likely consequences of adoption and implementation of PLAN Hermosa compared to existing conditions. This analysis uses the information provided in the 2015 City of Hermosa Beach GHG Inventory, Forecasting, Target-Setting Report for an Energy Efficiency Climate Action Plan (2015 GHG Inventory Report) and the local growth projections determined based on available land capacity (see Chapter 3.0, Project Description) as the basis

for projecting future GHG emissions in the city, as well as the Carbon Planning Tool developed to evaluate the GHG reduction potential of various policies.

As mentioned in the Environmental Setting subsection, the inventories were prepared consistent with industry protocols, including the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, the Local Government Operations Protocol, and the California Association of Environmental Professionals whitepapers on inventorying, forecasting, and setting targets for GHG emissions.

The Hermosa Beach Carbon Planning Tool is an Excel-based tool built to estimate the effectiveness of implementing various programs on reducing greenhouse gas emissions, as well as the associated costs and benefits from implementing measures. The tool includes data and information specific to Hermosa Beach regarding energy consumption, travel patterns, and building stock and relies on best practices such as the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures to outline the assumptions and methods for calculating the greenhouse gas reduction potential of various implementation measures. The Carbon Planning Tool includes the links and sources used for each data point and assumptions used to calculate emissions reductions.

Draft PLAN Hermosa Policies and Implementation Actions

Understanding that over 50 percent of the community's GHG emissions come from transportation, the City proposes a land use plan that allows for more office space (more professional jobs in town) to reduce commute dependence, more community-serving retail dispersed more evenly throughout the community to reduce the length of trips or dependence on automobiles for local trips, a wide variety of transportation system improvements to provide safe walking, bicycling, and transit, and green infrastructure options. Additionally, the City proposes to reduce the carbon intensity from energy consumption by increasing the amount of renewable energy generated and by implementing efficiency and conservation programs to reduce the amount of energy consumed. PLAN Hermosa policies and implementation actions that reduce potential GHG-related impacts include the following:

Policies

Transportation

Governance Element

- **4.4 Regional transportation and infrastructure decisions.** Actively support regional transportation and infrastructure projects and investment decisions that benefit the City and the region.
- **6.4 Jobs-housing balance.** Strive to improve the jobs-housing balance in the city by actively pursuing employment uses that match the skill and educational levels of existing and future residents.

Land Use + Design Element

- **Land Use Designations –** The range and diversity of uses allowed within each land use designation plays a role in the number of trips a use generates and the mode of transportation chosen to make that trip. The more diversity in uses (between commercial, office/professional, residential, etc.) in a given area, combined with a safe transportation network, results in shorter trips that can be made by driving, walking, biking, or transit.
- **1.1 Diverse and distributed land use pattern.** Strive to maintain the fundamental pattern of existing land uses, preserving residential neighborhoods, while providing for enhancement

and transformation of corridors and districts in order to improve community activity and identity.

- **1.2 Focused infill potential.** Proposals for new development should be directed toward the city's commercial areas with an emphasis on developing transit-supportive land use mixes.
- **1.3 Access to daily activities.** Strive to create sustainable development patterns such that the majority of residents are within one-half mile walking distance to a variety of neighborhood goods and services, such as supermarkets, restaurants, churches, cafes, dry cleaners, laundry mats, farmers' markets, banks, personal services, pharmacies and similar uses.
- **1.4 Diverse commercial areas.** Promote the development of diversified and unique commercial districts with locally owned businesses and job- or revenue-generating uses.
- **4.2 Employment centers.** Encourage the development and co-location of additional office space and employment centers along corridors.
- **4.7 Access to transit.** Support the location of transit stations and enhanced stops near the intersection of Aviation Blvd and Pacific Coast Highway, and adjacent to Gateway Commercial uses to facilitate and take advantage of transit service, reduce vehicle trips and allow residents without private vehicles to access services.
- **4.10 Pedestrian access.** For all new development, encourage pedestrian access, and create strong building entries that are primarily oriented to the street.
- **6.2 Streetscaping.** Proactively beautify existing streetscapes with street trees, landscaping and pedestrian-scaled lighting.
- **6.3 Green infrastructure network.** Establish an interconnected green infrastructure network throughout Hermosa Beach that serves as a network for active transportation, recreation and scenic beauty and connects all areas of the city. In particular, connections should be made between the beach, parks, the Downtown, neighborhoods, and other destinations within the city. Consider the following components when designing and implementing the green/open space network:
  - Preserved open space areas such as the beach and the Greenbelt;
  - Living streets with significant landscaping and pedestrian and bicycle amenities; and
  - Community and neighborhood parks, and schools.
- **6.5 Provision of sidewalks.** Encourage pedestrian-friendly sidewalks on both sides of streets in neighborhoods.
- **6.7 Pedestrian-oriented design.** Eliminate urban form conditions that reduce walkability by discouraging surface parking and parking structures along walkways, long blank walls along walkways, and garage-dominated building facades.
- **6.8 Balance pedestrian/vehicular circulation.** Require vehicle parking design to consider pedestrian circulation. Require the following of all new development along corridors:
  - Where parking lots front the street, the City will work with existing property owners to add landscaping between the parking lot and the street.
  - Parking lots should be landscaped to create an attractive pedestrian environment and reduce the impact of heat islands.
  - The number of curb cuts and other intrusions of vehicles across sidewalks should be minimized.

  - When shared parking supply options are not available, encourage connections between parking lots on adjacent sites.
  - Above-ground parking structures should be designed according to the same urban design principles as other buildings.
  - Encourage the use of systems to increase parking lot efficiency, such as mechanical lift systems or occupancy sensors.

- **9.1 Ocean-based energy resources.** Encourage and support research and responsible development of renewable ocean-based energy sources. Renewable energy sources appropriate to Hermosa Beach shall be limited to wave, tidal, solar, and wind sources that meet the region's and state's need for affordable sources of renewable energy.
- **9.2 Renewable energy facilities.** To reduce or avoid conflicts, communicate and collaborate with affected ocean users, coastal residents and businesses, and applicants seeking state or federal authorization for the siting, development, and operation of renewable energy facilities.
- **9.3 Ecosystem preservation.** Ensure that any future proposed offshore facilities do not have unacceptable adverse effects on the integrity, stability, and complexity of the marine ecosystem, important marine habitat, and areas important to fisheries, navigation, recreation, and aesthetic enjoyment.
- **9.5 Reclamation.** Require renewable energy facility operations to restore the natural characteristics of a site to the extent practicable when a project is decommissioned and removed.
- **13.3 Fresh food offerings.** Encourage the continuation and expansion of fresh food offerings including farmers' markets, community gardens, and edible landscapes in Hermosa Beach.

Mobility Element

- **1.1 Consider all modes.** Require the planning, design, and construction of all new and existing transportation projects to consider the needs of all modes of travel to create safe, livable and inviting environments for all users of the system.
- **1.5 Require improvements**. Require new development to provide or pay its share of transportation and infrastructure improvements including any sidewalk improvements, landscaping, bicycle infrastructure, traffic calming, and public realm improvements.
- **2.5 Require sustainable practices.** Incorporate environmental sustainability practices into designs and strategic management of road space and public right-of-ways, prioritizing practices that can serve dual infrastructure purposes.
- **3.2 Invest in sidewalks.** Prioritize investment in designated priority sidewalks to ensure a complete network of sidewalks and pedestrian-friendly amenities that enhances pedestrian safety, access opportunities and connectivity to destinations.
- **3.3 Active transportation.** Require that all development or redevelopment projects accommodate active transportation through providing on-site amenities, necessary connections to existing and planned pedestrian and bicycle networks, and incorporate people-oriented design practices.
- **3.4 Access opportunities.** Provide enhanced mobility and access opportunities for local transportation and transit services in areas of the city with sufficient density and intensity of uses, mix of appropriate uses, and supportive bicycle and pedestrian network connections that can reduce vehicle trips within the city's busiest corridors.

- **3.5 Incentivize other modes.** Incentivize local shuttle/trolley services, rideshare and car share programs, and developing infrastructure that support low speed, low carbon (e.g. electric) vehicles.
- **3.6 Complete bicycle network.** Provide a complete bicycle network along all designated roadways while creating connections to other modes of travel including walking and transit.
- **4.1 Shared parking.** Facilitate park-once and shared parking policies among private developments that contribute to a shared parking supply and interconnect with adjacent parking facilities.
- **4.4 Provision of subsidized parking.** Ensure the provision of subsidized on-street residential parking is limited to residences which cannot provide adequate parking on-site.
- **4.5 Sufficient bicycle parking.** Require a sufficient supply of bicycle parking to be provided in conjunction with new vehicle parking facilities by both public and private developments.
- **4.6 Priority parking.** Provide priority parking and charging stations to accommodate the use of Electric Vehicles (EVs), including smaller short-distance neighborhood electric vehicles.
- **4.9 Encourage TDM strategies.** Encourage use of Transportation Demand Management (TDM) strategies and programs such as carpooling, ride hailing, and alternative transportation modes as a way to reduce demand for additional parking supply.
- **5.1 Prioritize development of infrastructure.** Prioritize the development of roadway and parking infrastructure that encourages private electric and other low carbon vehicle ownership and use throughout the city.
- **5.2 Local transit system.** Develop a local transit system that facilitates efficient transport of residents, hotel guests, and beachgoers between activity centers, and to Downtown businesses and the beach.
- **5.3 Incentivize TDM strategies.** Incentivize the use of Transportation Demand Management (TDM) strategies as a cost effective method for maximizing existing transportation infrastructure to accommodate mobility demands without significant expansion to infrastructure.
- **5.5 Encourage smart growth.** Encourage smart growth land use features in development projects to ensure more compact, mixed, connected, and multimodal development that supports reduced trip generation, trip lengths, and greater ability to utilize alternative modes.
- **6.1 Regional network.** Work with government agencies and private sector companies to develop a comprehensive, regionally integrated transportation network that connects the community to surrounding cities.
- **6.3 Support programs.** Facilitate greater local and regional mobility through programs for shared equipment or transportation options such as car sharing and bike sharing.
- **6.6 Greater utilization.** Consider exploring opportunities for greater utilization of the Beach Cities Transit system for improved mobility along major corridors and as a potential means of improved regional transit connections.

Sustainability + Conservation Element

- **2.4 Land use and transportation investments.** Promote land use and transportation investments that support greater transportation choice, greater local economic opportunity, and reduced number and length of automobile trips.
- **3.2 Mobile source reductions.** Support land use and transportation strategies to reduce vehicle miles traveled and emissions, including pollution from commercial and passenger vehicles.
- **3.3 Fuel efficient fleets.** Promote fuel efficiency and cleaner fuels for vehicles as well as construction and maintenance equipment by requesting that City contractors provide cleaner fleets.

Parks + Open Space Element

- **4.2 Enhanced access points.** Increase and enhance access to parks and open space, particularly access points that promote physical activity such as pedestrian- and bike-oriented access points.
- **4.3 Safe and efficient trail network.** Develop a network of safe and efficient trails, streets, and paths that connect residents, visitors, and neighboring communities to the beach, parks, and activity centers.
- **6.4 Transit access.** Coordinate with regional agencies and neighboring jurisdictions to improve regional and local transit access to beach access points.
- **6.5 Bicycle and pedestrian access.** Maximize bicycle and pedestrian access and safety getting to and around the Coastal Zone through infrastructure and wayfinding improvements.
- **6.12 Complete South Bay Bike Master Plan.** Prioritize completion of proposed South Bay Bike Master Plan improvements in the Coastal Zone that connect to other bike routes and paths throughout the city and to the surrounding region.

Infrastructure Element

- **2.4 Sidewalk improvements.** Consider innovative funding strategies, such as cost-sharing, ADA accessibility grants, or sidewalk dedications, to improve the overall condition, safety, and accessibility of sidewalks.
- **2.5 Active transportation dedications.** Require new development and redevelopment projects to provide land or infrastructure necessary to accommodate active transportation, such as sidewalks, bike racks, and bus stops.
- **2.6 Traffic signal coordination.** Maintain and operate the traffic signal system with advanced technologies to manage traffic operations and maintain traffic signal infrastructure.

Energy Consumption

Sustainability + Conservation Element

- **4.1 Renewable energy generation.** Require, promote, and facilitate the installation of renewable energy projects on homes and businesses.
- **4.2 Building energy disclosure.** Require large buildings to report their energy and water use on a regular basis.

- **4.3 Retrofit program.** Provide an energy retrofit program to assist home and building owners to make efficiency improvements.
- **4.4 Rental efficiency.** Adopt a financing program to incentivize rental efficiency retrofits, such as green leasing.
- **4.5 Municipal facilities.** Continue to work toward achieving carbon neutral municipal facilities by 2020.
- **4.6 Sustainable building standards.** Use sustainable building checklists to minimize or eliminate waste and maximize recycling in building design, demolition, and construction activities.

Infrastructure Element

- **6.4 Innovative and renewable technology.** Encourage the exploration and establishment of innovative and renewable utility service technologies.
- **6.5 Renewable energy facilities.** Unless a renewable energy facility would cause an unmitigatable impact to health or safety, allow them by right.
- **6.6 Community choice aggregation.** Collaborate with nearby local and regional agencies to develop a community choice aggregation system that provides greater renewable energy choices to the community.

Water Conservation

Sustainability + Conservation Element

- **5.1 Recycled water facilities.** Enhance the availability of recycled water supply and distribution facilities are available throughout the city.
- **5.3 Water conservation programs.** Update and improve water conservation and efficiency programs, requirements, and incentives on a regular basis.
- **5.5 Greywater.** Encourage the installation of greywater irrigation or disposal systems.

Infrastructure Element

- **3.2 Alternative water supplies.** Pursue expansion of recycled water infrastructure and other alternative water supplies to meet water demands of the community that cannot be offset through conservation measures.
- **3.3 Recycled water infrastructure**. Require the use of recycled water in areas currently served by infrastructure, and encourage integration of recycled water into new buildings which may be served by appropriate infrastructure in the future.
- **3.6 Water infrastructure.** Support the development of water storage, recycling, greywater treatment, and necessary transmission facilities.

Waste + Recycling

Sustainability + Conservation Element

- **6.1 Franchise agreements.** Ensure waste franchise agreements and program offerings provide progressively higher rates of waste diversion.
- **6.2 Food waste collection.** Ensure food waste collection is available and convenient for all residents, businesses, and organizations.

- **6.3 Multi-family and commercial recycling.** Require the provision of convenient recycling options in multi-family residential and commercial uses.
- **6.6 Composting programs.** Provide composting equipment at community facilities and events and encourage home and commercial composting.
- **6.9 Building salvage.** Maximize building salvage and deconstruction in remodeling or building demolition projects.

Construction Equipment

Sustainability + Conservation Element

- **3.4 Two-stroke engines.** Discourage the use of equipment with two-stroke engines and publicize the benefits and importance of alternative technologies.
- **3.5 Clean fuels.** Support increased local access to cleaner fuels and cleaner energy by encouraging fueling stations that provide cleaner fuels and energy to the community.

Other Sectors/Supportive Policies

Sustainability + Conservation Element

- **1.2 Highest return on investment.** Prioritize the implementation of greenhouse gas reduction projects that simultaneously reduce ongoing operational costs to the City.
- **1.4 Carbon offsets as needed.** When necessary, purchase carbon offsets to achieve municipal carbon neutral goal.
- **1.6 Demonstration and pilot projects.** Utilize demonstration and pilot projects as a means to evaluate the greenhouse gas reduction potential and cost effectiveness of projects.
- **2.1 State targets and goals.** Reduce greenhouse gas emissions in alignment with State targets and goals, and achieve carbon neutrality as a community no later than 2040.
- **2.2 Triple bottom line projects.** Prioritize the implementation of greenhouse gas reduction projects that simultaneously provide the greatest economic and health benefits to the community.
- **2.3 Diversify GHG reduction strategies.** Pursue a diverse mixture of greenhouse gas reduction strategies across the transportation, energy, waste sectors, commensurate with their share of the community's greenhouse gas emissions.
- **2.5 Carbon offsets as needed.** When necessary, purchase carbon offsets to achieve community carbon neutral goal.
- **2.7 Discretionary projects**. Require discretionary projects to substantially mitigate all feasible greenhouse gas emissions, and offset the remainder of greenhouse gas emissions produced to meet annual thresholds.
- **2.8 Ministerial projects.** Encourage ministerial projects to directly offset potential greenhouse gas emissions generated.

Parks + Open Space Element

- **2.4 Low-maintenance design.** Promote environmentally sustainable and low maintenance design principles in the renovation, addition, or maintenance of parks and recreation facilities.
- **3.6 Community gardens**. Increase available space and necessary infrastructure to incorporate community garden plots at parks.

- **8.10 Sustainable events.** Improve sustainability and environmental protection associated with special events.
- **10.1 Urban forest.** Expand the urban forest and green spaces citywide on public and private property.
- **10.2 Native landscapes.** Require the planting of native, non-invasive, and drought-tolerant landscaping and trees, and encourage the planting of edible landscapes and fruit trees.

Infrastructure Element

- **1.5 New technologies.** When feasible, utilize emerging technologies and funding strategies that improve infrastructure efficiency, sustainability, and resiliency.

Implementation Actions

- SUSTAINABILITY-1. Establish a local greenhouse gas impact fee for projects to offset their fair share of greenhouse gas emissions generated, by providing funding for implementation of local GHG reduction projects.
- SUSTAINABILITY-2. Establish greenhouse gas emissions thresholds of significance and standardize potential mitigation measures for both discretionary and ministerial actions.
- SUSTAINABILITY-4. Identify, prioritize, and implement greenhouse gas reduction projects utilizing the City's carbon reduction planning tools for community and municipal operations.
- SUSTAINABILITY-5. Regularly monitor and evaluate the City's greenhouse gas emissions inventory and report on progress toward greenhouse gas reduction goals.

Thresholds of Significance

The impact analysis provided below is based on the application of the following CEQA Guidelines Appendix G thresholds of significance. Greenhouse gas–related impacts are considered significant if implementation of PLAN Hermosa 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.

Subsequent development allowed under PLAN Hermosa would result in the generation of GHG emissions associated with future construction activities, consisting primarily of emissions from equipment use and construction worker transportation, as well as long-term operations, consisting primarily of new stationary source emissions such as natural gas used for heating, transportation emissions, and indirect source emissions such as electricity usage for lighting.

Addressing GHG generation impacts requires an agency to make a determination as to what constitutes a significant impact. The amendments to the CEQA Guidelines (Section 15064.4) specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions will have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the project's GHG emissions (14 California Code of Regulations [CCR] Section 15064.4(a)).

A number of regulatory agencies throughout the state have drafted or adopted varying threshold approaches and guidelines for analyzing greenhouse gas emissions in CEQA documents. The different thresholds include compliance with a qualified GHG reduction strategy, performance-based reductions, numeric "bright-line" thresholds, and efficiency-based thresholds.

The California Supreme Court decision in the *Centers for Biological Diversity et al. vs. California Department of Fish and Wildlife, the Newhall Land and Farming Company* (November 30, 2015, Case No. S217763) confirmed that when an "agency chooses to rely completely on a single quantitative method to justify a no-significance finding, CEQA demands the agency research and document the quantitative parameters essential to that method."

While the calculation of an efficiency metric is useful to evaluate new development within the context of a long-term goal, the proposed PLAN Hermosa buildout time frame of 2040 extends beyond the time horizon identified in the metrics proposed by the SCAQMD (2020, 2035). Additionally, because PLAN Hermosa includes policies to reduce GHG emissions comprehensively from both new and existing development, it is more appropriate to utilize the State's long-term GHG reduction goals and scientific consensus to determine whether PLAN Hermosa includes policies and programs to reduce greenhouse gas emissions to a level that is considered less than significant.

In order to align with or be on a trajectory to meet the State's long-term greenhouse gas reduction goals and the scientific consensus of the emissions reductions needed to limit global warming to two degrees Celsius, the City of Hermosa Beach would need to reduce emissions equivalent to the following levels:

- To 1990 levels by 2020 (equivalent to 15 percent below 2005 levels) – consistent with AB 32
- To 40 percent below 1990 levels by 2030 (equivalent to 49 percent below 2005 levels) – consistent with SB 32 and EO B-30-15
- To 80 percent below 1990 levels by 2050 (equivalent to 83 percent below 2005 levels) – consistent with EO S-3-05

Since PLAN Hermosa has a buildout time horizon of 2040, the minimum equivalent GHG reduction needed to be consistent with long-term state targets would be 60 percent below 1990 levels by 2040, which equates to 66 percent below 2005 levels.

Additionally, since the City of Hermosa Beach has adopted and codified a GHG reduction goal for municipal operations, PLAN Hermosa would be considered significant if it conflicted with the City's goal to achieve carbon neutrality in municipal operations by 2020.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.6-1 ***Would PLAN Hermosa Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment?*** *PLAN Hermosa would guide future development and reuse projects in the city in a manner that could result in additional greenhouse gas emissions generated. However, the plan also includes numerous policies and actions to reduce or eliminate GHG emissions from both new and existing development through incentives and voluntary actions that will meet or exceed the long-term greenhouse gas reduction goals to reduce emissions at least 66 percent below 2005 levels by 2040 (excluding offsets—see discussion on page 4.6-22) through direct and local programs. However, since the City is relying on incentive-based or voluntary actions to achieve GHG reduction goals, there is a lower degree of certainty that the emissions reductions thresholds would be met compared to regulatory or mandatory actions. This impact would be* ***potentially significant.***

GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single land use project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contributes substantially to global climate change and its associated environmental impacts and as such is addressed only as a cumulative impact.

Emissions Forecast and Local Target

The City's GHG inventory report assessed baseline/current emissions levels in Hermosa Beach. The inventory relied on standardized protocols including the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions and the Association of Environmental Professionals Supplement to the Protocol for California to calculate the estimated emissions generated by activities in Hermosa Beach. In 2005, Hermosa Beach generated approximately 137,160 $MTCO_2e$ annually from activities related to transportation, electricity use, natural gas use, waste disposal, and water/wastewater activities. Between 2005 and 2012, emissions in Hermosa Beach decreased to 126,611 $MTCO_2e$, which represents a 7.7 percent decrease in emissions or an average decrease in emissions of 1.1 percent per year (City of Hermosa Beach 2015a).

Annual emissions generated vary from year to year based on a variety of factors, but often increase as the number of people living or working in a given area increases. The 2015 GHG inventory report forecast emissions levels for Hermosa Beach in 2035 if population, housing, and employment forecasts reached the levels projected by the Southern California Association of Governments (SCAG) in the 2035 Regional Transportation Plan and no new programs to reduce emissions were implemented, referred to as a business-as-usual or BAU forecast. Since the 2015 report was prepared, the City of Hermosa Beach provided more locally relevant information to SCAG on population, housing, and employment forecasts that were incorporated into the 2040 Regional Transportation Plan. Subsequently, the City of Hermosa Beach developed an updated BAU forecast for the year 2040 using the local projections adopted by SCAG and the Carbon Planning Tool developed by the City. It should be noted that 2040 emissions are projected to be lower than 2005 emissions due to the decreases achieved between 2005 and 2012, and the limited increase in the number of additional residents, employees, and housing units expected between 2012 and 2040.

Table 4.6-3 (Hermosa Beach Baseline (2005), Forecast (2040) Emissions, and Target Level (2040)) depicts the baseline emissions in 2005, the BAU forecast for 2040, and the emissions levels needed to be on a similar trajectory to long-term state targets by 2040.

TABLE 4.6-3
HERMOSA BEACH BASELINE (2005), FORECAST (2040) EMISSIONS, AND TARGET LEVEL (2040)

Time Frame/Target	Emissions Levels ($MTCO_2e$)
Baseline Emissions (2005)	137,160
Business-as-Usual Forecast Emissions (2040)	133,430
Emissions Levels to Meet State Target (2040)/66% below 2005 levels	46,630
Reductions Needed to Achieve 2040 Target	-86,800

Source: City of Hermosa Beach 2016

State Programs to Reduce Emissions Locally

Legislation, such as AB 1493 and the Advanced Clean Cars Program, the Low Carbon Fuel Standard, the Renewables Portfolio Standard, and the California Building Energy Efficiency Standards and Green Building Standards, described in **Table 4.6-4 (California Policies Reducing**

Emissions Locally), is geared toward reducing GHG emissions on a statewide level. However, these legislative actions will help to reduce GHG emissions locally, as residents and businesses purchase additional fuel-efficient and electric vehicles or consume electricity consume energy produced with greater amounts of renewable energy.

TABLE 4.6-4
CALIFORNIA POLICIES REDUCING EMISSIONS LOCALLY

Legislation	Description
Assembly Bill 1493 and Advanced Clean Cars Program	AB 1493 (the Pavley Standard) (Health and Safety Code Sections 42823 and 43018.5) aims to reduce GHG emissions from noncommercial passenger vehicles and light-duty trucks of model years 2009–2016. By 2025, when all rules will be fully implemented, new automobiles will emit up to 24 percent fewer CO_2e emissions and 75 percent fewer smog-forming emissions.
Low Carbon Fuel Standard (LCFS)	EO S-01-07 (2007) requires a 10 percent or greater reduction in the average fuel carbon intensity for transportation fuels in California. The regulation took effect in 2010 and is codified at Title 17, California Code of Regulations Sections 95480–95490. The LCFS will reduce greenhouse gas emissions by reducing the carbon intensity of transportation fuels used in California by at least 10 percent by 2020.
Renewables Portfolio Standard (Senate Bill X12 & Senate Bill 350)	The Renewables Portfolio Standard (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020. The 33 percent standard is consistent with the RPS goal established in the Scoping Plan. The passage of Senate Bill 350 in 2015 updates the RPS to require the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. The bill would make other revisions to the RPS program and to certain other requirements on public utilities and publicly owned electric utilities.
California Building Energy Efficiency Standards	In general, the California Building Energy Efficiency Standards require the design of building shells and building components to conserve energy. The California Energy Commission adopted changes to the 2013 Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 6 (also known as the California Energy Code) and associated administrative regulations in Part 1. The amended standards took effect in the summer of 2014. The 2013 Building Energy Efficiency Standards are 25 percent more efficient than previous standards for residential construction and 30 percent better for nonresidential construction. The standards offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses. Energy-efficient buildings require less electricity, and increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.
California Green Building Standards	The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code went into effect July 1, 2014.

** Senate Bill 375 is codified at Government Code Sections 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588, 14522.1, 14522.2, and 65080.01, as well as at Public Resources Code Sections 21061.3 and 21159.28 and Chapter 4.2.*

These actions require limited local action and are accounted for in the City's emissions forecasts to provide a more accurate picture of future emissions and the remaining gap to be filled with local policies and programs to reduce emissions to levels consistent with state recommendations. This forecast is called the adjusted BAU forecast. **Table 4.6-5 (Comparison of BAU and Adjusted BAU Emissions (2040))** summarizes the projected community GHG emissions for the city through 2040. Through 2020, the implementation of state programs and regulations is expected to reduce

local emissions approximately 23 percent below baseline emissions, exceeding the State-recommended goal of 15 percent below baseline emissions by approximately 8 percent (City of Hermosa Beach 2016).

TABLE 4.6-5
COMPARISON OF BAU AND ADJUSTED BAU EMISSIONS (2040)

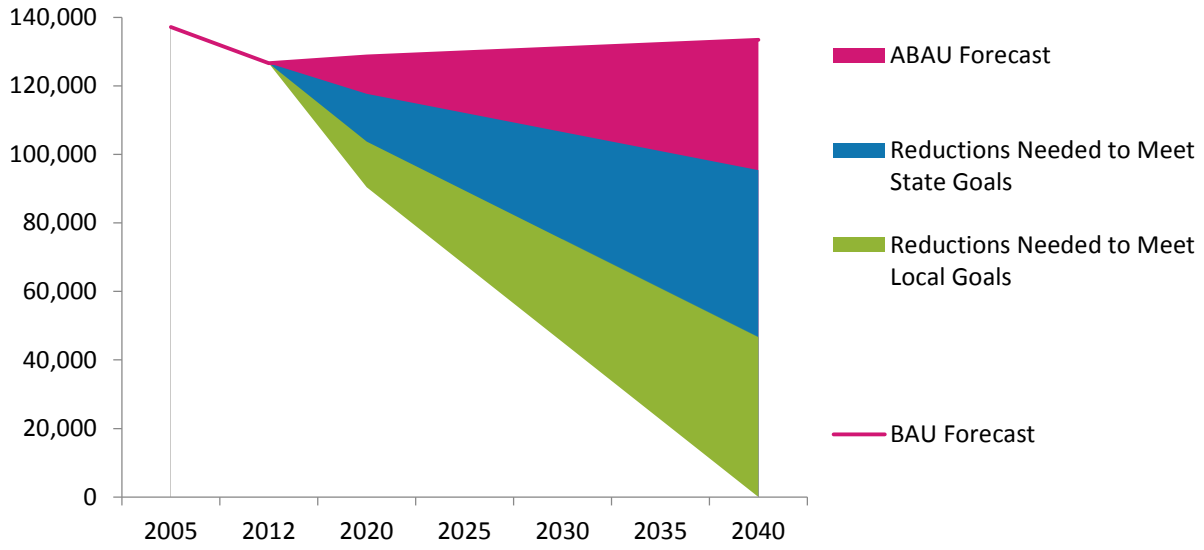
Sector	BAU	ABAU	Percentage Reduction
On-Road Transportation	64,560	43,320	33%
Off-Road Sources	1,090	730	33%
Nonresidential Energy	24,120	16,460	32%
Residential Energy	37,400	29,800	20%
Solid Waste	3,480	3,480	0%
Water & Wastewater	2,780	1,630	41%
Total Emissions	133,430	95,420	28%

Source: City of Hermosa Beach 2016

As shown, the city's adjusted BAU emissions are estimated to be approximately 95,420 $MTCO_2e$ in 2040. This change represents a 28 percent reduction from BAU levels in 2040 or approximately 38,000 $MTCO_2e$ reduced annually from implementation of state legislation.

As depicted in **Figure 4.6-3 (Emissions Reductions Needed to Meet State and Local Targets)**, the impact of state legislation on local emissions in 2040 would leave a remaining gap of 48,800 $MTCO_2e$ to be reduced by local policy to achieve state goals and a remaining gap of 95,420 $MTCO_2e$ to achieve a carbon neutral goal by 2040 as proposed in the draft of PLAN Hermosa.

FIGURE 4.6-3
EMISSIONS REDUCTIONS NEEDED TO MEET STATE AND LOCAL TARGETS



PLAN Hermosa Emissions Reductions

As noted previously, numerous policies and implementation actions are included in PLAN Hermosa that are intended to facilitate the reduction of greenhouse gas emissions from both existing and future activities. The applicable policies and implementation actions can be found in every element of PLAN Hermosa and are intended to reduce emissions associated with transportation and travel patterns, related to energy consumption from residential and commercial uses, from the disposal of solid waste in landfills, and from the energy needed to transport and treat the water consumed and the wastewater produced in Hermosa Beach.

Building Efficiency

PLAN Hermosa seeks to improve the efficiency of both existing and future buildings and associated activities by reducing the amount of energy needed to operate heating and cooling equipment, lighting, and household appliances, thereby reducing GHG emissions. Goals and policies contained in the Sustainability + Conservation Element are intended to reduce energy-related emissions from buildings that already exist today by requiring disclosure of energy use (Sustainability + Conservation Element Policy 4.2) and by offering incentives, financing options, and retrofit programs (Sustainability + Conservation Element Policies 4.3 and 4.4), while Sustainability + Conservation Element Policy 4.6 aims to minimize energy consumption from new buildings.

Renewable Energy Generation

While building efficiency policies and programs can help to reduce energy demand, energy consumption can almost never be completely eliminated. However, GHG emissions from energy used by residential, commercial, and other uses in Hermosa Beach can be further reduced by switching from traditional fossil fuel–based energy sources to cleaner and renewable sources of energy production. Policies in the Sustainability + Conservation Element aiming to increase renewable energy projects include Policy 4.1 to require, promote, and facilitate the installation of renewable energy projects on homes and businesses and Policy 4.5 to achieve carbon neutral municipal facilities. Additionally, policies in the Land Use + Design Element speak to identifying locations appropriate for additional renewable energy technologies (Policy 9.1), ensuring they are compatible with surrounding uses and protect ocean resources (Policies 9.2 and 9.3), and that sites with renewable energy systems are returned to the natural characteristics of a site at the end of their useful life (Policy 9.5). Finally, policies in the Infrastructure Element speak to encouraging the exploration and establishment of innovative and renewable utility service technologies (Policy 6.4), to allow renewable energy facilities by right when they would not cause an unmitigatable impact on health or safety (Policy 6.5), and to collaborate with nearby local and regional agencies to develop a community choice aggregation system that provides greater renewable energy choices (Policy 6.6).

Transportation and Land Use

PLAN Hermosa seeks to reduce the environmental impact (including GHG emissions) of land development by increasing the viability of walking, biking, and transit and by reducing reliance on the automobile through cohesive land use patterns, thus reducing GHG emissions. This reduction is due to the sustainability-related aspects of the proposed policy provisions of the Land Use + Design Element, Mobility Element, and Sustainability + Conservation Element. Mobility Element Policy 5.5 seeks to encourage smart growth land use features in development projects to ensure that more compact, mixed, connected, and multimodal development supports reduced trip generation, reduced trip lengths, and a greater ability to utilize alternative modes. In addition, Land Use + Design Element Policy 1.2 states that proposals for new development should be directed toward the city's commercial areas with an emphasis on developing transit-supportive land use mixes. Land Use + Design Element Policy 4.10 requires all new development to consider

pedestrian access. Mobility Element Policy 3.2 would prioritize investment in designated priority sidewalks to ensure a complete network of sidewalks and pedestrian-friendly amenities that enhances pedestrian safety, access opportunities, and connectivity to destinations. Mobility Element Policy 4.5 requires a sufficient supply of bicycle parking to be provided in conjunction with new vehicle parking facilities by both public and private developments.

Section 4.14, Transportation, identifies the effects of PLAN Hermosa's policy provisions on traffic generation, vehicle miles traveled, and thus mobile source GHG emissions, which are the predominant source of GHG emissions in the city. As described in Section 4.14, daily traffic trips and the daily rate of vehicle miles traveled (VMT) are projected to decrease under PLAN Hermosa compared to existing conditions by approximately 12.9 percent. This reduction in VMT would roughly equate to 2,600 fewer daily vehicle trips and 30,000 less vehicle miles traveled per day, due to the mobility-related policy provisions described above. An expanded discussion of the PLAN Hermosa policies reducing VMT is provided in Section 4.14 and **Appendix G-2**.

Other Sectors and Offsets

There are also policies within PLAN Hermosa for reducing GHG emissions from waste disposal and the transport/treatment of water and wastewater. Sustainability + Conservation Element Policies 6.1, 6.2, 6.3, 6.6, and 6.9 identify methods to achieve the zero waste goal, which include food waste collection, multi-family and commercial recycling, composting programs, and greater use of recycled or salvaged materials. Policies under Sustainability + Conservation Element Goal 5 identify policies to facilitate greater use of greywater, recycled water, and rainwater.

Finally, PLAN Hermosa also includes several policies to support the reduction of GHG emissions that are not specific to a certain activity or sector. For instance, Sustainability + Conservation Element Policy 2.1 states that Hermosa Beach will reduce its GHG emissions in alignment with state targets and goals and will also achieve carbon neutrality no later than 2040. Implementation action SUSTAINABILITY-1 will establish a GHG impact fee for all future development projects to offset their fair share of GHG contribution, and SUSTAINABILITY-5 requires the City to regularly monitor and evaluate Hermosa Beach's progress toward community-wide carbon neutrality.

Sustainability + Conservation Element Policy 2.5 directs the City to purchase carbon offsets when necessary to achieve community-wide carbon neutrality goals. The emissions reductions achieved from the purchase of carbon offsets or implementation of projects outside of Hermosa Beach to achieve carbon neutrality are included in the emissions reductions calculations to demonstrate achievement toward carbon neutrality, but they are excluded from demonstrating the community's ability to achieve the greenhouse gas reduction targets by 2040 consistent with long-term state goals. While offsets are included to achieve a carbon neutral goal, the degree to which they can be relied upon to demonstrate consistency with state goals is limited at this time. While the California Air Resources Board has developed guidance for organizations or operators subject to cap-and-trade regulation on how to select, verify, and register offset projects counted toward cap-and-trade compliance, this guidance has not yet been approved for use or to demonstrate compliance by organizations or jurisdictions that are excluded from cap-and-trade regulation.

Summary of Greenhouse Gas Reductions

As noted in the Thresholds of Significance discussion above, PLAN Hermosa needs to demonstrate an ability to achieve long-term statewide goals by reducing community GHG emissions by approximately 66 percent below 2005 levels by 2040 to be considered a less than significant impact. Full implementation of the policies and actions in PLAN Hermosa has the potential to reduce emissions through local projects by at least 66 percent below 2005 levels by 2040 and up to 100 percent by 2040 through the purchase of additional offsets. Additional emissions reductions to achieve the community carbon neutral goal contained in the Sustainability + Conservation

Element would come from emissions reduction projects outside of Hermosa Beach or through the purchase of carbon offsets or credits. **Table 4.6-6 (Summary of Annual Emissions Reductions by Sector in 2040)** illustrates the range of activities and the estimated level of emissions reductions to be achieved by 2040. The assumptions and data used to calculate the estimated reductions in GHG emissions are documented in **Appendix E** of this EIR.

TABLE 4.6-6
SUMMARY OF ANNUAL EMISSIONS REDUCTIONS BY SECTOR IN 2040

	Share of Carbon Reductions (%)	Annual Carbon Reduction ($MTCO_2e$)
Baseline 2005 Emissions		137,160
2012 Emissions	-7.7%	126,610
BAU Emissions (2040)	+5.0%	133,430
State Programs (2040)	-27.7%	38,010
Local Remaining Emissions to Be Reduced		95,420
Building Efficiency		
New Construction Residential Efficiency	-1.3%	1,810
Existing Buildings Residential Efficiency	-4.4%	6,100
New Construction Nonresidential Efficiency	-2.0%	2,810
Existing Buildings Nonresidential Efficiency	-2.0%	2,770
Subtotal	**-9.8%**	**13,490**
Renewable Energy Generation		
Rooftop Solar	-5.9%	8,100
Community Solar	-0.4%	550
Community Choice Aggregation	-7.3%	10,010
Purchased Renewables (Green Rate)	-0.0%	0
Subtotal	**-13.6%**	**18,660**
Transportation + Land Use		
Land Use & Transportation Alternatives	-4.0%	5,500
Additional Transportation Strategies	-1.9%	2,560
Electric Vehicles	-7.4%	10,100
Subtotal	**-13.0%**	**18,160**
Other Sectors + Offsets		
Waste + Recycling	-2.5%	3,480
Water + Wastewater	-0.2%	330
Purchase Offsets	-30.1%	41,310
Subtotal	**-32.9%**	**45,120**
TOTAL	**-100.0%**	**95,420**

Source: City of Hermosa Beach 2016

As shown in **Table 4.6-6**, full implementation of the policies and actions in PLAN Hermosa has the potential to achieve emissions reduction targets consistent with the State's long-term emissions reduction goals. However, the degree of certainty at which the city can meet GHG targets beyond 2020 is limited since attainment would at least be partially reliant on implementation of statewide programs and because some of the policies included in PLAN Hermosa are reliant on voluntary or incentive-based actions. Because the implementation of PLAN Hermosa is partially reliant on voluntary or incentive-based policies and actions, as well as state regulations to be implemented in the future, the impact would be considered **potentially significant** and **cumulatively considerable**.

Mitigation Measures

MM 4.6-1a The City of Hermosa Beach will utilize the climate action plan, under development by the South Bay Cities Council of Governments, or other appropriate tools to research current data gaps, identify specific actions, and define the responsible parties and time frames needed to achieve the greenhouse gas reduction goals (monitoring milestones) identified in mitigation measure MM 4.6-1b.

MM 4.6-1b The City of Hermosa Beach will re-inventory community GHG emissions and evaluate implementation progress of policies to reduce GHG emissions for the calendar year of 2020 and a minimum of every five years thereafter. The interim reduction goals to be achieved for consistency with long-term state goals include:

- 2020: 15 percent below 2005 levels
- 2025: 31 percent below 2005 levels
- 2030: 49 percent below 2005 levels
- 2035: 57 percent below 2005 levels
- 2040: 66 percent below 2005 levels

MM 4.6-1c The City will revise PLAN Hermosa and/or the City's Climate Action Plan when, upon evaluation required in mitigation measure MM 4.6-1b, the City determines that Hermosa Beach is not on track to meet the applicable GHG reduction goals. Revisions to PLAN Hermosa, the Climate Action Plan, or other City policies and programs will include additional regulatory measures that provide a higher degree of certainty that emissions reduction targets will be met. Use of an adaptive management approach would allow the City to evaluate progress by activity sector (e.g., transportation, energy, water, waste) and prescribe additional policies or programs to be implemented in the intervening five years for activity sectors that are not on track to achieve the GHG reduction goals.

Level of Significance After Mitigation

With the addition of mitigation measures **MM 4.6-1 a** through **MM 4.6-1c**, the City of Hermosa Beach is committing to achieving specific emissions reduction targets within every five-year time period and modifying policies and programs, including the addition of new policies or modification of existing policies to become mandatory, to achieve greater levels of emissions reductions if the City falls short of meeting the established targets in mitigation measure **MM 4.6-1b**. The implementation of PLAN Hermosa policies to reduce greenhouse gas emissions, in conjunction with mitigation measures **MM 4.6-1a** through **MM 4.6-1c,** will add the degree of certainty needed

to determine that PLAN Hermosa would have a **less than significant** impact on greenhouse gas emissions and would **not be cumulatively considerable**.

CEQA GUIDELINES FOR A QUALIFIED GREENHOUSE GAS REDUCTION STRATEGY

This section is provided for informational purposes and is not meant to serve as an analysis in determining levels of significance for PLAN Hermosa. Instead, the following description is meant to demonstrate how PLAN Hermosa meets the criteria for a Qualified GHG Reduction Strategy and that future projects may streamline environmental analysis, and determine the project has a less than significant impact for greenhouse gas emissions, by demonstrating their consistency with PLAN Hermosa as a Qualified GHG Reduction Strategy.

As previously stated, the California Natural Resources Agency and the Governor's Office of Planning and Research have identified the necessary components of a greenhouse gas reduction strategy that should be incorporated to be deemed a Qualified GHG Reduction Strategy. PLAN Hermosa is designed to serve as the City of Hermosa Beach's Qualified Greenhouse Gas Reduction Strategy, and this EIR elaborates how each of the required components for such a strategy are met. The discussion below is a summary of how PLAN Hermosa meets the intent of each component, with more details and explanation included earlier in this section.

- Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.

  The City of Hermosa Beach, in collaboration with the South Bay Cities Council of Governments, used actual activity data and emissions factors to estimate the contribution of greenhouse gas emissions, including carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), from existing activities within the geographic boundaries of Hermosa Beach for the calendar years 2005, 2007, 2010, and 2012. These emissions inventories relied upon standardized protocols including the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions and the Association of Environmental Professionals Supplement to the Protocol for California to calculate the estimated emissions generated by activities in Hermosa Beach. In 2005, Hermosa Beach generated approximately 137,160 $MTCO_2e$ annually from activities related to transportation, electricity use, natural gas use, waste disposal, and water/wastewater activities.

  To project emissions over the time horizon of PLAN Hermosa (2040), the City of Hermosa Beach used the population, housing, and employment forecasts that were incorporated into the 2040 Regional Transportation Plan to develop a business-as-usual forecast for the year 2040 using the Carbon Planning Tool developed by the City. BAU emissions in 2040 are projected to be lower than 2005 emissions due to the decreases achieved between 2005 and 2012, and the limited increase in the number of additional residents, employees, and housing units expected between 2012 and 2040. Additionally, the projections considered the effect that legislation and regulation at the state level would have on reducing emissions locally by developing an adjusted BAU forecast for 2040.

- Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable.

  In order to limit global temperature increases to two degrees Celsius and prevent the most catastrophic effects of climate change, the IPCC and organizations like the Union of Concerned Scientists have indicated that the United States and other developed countries would need to reduce greenhouse gas emissions anywhere from 78 to 95 percent below 1990 levels, with most organizations identifying an approximately 80 percent reduction below 1990 levels by 2050 to provide stabilization at the two degree

Celsius threshold (IPCC 2014). California has taken early action and efforts to avoid the most catastrophic effects of climate change by establishing aggressive statewide greenhouse gas reduction goals through legislation and executive orders (AB 32, SB 32, EO B-30-15, EO S-3-05).

In order to align with or be on a trajectory to meet the State's long-term greenhouse gas reduction goals and the scientific consensus of the emissions reductions needed to limit global warming to 2 degrees Celsius, the City of Hermosa Beach would need to reduce emissions equivalent to the following levels:

- To 1990 levels by 2020 (equivalent to 15 percent below 2005 levels) – consistent with AB 32
- To 40 percent below 1990 levels by 2030 (equivalent to 49 percent below 2005 levels) – consistent with SB 32 and EO B-30-15
- To 80 percent below 1990 levels by 2050 (equivalent to 83 percent below 2005 levels) – consistent with EO S-3-05

Since PLAN Hermosa has a buildout time horizon of 2040, the minimum equivalent GHG reduction needed to be consistent with long-term state targets and determine that the cumulative activities in Hermosa Beach as less than cumulatively considerable would be a target to reduce emissions 60 percent below 1990 levels by 2040, which equates to 66 percent below 2005 levels.

- Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area.

The goals, policies, and actions to reduce GHG emissions in Hermosa Beach included in PLAN Hermosa, and detailed earlier in this section, are designed to meet or exceed the GHG reduction target of 66 percent below 2005 levels by 2040 when fully implemented. The potential emissions reductions were quantified for the year 2040 using the Hermosa Beach Carbon Planning Tool. The Carbon Planning Tool is an Excel-based tool built to estimate the effectiveness of implementing various programs on reducing greenhouse gas emissions, as well as the associated costs and benefits from implementing measures. The tool includes data and information specific to Hermosa Beach regarding energy consumption, travel patterns, and building stock and relies on best practices such as the CAPCOA Quantifying Greenhouse Gas Mitigation Measures to outline the assumptions and methods for calculating the greenhouse gas reduction potential of various implementation measures. The Carbon Planning Tool includes the links and sources used for each data point and assumptions used to calculate emissions reductions and is provided in **Appendix E.**

The GHG reduction strategies included in PLAN Hermosa are organized by goal or topic area to correspond with the sectors and sources of GHG emissions as follows:

- Building Efficiency
- Renewable Energy Generation
- Transportation and Land Use
- Other Sectors and Offsets

The measures included in PLAN Hermosa are a diverse mix of regulatory, educational, and incentive-based programs. The reduction measures are intended to reduce GHG emissions from each source to avoid reliance on any one strategy or sector to achieve the target. In total, existing actions, state programs, and the goals, policies, and actions of

PLAN Hermosa, along with mitigation measures **MM 4.6-1a, MM 4.6-1b,** and **MM 4.6-1c**, will reduce GHG emissions in Hermosa Beach at least 66 percent below 2005 levels by 2040.

- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.

  To facilitate individual project consistency and keep Hermosa Beach on track to collectively achieve the specified emissions level, implementation actions in PLAN Hermosa direct the City to:

  - SUSTAINABILITY-1. Establish a local greenhouse gas impact fee for projects to offset their fair share of greenhouse gas emissions generated, by providing funding for implementation of local GHG reduction projects.
  - SUSTAINABILITY-2. Establish greenhouse gas emissions thresholds of significance and standardize potential mitigation measures for both discretionary and ministerial actions.

  By establishing a greenhouse gas impact fee and standardizing potential measures for individual projects to implement, the City will have the tools necessary to ensure individual projects are minimizing the levels of greenhouse gas emissions generated, while offering projects multiple pathways to compliance.

- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels.

  The estimated emissions reduction potential from implementation of PLAN Hermosa exceeds the trajectory of the State's long-term greenhouse gas reduction goals (66 percent below 2005 levels by 2040). However, the degree of certainty at which the city can meet GHG targets beyond 2020 is limited since attainment would at least be partially reliant on implementation of statewide programs and because some of the policies included in PLAN Hermosa are reliant on voluntary or incentive-based actions taken by the community. To address this uncertainty, PLAN Hermosa includes implementation action SUSTAINABILITY-5 to "Regularly monitor and evaluate the City's greenhouse gas emissions inventory and progress toward greenhouse gas reduction goals." This EIR further strengthens that implementation action by incorporating specific metrics to be achieved for each five-year time increment through mitigation measure MM 4.6-1b.

  The combination of implementation actions and mitigation measures intended to regularly evaluate progress and institute a mechanism to amend PLAN Hermosa when emissions reduction goals are not met will ensure the City is consistently making progress toward the long-term state goals and local targets.

- Be adopted in a public process following environmental review.

  As the City's integrated General Plan and Local Coastal Program, PLAN Hermosa is legally required to be reviewed by the Planning Commission, and the Planning Commission must hold at least one public hearing before providing a recommendation to the City Council pursuant to California Government Code Section 65353(a). Any amendment to a general plan is also further obligated to undergo environmental review prior to approval or adoption. Prior to holding public hearings at which the City Council will consider adoption, the City of Hermosa Beach will complete the environmental review process for PLAN Hermosa, which will include a 60-day public review period on the Draft EIR, preparation of response to comments, and a Final EIR.

Beyond the obligations of state law to adopt PLAN Hermosa through a public process following environmental review, the community engagement and opportunities for the community to provide feedback during this process to date have included:

- Five community workshops or walking tours
- A three-part educational series
- An online portal, in addition to email and in-person opportunities to submit comments, questions, and feedback
- A 15-member community working group (which met on more than a dozen occasions)
- Twenty study sessions with the Planning Commission, City Council, Parks and Recreation Commission, Emergency Preparedness Commission, and Public Works Commission
- Numerous informal opportunities to present PLAN Hermosa to community groups and local organizations at their standing meetings

This extensive level of community engagement over a three-year period has helped to raise the community's awareness in the need to address greenhouse gas emissions and participate in the identification of potential opportunities to achieve the long-term goals.

IMPACT 4.6-2 ***Would PLAN Hermosa Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases?*** *PLAN Hermosa would guide future development and reuse projects in the city in a manner that is consistent with state and local plans, policies, or regulations adopted to reduce greenhouse gas emissions. The applicable plans, policies, and regulations include the AB 32 Scoping Plan, the City of Hermosa Beach Sustainability Plan, and the City of Hermosa Beach Municipal Carbon Neutral Plan. PLAN Hermosa includes goals, policies, and actions that would meet or exceed the goals established within each of these applicable plans; therefore, the impact would be* ***less than significant****.*

PLAN Hermosa's consistency with the AB 32 Scoping Plan, Hermosa Beach Sustainability Plan, and Municipal Carbon Neutral Plan is evaluated below.

AB 32 and Climate Change Scoping Plan

AB 32 is the primary legislation that has driven GHG regulation and analysis in California. Under AB 32, the legislature directed CARB to develop and periodically update the AB 32 Climate Change Scoping Plan document to detail the latest scientific understanding of climate change, describe California's motivations to address climate change and preserve the California lifestyle, evaluate accomplishments and next steps for reducing emissions, and describe the role of regional and local governments in achieving the State's emissions reduction goals. While AB 32 does not mandate or prescribe local governments to achieve certain emissions reduction targets, the AB 32 Scoping Plan recognizes that local governments are essential partners to achieving statewide goals given that local jurisdictions have a higher degree of influence and authority over significant sources of GHG emissions.

The first AB 32 Scoping Plan, developed in 2007, suggested that local governments should aim to reduce emissions 15 percent below current levels (2005–2008) by 2020 and assist with meeting regional vehicle miles traveled (VMT) targets mandated by SB 375. PLAN Hermosa is consistent with the AB 32 Scoping Plan and fulfills the recommended role of local governments in achieving statewide goals by reducing emissions 15 percent below 2005 levels by 2020 and by meeting VMT targets established for the Southern California Association of Governments and detailed in the

Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (see Section 4.9, Land Use and Planning, for discussion of consistency with the RTP/SCS).

Hermosa Beach Sustainability Plan

The Sustainability Plan adopted by the City of Hermosa Beach in 2011 describes community and municipal GHG emissions, compares future emissions to the AB 32 emissions reduction target (15 percent below 2005 levels by 2020), and outlines a series of strategies and actions to reduce GHG emissions. The strategies address emissions from building energy (commercial, residential, and municipal), transportation, solid waste, and water consumption, determining that the suite of programs could reasonably reduce emissions 15 percent below 2005 levels. As described previously, the City of Hermosa Beach is likely to reduce emissions 23 percent below 2005 levels by 2020 through implementation of state and local measures. PLAN Hermosa supports and is consistent with the Hermosa Beach Sustainability Plan by incorporating and further developing policy to reduce emissions from building energy, transportation, solid waste, and water consumption sources. The specific policies included in PLAN Hermosa to reduce emissions from each sector are further described under the discussion of Impact 4.6-1.

Municipal Carbon Neutral Plan

In 2015, the City of Hermosa Beach adopted a local goal to become a carbon neutral municipal organization no later than 2020 through adoption of the Municipal Carbon Neutral Plan. This plan sets the City up to demonstrate environmental leadership at the municipal level and identifies carbon reduction programs and initiatives to achieve the carbon neutral goal. PLAN Hermosa includes Sustainability + Conservation Element Goal 1 (carbon neutral municipal facilities and operations by 2020 and sustained into the future), which is consistent with the goal adopted in 2015 to be a carbon neutral municipal organization by 2020. To further support the goal, Policies 1.1 through 1.7 speak to prioritizing projects that provide the highest return on investment, aligning projects to reduce emissions with the current sources of emissions, using pilot or demonstration projects, and purchasing carbon offsets when necessary to reach the goal. The policies included in PLAN Hermosa mirror the Municipal Carbon Neutral Plan recommendations to pursue a diverse mixture of emissions reduction projects, to utilize offsets, and to evaluate the costs and savings/benefits of various projects prior to implementing.

Conclusion

A core objective in the development of PLAN Hermosa has been to identify policies to reduce greenhouse gas emissions and set Hermosa Beach on a path to a low- or no-carbon future. As described above, PLAN Hermosa is consistent with the goals of AB 32 and the Climate Change Scoping Plan, the Hermosa Beach Sustainability Plan, and the Municipal Carbon Neutral Plan to reduce greenhouse gas emissions. PLAN Hermosa has further been developed to serve as the City of Hermosa Beach's Qualified Greenhouse Gas Reduction Strategy, as defined by the CEQA Guidelines. Therefore, the impact of PLAN Hermosa would be **less than significant.**

Mitigation Measures

None required.

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