4.11 GREENHOUSE GAS EMISSIONS

4.11.1 INTRODUCTION

This section addresses the potential global climate change impacts that would occur from construction and operation of the proposed Newport Banning Ranch Project (Project). At the direction of the State Legislature in Senate Bill (SB) 97, the California Natural Resources Agency adopted amendments to the California Environmental Quality Act (CEQA) Guidelines that require analysis of climate change and greenhouse gas (GHG) emissions in CEQA documents; these amendments were effective March 18, 2010. The model data used for the quantitative analysis contained in this section are included in this EIR as Appendix H.

Greenhouse Gases

GHGs are atmospheric gases and clouds within the atmosphere that influence the Earth's temperature by absorbing most of the infrared radiation that rises from the sun-warmed surface and that would otherwise escape into space. This process is commonly known as the "Greenhouse Effect". GHGs, as defined under California Assembly Bill (AB) 32, include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).[1] General discussions on climate change often include water vapor, ozone, and aerosols in the GHG category. Water vapor and atmospheric ozone are not gases that are formed directly in the construction or operation of development projects, nor can they be controlled in these projects. Aerosols are not gases. While these elements have a role in climate change, they are not considered by either regulatory bodies (such as the California Air Resources Board [CARB]) or climate change groups (such as the California Climate Action Registry [CCAR]) as gases to be reported or analyzed for control. Therefore, no further discussion of water vapor, atmospheric ozone, or aerosols is provided in this EIR section.

4.11.2 REGULATORY SETTING

Federal

USEPA Findings

On December 7, 2009, the Administrator of the U.S. Environmental Protection Agency (USEPA) signed two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- ***Endangerment Finding:*** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations.
- ***Cause or Contribute Finding:*** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

[1] The addition of NF_3 to the AB 32 list of GHGs was effective January 1, 2010.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the USEPA's proposed GHG emission standards for light-duty vehicles (USEPA 2009b).

Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards

On April 1, 2010, the USEPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule to reduce GHG emissions and to improve fuel economy for new cars and trucks sold in the United States. The rule applies to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The rule requires these vehicles to meet an estimated combined average emissions level of 295 grams of CO_2 per mile by 2012, decreasing to 250 grams per mile by 2016; the latter figure is equivalent to 35.5 miles per gallon (MPG) if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. The combined USEPA GHG standards and NHTSA Corporate Average Fuel Economy (CAFE) standards resolve previously conflicting requirements under both federal programs and the standards of the State of California and other states that have adopted the California standards (USEPA 2010).

State

CARB, a part of the State of California Environmental Protection Agency, is responsible for the coordination and administration of both federal and State air pollution control programs in California. In this capacity, CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, and oversees local programs, including those relative to climate change and global warming.

There are numerous State plans, policies, regulations, and laws related to GHGs and global climate change. Following is a brief discussion of some of these plans, policies, and regulations.

Assembly Bill 1493 – Clean Car Standards

In 2002, AB 1493 (Pavley) (2002 Cal. Stats Ch. 200, amending *California Heath an Safety Code,* Section 42823 and adding *California Health and Safety Code,* Section 43018.5) required CARB to develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the state". Implementation of AB 1493 was delayed for many years by prolonged litigation and USEPA actions. On May 19, 2009, challenging parties, automakers, the State of California, and the federal government reached an agreement on a series of actions that would resolve these current and potential future disputes over the standards through model year 2016. On September 24, 2009, CARB adopted amendments to the AB 1493 regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments, approved by the Board, are part of California's commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. The amendments bind California's enforcement of AB 1493 starting in 2009 while providing vehicle manufacturers with new compliance flexibility. The amendments will also prepare California to harmonize its rules with the federal rules for passenger vehicles (CARB 2010). As described above, the USEPA/NHTSA rule to implement the GHG reduction standards was issued on April 1, 2010.

Executive Order S-3-05

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05, which proclaims that California is vulnerable to climate change impacts. It declares that increased temperatures could reduce snowpack in the Sierra Nevadas, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. In an effort to avoid or reduce climate change impacts, Executive Order S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

The California Legislature adopted the public policy position that global warming is "a serious threat to the economic well-being, public health, natural resources, and the environment of California" (*California Health and Safety Code* §38501). Further, the State Legislature has determined that:

> the potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra Nevada snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious disease, asthma, and other human health-related problems.

These public policy statements became law with the enactment of AB 32, the California Global Warming Solutions Act of 2006, signed by Governor Arnold Schwarzenegger in September 2006. AB 32 is now codified as *California Health and Safety Code* Sections 38500–38599. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020.

Senate Bill 97 and Amendments to State CEQA Guidelines

SB 97 directed the California Natural Resources Agency (CNRA) to adopt amendments to the State CEQA Guidelines that require evaluation of GHG emissions or the effects of GHG emissions. The amendments to the State CEQA Guidelines, published December 31, 2009 in a new Section 15064.4, titled Determining the Significance of Impacts from Greenhouse Gas Emissions, provide that (CNRA 2009a):

> (a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
>
> (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or

(2) Rely on a qualitative analysis or performance based standards.

(b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The amendments add a new Section 15126.4(c), Mitigation Measures Related to Greenhouse Gas Emissions. This new State CEQA Guidelines section includes the following:

Lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

(1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;

(2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F;

(3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;

(4) Measures that sequester greenhouse gases;

(5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

The State CEQA Guidelines, Appendix F, Energy Conservation, in Section II, EIR Contents, includes the following:

D. Mitigation Measures may include:

1. Potential measures to reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, maintenance and/or removal. The discussion should explain why certain measures were incorporated in the Project and why other measures were dismissed.

2. The potential of siting, orientation, and design to minimize energy consumption, including transportation energy, increase water conservation and reduce solid-waste.

3. The potential for reducing peak energy demand.

4. Alternate fuels (particularly renewable ones) or energy systems.

5. Energy conservation which could result from recycling efforts.

CARB Scoping Plan

In December 2007, CARB published California's GHG inventory, which compiled statewide anthropogenic GHG emissions and sinks for the years 1990 through 2004. The total statewide GHG 1990 emissions level, and therefore the year 2020 emissions target, is 427 million metric tons of carbon dioxide equivalent ($MMTCO_2e$).[2] Achieving this target requires a reduction of 169 $MMTCO_2e$ (approximately 30 percent) from the State's projected 2020 emissions of 596 $MMTCO_2e$ (business-as-usual), and a reduction of 42 $MMTCO_2e$ (almost 10 percent) of the 2002–2004 average emissions.

AB 32 requires CARB to develop a Scoping Plan to lower the State's GHG emissions to meet the 2020 limit. The Scoping Plan was approved at the December 2008 board meeting and the measures in the Scoping Plan, listed in Table 4.11-1, will be developed and in place by 2012. As shown in the table, statewide measures addressing vehicle emissions, energy efficiency, vehicle fuel, and power generation are planned to achieve the greater amounts of emissions reductions. However, reductions at all levels will be needed to reach the 2020 targets.

[2] CO_2e emissions are commonly expressed in metric tons of carbon dioxide equivalent ($MTCO_2e$). Larger quantities of emissions, such as on the State or world scale, are expressed in million metric tons of carbon dioxide equivalent ($MMTCO_2e$). Metric tons may also be stated as "tonnes". The CO_2e for a gas is derived by multiplying the tons of the gas by the associated global warming potential (GWP) such that $MMTCO_2e$ = (million metric tons of a GHG) x (GWP of the GHG). For example, the GWP for CH_4 is 21. This means that emissions of 1 million metric tons of CH_4 are equivalent to the emissions of 21 million metric tons of CO_2.

TABLE 4.11-1
AB 32 SCOPING PLAN RECOMMENDED GREENHOUSE GAS REDUCTION MEASURES

Recommended Reduction Measures	Reductions Counted Toward 2020 Target of 169 $MMTCO_2e$	Percentage of Statewide Year 2020 Target
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	18.2%
Energy Efficiency	26.3	15.1%
Renewable Portfolio Standard (33% by 2020)	21.3	12.2%
Low Carbon Fuel Standard	15	8.6%
Regional Transportation-Related GHG Targets[a]	5	2.9%
Vehicle Efficiency Measures	4.5	2.6%
Goods Movement	3.7	2.1%
Million Solar Roofs	2.1	1.2%
Medium/Heavy Duty Vehicles	1.4	0.8%
High Speed Rail	1.0	0.6%
Industrial Measures	0.3	0.2%
Additional Reduction Necessary to Achieve Cap	34.4	19.8%
Total Estimated Reductions from Cap and Trade Program and Associated Measures	*146.7*	*84.3%*
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	11.6%
Sustainable Forests	5.0	2.9%
Industrial Measures (for sources not covered under cap and trade program)	1.1	0.6%
Recycling and Waste (landfill methane capture)	1.0	0.6%
Total Estimated Reductions from Uncapped Sources/Sectors	*27.3*	*15.7%*
Total Reductions Counted Towards 2020 Target	***174[b]***	***100%***
Other Recommended Measures – Not Counted Towards 2020 Target	**Estimated Reductions $MMTCO_2e$**	
State Government Operations	1 to 2	
Local Government Operations	To Be Determined	
Green Buildings	26	
Recycling and Waste	9	
Water Sector Measures	4.8	
Methane Capture at Large Dairies	1.0	

$MMTCO_2e$: million metric tons of CO_2e; GHG: greenhouse gas(es)

[a] Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 Regional target.

[b] The total reduction for the recommended measures slightly exceeds the 169 $MMTCO_2e$ of reductions estimated in the Draft Scoping Plan. This is the net effect of adding several measures and adjusting the emission reduction estimates for some other measures.

Source: CARB 2008b.

Key elements of the Scoping Plan include (1) expanding and strengthening existing energy efficiency programs and building and appliance standards; (2) achieving a statewide renewable energy mix of 33 percent; (3) developing a California cap and trade program linked with other similar programs; (4) establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;

(5) implementing existing laws and standards such as California's clean car standards identified in Table 4.11-1 as Light Duty Vehicle GHG Standards and described above under the AB 1493 heading, goods movement measures, and the Low Carbon Fuel Standard (LCFS); and (6) issuing targeted fees to fund the State's long-term commitment to AB 32 administration (CARB 2008b).

The estimated 2020 greenhouse gas (GHG) emission reductions for measures described in the 2008 Scoping Plan, and above, were based on the best available information as of December 2008. CARB staff has since revised the expected 2020 emission reductions in consideration of the economic recession and the availability of updated information from development of measure-specific regulations. In addition, CARB moved the Light Duty Vehicle and renewable portfolio standards into the baseline calculation. Based on these revisions, the AB 32 2020 baseline is now forecasted to be 507 $MMTCO_2e$. Reduction of an estimated 80 $MMTCO_2e$ are necessary to reduce statewide emissions to the AB 32 Target of 427 $MMTCO_2e$ by 2020. The forecasted reductions for the individual scoping plan measures shown in Table 4.11-1 have been or are being reevaluated. For example, the estimated reductions from energy efficiency and conservation have been revised from 19.5 to 11.9 $MMTCO_2e$ and reductions from regional transportation related GHG targets, discussed in the next section, have been revised from 5.0 to 3.0 $MMTCO_2e$.

Senate Bill 375

Signed September 30, 2008, SB 375 provides for a new planning process to coordinate land use planning, regional transportation plans, and funding priorities in order to help California meet the GHG reduction goals established in AB 32. Its goal is to promote land use growth patterns that will help reduce GHG emissions by reducing driving. SB 375 requires Metropolitan Planning Organizations (MPOs), including the Southern California Association of Governments (SCAG), to incorporate a "Sustainable Communities Strategy" (SCS) in their regional transportation plans that will demonstrate an ability to attain GHG emission reduction targets set by CARB. There are two mutually important facets to SB 375: reducing vehicle miles traveled (VMT) and encouraging more compact, complete, and efficient communities for the future. SCAG's SCS is currently scheduled for adoption in April 2012. SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit oriented development. SB 375 will be implemented over the next several years.

SB 375 requires CARB to set GHG emission reduction targets for the 18 MPOs throughout California. Prior to setting targets for a region, CARB is required to exchange technical information with each MPO and the affected air districts. SB 375 also required CARB to appoint a Regional Targets Advisory Committee (RTAC) by January 31, 2009, to recommend factors for CARB to consider and methodologies for it to use in setting GHG emission reduction targets for each region. The RTAC was required to include representation from the League of California Cities, the California State Association of Counties, MPOs, developers, planning organizations, and other stakeholders. In January 2009, CARB appointed 21 members to the RTAC, from a variety of constituencies. On September 29, 2009, the RTAC released its recommendations to CARB, representing a key step in the establishment of regional targets for inclusion in sustainable community strategies (RTAC 2009). The RTAC recommendations focus largely on the manner in which CARB staff should interact with various stakeholders during the target-setting process, and how staff should use empirical studies and modeling in establishing regional GHG targets.

Following the release of RTAC's recommendations, CARB began the process of developing regional GHG reduction targets (Regional Targets) for the State's MPOs. In establishing the

targets, CARB must take into account GHG reductions to be achieved by improved vehicle emission standards, changes in the carbon-intensity of fuels and other measures it has approved that will reduce GHG emissions in affected regions. As these factors change, CARB may revise the targets every four years, and at a minimum, must update them every eight years. Additionally, each MPO may recommend a target for its region.

On September 23, 2010, CARB adopted Regional Targets applying to the years 2020 and 2035. For the area under SCAG's jurisdiction—including the Project site—CARB adopted Regional Targets of 8 percent for 2020 and 13 percent for 2035; these reductions are on a per capita basis relative to a 2005 baseline. On February 15, 2011, the CARB's Executive Officer approved the final targets. CARB filed a Notice of Decision two days later on February 17, 2011. Now that CARB has adopted these Regional Targets, the MPOs must begin the process of developing SCSs that meet these Regional Targets for inclusion in their Regional Transportation Plans (RTPs) or, if it is not possible to meet the Regional Targets, MPOs must develop Alternative Planning Strategies (APS). The APS is meant to bridge the gap between GHG emission reductions an SCS can achieve and a region's target, set by CARB.

SB 375 is similar to the Regional Blueprint Planning Program, established by Caltrans, which made $5 million in discretionary grants to fund available for regional transportation and land use plans voluntarily developed by MPOs working in cooperation with Council of Governments. SCAG adopted Amendment #4 to the 2008 RTP in November 2010. The Amendment was developed as a response to changes to projects in the 2008 RTP. Five projects are being modified or added in these Amendments, with a majority of the changes being minor in nature, including changes to completion years, as well as minor modifications to project scopes, costs, and funding. The 2013 RTP will be the first SCAG RTP subject to SB 375. The Scoping Plan adopted by CARB in December of 2008 relies on the requirements of SB 375 to implement the carbon emission reductions anticipated from land use decisions.

For the SCAG region, a subregional SCS may be prepared by a subregional Council Of Government and the County Transportation Commission. The Orange County Council of Governments (OCCOG)/Orange County Transportation Authority (OCTA) assumed this responsibility and prepared a SCS that was approved by the OCCOG and OCTA boards of directors in June 2011. During the last half of 2011, OCCOG/OCTA is working with SCAG to integrate the subregional SCS into the SCAG regional SCS.

After assigning targets, CARB's role is to assure the accuracy of the methodology selected by each MPO and then to determine whether the SCS, or the APS, would achieve the target if implemented. Thus, the policy choices relating to how the MPO will achieve the target are left to the region.

Title 24 Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24, Part 6 of the *California Code of Regulations* [CCR]) were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Since that time, the energy efficiency standards have undergone several revisions. Effective January 1, 2010, the adopted 2008 Title 24 standards replaced the 2005 Title 24 standards. The California Energy Commission (CEC) adopted the 2008 standards in order to (1) "Provide California with an adequate, reasonably-priced, and environmentally-sound supply of energy" and (2) "Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its greenhouse gas emissions to 1990 levels by 2020" (CEC 2009).

An impact analysis of the 2008 Energy Efficiency Standards estimates that, compared to the 2005 Standards, for new multi-family residential construction, electricity use will be reduced by 19.7 percent; peak demand will be reduced by 7.4 percent; and gas consumption will be reduced by 7.0 percent. For new single-family residential construction, electricity use will be reduced by 22.7 percent; peak demand will be reduced by 8.2 percent; and gas consumption will be reduced by 10.0 percent. These percent savings are relative to heating, cooling, lighting, and water heating only and do not include other appliances, outdoor lighting that is not attached to buildings, plug loads, or other energy uses (CEC 2007).

The California Energy Commission is in the process of developing the 2013 Title 24 Building Energy Efficiency Standards; the proposed amended standards will be adopted in 2014 (CEC 2011).

Attorney General

The California Attorney General (AG) has filed numerous comment letters with agencies discussing their analysis of climate change in CEQA documents. As part of the AG's efforts to work with agencies on addressing climate change in their CEQA documents, the AG publishes and updates *The California Environmental Quality Act, Addressing Global Warming Impacts at the Local Agency Level,* which is a document with "information that may be helpful to local agencies in carrying out their duties under CEQA as they relate to global warming. Included in this document are various measures that may reduce the global warming related impacts of a project" " (DOJ 2008). The AG's measures are addressed later in this EIR section.

Regional and Local

South Coast Air Quality Management District

Air quality in Orange County is regulated by the South Coast Air Quality Management District (SCAQMD). The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin (SoCAB). To that end, the SCAQMD, a regional agency, works directly with SCAG, County transportation commissions, and local governments and cooperates actively with all federal and State government agencies. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary.

Beginning in April 2008, the SCAQMD convened a working group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. The Working Group meets approximately once per month. On December 5, 2008, the SCAQMD Governing Board adopted its staff proposal for an interim CEQA GHG significance threshold for industrial projects where the SCAQMD is the lead agency (SCAQMD 2008). The interim screening threshold for industrial projects is 10,000 metric tons of carbon dioxide equivalent per year ($MTCO_2e$/yr).

In September 2010, the Working Group presented a tiered approach to determining GHG significance (SCAQMD 2010). At Tier 1, GHG emissions impact would be less than significant if the project qualifies under a categorical or statutory CEQA exemption. At Tier 2, the GHG emissions impact would be less than significant if the project is consistent with a previously adopted GHG reduction plan that meets specific requirements.[3] At Tier 3, the Working Group

[3] The plan must (A) Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area; (B) Establish a level, based on substantial evidence,

proposes extending the 10,000 $MTCO_2e$/yr screening threshold applicable to industrial projects where SCAQMD is the lead agency, described above, to other lead agency industrial projects. For residential and commercial projects the Working Group proposes the following Tier 3 screening values: either (1) a single 3,000 $MTCO_2e$/yr threshold for all land use types or (2) separate thresholds of 3,500 $MTCO_2e$/yr for residential projects, 1,400 $MTCO_2e$/yr for commercial projects, and 3,000 $MTCO_2e$/yr for mixed use projects. A project with emissions less than the applicable screening value would have less than significant GHG emissions. As of June 2011, these proposals have not been considered by the SCAQMD Board.

Projects with emissions greater than the Tier 3 screening values would be analyzed at Tier 4 by one of three methods:

1. ***A percent emission reduction target.*** This method is used by the Sacramento Metropolitan and San Joaquin Valley Air Districts and the City of San Diego. The SCAQMD Working Group made no recommendation relative to this method.

2. ***Early implementation of applicable AB 32 Scoping Plan Measures.*** The Working Group assumes implementation of AB 32 measures would be incorporated in method 3 below.

3. ***Efficiency Targets.*** On the project level, 2020 GHG emissions should not exceed 4.8 $MTCO_2e$/year per service population (SP) where SP is project residents plus employees. Further, 2035 GHG emissions should not exceed 3.0 $MTCO_2e$/year per SP. This efficiency methodology is used by the Bay Area Air District.

Projects with GHG emissions not meeting the Tier 4 targets would be required to provide mitigation in the form of real, quantifiable, and verifiable offsets to achieve the target thresholds. The offsets may be achieved through project design features, other on-site methods, or by off-site actions, such as energy efficiency upgrade of existing buildings.

City of Newport Beach

General Plan

The General Plan for the City of Newport Beach was adopted in 2006. As Newport Beach is almost fully built out, the General Plan focuses on conserving the existing pattern of land uses and establishes policies for their protection and long-term maintenance. While the General Plan contains no policies specifically pertaining to GHG emissions, the Natural Resources Element of the General Plan provides direction regarding the conservation, development, and utilization of natural resources. This element addresses water supply (as a resource) and water quality (including bay and ocean quality and potable drinking water); air quality; terrestrial and marine biological resources; open space; mineral resources; visual resources; and energy. The Circulation Element includes policies to achieve reduced automobile travel. Specific policies that

below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable; (C) Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area; (D) 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; (E) 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; (F) Be adopted in a public process following environmental review (CEQA Guidelines §15183.5).

could result in GHG emissions reductions and that could relate to the proposed Project are addressed later in this EIR section.[4]

Interim CEQA Significance Thresholds

The City of Newport Beach has used the following approach and standards in complying with CEQA with respect to the assessment of global climate change impacts:

> While State agencies and local air pollution control districts are currently working to develop CEQA thresholds of significance that would guide classification of impacts associated with global climate change in CEQA documents, to date, the City lacks sufficient information to establish formal, permanent thresholds by which to classify projects with relatively small, incremental contributions to the State's total GHG emissions as cumulatively considerable or not. Until appropriate regulatory entities develop CEQA thresholds for GHGs, for projects emitting more than 1,600 metric tons of CO_2e per year, the City will apply interim standards. For residential and commercial projects, the City will evaluate a project's consistency with performance standards set out in City policies, which promote sustainability and reduce emissions, as well as State policies and strategies designed to meet the State's emission reduction objectives in AB 32;[5] the City will also evaluate project emissions numerically. Until further guidance is provided by the State or other appropriate expert agencies, the City will conservatively apply a standard that falls somewhat below the State's proposed threshold for industrial projects, which is 7,000 metric tons of CO_2e per year (CARB 2008).
>
> To restate, until more guidance is provided from the expert agencies, the City will consider projects emitting 1,600 metric tons of CO_2e per year or less to be less than significant and no further analysis is required. For projects exceeding the screening threshold of 1,600 metric tons of CO_2e per year, the City will consider projects to have significant impacts under this threshold if they either (1) are not substantially consistent with policies and standards set out in federal, State, and local plans designed to reduce greenhouse gas emission or (2) would emit more than 6,000 metric tons of CO_2e per year. Projects that are not substantially consistent with policies and standards set out in federal, State, and local plans designed to reduce greenhouse gas emission or would emit more than 6,000 metric tons of CO_2e per year would be considered to have significant impacts under this threshold, and thus could be expected to impede the State's mandatory requirement under AB 32 to reduce statewide GHG emissions to 1990 levels by 2020. The City recognizes that this is an interim standard and will likely change over time as further guidance is provided by the expert regulatory agencies.

[4] For ease of reading, the policy tables are located at the end of this section.

[5] The City adopted the interim standard on November 24, 2009, via Resolution No. 2009-87, which certified the City Hall and Park Development Project's Final EIR. These interim standards are consistent with the general guidance on cumulative impacts analysis. For instance, Section 15064(h)(3) of the adopted amendments to the CEQA Guidelines states that a Lead Agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a plan or regulation that apply to the project that is specified in law or adopted by the public agency and has specific requirements to reduce GHG emissions.

4.11.3 METHODOLOGY

Calculation of GHG Emissions

Construction and Operational GHG Emissions

Long-term GHG emissions from mobile sources and area sources and short-term emissions from construction equipment were calculated by using California Emissions Estimator Model (CalEEMod) version 2011.1.1 (SCAQMD 2011a). CalEEMod was also used to calculate construction GHG emissions. CalEEMod is a computer program accepted by the SCAQMD that can be used to estimate anticipated emissions associated with land development projects. CalEEMod has separate databases for specific counties and air districts. The Orange County database was used for the proposed Project.

The limitations of the CalEEMod model should be noted. The vehicle emission factors of EMFAC 2007 have been updated to include standards required for vehicles through year 2016. Emissions standards for the years 2017-2025 (known as Pavley II or LEV III GHG) have not been included; therefore, GHG emissions for the years 2017-2025 may be overstated. Solid waste emissions are not addressed in this analysis because of corrections in process to the model. Solid waste GHG emissions are relatively a very small part of overall emissions and omission of these data is considered to be acceptable.

Specific inputs to CalEEMod for both construction and operations include Project land uses and acreages. Operational inputs for mobile sources include year of operations and vehicle trip generation rates. Mobile sources are the vehicles used by residents and by patrons, staff, and vendors for commercial and hotel businesses. Model default values for trip distances, fleet composition, and other factors may be adjusted for project-specific conditions. Default values were used for the proposed Project. Inputs for long-term GHG emissions analysis include the electrical energy supplier, fireplace types and quantities, changes in vegetated land use, estimated number of new trees, land use features that contribute to reductions in vehicle miles traveled, and Project criteria for energy use and water conservation.

In August 2010, the California Air Pollution Control Officers Association (CAPCOA) published *Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures.* This document provides guidance on the quantification of project-level mitigation of GHGs associated with land use, transportation, energy use, and other related project areas. The guidance includes detailed procedures on the definition of “business as usual” emissions and the approaches to assessing and calculating the GHG emission reductions associated with project design features and mitigation measures. The concepts in the CAPCOA document were incorporated into CalEEMod.

Construction input data to CalEEMod include but are not limited to the start and finish dates of Project construction phases; inventories of construction equipment to be used during each phase; volumes of materials to be imported to and exported from the site; areas to be paved; and areas to be painted. Because impacts from construction activities occur over a relatively short time period, they contribute a relatively small portion of the overall GHG emissions for the lifetime of the Project. GHG emission reduction measures for construction equipment are relatively limited. Therefore, in its *Draft Guidance Document – Interim CEQA GHG Significance Thresholds,* the SCAQMD recommends that construction emissions be amortized over a 30-year project lifetime so that GHG reduction measures will address construction GHG

emissions as part of the operational GHG reduction strategies (SCAQMD 2008). That methodology is used in this analysis.

Oilfield Operations

GHG emissions for present and future oilfield operations are reported in *Draft Air Toxic Health Risk Assessment in Support of CEQA Documentation, Newport Banning Ranch* (CDM 2010).

4.11.4 EXISTING CONDITIONS

Global Climate Change and Greenhouse Gases

Climate change is a recorded change in the average weather of the earth measured by variables such as wind patterns, storms, precipitation, and temperature. Historical records show that global temperature changes have occurred naturally in the past, such as during previous ice ages. Since 1850, eleven of the 12 years from 1995 to 2006 rank among the warmest years in the instrumental record of global surface temperature. An increase of 0.74 degree Celsius (°C) (or 1.33 degrees Fahrenheit [°F]) in the global surface temperature occurred during the 100-year period from 1906 to 2005, and the linear warming trend over the 50 years from 1956 to 2005 is nearly twice that for the 100 years from 1906 to 2005 (IPCC 2007).

Increasing GHG emissions have led to an anthropogenic[6] warming trend of the earth's average temperature, which is causing changes in the earth's climate. GHG emissions are primarily associated with (1) the burning of fossil fuels during motorized transport, electricity generation, consumption of natural gas, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition. This increasing temperature phenomenon is known as "global warming", and the climatic effect is known as "climate change" or "global climate change".

Recent scientific research indicates very high confidence (i.e., at least 90 percent) that the rate and magnitude of current global temperature changes are anthropogenic and that global warming will lead to adverse climate change effects around the globe (IPCC 2007).

Greenhouse Gases

GHGs are global pollutants and are therefore unlike air pollutants such as ozone, particulate matter and toxic air contaminants (TACs), which are pollutants of regional and local concern (see Section 4.10, Air Quality, of this EIR). While pollutants with localized air quality effects have relatively short atmospheric lifetimes (generally on the order of a few days), GHGs have relatively long atmospheric lifetimes, ranging from one year to several thousand years. Long atmospheric lifetimes allow for GHGs to disperse around the globe. Therefore, GHG impacts are global, as opposed to the localized air quality effects of criteria air pollutants and TACs.

GHGs vary widely in the power of their climatic effects; therefore, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, since CH_4 and N_2O are approximately 21 and 310 times (respectively) more powerful than CO_2 in their ability to trap heat in the atmosphere, they have GWPs of 21 and 310, respectively (CO_2 has a GWP of 1). Carbon dioxide equivalent (CO_2e) is a quantity that enables all GHG emissions to be

[6] Anthropogenic effects, processes, objects, or materials are those that are derived from human activities, as opposed to those occurring in natural environments without human influence.

considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO_2e.

General Environmental Effects of Global Climate Change

Executive Order S-3-05 mandates the preparation of biennial science assessment reports on climate change impacts and adaptation options for California. Executive Order S-13-08 directs the California Natural Resources Agency (CNRA) to develop a State Climate Adaptation Strategy and provide state land use planning guidance related to sea level rise and other climate change impacts. Current reports resulting from these directed actions are the *Climate Action Team Biennial Report to the Governor and Legislature* (CCCC 2009a) and the *California Climate Adaptation Strategy* (CNRA 2009b). These studies report that global warming in California is anticipated to impact resources including, but not limited to, the following:

- ***Public Health.*** Many Californians currently experience the worst air quality in the nation, and climate change would likely make matters worse. Higher temperatures would increase the frequency, duration, and intensity of conditions conducive to air pollution formation. If global background ozone (O_3) levels increase as predicted under some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by more frequent wildfires, which emit fine particulate matter that can travel long distances. Rising temperatures and more frequent heat waves would increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress. Climate change may also increase asthma rates and the spread of infectious diseases and their vectors, as well as challenge food and water supplies. Children, the elderly, people with chronic heart or lung disease, outdoor workers, people who exercise outdoors, and the economically disadvantaged would be particularly vulnerable to these changes. In addition, more frequent extreme weather events could also result in increased injuries and deaths.
- ***Energy.*** Increasing mean temperature and more frequent heat waves will drive up demand for cooling in summer; this new energy demand will only be partially offset by decreased demand for heating in winter. Hydropower, which currently provides 15 percent of in-state generation, would be threatened by declining snowpack, which serves as a natural reservoir for hydropower generation in the spring and summer. Winter storms, earlier snowmelt, and greater runoff may combine to cause flooding, which could, in turn, damage transmission lines and cause power outages.
- ***Water Resources.*** Rising temperatures, less precipitation, and more precipitation falling as rain instead of snow could severely diminish snowpack. Because the Sierra Nevada snowpack provides most of California's available water, this potential loss would increase the risk of summer water shortages and would hamper water distribution and hydropower generation. The diminished snowpack would also nearly eliminate all skiing and other snow-related recreation. Rising sea levels would push saltwater into California's estuaries, wetlands, and groundwater aquifers, threatening the water quality and reliability within the Sacramento/San Joaquin River Delta—a major California fresh water supply. Extreme precipitation and flooding could also damage water quality by creating sudden increases in runoff. Moreover, warming would increase evapotranspiration rates from plants, soil, and open water surfaces, which would result in greater demand for irrigation. Overall, climate change would reduce California's water supplies even as its growing population requires additional resources.
- ***Sea Level and Flooding.*** Sea level at California's coasts is expected to rise by 11 to 18 inches above 2000 levels by 2050, and by 23 to 55 inches by 2100. If realized, these

increases would create more frequent and higher storm surges, would erode some coastal areas, and would increase pressure on existing levees, creating greater risk of flooding in previously untouched inland areas. Consequently, continued development in vulnerable coastal areas would put more people and infrastructure at risk.

- ***Agriculture.*** Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, in the long-term, climate change would reduce the quantity and quality of agricultural products statewide. As temperatures rise, farmers will face greater water demand for crops and a less reliable water supply, as well as increased competition from urban water users. Sea level rise may cause saltwater intrusion in the Delta region, making it difficult to raise certain crops. Rising temperatures will likely aggravate O_3 pollution, interfering with plant growth and making plants more susceptible to disease and pests. In addition, warming would reduce the number of colder hours needed for fruit and nut production; would shift pest and weed ranges; alter crop-pollinator timing; and increase the frequency of droughts, heat waves, and floods. Higher average temperatures would also increase mortality and decrease productivity in livestock.
- ***Forestry.*** California timber production has declined over the past few decades due, in part, to warming and increased wildfires. While further warming may increase production for some species in some locations, climate change is expected to reduce overall forest growth. Increasing average temperature and drought frequency would result in more wildfires and greater burned areas, while less frequent and more intense rainfall would increase soil erosion and landslides. Higher temperatures and less water would force many tree species to shift their ranges; those that run out of livable habitat may die out. Pests, diseases, and invasive species may also colonize new areas, further challenging forest health and biodiversity.
- ***Ecosystems.*** Rising average temperature would subject plants and animals to greater thermal stress, causing some species to adapt or shift their ranges, while others may face extinction. Invasive species may also shift their ranges, threatening native species. Changing temperatures would also alter the timing of plant flowering and insect emergence, damaging species' ability to reproduce. Changing precipitation patterns would impact aquatic and riparian ecosystems by reducing snow pack, stream flow, and groundwater, while increasing the frequency of droughts, floods, and wildfires. As sea levels rise, some coastal habitats may be permanently flooded or eroded, and salt water intrusion into fresh water resources may threaten terrestrial species. Changes in ocean circulation and temperature, ocean acidification, and increased runoff and sedimentation would threaten pelagic species. In sum, continued global warming would alter natural ecosystems and threaten California's biological diversity.

Global, National, State, and Regional Contributions to Greenhouse Gas Emissions

Table 4.11-2 shows the magnitude of GHG emissions on the global, national, State, and regional scale. Worldwide, China is the world's largest GHG emitter, contributing approximately 19 percent, just ahead of the U.S., with approximately 18 percent. Approximately half of global emissions come from developed countries and half from developing countries; note that China and India are developing countries (WRI 2009). The most common GHG is CO_2, which constitutes approximately 84 to 85 percent of all GHG emissions in the United States and California. The primary contributors to California GHG emissions are transportation; electric power production from both in-state and out-of-state sources; and industrial uses.

TABLE 4.11-2
COMPARISON OF WORLDWIDE GHG EMISSIONS

Area and Data Year	Annual GHG Emissions ($MMTCO_2e$)
World (2006)	29,000
United States (2007)	7,150
California (2006)	480
Orange County (2008)	30
$MMTCO_2e$: million metric tons of CO_2e; GHG: greenhouse gas(es)	
Source: Source: WRI 2009, USEPA 2009c, CARB 2007, SCAG 2008a.	

Existing Development and GHG Emissions on the Project Site

The Project site is currently operated as a crude oil and gas production facility. Horizontal Drilling, LLC, and its operating affiliate, West Newport Oil Company (WNOC), manage oil and gas production operations on most of the site. WNOC has approximately 85 active/idle wells spread across most of the approximate 401.1-acre property. In addition, the City of Newport Beach (City) operates 16 oil wells, 1 water injection well, and an oil processing facility located at the West Coast Highway entrance area. The existing level of emissions from the vehicles used in oilfield operations is estimated at 492 $MTCO_2e$ per year (CDM 2010).

GHG emissions from stationary oilfield sources were not included in the annual emissions reports to the SCAQMD. Although this data and data relative to electrical energy used to power the oilfield equipment are not reported, these data are not forecasted to change substantially for the proposed Project. Although there would be physical consolidation of operations, the total amount of active stationary operations may not be reduced markedly in the initial years. Thus, an assumption of unchanged emissions is conservative. Therefore, the exclusion of these data does not affect the impact analysis.

4.11.5 PROJECT DESIGN FEATURES AND STANDARD CONDITIONS

Project Design Features

The following project design features (PDFs) are identified as specifically addressing GHG emissions.

PDF 4.11-1 The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require that the Project be consistent with a recognized green building programs that exist at the time of final Project approval such as, but not limited to, Build It Green, the U.S. Green Building Council's (USGBC's) Leadership in Energy and Environmental Design–Neighborhood Development (LEED-ND™), California Green Builder, or National Association of Home Builders' National Green Building Standard™.

PDF 4.11-2 The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require the Project to exceed adopted 2008 Title 24 energy requirements by a minimum of five percent.

PDF 4.11-3 The Master Development Plan and the Newport Banning Ranch Planned Community Development Plan require the Project to be coordinated with Orange County Transportation Authority (OCTA) to allow for a transit routing through the

community, and will provide bus stops and/or shelters as needed in the community to accommodate the bus routing needed by OCTA.

PDF 4.11-4 The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require that all residential development incorporate the following measures, which will be reflected on and incorporated into every application for a final subdivision map that creates residential lots:

a. Builder-installed indoor appliances, including dishwashers, showers, and toilets, will be low water-use. Homeowners Association (HOA) owned and operated public and/or common area men's restrooms will be required to feature waterless urinals.

b. Smart Controller irrigation systems will be installed in all public and common area landscaping. Community landscape areas will be designed on a "hydrozone" basis to group plants according to their water requirements and sun exposure.

c. Air conditioning units will be Freon-free.

d. Concrete for paving in public infrastructure and Project common areas will not be acid-washed unless mandated by agency requirements.

e. The future homeowners association for Newport Banning Ranch will be required to provide educational information on recycling to all homeowners prior to individual purchase of property and again annually.

f. Multimetering "dashboards" will be provided in each dwelling unit to visualize real-time energy use.

g. Single-family detached residential roofs, commercial building roofs, and HOA owned public building roofs, which have adequate solar orientation shall be designed to be compatible with the installation of photovoltaic panels or other current solar power technology.

PDF 4.11-5 The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require that the following measures be implemented during initial project grading activities and will be incorporated into all grading permit applications submitted to the City:

a. Construction waste diversion will be increased by 50 percent from 2010 requirements.

b. To the extent practical, during the oilfield clean-up and remediation process, the Landowner/Master Developer will be required to recycle and reuse materials on site to minimize off-site hauling and disposal of materials and associated off-site traffic.

Additionally, the following PDFs, which are specifically identified for reducing criteria air pollutant emissions, would also reduce GHG emissions.

PDF 4.8-3 If permitted by all applicable agencies, a pedestrian and bicycle bridge over West Coast Highway will be provided, as set forth in the Master Development Plan,

from the Project site to a location south of West Coast Highway to encourage walking and bicycling to and from the beach.

PDF 4.10-1 The Master Development Plan provides for commercial uses, in the Mixed-Use/Residential and Visitor-Serving Resort/Residential Land Use Districts, within walking distance of the proposed residential neighborhoods and nearby residential areas to reduce vehicle trips and vehicle miles traveled.

PDF 4.10-2 The Master Development Plan provides a network of public pedestrian and bicycle trails to reduce auto-dependency by connecting proposed residential neighborhoods to parks and open space within the Project site and to off-site recreational amenities, such as the beach and regional parks and trails.

Standard Conditions and Requirements

SC 4.11-1 ***Energy Efficiency Standards.*** The Project shall be built in accordance with the California *2008 Building Energy Efficiency Standards for Residential and Nonresidential Buildings*, commonly identified as the "2008 Title 24 Energy Efficiency Standards" or the version of these standards current at the time of the issuance of each building permit.[7]

4.11.6 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are derived from the State CEQA Guidelines. A project would result in a significant adverse impact related to GHG emissions if it would:

Threshold 4.11-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

In accordance with the interim policy of the City of Newport Beach, Threshold 4.11-1 is evaluated as follows. The Project would create a significant cumulative contribution to GHG emissions if it would:

- Emit more than 6,000 $MTCO_2e$/yr of GHGs.

Threshold 4.11-2 Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

As described above, the State CEQA Guidelines allow lead agencies to select specific significance criteria in a similar manner as occurs for air pollutants. The City of Newport Beach has done so, as described in Section 4.11.2.

Because of the global nature of the climate change problem, most projects will not result in GHG emissions that are individually significant (CAPCOA 2009). This concept is supported in the various AG, OPR, and SCAQMD publications (as described above) that almost exclusively address cumulative impacts. Therefore, it is accepted as very unlikely that any individual development project or General Plan would have GHG emissions of a magnitude to directly impact global climate change and the impact of the proposed Project is considered on a cumulative basis.

[7] Note that PDF 4.11-2 requires the Project to exceed the energy requirements of these standards by at least five percent.

4.11.7 ENVIRONMENTAL IMPACTS

Threshold 4.11-1 Would the project emit more than 6,000 $MTCO_2e$/yr of GHGs?

Construction Emissions

Temporary impacts would result from Project construction activities. GHGs would be emitted by off-road and on-road construction equipment and worker vehicles. Construction emissions were calculated using CalEEMod, as described in the Methodology Section. The proposed Project would be constructed over a period of approximately 13 years. Construction would include the consolidation of the existing oilfields and soil remediation. Remediation is anticipated to occur from approximately February 2014 until February 2017. Site development is scheduled to begin in August 2014 with construction of residences and other Project elements expected to begin in early 2015. Completion and full occupancy is expected at the end of 2023. The schedule of construction activities used for calculating construction emissions was developed from the Proposed Implementation Plan (see Table 3-3 of Section 3.0, Project Description). The oilfield remediation work would overlap with site development and construction of the first two building phases. The details of development sequencing, selection of construction equipment, and other input parameters are included in Appendix H. The results of the CalEEMod calculations for GHGs from Project construction are shown in Table 4.11-3. The total construction GHG emissions are estimated at 16,851 $MTCO_2e$.

TABLE 4.11-3
ESTIMATED GREENOUSE GAS EMISSIONS
FROM CONSTRUCTION

Year	Emissions ($MTCO_2e$)
2014	1,529
2015	2,165
2016	2,016
2017	2,214
2018	1,582
2019	2,645
2020	1,277
2021	1,165
2022	1,154
2023	1,103
Total	**16,851**
Annual Construction Emissions Amortized over 30 Years[a]	***562***

$MTCO_2e$: metric tons of CO_2 equivalent
Total does not add due to rounding.
[a] See Section 4.11.3

Operational Emissions

Operational GHG emissions for the proposed Project were calculated in accordance with the methodologies described above. Mobile source input for trip generation was taken from the Project's traffic impact analysis (Kimley-Horn 2011). The results of the calculations are shown in Table 4.11-4; CalEEMod data sheets are included in Appendix H. Table 4.11-4 shows both

unmitigated and mitigated GHG emissions. The "mitigated" scenario demonstrates the GHG reductions that occur with Project features that contribute to the reduction of GHG emissions when compared with typical residential and commercial developments. These include VMT reductions that would result from the mixed use, neighborhood walkability, and increased density designs; energy design that would exceed Title 24 requirements; and water conservation design for indoor and outdoor use. These measures would result in an estimated reduction in forecasted buildout annual operational GHG emissions of approximately 25 percent: from 25,359 to 18,949 $MTCO_2e/yr$.

TABLE 4.11-4
ESTIMATED GREENHOUSE GAS EMISSIONS
FROM OPERATIONS

Source	Unmitigated Emissions		Mitigated Emissions	
	$MTCO_2e/yr$	Percent of Total	$MTCO_2e/yr$	Percent of Total
Project at Buildout				
Mobile Sources	18,542	71.7%	12,368	63.6%
Electricity	2,581	10.0%	2,565	13.2%
Natural Gas	2,487	9.6%	2,380	12.2%
Area Sources -Fireplaces & Landscape Maintenance	962	3.7%	962	4.9%
Water Supply and Disposal	794	3.1%	681	3.5%
Oilfield Operations[a]	485	1.9%	485	2.5%
Total – Proposed Project	***25,851***	***100***	***19,441***	***100%***
Existing Land Uses				
Oilfield Operations[a]	492	100	492	100%
Total – Existing Land Uses	***492***	***100***	***492***	***100%***
Net Increase in Annual GHG Emissions	***25,359***		***18,949***	

$MTCO_2e/yr$: metric tons of carbon dioxide equivalent per year.

[a] Vehicle emissions only. GHG emissions from stationary sources, electrical energy use, and water consumption are assumed to be the same for both Existing and Project Buildout conditions and are not quantified.

Vegetation and Sequestration

Terrestrial carbon sequestration is the process through which CO_2 from the atmosphere is absorbed by trees, plants and crops through photosynthesis, and stored as carbon in biomass (tree trunks, branches, foliage, and roots) and soils. The term "sinks" is also used to refer to forests, croplands, and grazing lands, and their ability to sequester carbon. Vegetation existing on the site is a GHG sink. The removal of existing vegetation to develop the project land uses would result in a loss of sequestration capacity that would be equivalent to increasing GHG emissions. The proposed Project is anticipated to include the planting of approximately 9,000 trees inclusive of private residential areas, parks, parkways, and medians. The trees would become new GHG sinks.

The GHG emissions impact of the loss of vegetated area was calculated by CalEEMod to be 2,198 $MTCO_2e$. The GHG emissions impact of the planting of new trees was calculated by CalEEMod to be 5,762 $MTCO_2e$. Thus, the proposed Project would improve the sequestration capacity of the project site by approximately 3,564 $MTCO_2e$. These emissions, similar to construction emissions, are single-event emissions to be amortized over the Project lifetime.

Combined Emissions

Construction, operational, and vegetation GHG emissions are combined by amortizing the construction and vegetation emissions over a conservative, assumed 30-year Project lifetime. This combination is shown in Table 4.11-5. The total annual estimated GHG emissions for the proposed Project are 19,392 $MTCO_2e$/yr.

TABLE 4.11-5
ESTIMATED TOTAL PROJECT ANNUAL GHG EMISSIONS

Source	Emissions $MTCO_2e$/yr
Construction amortized (from Table 4.11-3)	562
Operations (Table 4.11-4)	18,949
Vegetation	-119
Total[a]	***19,392***

$MTCO_2e$/yr: metric tons of carbon dioxide equivalent per year
[a] The Total is the sum of amortized construction and operational emissions less the amortized increase in sequestration.

SC 4.11-1 requires the Project to be built in accordance with the Title 24 Building Efficiency Standards and PDF 4.11-2 actually requires the Project to exceed the Title 24 energy requirements by five percent. Building energy efficiency is also required through PDF 4.11-1, requiring green building. PDF 4.11-3, requiring coordination with OCTA for transit routing; PDF 4.8-3, requiring a bridge over West Coast Highway; PDF 4.10-1, requiring commercial uses near residential uses; PDF 4.10-2 requiring a network of pedestrian and bicycle trails; MM4.11-5, requiring facilities for electric vehicle recharging; and MM4.11-6 requiring bicycle parking facilities would result in reduced GHG emissions resulting from reduced VMT. Additionally, PDF 4.11-4 requires low water use appliances and plumbing fixtures and water-efficient landscape and irrigation practices. PDF 4.11-4 requires building roof orientation to be compatible for the installation of solar power systems and MM 4.11-2 requires solar heating for resort inn and multi-family complex swimming pools. PDF 4.11-4 and MM 4.11-1 require homeowner education programs in practices that will improve energy efficiencies and reduce GHG emissions. PDF 4.11-4 also requires in-home energy monitoring to improve energy use. PDF 4.11-5 requires construction recycling practices to reduce VMT and GHG emissions. MM 4.11-3 requires the use of energy efficient outdoor and street lighting. MM 4.11-4 requires the installation of recycling facilities for multi-family buildings and public spaces.

Impact Summary: ***Cumulatively Significant Impact.*** The total annual estimated GHG emissions for the proposed Project are 19,392 $MTCO_2e$/yr. The Project would emit quantities of GHGs that would exceed the City's 6,000 $MTCO_2e$/yr significance threshold. Thus, the Project would make a cumulatively considerable contribution to the global GHG inventory and would have a cumulatively significant impact on global climate change.

Threshold 4.11-2 ***Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

As discussed above under Section 4.11.2, Regulatory Setting, there are numerous State plans, policies, and regulations that have been adopted to reduce GHG emissions. The principal overall State plan and policy is AB 32. The quantitative goal of AB 32 is to reduce GHG

emissions to 1990 levels by 2020. This goal has been calculated by various methods, including the reduction of 2020 GHG emissions by 28 to 30 percent compared to "business as usual". To state that a project quantitatively achieves this reduction would require speculation about implementation timing, effectiveness of statewide policies, and characterization of "business as usual". However, as described in the PDFs and demonstrated above, the proposed Project incorporates many characteristics and features that would reduce GHG emissions compared with development of similar land uses in other locations or without commitments to sustainable design. Table 4.11-4 shows a 25 percent reduction with measures quantifiable in CalEEMod. Additional reductions would occur if developers or homeowners choose to install solar electricity generation or hot water heating. The proposed Green and Sustainable Program (see Section 3.6.8 of Section 3.0, Project Description) describes the minimum requirements for "green" building, required site design features, and compliance with the Newport Banning Ranch Master Development Plan and Newport Banning Ranch Planned Community Development Plan (NBR-PC). Further, the proposed Project incorporates additional mitigation measures to reduce GHG emissions. Thus, the proposed Project is consistent with AB 32 and the associated Scoping Plan.

Statewide plans and regulations (such as GHG emissions standards for vehicles [AB 1493] and the LCFS) are being implemented at the statewide level so compliance at the project level is not appropriate. Therefore, the proposed Project does not conflict with those plans and regulations.

SB 375 is being addressed at the State and regional level, and application at the specific plan/project level is not anticipated until 2012 or later. The goal of SB 375 is to promote land use growth patterns that will help reduce GHG emissions by reducing VMT. It is intended to foster the implementation of infill and transit oriented development projects to reduce GHG emissions and meet the statewide goals of AB 32. Notwithstanding future date of applicability of SB 375, the proposed Project has been planned in the compact, complete, and efficient land use development manner envisioned by SB 375. Further, the Newport Banning Ranch Project, because it is an infill project, when compared with a similar development not immediately adjacent to commercial and public transportation facilities, would make a positive contribution to reducing regional VMT, another goal of SB 375. The proposed Project would not conflict with SB 375.

The regulations, plans, and polices adopted for the purpose of reducing GHG emissions that are directly applicable to the proposed Specific Plan include:

- Title 24 Energy Efficiency Standards for Residential and Nonresidential Buildings and
- Title 24 California Green Building Standards Code.

By implementing SC 4.11-1, the proposed Project would comply with both of these regulations.

Tables 4.11-6, 4.11-7, and 4.11-8[8] evaluate the consistency of the proposed Project with the applicable goals and policies of the Southern California Association of Governments (SCAG), the City's General Plan, and the California Coastal Act, respectively. For each applicable goal or policy, the right-hand column of the table shows standard conditions and requirements (SCs), PDFs, and strategies and commitments from the Green and Sustainable Program that respond to the measure. As shown in Table 4.11-7,[9] the proposed Project is consistent with the City of Newport Beach's policies regarding GHG emissions. Compliance with these policies would further reduce the Project's GHG emissions.

[8] For ease of reading, the policy tables are located at the end of this section.
[9] Table 4.11-7 is not an exhaustive list of relevant City policies.

In accordance with Section 15126.4(c) of the State CEQA Guidelines, "Lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions". Suggested mitigation measures to reduce GHGs have been published by various agencies including the California Air Pollution Control Officers Association, the Sacramento Metropolitan Air Quality Management District, and the San Joaquin Air Pollution Control District. One of the more comprehensive lists of project-level measures is published by the California AG. Therefore, that list was selected for use in this impact analysis.

In addition to the Mitigation Program identified in this EIR section, the City has evaluated other possible means of reducing GHG emissions as set forth in Table 4.11-9; the table contains the AG's list of project-level measures that reflect the AG's guidance on project compliance with State policies. To the extent feasible and applicable, these measures have been incorporated into the Project. For each applicable measure, the table's right-hand column shows SCs, PDFs, or commitments from the Green and Sustainable Program that respond to the measure. Table 4.11-9 demonstrates that the proposed Project incorporates extensive feasible measures to reduce GHG emissions.

As previously indicated, SC 4.11-1 requires the Project to be built in accordance with the Title 24 Building Efficiency Standards and PDF 4.11-2 actually requires the Project to exceed the Title 24 energy requirements by five percent. Building energy efficiency is also required through PDF 4.11-1, requiring green building. PDF 4.11-3, requiring coordination with OCTA for transit routing; PDF 4.8-3, requiring a bridge over West Coast Highway; PDF 4.10-1, requiring commercial uses near residential uses; PDF 4.10-2 requiring a network of pedestrian and bicycle trails; MM4.11-5, requiring facilities for electric vehicle recharging; and MM4.11-6 requiring bicycle parking facilities would result in reduced GHG emissions resulting from reduced VMT. PDF 4.11-4 requires low water use appliances and plumbing fixtures and water-efficient landscape and irrigation practices. PDF 4.11-4 requires building roof orientation to be compatible for the installation of solar power systems and MM 4.11-2 requires solar heating for resort inn and multi-family complex swimming pools. PDF 4.11-4 and MM 4.11-1 require homeowner education programs in practices that will improve energy efficiencies and reduce GHG emissions. PDF 4.11-4 also requires in-home energy monitoring to improve energy use. Additionally, PDF 4.11-5 requires construction recycling practices to reduce VMT and GHG emissions. MM 4.11-3 requires the use of energy efficient outdoor and street lighting. MM 4.11-4 requires the installation of recycling facilities for multi-family buildings and public spaces.

Impact Summary: ***No Impact.*** As shown in Tables 4.11-6, 4.11-7, and 4.11-8, the proposed Project would be consistent with applicable SCAG, *City of Newport Beach General Plan,* and Coastal Act policies that would result in minimization of GHG emissions. Table 4.11-9 shows consistency with measures recommended by the California AG to reduce GHG emissions. Therefore, the proposed Project would not conflict with applicable plans, policies or regulations adopted for the purpose of reducing the emissions of greenhouse gases.

4.11.8 MITIGATION PROGRAM

Project Design Features

The following Project Design Features (PDFs) are applicable to addressing GHG emissions: PDF 4.11-1, PDF 4.11-2, PDF 4.11-3, PDF 4.11-4, PDF 4.11-5, PDF 4.8-3, PDF 4.10-1, and PDF 4.10-2.

Standard Conditions and Requirements

Standard Condition SC 4.11-1 is applicable to GHG.

Mitigation Measures

MM 4.11-1 Prior to the issuance of each occupancy permit, the Applicant shall submit for approval to the Community Development Director the plan for the applicable future homeowners association to provide educational information on (1) water conservation; (2) energy conservation, including the use of energy-efficient lighting and the limiting of outdoor lighting; (3) mobile source emission reduction techniques, such as use of alternative modes of transportation and zero- or low-emission vehicles; and (4) the use of solar heating, automatic covers, and efficient pumps and motors for pools and spas to all homeowners prior to individual purchase of property and again annually.[10]

MM 4.11-2 Prior to the issuance of the building permit for the resort inn and each building permit for a multi-family complex with a swimming pool or spa, the Applicant shall submit for approval to the Community Development Director that the plans incorporate energy efficient heating, pumps and motors.

MM 4.11-3 Prior to the issuance of each building permit, the Applicant shall submit for approval to the Public Works Director that light emitting diode (LED) lights shall be used for traffic lights and LED or similar energy-efficient lighting will be used for street lights and other outdoor lighting.

MM 4.11-4 Prior to the issuance of each building permit for multi-family buildings, parks, and other public spaces, the Applicant shall submit for approval to the Community Development Director that the plans include the installation of facilities for the collection of recyclable materials consistent with the recycle requirements of the City and the local waste collection contractor.

MM 4.11-5 Prior to the issuance of each building permit for multi-family buildings and the resort inn, the Applicant shall submit for approval to the Community Development Director that the plans include the installation of facilities for electric vehicle recharging, unless it is demonstrated that the technology for these facilities or availability of the equipment current at the time makes this installation infeasible.

MM 4.11-6 Prior to the issuance of each building permit for multi-family buildings, commercial building, park, and other public space, the Applicant shall submit for approval to the Community Development Director that the plans include the

[10] The requirements in this MM are in addition to those of PDF 4.11-4f, but may be distributed and/or grouped together by the homeowners associations. The mobile source emissions component of this MM is the same as MM 4.10-7 from Section 4.10, Air Quality, of this EIR.

installation of bicycle parking spaces at each facility. Bicycle spaces for residents and employees shall be easily accessible and secure. Bicycle spaces for visitors and customers, in parks, and in public spaces shall be visible from the primary entrance, illuminated at night, and protected from damage from moving and parked vehicles.

4.11.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed Project would be consistent with applicable *City of Newport Beach General Plan* policies that would result in minimization of GHG emissions and with measures recommended by the California Attorney General to reduce GHG emissions. Notwithstanding, the Project would emit quantities of GHGs that would substantially exceed the City's 6,000 $MTCO_2e$/yr significance threshold. GHG emission reductions resulting from implementation of the SC, PDFs, and the Green and Sustainable Program cannot be reasonably estimated. These reductions would not reduce emissions to less than 6,000 $MTCO_2e$/yr. Mitigation Measures 4.11-1 through 4.11-6 would provide both GHG reductions and additional consistency with applicable State and local policies. However, GHG emissions would continue to exceed the 6,000 $MTCO_2e$/yr significance threshold. Despite application of all feasible mitigation, the Project would make a cumulatively considerable contribution to the global GHG inventory and would have a significant and unavoidable GHG emissions impact.

TABLE 4.11-6
SCAG REGIONAL POLICY CONSISTENCY ANALYSIS

Relevant Policies and Principles	Consistency Analysis
Regional Comprehensive Plan Policies (Voluntary)[a]	
Land Use and Housing LU-6.2 Developers and local governments should integrate green building measures into project design and zoning such as those identified in the U.S. Green Building Council's Leadership in Energy and Environmental Design, Energy Star Homes, Green Point Rated Homes, and the California Green Builder Program.	The Project is consistent with this policy. PDF 4.11-1 requires the Project to be consistent with green building programs.
Open Space and Habitat OSC-11 Developers should incorporate and local governments should include land use principles, such as green building, that use resources efficiently, eliminate pollution and significantly reduce waste into their projects, zoning codes and other implementation mechanisms.	The Project is consistent with this policy. The Project is consistent with this principle. The Project site is an infill site predominately surrounded by existing development. The *Newport Banning Ranch Planned Community Development Plan* (NBR-PC) and the Master Development Plan require that the Project be consistent with recognized green building programs that exist at the time of final Project approval such as, but not limited to, Build It Green, the U.S. Green Building Council's (USGBC's) Leadership in Energy and Environmental Design-Neighborhood Development (LEED-ND™), California Green Builder, or National Association of Home Builders' National Green Building Standard™ (see PDF 4.11-1). Achieving this certification would require the incorporation of many energy efficiency measures.
Energy EN-8 Developers should incorporate and local governments should include the following land use principles that use resources efficiently, eliminate pollution and significantly reduce waste into their projects, zoning codes and other implementation mechanisms: • Mixed-use residential and commercial development that is connected with public transportation and utilizes existing infrastructure. • Land use and planning strategies to increase biking and walking trips.	The Project is consistent with this policy. The proposed Project would allow for the development of a mix of residential, retail, visitor-serving resort inn, active and passive recreation, and open space uses on the Project site. Included in the Project is up to 75,000 square feet (sf) of community retail uses integrated into the Urban Colony (mix of retail and residential) area of the site, which is intended to provide local convenient goods and services to the residents of and visitors to the Project site and nearby residential areas. The Project would provide a network of public pedestrian and bicycle trails that connect residential areas and visitor-serving areas to parks, commercial uses, and open space within the Project site and to recreational amenities including the beach and regional bike trails located adjacent to the Project site to reduce vehicle trips and miles traveled (PDF 4.10-2).
Energy EN-10 Developers and local governments should integrate green building measures into project design and zoning such as those identified in the U.S. Green Building Council's Leadership in Energy and Environmental Design, Energy Star Homes, Green Point Rated Homes, and the California Green Builder Program. Energy saving measures that should be explored for new and remodeled buildings include: • Using energy efficient materials in building design, construction, rehabilitation, and retrofit • Encouraging new development to exceed Title 24 energy efficiency requirements.	The Project is consistent with this policy. The Project is committed to LEED or National Green Building certification, meeting or exceeding 2008 Title 24 energy requirements, and installing visual energy metering in residential units. These strategies would reduce emissions from stationary sources consistent with NR policies 7.1 and 7.2. (See SC 4.11-1, PDF 4.11-1, PDF 4.11-2 and Commitment 3.1.1-a.)

TABLE 4.11-6 (Continued)
SCAG REGIONAL POLICY CONSISTENCY ANALYSIS

Relevant Policies and Principles	Consistency Analysis
• Developing Cool Communities measures including tree planting and light-colored roofs. These measures focus on reducing ambient heat, which reduces energy consumption related to air conditioning and other cooling equipment. • Utilizing efficient commercial/ residential space and water heaters: This could include the advertisement of existing and/or development of additional incentives for energy efficient appliance purchases to reduce excess energy use and save money. Federal tax incentives are provided online at http://www.energystar.gov/index.cfm?c=Products.pr_tax_credits. • Encouraging landscaping that requires no additional irrigation: utilizing native, drought tolerant plants can reduce water usage up to 60 percent compared to traditional lawns. • Encouraging combined heating and cooling (CHP), also known as cogeneration, in all buildings. • Encouraging neighborhood energy systems, which allow communities to generate their own electricity • Orienting streets and buildings for best solar access. • Encouraging buildings to obtain at least 20% of their electric load from renewable energy.	
Energy EN-12 Developers and local governments should encourage that new buildings are able to incorporate solar panels in roofing and tap other renewable energy sources to offset new demand on conventional power sources.	The Project is consistent with this policy. MM 4.11-1 expands the homeowner education program to include the advantages of using solar heating, automatic covers, and efficient pumps and motors for pools and spas. MM 4.11-2 requires that pools and spas in the resort inn and multi-family complexes incorporate solar heating, automatic covers, and efficient pumps and motors as feasible.
Compass Blueprint Principles and Goals	
Principle 4: Promote sustainability for future generations. GV P4.1 Preserve rural, agricultural, recreational, and environmentally sensitive areas. GV P4.2 Focus development in urban centers and existing cities. GV P4.3 Develop strategies to accommodate growth that uses resources efficiently, eliminates pollution and significantly reduces waste. GV P4.4 Utilize "green" development techniques.	The Project is consistent with this principle. The Project site is an infill site surrounded by existing development. The NBR-PC and the Master Development Plan require that the Project be consistent with recognized green building programs that exist at the time of final Project approval such as, but not limited to, Build It Green, the USGBC's LEED-ND™, California Green Builder, or National Association of Home Builders' National Green Building Standard™ (see PDF 4.11-1). Consistency with these programs would require the incorporation of many energy efficiency measures.
[a] All SCAG Regional Comprehensive Plan policies listed are voluntary local government and developer practices.	

TABLE 4.11-7
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

Applicable General Plan Goals and Policies	Consistency Analysis[a]
Land Use Element	
LU Policy 2.2: Sustainable and Complete Community Emphasize the development of uses that enable Newport Beach to continue as a self-sustaining community and minimize the need for residents to travel outside of the community for retail, goods and services, and employment.	The Project is consistent with this policy. The proposed Project would allow for the development of a mix of residential, retail, visitor-serving resort inn, active and passive recreation, and open space uses on the Project site. Included in the Project is up to 75,000 sf of community retail uses integrated into the Urban Colony (mix of retail and residential) area of the site, which is intended to provide local convenient goods and services to the residents of and visitors to the Project site and nearby residential areas. While parking would be provided for the retail uses, the Project includes pedestrian and bicycle trails throughout the Project site with access to the retail area.
LU Policy 6.4.10: Sustainable Development Practices Require that any development of Banning Ranch achieve high levels of environmental sustainability that reduce pollution and consumption of energy, water, and natural resources to be accomplished through land use patterns and densities, site planning, building location and design, transportation and utility infrastructure design, and other techniques. Among the strategies that should be considered are the concentration of development, reduction of vehicle trips, use of alternative transportation modes, maximized walkability, use of recycled materials, capture and re-use of storm water on-site, water conserving fixtures and landscapes, architectural elements that reduce heat gain and loss, and preservation of wetlands and other habitats.	The Project is consistent with this policy. PDFs 4.11-1 through 4.11-5 and PDFs 4.10-1 and 4.10-2 would reduce GHG emissions, energy consumption, and vehicle miles traveled. The Green and Sustainable Program contains additional strategies and commitments that would conserve resources and reduce GHG emissions.
Natural Resources Element	
Natural Resources General Plan Goal NR 1	
Minimized water consumption through conservation methods and other techniques.	The Project is consistent with this goal. The City of Newport Beach Water Conservation Ordinance (Section 14.16 of the Municipal Code) is applicable to the Project. The Ordinance includes but is not limited to Low-impact Development (LID) and requires an approved water use plan. Builder-installed indoor appliances, including dishwashers, showers, and toilets, would be low water-use. Public and/or common area men's restrooms would be required to feature waterless urinals. (PDF 4.11-4a) Smart Controller irrigation systems would be installed in all public and common area landscaping. Community landscaped areas would be designed on a "hydrozone" basis to group plants according to their water requirements and sun exposure (See PDF 4.11-4b). 100% of plant materials in Upland and Lowland Open Space Areas (excluding public park and recreation areas), in Oil Facilities Areas, and common Fuel Management Areas maintained by the HOA are required to be California natives (Green and Sustainable Program; 3.3.1-a). Drought-tolerant, native landscaping would be used in public and common areas to reduce water consumption (Green and Sustainable Program; 3.3.1-b).

TABLE 4.11-7 (Continued)
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

Applicable General Plan Goals and Policies	Consistency Analysis[a]
Policies	
NR Policy 1.1: Water Conservation in New Development Enforce water conservation measures that limit water usage, prohibit activities that waste water or cause runoff, and require the use of water-efficient landscaping and irrigation in conjunction with new construction projects.	The Project is consistent with this policy. Please refer to the response to Goal NR 1.
NR Policy 1.2: Use of Water Conserving Devices Establish and actively promote use of water conserving devices and practices in both new construction and major alterations and additions to existing buildings. This can include the use of rainwater capture, storage, and reuse facilities.	The Project is consistent with this policy. Please refer to the response to Goal NR 1.
NR Policy 1.4: Alternative Conservation Measures Explore implementation of alternative conservation measures and technology as they become available.	The Project is consistent with this policy. The NBR-PC and the Master Development Plan require that the Project be consistent with recognized green building programs that exist at the time of final Project approval such as, but not limited to, Build It Green, the U.S. Green Building Council's (USGBC's) Leadership in Energy and Environmental Design–Neighborhood Development (LEED-ND™), California Green Builder, or National Association of Home Builders' National Green Building Standard™ (See PDF 4.11-1). Consistency with these programs would require the incorporation of many energy efficiency measures identified in the Master Development Plan.
NR Policy 1.5: Education Establish educational programs on water conservation.	The Project is consistent with this policy. MM 4.11-1 would expand the homeowner education program to include water conservation.
Natural Resources Element Goal NR 6	
Reduced mobile source emissions.	The Project is consistent with the goal. To the degree feasible, the Project would reduce mobile emissions during construction as well as mobile emission sources. The Project would provide a network of public pedestrian and bicycle trails that connect residential areas and visitor-serving areas to parks, commercial uses, and open space within the Project site and to recreational amenities including the beach and regional bike trails located adjacent to the Project site to reduce vehicle trips and miles traveled (PDF 4.10-2).
NR Policy 6.1: Walkable Neighborhoods Provide for walkable neighborhoods to reduce vehicle trips by siting amenities such as services, parks, and schools in close proximity to residential areas.	The Project is consistent with this policy. The Project would design streets and intersections to encourage walking and bicycling with a pedestrian-oriented street design (Green and Sustainable Program; 5.1.1-1).
NR Policy 6.2: Mixed-Use Development Support mixed-use development consisting of commercial or office with residential uses in accordance with the Land Use Element that increases the opportunity for residents to live in proximity to jobs, services, and entertainment.	The Project is consistent with this policy. In order to reduce vehicle trips and vehicle miles traveled, the Project would include commercial uses in the Mixed-Use/Residential and Visitor-Serving Resort/Residential Land Use Districts within walking distance of the proposed residential neighborhoods and nearby residential areas (PDF 4.10-1).

TABLE 4.11-7 (Continued)
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

Applicable General Plan Goals and Policies	Consistency Analysis[a]
NR Policy 6.3: Vehicle-Trip Reduction Measures Support measures to reduce vehicle-trip generation such as at-work day care facilities, and on-site automated banking machines.	The Project is consistent with this policy. The measures described for policies NR 6.1, NR 6.2, NR 6.5, NR 6.9, and CE 6.2.1 all contribute to vehicle trip reduction. In addition, Fiber-optic lines (FIOS), including wireless technology or similar technology available at the time of construction, shall be connected to all homes to provide opportunities for telecommuting (Green and Sustainable Program; 5.1.3-a).
NR Policy 6.4: Transportation Demand Management Ordinance Implement the Transportation Demand Management (TDM) Ordinance, which promotes and encourages the use of alternative transportation modes, and provides those facilities such as bicycle lanes that support such alternate modes.	The Project is consistent with the policy. The Project would be coordinated with the Orange County Transportation Authority (OCTA) to allow for a transit routing through the community, and would provide bus stops and/or shelters as needed in the community to accommodate the bus routing needed by the OCTA (PDF 4.11-3). The Project would design streets and intersections to encourage walking and bicycling with a pedestrian-oriented street design (Green and Sustainable Program; 5.1.1-a).
NR Policy 6.5: Local Transit Agency Collaboration Collaborate with local transit agencies to: develop programs and educate employers about employee rideshare and transit; establish mass transit mechanisms for the reduction of work-related and non-work-related vehicle trips; promote mass transit ridership through careful planning of routes, headways, origins and destinations, and types of vehicles; and develop bus shelters, bicycle lanes, and other bicycle facilities.	The Project is consistent with the policy. Please refer to the response to NR Policy 6.4, which describes coordination with OCTA that would promote mass transit ridership.
NR Policy 6.9: Education on Mobile Source Emission Reduction Techniques Provide education to the public on mobile source emission reduction techniques such as using alternative modes of transportation.	The Project is consistent with the policy. FIOS, including wireless technology or similar technology available at the time of construction, would be connected to all homes to provide opportunities for telecommuting (Green and Sustainable Program; 5.a.3-a). MM 4.11-1 would have a homeowner education program to include mobile source emission reduction techniques.
Natural Resources Element Goal NR 7	
Reduced air pollutant emissions from stationary sources.	The Project is committed to LEED or National Green Building certification, meeting or exceeding 2008 Title 24 energy requirements, and installing visual energy metering in residential units. These strategies would reduce emissions from stationary sources consistent with NR policies 7.1 and 7.2. (See SC 4.11-1, PDF 4.11-1, PDF 4.11-2 and Commitment 3.1.1-a.)
NR Policy 7.1: Fuel Efficient Equipment Support the use of fuel efficient heating equipment and other appliances.	The Project is consistent with these policies. The NBR-PC and the Master Development Plan require that the Project be consistent with recognized green building programs that exist at the time of final Project approval (PDF 4.11-1). The Project would be required to exceed adopted 2008 Title 24 energy requirements by a minimum of five percent (PDF 4.11-2).

TABLE 4.11-7 (Continued)
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

Applicable General Plan Goals and Policies	Consistency Analysis[a]
NR Policy 7.3: Incentives for Air Pollution Reduction Provide incentives to promote siting or to use clean air technologies and building materials (e.g., fuel cell technologies, renewable energy sources, UV coatings, hydrogen fuel)	The Project is consistent with this policy. MM 4.11-1 would expand the homeowner education program to include the advantages of using solar heating, automatic covers, and efficient pumps and motors for pools and spas. MM 4.11-2 would require that pools and spas in the resort inn and multi-family complexes incorporate solar heating, automatic covers, and efficient pumps and motors as feasible.
Natural Resources Element Goal NR 8	
Reduced air pollutant emissions from construction activities.	The Project is consistent with this goal. Construction waste diversion would be increased by 50% from 2010 requirements (PDF 4.11-5a). To the extent practical, during the oilfield clean-up and remediation process, the Applicant would be required to recycle and reuse materials on site to minimize off-site hauling and disposal of materials and associated off-site traffic (PDF 4.11-5b).
Natural Resources Element Goal NR 24	
Increased energy efficiency in City facilities and operations and in private developments.	The Project is consistent with this goal. The NBR-PC and the Master Development Plan require that the Project be consistent with recognized green building programs that exist at the time of final Project approval. The Project would exceed adopted 2008 Title 24 energy requirements by a minimum of 5% (PDF 4.11-2). The Project would install visual energy metering in residential units. These strategies would result in energy efficient design of Project facilities (PDF 4.11-4g).
NR Policy 24.1: Incentives for Energy Conservation Develop incentives that encourage the use of energy conservation strategies by private and public developments.	The Project is consistent with this policy. Multi-metering "dashboards" would be provided in each residence to visualize real-time energy use (PDF 4.11-4g).
NR Policy 24.2: Energy-Efficient Design Features Promote energy-efficient design features.	The Project is consistent with this policy. The NBR-PC and the Master Development Plan require that the Project be consistent with recognized green building programs that exist at the time of final Project approval (PDF 4.11-1). The Project would exceed adopted 2008 Title 24 energy requirements by a minimum of 5 percent (PDF 4.11-2).
NR Policy 24.3: Incentives for Green Building Program Implementation Promote or provide incentives for "Green Building" programs that go beyond the requirements of Title 24 of the California Administrative Code and encourage energy efficient design elements as appropriate to achieve "green building" status.	The Project is consistent with this policy. Please refer to the response to NB Policy 24.2.
NR Policy 24.4: Incentives for Provision of LEED Certified Buildings Provide incentives for implementing Leadership in Environmental and Energy Design (LEED) certified building such as fee waivers, bonus densities, and/or awards recognition programs.	The Project is consistent with this policy. Please refer to the response to NB Policy 24.2.

TABLE 4.11-7 (Continued)
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

Applicable General Plan Goals and Policies	Consistency Analysis[a]
Circulation Element	
Policies	
Policy CE 6.2.1 Alternative Transportation Modes Promote and encourage the use of alternative transportation modes, such as ridesharing, carpools, vanpools, public transit, bicycles, and walking; and provide facilities that support such alternate modes.	The Project is consistent with this policy. The Project would include commercial uses, in the Mixed-Use/Residential and Visitor-Serving Resort/Residential Land Use Districts, within walking distance of the proposed residential neighborhoods and nearby residential areas to reduce vehicle trips and vehicle miles traveled. (PDF 4.10-1). The Project would provide public pedestrian and bicycle trails to reduce auto-dependency by connecting proposed residential neighborhoods to parks and open space within the Project site and to off-site recreational amenities, such as the beach and regional parks and trails (PDF 4.10-2). A pedestrian and bicycle bridge is proposed over West Coast Highway from the Project site to encourage walking and bicycling to and from the beach (PDF 4.8-3)**.** The Project would design streets and intersections to encourage walking and bicycling with a pedestrian-oriented street design (Green and Sustainable Program; 5.1.1-a).
Policy CE 6.2.2 Support Facilities for Alternative Modes Require new development projects to provide facilities commensurate with development type and intensity to support alternative modes, such as preferential parking for carpools, bicycle lockers, showers, commuter information areas, rideshare vehicle loading areas, water transportation docks, and bus stop improvements.	The Project is consistent with this policy. Please refer to the response to Policy CE 6.2.1.
Policy CE 6.2.3 Project Site Design Supporting Alternative Modes Encourage increased use of public transportation by requiring project site designs that facilitate the use of public transportation and walking.	The Project is consistent with this policy. Please refer to the response to Policy CE 6.2.1.
[a] SCs and PDFs are in Section 4.11-5	

TABLE 4.11-8
CALIFORNIA COASTAL ACT CONSISTENCY ANALYSIS

Relevant California Coastal Act Policies	Consistency Analysis
Development	
Section 30253 Minimization of adverse impacts New development shall do all of the following: (d) Minimize energy consumption and vehicle miles traveled.	The Project is consistent with this policy. The NBR-PC and the Master Development Plan require that the Project be consistent with recognized green building programs that exist at the time of final Project approval (PDF 4.11-1). The Project would be required to exceed adopted 2008 Title 24 energy requirements by a minimum of 5% (PDF 4.11-2). Multi-metering "dashboards" would be provided in each dwelling unit to visualize real-time energy use (PDF 4.11-4g). In order to reduce vehicle trips and vehicle miles traveled, the Project would include commercial uses in the Mixed-Use/Residential and Visitor-Serving Resort/Residential Land Use Districts within walking distance of the proposed residential neighborhoods and nearby residential areas (PDF 4.10-1). The Project would provide public pedestrian and bicycle trails to reduce auto-dependency by connecting proposed residential neighborhoods to parks and open space within the Project site and to off-site recreational amenities, such as the beach and regional parks and trails (PDF 4.10-2). A pedestrian and bicycle bridge is proposed over West Coast Highway to encourage walking and bicycling to and from the beach (PDF 4.8-3). The Project would design streets and intersections to encourage walking and bicycling with a pedestrian-oriented street design (Green and Sustainable Program; 5.1.1-a).

TABLE 4.11-9
APPLICATION OF ATTORNEY GENERAL'S RECOMMENDED GREENHOUSE GAS MITIGATION MEASURES TO THE NEWPORT BANNING RANCH PROJECT

ID	Suggested Mitigation Measures	Newport Banning Ranch Project Consistency with Measures[a]
Energy Efficiency		
AG-1	Design buildings to be energy efficient.	The project is consistent with this measure. The NBR-PC and the Master Development Plan require that the Project be consistent with recognized green building programs that exist at the time of final Project approval such as, but not limited to, Build It Green, the U.S. Green Building Council's (USGBC's) Leadership in Energy and Environmental Design–Neighborhood Development (LEED-ND™), California Green Builder, or National Association of Home Builders' National Green Building Standard™ (PDF 4.11-1). The Project would exceed adopted 2008 Title 24 energy requirements by a minimum of 5 percent (PDF 4.11-2).
AG-2	Install efficient lighting and lighting control systems. Site and design building to take advantage of daylight.	The Project is consistent with this measure. MM 4.11-3 would require that light-emitting diode (LED) or similar energy efficient lights be used for street lights and other outdoor lighting. Multi-metering "dashboards" would be provided in each dwelling unit to visualize real-time energy use (PDF 4.11-4g).
AG-3	Use trees, landscaping, and sun screens on west and south exterior building walls to reduce energy use.	The Project is consistent with this measure. The Green and Sustainable Program incorporates landscaping as a tool to reduce energy consumption and thereby reduce GHG emissions. Although the layout of individual residences has not been planned at this level of entitlement, where possible the Master Site Plan design standards would encourage the placement of trees on residential lots to reduce energy use.
AG-4	Install light colored "cool" roofs and cool pavements.	The Project is consistent with this measure. Cool roofs are required by 2008 Title 24 standards.
AG-5	Provide information on energy management services for large energy users.	Not applicable.
AG-6	Install energy efficient heating and cooling systems, appliances and equipment, and control systems.	The Project is consistent with this measure. Refer to AG-1 and AG-2 above.
AG-7	Install light emitting diodes (LEDs) for traffic, street and other outdoor lighting.	The Project is consistent with this measure. Street lights would be used only in key intersections and safety areas (Green and Sustainable Program; 8.1.4-a). MM 4.11-3 would require that LED or similar energy efficient lights be used for street lights and other outdoor lighting.
AG-8	Limit the hours of operation of outdoor lighting.	The Project is consistent with this measure. MM 4.11-1 expands upon the homeowner education program to include energy conservation, including the limiting of hours for operation of outdoor lighting.

TABLE 4.11-9 (Continued)
APPLICATION OF ATTORNEY GENERAL'S RECOMMENDED GREENHOUSE GAS MITIGATION MEASURES TO THE NEWPORT BANNING RANCH PROJECT

ID	Suggested Mitigation Measures	Newport Banning Ranch Project Consistency with Measures[a]
AG-9	Use solar heating, automatic covers, and efficient pumps and motors for pools and spas.	The Project is consistent with this measure. MM 4.11-1 would expand the homeowner education program to include the advantages of using solar heating, automatic covers, and efficient pumps and motors for pools and spas. MM 4.11-2 would require that pools and spas in the resort inn and multi-family complexes incorporate solar heating, automatic covers, and efficient pumps and motors as feasible.
AG-10	Provide education on energy efficiency.	The Project is consistent with this measure. Multi-metering "dashboards" would be provided in each dwelling unit to visualize real-time energy use (PDF 4.11-4g). MM 4.11-1 expands upon the homeowner education program to include the advantages of using solar heating, automatic covers, and efficient pumps and motors for pools and spas.
Renewable Energy		
AG-11	Install solar, wind, and geothermal power systems and solar hot water heaters. Educate consumers about existing incentives.	Please refer to the response to Measure AG-9.
AG-12	Install solar panels on carports and over parking areas.	No specific requirement, but may be used by builders to meet LEED-equivalent and Title 24 energy efficiency requirements.
AG-13	Use on-site generated biogas, including methane, in appropriate applications.	Not applicable for the proposed Project.
AG-14	Use combined heat and power in appropriate applications.	Not applicable. The USEPA suggests that combined heat and power would not be a good fit for hotels with less than 100 rooms.
Water Conservation and Efficiency		
AG-15	Create water-efficient landscapes.	The Project is consistent with this measure. 100% of the plant materials in Upland and Lowland Open Space Areas (excluding public park and recreation areas), in Oil Facilities Areas, and in common Fuel Management Areas maintained by the Homeowners Association (HOA) are required to be California natives (Green and Sustainable Program; 3.3.1-a). Drought-tolerant, native landscaping would be used in public common areas to reduce water consumption (Green and Sustainable Program; 3.3.1-b).
AG-16	Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.	The Project is consistent with this measure. Smart Controller irrigation systems would be installed in all public and common area landscaping. Community landscape areas would be designed on a "hydrozone" basis to group plants according to their water requirements and sun exposure (PDF 4.11-4b).
AG-17	Use reclaimed water for landscape irrigation in new developments and on public property. Install the infrastructure to deliver and use reclaimed water.	At present, this is not feasible, because the City does not have or plan to provide recycled water in the vicinity of the Project site.

TABLE 4.11-9 (Continued)
APPLICATION OF ATTORNEY GENERAL'S RECOMMENDED
GREENHOUSE GAS MITIGATION MEASURES TO THE NEWPORT BANNING RANCH PROJECT

ID	Suggested Mitigation Measures	Newport Banning Ranch Project Consistency with Measures[a]
AG-18	Design buildings to be water-efficient. Install water-efficient fixtures and appliances.	The Project is consistent with this measure. Builder-installed indoor appliances, including dishwashers, showers, and toilets, would be low water-use. Public and/or common area men's restrooms would be required to feature waterless urinals (PDF 4.11-4a).
AG-19	Use gray water. (Gray water is untreated household waste water from bathtubs, showers, bathroom wash basins, and water from clothes washing machines.) For example, install dual plumbing in all new development allowing gray water to be used for landscape irrigation.	This is not planned and is pending further development of regulations governing the use of gray water and subsequent development of appropriate hardware that complies with the regulations.
AG-20	Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.	The Project is consistent with this measure. Section 14.16.045 of the *Newport Beach Municipal Code* states that "No person or customer shall use water to wash any sidewalk, walkway, driveway, parking area or any other hard surface".
AG-21	Restrict the use of water for cleaning outdoor surfaces and vehicles.	The Project is consistent with this measure. Please refer to the response to Measure AG-20.
AG-22	Implement low-impact development (LID) practices that maintain the existing hydrologic character of the site to manage storm water and protect the environment. (Retaining storm water runoff on-site can drastically reduce the need for energy-intensive imported water at the site.)	The Project is consistent with this measure. The Project would incorporate a combination of best management practices (BMPs) for erosion control, sediment control, wind erosion, tracking control, storm water and non-storm water management, and waste management/pollution control (Green and Sustainable Program; 2.3.6-a). The larger streets and arterials throughout the Project site would be designed with "green street" and other Low Impact Development (LID) features, such as bioswales and bio-cells. Green streets are carefully designed roadways that incorporate sustainable design elements that may include narrower pavement widths, canopy street trees, traffic-calming features, and alternative lighting systems. In addition, landscaping along the street edges and within the medians would provide opportunities for treatment of storm water runoff from the streets and adjacent development areas where feasible (Green and Sustainable Program; 2.3.3-a, 3.4.1-a).
AG-23	Devise a comprehensive water conservation strategy appropriate for the project and location. The strategy may include many of the specific items listed above, plus other innovative measures that are appropriate to the specific project.	The Project is consistent with this measure. See measures above.
AG-24	Provide education about water conservation and available programs and incentives.	The Project is consistent with this measure. MM 4.11-1 expands upon the homeowner education program to include water conservation.

TABLE 4.11-9 (Continued)
APPLICATION OF ATTORNEY GENERAL'S RECOMMENDED GREENHOUSE GAS MITIGATION MEASURES TO THE NEWPORT BANNING RANCH PROJECT

ID	Suggested Mitigation Measures	Newport Banning Ranch Project Consistency with Measures[a]
Solid Waste Measures		
AG-25	Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).	The Project is consistent with this measure. Construction waste diversion would be increased by 50 percent from 2010 requirements (PDF 4.11-5b). To the extent practical, during the oilfield clean-up and remediation process, the Applicant would be required to recycle and reuse materials on site to minimize off-site hauling and disposal of materials and associated off-site traffic (PDF 4.11-5c).
AG-26	Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas.	The Project is consistent with this measure. MM 4.11-4 provides for recycling facilities in multi-family buildings, commercial areas, parks, and public spaces.
AG-27	Recover by-product methane to generate electricity.	Not applicable.
AG-28	Provide education and publicity about reducing waste and available recycling services.	The Project is consistent with this measure. The future homeowners associations for Newport Banning Ranch would be required to provide educational information on recycling to all homeowners prior to individual purchase of property and again annually (PDF 4.11-4f).
Land Use Measures		
AG-29	Include mixed-use, infill, and higher density in development projects to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and promote efficient delivery of services and goods.	The Project is consistent with this measure. The Project site is an infill location that would include the following mix of uses: up to 1,375 du, 75,000 sf of commercial uses, and a 75-room resort inn. Approximately 51.4 gross (42.1 net) acres are proposed for active and passive park uses. The Urban Colony area would have density exceeding 30 dwelling units/acre. In order to reduce vehicle trips and vehicle miles traveled, the Project proposes commercial uses in the Mixed-Use/Residential and Visitor-Serving Resort/Residential Land Use Districts within walking distance of the proposed residential neighborhoods and nearby residential areas (PDF 4.10-1).
AG-30	Educate the public about the benefits of well-designed, higher density development.	The Project is consistent with this measure. This EIR analyzes the Project and the potential environmental effects associated with Project implementation. The "benefits of well-designed, higher density development" can be addressed by the City and the Applicant during the City's public hearing process.
AG-31	Incorporate public transit into project design.	The Project is consistent with this measure. The Project would coordinate with the Orange County Transportation Authority (OCTA) to provide a transit routing through the community, and would provide bus stops and/or shelters as needed in the community to accommodate the bus routing. (PDF 4.11-3.)

TABLE 4.11-9 (Continued)
APPLICATION OF ATTORNEY GENERAL'S RECOMMENDED
GREENHOUSE GAS MITIGATION MEASURES TO THE NEWPORT BANNING RANCH PROJECT

ID	Suggested Mitigation Measures	Newport Banning Ranch Project Consistency with Measures[a]
AG-32	Preserve and create open space and parks. Preserve existing trees, and plant replacement trees at a set ratio.	The Project is consistent with this measure. The Project would preserve and enhance approximately 236 acres of open space and provide approximately 51.4 gross (42.1 net) acres for public parks. Community landscaping improvements for streets, parks, common areas, open space areas, and habitat areas would be enhanced, restored, and improved to increase the biomass of the Project site, providing for on-site carbon sequestration. This would be a beneficial impact for GHG emissions.
AG-33	Develop "brownfields" and other underused or defunct properties near existing public transportation and jobs.	The Project is consistent with this measure. The Project would allow for the cleanup, remediation, and consolidation of an industrial site ("brownfield"). The Project would allow for ongoing oil operations while providing for the reuse of the property with urban land uses and recreational opportunities. The infill location places the site adjacent to existing residential and commercial areas and public transportation.
AG-34	Include pedestrian and bicycle-only streets and plazas within developments. Create travel routes that ensure that destinations may be reached conveniently by public transportation, bicycling or walking.	The Project is consistent with this measure. The Project would include commercial uses within walking distance of the proposed residential neighborhoods and nearby residential areas to reduce vehicle trips and vehicle miles traveled (PDF 4.10-1). The Project would provide public pedestrian and bicycle trails connecting residential areas and visitor-serving areas to parks, commercial uses, and open space within the Project site and to recreational amenities including the beach and regional bike trails (PDF 4.10-2). A pedestrian and bicycle bridge is proposed spanning West Coast Highway to encourage walking and bicycling to and from the beach (PDF 4.8-3). The Project would coordinate with the OCTA to provide a transit routing through the community, and bus stops and/or shelters as needed in the community to accommodate the bus routing (PDF 4.11-3).
Transportation and Motor Vehicles		
AG-35	Limit idling time for commercial vehicles, including delivery and construction vehicles.	The Project is consistent with this measure. Vehicle idling time limits would conform to State requirements.
AG-36	Use low or zero-emission vehicles, including construction vehicles.	The Project is consistent with this measure. The Project would use clean-burning fuel, bio-diesel fuel, and/or other alternative fuels for heavy construction equipment to reduce construction emissions by 25% over 2010 "business as usual" construction equipment emissions (PDF 4.11-5). The Project would not have an operational vehicle fleet.
AG-37	Promote ride sharing programs e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides.	Not applicable; this measure is applicable to large commercial, institutional, or industrial projects with a substantial commuting population.

TABLE 4.11-9 (Continued)
APPLICATION OF ATTORNEY GENERAL'S RECOMMENDED GREENHOUSE GAS MITIGATION MEASURES TO THE NEWPORT BANNING RANCH PROJECT

ID	Suggested Mitigation Measures	Newport Banning Ranch Project Consistency with Measures[a]
AG-38	Create car sharing programs. Accommodations for such programs include providing parking spaces for the car share vehicles at convenient locations accessible by public transportation.	Not applicable; this measure is applicable to large commercial, institutional, or industrial projects with a substantial commuting population.
AG-39	Create local "light vehicle" networks, such as neighborhood electric vehicle (NEV) systems.	A light vehicle network is not necessary because of the infill nature of the development and the proposed pedestrian and bicycle trails described in PDF 4.10-2.
AG-40	Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations.	The Project is consistent with this measure. MM 4.11-5 would require the installation of electric vehicle charging facilities in multi-family buildings and the resort inn unless the necessary technology and equipment is not available. The development of a common fueling station for alternative fuels is not appropriate for the location and character of the development.
AG-41	Increase the cost of driving and parking private vehicles by, e.g., imposing tolls and parking fees.	Not applicable; this measure is applicable to large commercial, institutional, or industrial projects with a substantial commuting population.
AG-42	Institute a low-carbon fuel vehicle incentive program.	Not applicable; this measure is applicable to local, regional, or State agencies.
AG-43	Build or fund a transportation center where various public transportation modes intersect.	Not applicable; this measure is applicable to local, regional, or State agencies.
AG-44	Provide shuttle service to public transit.	A shuttle service is not necessary because of the compact nature of the development and the proposed pedestrian and bicycle trails described in PDF 4.10-2 and the proximity to transit facilities. However, the Project would be coordinated with OCTA to allow for a transit routing through the community, and provide bus stops and/or shelters as needed in the community to accommodate the bus routing needed by the OCTA (PDF 4.11-3).
AG-45	Provide public transit incentives such as free or low-cost monthly transit passes.	This measure is applicable to large commercial, institutional, or industrial projects or suburban residential developments with a substantial commuting population. The proposed Project's convenient access to public transit makes incentives unnecessary.
AG-46	Promote "least polluting" ways to connect people and goods to their destinations.	The Project is consistent with this measure. The Project proposes commercial uses within walking distance of proposed residential neighborhoods and nearby residential areas to reduce vehicle trips and vehicle miles traveled (PDF 4.10-1). The Project proposes public pedestrian and bicycle trails connecting residential areas and visitor-serving areas to parks, commercial uses, and open space within the Project site and to recreational amenities including the beach and regional bike trails (PDF 4.10-2). A pedestrian and bicycle bridge is proposed over West Coast Highway to encourage walking and bicycling to and from the beach (PDF 4.8-3).

TABLE 4.11-9 (Continued)
APPLICATION OF ATTORNEY GENERAL'S RECOMMENDED
GREENHOUSE GAS MITIGATION MEASURES TO THE NEWPORT BANNING RANCH PROJECT

ID	Suggested Mitigation Measures	Newport Banning Ranch Project Consistency with Measures[a]
AG-47	Incorporate bicycle lanes and routes into street systems, new subdivisions, and large developments.	The Project is consistent with this measure. Public pedestrian and bicycle trails are proposed to reduce automobile dependency (see PDF 4.10-2).
AG-48	Incorporate bicycle-friendly intersections into street design.	The Project is consistent with this measure. Streets and intersections would be designed to create a safe, pleasant pedestrian experience that encourages walking and bicycling in place of automobile use (Green and Sustainable Program; 5.1.1-a).
AG-49	For commercial projects, provide adequate bicycle parking near building entrances to promote cyclist safety, security, and convenience. For large employers, provide facilities that encourage bicycle commuting, including, e.g., locked bicycle storage or covered or indoor bicycle parking.	The Project is consistent with this measure. MM 4.11-6 requires secure bicycle parking.
AG-50	Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.	The Project is consistent with this measure. The Project proposes public pedestrian and bicycle trails connecting residential areas and visitor-serving areas to parks, commercial uses, and open space within the Project site and to recreational amenities including the beach and regional bike trails (PDF 4.10-2). A pedestrian and bicycle bridge is proposed over West Coast Highway to encourage walking and bicycling to and from the beach (PDF 4.8-3).
AG-51	Work with the school district to restore or expand school bus services.	The Project is consistent with this measure. The Newport-Mesa Unified School District offers home-to-school bus transportation. Free or reduced bus passes are available for qualifying low-income families.
AG-52	Institute a telecommute and/or flexible work hours program. Provide information, training, and incentives to encourage participation. Provide incentives for equipment purchases to allow high-quality teleconferences.	The Project is consistent with this measure. Fiber-optic lines (FIOS), including wireless technology, or similar technology available at the time of construction would be installed to all homes to provide opportunities for telecommuting and other communications technology (Green and Sustainable Program; 5.1.3-a).
AG-53	Provide information on all options for individuals and businesses to reduce transportation-related emissions. Provide education and information about public transportation.	The Project is consistent with this measure. MM 4.11-1 expands the homeowner education program to include mobile source emission reduction techniques.

[a] SCs and PDFs are in Section 4.11-5.