Section 4.7
Greenhouse Gases
4.7.1 Introduction

The State of California recognizes that anthropogenic (human-caused) greenhouse gas (GHG) emissions are contributing to changes in the global climate and that such changes are having and will have adverse effects on the environment, the economy and public health. These are cumulative effects of past, present and future actions worldwide. While worldwide contributions of GHG emissions are expected to have widespread consequences, it is not possible to link particular changes to the environment of California or elsewhere to GHGs emitted from a particular source or location. Thus, when considering a project’s contribution to impacts from climate change, it is possible to examine the quantity of GHG emissions that would be emitted either directly from project sources or indirectly from other sources, such as production of electricity as a result of activities or land use development in the county. This section assesses the potential impacts of GHG emissions that could result from new land use development within unincorporated Riverside County as authorized pursuant to the plans and policies of the General Plan, as updated per this project, proposed GPA No. 960. The updates proposed in GPA No. 960 include extensive revisions to the existing General Plan Air Quality Element to address GHGs in Riverside County.

GHGs trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities, primarily through the combustion of fossil fuels. The State of California has been at the forefront of developing solutions to address global climate change and reduce anthropogenic GHG emissions.

State law defines GHGs to include the following compounds: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆) (State CEQA Guidelines, Section 15364.5 and Health and Safety Code, Section 38505(g)). The most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide. Because GHGs have variable potencies, a common metric of “carbon dioxide equivalents” (CO₂e) is used to report their combined potency. The potency each GHG has in the atmosphere is measured as a combination of the volume of its emissions and its ‘global warming potential’ (GWP). GWP is the potential of a gas or aerosol to trap heat in the atmosphere and is expressed as a function of the potency with respect to the same mass of CO₂. Methane, for example has a GWP of 21, while nitrous oxide has a GWP of 310. By multiplying the amount in metric tons of each individual gas by their respective GWP, all GHGs can be reported in the common unit of metric tons of CO₂e (MT CO₂e). Note, one metric ton (MT) equals 1,000 kilograms or 2,204 pounds; one ‘short ton’ is 2,000 pounds.

Due to the successful global bans on chlorofluorocarbons (primarily used as refrigerants, aerosol propellants and cleaning solvents), Riverside County does not generate significant emissions of these GHGs. The same has occurred for other synthesized gases, such as HFCs and carbon tetrafluoride (CF₄), which have been banned and
are no longer available on the market. Because of the ban, Riverside County will not generate additional emissions of these GHGs and therefore, they are not considered any further in this document. SF$_6$ is another GHG with a high GWP (23,900 times that of CO$_2$); it is mainly used in the electric switchgear of high voltage electric transmission lines and medical use in retinal detachment surgery and ultrasound imaging. These are the only two uses of SF$_6$ in Riverside County. According to the Local Government Operations Protocol (LGOP) published jointly by the California Air Resources Board (CARB), the California Climate Action Registry (CCAR) and The Climate Registry (TCR) for quantification and reporting of GHG emissions inventories by local governments, the sources of SF$_6$ in Riverside County are defined as a Scope 3 emission source not directly or indirectly attributable to the Riverside County operations or the community within Riverside County. This means that the County of Riverside has little control over the emission source and is not considered necessary within Riverside County’s community-wide GHG emissions inventory. Therefore, it is not considered further in this document.

4.7.2 Existing Environmental Setting – Greenhouse Gases

A. Data Types and Sources

Before establishing policies to reduce GHGs, it was necessary to determine the full extent of the issue’s effects within Riverside County. Thus, in order to establish a GHG emissions baseline that is currently being emitted into the environment, an inventory of GHG emissions within unincorporated Riverside County and the county government operations was conducted. Note that the GHG emission inventories for Riverside County include emissions sources within unincorporated Riverside County and activities that the County of Riverside has direct or indirect jurisdictional control. The GHG emissions inventories do not include sources within the incorporated cities because these emission sources are under the jurisdictional control of the respective municipal government that those emissions sources reside within. The following GHG emissions inventory identifies and categorizes the major sources and quantities of GHG emissions being produced by Riverside County residents, businesses and government (County of Riverside) operations currently in Riverside County. Using historic emissions and business-as-usual (BAU) practices as the basis, the inventory includes GHG emissions from 2008 (baseline) and projected for 2020 and beyond. The year 2008 was used as the baseline to inventory emissions for existing conditions as it was the most recent year with complete data. The methodology and data sources used to estimate the various types of existing (2008) GHG emissions are described here. The results of modeled estimates for 2035, including projected emissions for the year 2020 (both BAU and reduced scenarios), are described under “Effects” (Section 4.7.4).

In terms of land use, GHG emissions are predicted based on the types of activities associated with the given use and may span a number of sectors. For example, a single-family home would be associated with GHG emissions from transportation (commuting to work, say), waste generation (trash and lawn clippings) and energy consumption (electricity to run appliances and lights, natural gas to heat the house and cook, etc.). Accordingly, the following subsection describes the 2008 existing GHG emissions inventory for Riverside County and the methodology used to calculate emissions from the following categories: electricity, natural gas, solid waste, area sources, water-related emissions, agriculture and transportation.

1. Energy

The two main energy sources used to provide power on most developed sites are electricity and natural gas. Both these energy sources can result in greenhouse gas emissions. Because natural gas use involves combustion within
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the equipment itself, it is a direct source of greenhouse gas emissions on a site. Electricity is sometimes generated directly on a site through alternative means, such as solar or wind turbines. Most commonly, however, it is generated offsite by a utility provider and when that generation involves the combustion of a fossil fuel (such as coal or natural gas, for example, which is burned to generate steam to run turbines), the result is the indirect production of greenhouse gases. Estimates for Riverside County usage of these two resources are as follows below. It should be noted that these values are countywide estimates obtained directly from major utility providers. They are not meant to be synonymous with the data used in Section 4.10 (Energy) later in this document.

Electricity: Emissions of CO2, CH4 and N2O within Riverside County result from the use of electricity. Annual electricity usage in 2008, obtained from Southern California Edison (SCE) and the Imperial Irrigation District (IID), the two major commercial electricity providers serving Riverside County territory, was used in determining community-wide electricity consumption and generation emission estimates for the existing inventory.

SCE and IID provide electricity generated via a variety of sources, including combustion of natural gas and coal, nuclear, large hydroelectric and renewable sources (solar, wind, etc.). Each of these sources of electricity emits different amounts of GHGs. Therefore, emissions from electricity were determined by multiplying annual usage in megawatt hours per year (MWh/year) by the SCE emission factors appropriate to the inventory year for CO2, CH4 and N2O as reported in the EPA’s Emissions and Generation Resource Integrated Database (eGRID) (U.S. EPA 2007).

Two gas-to-energy facilities are located in unincorporated Riverside County, one at the Badlands Landfill and one at the El Sobrante Landfill. These facilities take the methane collected from the decomposition of solid waste and convert it to electricity. The generation of electricity from these alternative generation sources results in emission reductions. Therefore, the operation of these facilities offset electrical consumption within the inventory by approximately 13,016 megawatt hours to account for the electricity generated by these facilities in 2008. Concerning the El Sobrante Landfill, the County of Riverside cannot claim all of the benefits associated with the gas-to-energy facility at the landfill. The El Sobrante landfill is privately owned and operated. The majority of the waste disposed of at the landfill is generated from outside of Riverside County boundaries. The County of Riverside collects fees and has indirect control over the waste collected from within Riverside County at the El Sobrante Landfill; however, the County of Riverside does not have control over the landfill waste collected by the private operator from outside Riverside County boundaries. Therefore, the benefits from cogeneration are limited to the portion of methane associated with waste collected within Riverside County. As of the end of 2008, approximately 49 percent of the total waste deposited in the El Sobrante landfill originated within Riverside County with the remaining 51 percent originating outside of Riverside County. The 2008 baseline inventory calculates the benefit of the El Sobrante cogeneration based on the portion of waste collected within Riverside County. The contractual split of waste at El Sobrante Landfill was updated after 2008 such that 40 percent of the waste will come from within Riverside County with the remaining 60 percent coming from outside Riverside County. Cogeneration benefits at the El Sobrante Landfill for years 2020 and 2035 reflect the contractual split of waste.

Natural Gas: The residents and businesses of Riverside County emit GHGs from the combustion of natural gas, most often used for space heating and cooling. To determine annual GHG emissions from natural gas combustion, the annual natural gas usage for the unincorporated areas of Riverside County in million British Thermal Units (MMBTUs) was multiplied by the respective emissions factors for CO2, CH4 and N2O. Existing inventory consumption levels were obtained from the Southern California Gas Company, which serves all of the fixed-line connections and mains within unincorporated Riverside County.
2. Solid Waste

Riverside County Waste Management Department is responsible for managing Riverside County’s landfills, including both active and closed landfills. Table 4.7-A (Existing Riverside County Landfills), below, provides information on Riverside County’s active landfills, including planned closure year, the year the landfill-gas system was installed, the in-place tonnage at the end of 2008 and the amount of waste disposed at each landfill in 2008. Table 4.7-B (Closed Riverside County Landfills) provides information for the closed landfills managed by Riverside County including closure year, the year the landfill-gas system was installed and the in-place tonnage. All of the listed landfills are managed by the County of Riverside with the exception of El Sobrante, which is privately owned and operated. As discussed under Electricity, the County of Riverside collects fees and has control over the portion of the El Sobrante landfill waste collected from within Riverside County. Therefore, the emissions associated with solid waste collected within Riverside County are calculated in Riverside County’s baseline inventory of GHG emissions.

Emissions from solid waste result from three different waste-related sources of emissions: transportation from its source to the landfill, operation of the equipment used at the landfill and the fugitive emissions from waste decomposition. Emissions from the transportation of solid waste is determined based on the average number of miles traveled by each truck and the CO$_2$, CH$_4$ and N$_2$O emissions generated per mile traveled. Unlike the rest of these emissions, the transportation-related emissions are accounted for under “Transportation” in the inventory described below. The emissions from landfill equipment are dependent upon the type of equipment, fuel use and duration of use. Emissions from waste decomposition at both active and inactive landfills operated by Riverside County are included in the solid waste category of the Riverside County GHG inventory.

<table>
<thead>
<tr>
<th>Table 4.7-A: Existing Riverside County Landfills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landfill Name (Scheduled Closure Year$^2$)</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Badlands (2024)</td>
</tr>
<tr>
<td>Blythe (2047)</td>
</tr>
<tr>
<td>Desert Center (2018)</td>
</tr>
<tr>
<td>El Sobrante$^4$ (Private) (2045)</td>
</tr>
<tr>
<td>Lamb Canyon (2021)</td>
</tr>
<tr>
<td>Mecca II (2037)</td>
</tr>
<tr>
<td>Oasis (2021)</td>
</tr>
</tbody>
</table>

Footnotes:
1. LFG = landfill gas.
2. Estimated years per Riverside County Waste Management Dept.’s “Site Info Landfill Operation Database,” 2010.
3. All values rounded to nearest 10.
4. Waste Disposed in 2008 associated with the El Sobrante landfill represents only the in-county portion (or approximately 49 percent) of the total waste disposed at this landfill.


<table>
<thead>
<tr>
<th>Table 4.7-B: Closed Riverside County Landfills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landfill Name (Closure Year)</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Coachella (1997)</td>
</tr>
<tr>
<td>Corona (1986)</td>
</tr>
<tr>
<td>Double Butte (1994)</td>
</tr>
<tr>
<td>Edom Hill (1997)</td>
</tr>
<tr>
<td>Elsinore (1965)</td>
</tr>
<tr>
<td>Mead Valley (1997)</td>
</tr>
<tr>
<td>West Riverside (1993)</td>
</tr>
</tbody>
</table>

$^*$All values rounded to nearest 10. LFG = landfill gas.

Emissions from the equipment used at the landfills were calculated from total fuel use by the equipment and the emission factors for CO₂, CH₄ and N₂O, as determined from CARB off-road mobile source emission factors. Fugitive methane emissions from the decomposition of solid waste (typically buried) are calculated based on the annual waste generation multiplied by the applicable emission factors for waste production for CH₄. In Riverside County, all of the landfills have such landfill gas collection systems with the exception of Desert Center, Mecca II and Oasis landfills. These three landfills are the smallest in Riverside County with limited waste disposal and represent only 0.07% (444,923 tons) of the total in-place waste (61,896,358 tons) at the end of 2008. Although CO₂ is also a by-product of organic waste decomposition, the United States Environmental Protection Agency (U.S. EPA) considers these emissions to be natural and not anthropogenic; therefore they are not included in the emissions inventory. Therefore, CH₄ is the only fugitive GHG that is analyzed from the decomposition of organic waste in landfill operations. Organic waste includes yard and food waste while non-organic waste includes fossil fuel-derived products, such as plastic and rubber. Nitrous oxide is not a by-product of decomposition and therefore no fugitive emissions of nitrous oxide are anticipated or calculated from solid waste sources.

3. Area Source Emissions

The following two categories of emissions, landscaping equipment and woodburning emissions, are included in the “Area Source” category, as follows. The emissions associated with landscaping activities and woodburning were calculated using URBEMIS2007. URBEMIS2007 is a computer software package used for modeling projected emissions of air quality pollutants, including carbon dioxide.

Landscaping Emissions: Emissions of CO₂, CH₄ and N₂O are generated by the use of landscape equipment that runs on gasoline. CO₂ emissions were determined directly through URBEMIS2007 for the existing (2008) inventory. From the CO₂ emissions, the approximate number of gallons of gasoline consumed by landscape equipment use was calculated (CARB 2007e). This number was then multiplied by emission factors according to the General Reporting Protocol, version 3.1 (CCAR 2010) to derive both CH₄ and N₂O emissions.

Woodburning Emissions: Direct CO₂ emissions are produced from the burning of wood in wood stoves and fireplaces. Natural gas-fired stoves, barbecues and other heating devices are not included in this subcategory; they have already been accounted for under “Energy.” CO₂, CH₄ and N₂O emissions from wood stoves and fireplaces are calculated based on the percentage of residential units using each type of hearth and the California average amount of wood burned per unit value provided by the EIA “2005 Residential Energy Consumption Survey.” The emission coefficients used are taken from the EPA’s AP-42 document (U.S. EPA 1985).

4. Water-Related Emissions

Water-related emissions included in this section are indirectly produced as a result of electrical consumption to pump and treat water imported from outside Riverside County. There are many water agencies that operate in Riverside County providing both potable and non-potable water to customers in the unincorporated areas. The six major water importers/wholesalers serving Riverside County are: Coachella Valley Water District, Desert Water Agency, Eastern Municipal Water District, Western Municipal Water District, Palo Verde Irrigation District and San Gorgonio Pass Water Agency. However, the Palo Verde Irrigation District does not serve potable water delivery.

Serving EMWD and WMWD, the Metropolitan Water District of Southern California (MWD) holds the rights to a large portion of the State Water Project supply (the system of aqueducts and canals that distributes water from the Sacramento Bay-San Joaquin Delta across the state) and is the largest water wholesaler in California. The San
Gorgonio Pass Water Agency also gets its water from the State Water Project. The water agencies in the eastern portion of Riverside County predominantly get their water from the Colorado River. See Section 4.19 (Water Resources) for full details.

Within Riverside County, each agency’s water supply comes from a mixture of the following sources: the Bay-Delta via the State Water Project, the Colorado River via a system of regional canals, local groundwater, recycled water, and local surface water. The GHG emissions associated with water use come from the energy used to collect, treat, convey and distribute the water. Thus, water imported through the State Water Project and from the Colorado River have higher GHG emissions associated with them, when compared to local water sources, as these distant sources require more energy-intensive transport to reach Riverside County.

**Water Supply:** This category, “Water Supply,” addresses the GHG emissions resulting from energy used to pump/transport these imported sources of water from their sources to Riverside County and to treat the water. This separate category is necessary, as the energy used is accrued across a variety of providers and is not included in the data collected from SCE and IID. For local water sources, the data collected from SCE and IID include associated electricity usage and, hence GHG emissions, are included under the “Electricity” category described above.

**Wastewater Treatment:** As with the local water supply described above, GHG emissions associated with wastewater (that is, pumping and treatment of sewage, urban runoff and, in some cases, industrial or manufacturing runoff) are based on the electricity needed to pump and treat the wastewater. The Riverside County GHG inventory measures the GHG emissions from the transport and treatment of the wastewater as a separate sub-category within the inventory analysis.

### 5. Agricultural Emissions

Riverside County encompasses a large amount of agricultural land with a variety of cultivation uses. The most prominent uses are field and seed crops, including primarily alfalfa and wheat, as well as irrigated pasturlands and rangelands (for grazing). Other uses include orchards, groves, vineyards, truck crops and livestock (including poultry). Agricultural procedures contribute directly to emissions of greenhouse gases through a variety of processes. Assessment of non-carbon-dioxide emissions are from the following source categories: enteric fermentation in domestic livestock, livestock manure management, crop cultivation and field burning of agricultural residues.

Livestock emissions are divided into two categories based on the emissions source: enteric fermentation and manure management. Enteric fermentation is defined as a fermentation process that takes place in the stomach of ruminant animals, such as cows, sheep and goats. This process produces methane that is released through belching and flatulence. Manure management is the process of gathering and disposing of manure generated by livestock. Management practices vary by type of livestock, but in the case of dairy cows, manure is often collected and stored in lagoons. As the manure breaks down, methane is released.

Methane (CH$_4$) and N$_2$O are the primary greenhouse gases emitted from crop cultivation and associated activities. Field burning of agricultural residues from corn and wheat is a minor source of CH$_4$ in Riverside County (U.S. EPA 2009b). Agricultural-related emissions for 2008 were based on data for the unincorporated areas of Riverside County from SCAG and the Riverside County Agricultural Commissioner.


6. Transportation Emissions

The transportation emissions include emissions from on-road vehicles as well as aviation-related fuel use. These two categories of emissions are described below:

**On-Road Vehicles:** Emissions from on-road vehicles include all generated from trips attributable to activities taking place in the unincorporated parts of Riverside County. Carbon dioxide emissions from vehicles were calculated utilizing EMFAC2007 emission factors for the existing inventory. The Emission Factors (EMFAC) model was developed by CARB and is used to calculate CO₂ emission rates for on-road motor vehicles, from light-duty passenger vehicles to heavy-duty trucks that operate on highways, freeways and local roads in California. Motor vehicle emissions of CH₄ and N₂O were calculated using U.S. EPA emission factors for on-road vehicles based on the total annual mileage driven (that is, vehicle miles traveled) multiplied by their respective emission factors by year.

Vehicle miles traveled (VMT) were provided by the Riverside County Transportation Department, which derived them from a transportation model count of the trips entering the unincorporated areas of Riverside County, trips leaving unincorporated Riverside County and trips occurring solely within unincorporated Riverside County. Pass-through traffic (that is, trips beginning and ending outside of unincorporated Riverside County) is not included in this analysis. Since trips entering or leaving unincorporated Riverside County have only one end in Riverside County, only half of these miles were included in the emissions analysis in order to reflect the split jurisdiction of these trips. The VMT associated with these trips are split equally between the two jurisdictions since both are equally responsible for the trips; one jurisdiction is home to the origin and the other is home to the destination. Due to the size of Riverside County and the complexity of its circulation network, using any other split ratio was technologically infeasible. See Section 4.18 (Circulation and Traffic), for further details on traffic modeling, data and results.

The transportation modeling (RIVTAM) assumed that all vehicles are either gasoline or diesel powered. The estimates therefore do not account for electrical, biodiesel (a blend of diesel and vegetable oil) or hydrogen-powered systems. Any electrically powered vehicle draws its power from a residential, commercial or industrial land use within Riverside County; however, the electricity would have been captured under the electrical usage category for the baseline year of 2008.

**Aviation:** Riverside County owns and operates five airports: Hemet-Ryan, French Valley, Chiriaco Summit, Desert Center and Jacqueline Cochran Regional Airport. The GHG emissions associated with aircraft trips within Riverside County were calculated based on annual fuel consumption (extrapolated from airport aviation fuel sales) and emission factors for jet fuel and aviation fuel for CO₂, CH₄ and N₂O. Fuel services are not provided at the Chiriaco Summit or Desert Center Airport, so all fuel consumption data was obtained from the three larger airports. March Air Reserve Base is not included here as flights occurring there are predominantly military and not under the jurisdiction of the County of Riverside.

B. Base Year (2008) Results

For 2008, activities within unincorporated Riverside County resulted in the emission of approximately 7.1 million metric tons (MMT) CO₂e. The categories included in this inventory are: transportation, energy, area source, water and wastewater, solid waste and agriculture. As shown in Figure 4.7.1 (2008 Greenhouse Gas Emissions in Unincorporated Riverside County) and Table 4.7-C (2008 Net Total GHG Emissions for Unincorporated Riverside County), energy-related emissions represent approximately 22% of the total GHG emissions generated by Riverside County in 2008. Solid waste-related emissions represent approximately 3% of the total GHG
emissions. Area source emissions represent approximately 4%. Indirect emissions from the purchasing of water from the State Water Project and the Colorado River represent approximately 2% of the total GHG emissions. Agricultural emissions represent approximately 29% of the total GHG emissions generated by Riverside County in 2008. Transportation emissions do not include pass-through traffic on the freeways within Riverside County and only account for vehicle trips with starting points and/or destinations related to land uses within unincorporated areas that are within the jurisdictional control of the County of Riverside. Transportation-related emissions represent the largest emission source; approximately 40% of the total GHG emissions generated within Riverside County.

**Figure 4.7.1: 2008 Greenhouse Gas Emissions in Unincorporated Riverside County**

Total 2008 GHG Emissions = 7,012,938 MT CO$_2$e

![Greenhouse Gas Emissions Pie Chart](chart.png)

*Source: Atkins, Greenhouse Gas Study for General Plan Update, 2011. See Appendix EIR-6.*

**Table 4.7-C: 2008 Net Total GHG Emissions for Unincorporated Riverside County**

<table>
<thead>
<tr>
<th>Emissions Category &amp; Sub-category</th>
<th>Metric Tons of CO$_2$e</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transportation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-road Vehicles</td>
<td>2,850,520</td>
<td>41%</td>
</tr>
<tr>
<td>Energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>1,067,418</td>
<td>15%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>510,249</td>
<td></td>
</tr>
<tr>
<td><strong>Solid Waste</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landfill Off-gassing</td>
<td>150,639</td>
<td>2%</td>
</tr>
<tr>
<td>Onsite Equipment</td>
<td>4,816</td>
<td></td>
</tr>
<tr>
<td><strong>Area Sources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscaping Equipment</td>
<td>128,043</td>
<td></td>
</tr>
<tr>
<td>Wood Burning</td>
<td>118,543</td>
<td></td>
</tr>
<tr>
<td>Water and Wastewater</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enteric Fermentation</td>
<td>2,030,431</td>
<td>29%</td>
</tr>
<tr>
<td>Manure Management</td>
<td>115,584</td>
<td></td>
</tr>
<tr>
<td>Agriculture Residue Burning</td>
<td>166</td>
<td></td>
</tr>
</tbody>
</table>
4.7.3 Policies and Regulations Addressing Greenhouse Gases

A. Federal Regulations

Kyoto Protocol: The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) signed on March 21, 1994. Specifically, the Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5% from 1990 levels during the first commitment period of 2008-2012 (UNFCCC 1997). It should be noted that although the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol’s commitments.

In December 2009, representatives from 170 countries met in Copenhagen to ratify an updated UNFCCC agreement known as the “Copenhagen Accord”. This accord is a voluntary agreement between the United States, China, India and Brazil that recognizes the need to keep global temperature rise to below 2°C and obliges signatories to establish measures to reduce greenhouse gas emissions and to prepare to provide help to poorer countries in adapting to climate change. The countries met again in Cancun in December 2010 and adopted the Cancun Agreements, which reinforce and build upon the Copenhagen Accord. The nations agreed to recognize country targets, develop low-carbon development plans and strategies, and report inventories annually. In addition, agreements were made regarding financing for developing countries, as well as for technology support and coordination among all nations. The conference of the parties occurred again in December 2011 in South Africa. At the South Africa conference, China and Brazil agreed to unbinding Kyoto reduction targets through an informal memorandum. Two climate change conferences of the parties occurred in August 2012 in Bangkok, Thailand; and again in November/December 2012 in Doha, Qatar without major progress. The 2013 climate change conference occurred in Warsaw, Poland and the parties agreed to extend the Kyoto Protocol through 2015. The next climate change conference of the parties is scheduled for September 2014 in New York City.

Climate Change Technology Program: In lieu of the Kyoto Protocol’s mandatory framework, the United States has opted for a voluntary and incentive-based approach toward emissions reductions. The Climate Change Technology Program is a multi-agency research and development coordination effort led by the Secretaries of Energy and Commerce and charged with carrying out the President’s National Climate Change Technology Initiative.

United States Environmental Protection Agency: The United States Environmental Protection Agency (U.S. EPA) is responsible for implementing federal policy to address global climate change. The federal government administers a wide array of public-private partnerships to reduce GHG emissions generated by the United States.

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<table>
<thead>
<tr>
<th>Emissions Category &amp; Sub-category</th>
<th>Metric Tons of CO2e</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop Growth</td>
<td>1,233,081</td>
<td></td>
</tr>
<tr>
<td>Animals and Runoff</td>
<td>235,565</td>
<td></td>
</tr>
<tr>
<td>Fertilizer Use</td>
<td>246,162</td>
<td></td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td>7,012,938</td>
<td>100%</td>
</tr>
</tbody>
</table>

Footnotes:
1. Includes electricity used for local water supply and wastewater treatment.
2. Includes natural gas-using stoves, grills, barbecues and other heating devices.
3. Per U.S. EPA standards, does not include landfill decomposition emissions.
4. Indirect (outside of county) electricity use for importation of water.

These programs focus on energy efficiency, renewable energy, methane and other non-CO₂ gases, agricultural practices and implementation of technologies to achieve GHG reductions. The U.S. EPA implements several voluntary programs that help substantially reduce GHG emissions. These programs include: the State Climate and Energy Partner Network, which fosters the exchange of information between federal and state agencies regarding climate and energy; the Climate Leaders program for companies; the Energy Star® labeling system for energy-efficient products; and the Green Power Partnership for organizations interested in buying green power. All of these programs play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

It should be noted that in Massachusetts v. Environmental Protection Agency (Docket No. 05-1120), the U.S. Supreme Court held in April of 2007 that the U.S. EPA has authority to regulate greenhouse gases and that the U.S. EPA's reasons for not regulating this area did not fit the statutory requirements. As such, the Court ruled that the U.S. EPA should be required to regulate CO₂ and other greenhouse gases as pollutants pursuant to Section 202(a)(1) of the federal Clean Air Act (CAA).

Towards this aim, in 2009 the U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions by fossil fuel suppliers, industrial gas suppliers, direct GHG emitters and manufactures of heavy-duty and off-road vehicles and vehicle engines. It also requires annual reporting of emissions. The first annual reports required by the Rule were due in March 2011. This rule does not regulate the emission of GHGs; it only requires the monitoring and reporting of greenhouse gas emissions for those sources above certain thresholds (U.S. EPA 2009). In addition, the U.S. EPA adopted a Final Endangerment Finding for the six defined GHGs in December 2009. This Endangerment Finding is required for the U.S. EPA to regulate GHG emissions under Section 202(a)(1) of the CAA.

On May 13, 2010, the U.S. EPA issued a Final Rule that establishes a common sense approach to addressing greenhouse gas emissions from stationary sources under the CAA permitting programs. The rule is in its second phase, which continues through June 2013. In this phase, new construction projects that exceed a CO₂e threshold of 100,000 tons per year and modifications of existing facilities that increase CO₂e emissions by at least 75,000 tons per year are subject to permitting requirements. Additionally, operating facilities that emit at least 100,000 tons per year are subject to Title V permitting requirements for GHGs (U.S. EPA 2010a). New and existing industrial facilities that meet or exceed that threshold require a permit under the New Source Review ‘Prevention of Significant Deterioration’ and Title V ‘Operating Permit’ programs.

B. State Regulations

California Air Resources Board: The California Air Resources Board (CARB), a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles air emission inventories, develops suggested control measures and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints and barbecue lighter fluid) and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of the State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts. The SIP is required for the State of California to take over implementation of the federal Clean Air Act in California and consists of rules and technical documentation to support the State of California’s plan for reducing emissions of criteria pollutants in areas that exceed EPA standards and are designated non-attainment.
Section 4.7  Greenhouse Gases

Executive Order S-3-05: In June 2005, California Governor Arnold Schwarzenegger issued Executive Order S-3-05 establishing the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels.
- By 2020, California shall reduce GHG emissions to 1990 levels.
- By 2050, California shall reduce GHG emissions to 80% below 1990 levels.

The first California Climate Action Team (CCAT) Report to the Governor in 2006 contained recommendations and strategies to help meet these Executive Order targets. The 2010 CCAT Biennial Report expanded on the policy-oriented 2006 report. The information detailed in the 2010 CCAT Biennial Report included issuance of revised climate and sea level projections using newly available information and tools, and an evaluation of climate change within the context of broader social changes, such as land-use changes and demographic shifts. The action items in the report focus on the preparation of the Climate Change Adaptation Strategy, as required by Executive Order S-13-08 (and described later in this report).

Assembly Bill 32 - Global Warming Solutions Act of 2006: In 2006, the California legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006, focusing on reducing GHG emissions in California. GHGs as defined under AB 32 include CO₂, CH₄, N₂O, HFCH, PCH, SFX. AB 32 required CARB to adopt rules and regulations directing state actions that would reduce GHG emissions to 1990 statewide levels by 2020. CARB was also required to publish a list of “discrete early action” GHG emission reduction measures that would be made enforceable by 2010. The law further required that such measures achieve the maximum technologically feasible and cost-effective reductions in GHGs from sources or categories of sources to achieve the statewide greenhouse gas emissions limit for 2020.

Towards this aim, in October 2007, CARB published its “Final Report for Proposed Early Actions to Mitigate Climate Change in California.” This report described recommendations for discrete early action measures to reduce GHG emissions. Resulting from this were three new regulations including: a low carbon fuel standard, reduction of HFC-134a (a refrigerant chemical) emissions from non-professional servicing of motor vehicle air conditioning systems and improved landfill methane capture. CARB estimated that by 2020, reductions from these three measures would reduce emissions by approximately 13-26 million metric tons CO₂e.

In 2007, CARB released a report, “California 1990 GHG Emissions Level and 2020 Emissions Limit,” establishing that statewide levels of GHG emissions in 1990 were 427 MMT CO₂e. Additionally, in 2008, CARB adopted the “Climate Change Scoping Plan,” outlining the State of California’s strategy to achieve the 2020 GHG limit. The Scoping Plan proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify energy sources, save energy, create new jobs and enhance public health. The plan emphasizes a cap-and-trade program, but also includes the discrete early actions previously mentioned.

Senate Bill 97 – 2007 CEQA Guidelines and Climate Change: SB 97, enacted in 2007, amended the California Environmental Quality Act (CEQA) to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directed the California Office of Planning and Research (OPR) to develop revisions to the State CEQA Guidelines “for the mitigation of GHG emissions or the effects of GHG emissions” and directed the Natural Resources Agency to certify and adopt these revised State CEQA Guidelines by January 2010 (See PRC Section 21083.05). The revisions were codified into the California Code of Regulations (CCR) and became fully effective by July 2010. These revisions provide regulatory guidance for the analysis and mitigation of the potential effects of GHG emissions.
Among the changes resulting from SB 97 was the addition of criteria for climate action plans used in the tiering and streamlining of CEQA analysis of GHGs for subsequent development projects. Riverside County has updated the Air Quality Element of the General Plan to include specific policies to address GHG emissions. The implementation mechanisms for these GHG-related policies are the Screening Tables for New Development, included in the proposed Climate Action Plan (CAP). The Screening Tables allow new development projects a streamlined option for complying with the CEQA requirements for addressing GHG emissions. Additionally, Riverside County’s CAP details policies to reduce emissions from municipal and community-wide sources, including existing buildings and new development. The addition to the State CEQA Guidelines addressing tiering reads as follows:

15183.5. Tiering and Streamlining the Analysis of Greenhouse Gas Emissions.

(a) Lead agencies may analyze and mitigate the significant effects of greenhouse gas emissions at a programmatic level, such as in a general plan, a long range development plan or a separate plan to reduce greenhouse gas emissions. Later project-specific environmental documents may tier from and/or incorporate by reference that existing programmatic review. Project-specific environmental documents may rely on an EIR containing a programmatic analysis of greenhouse gas emissions as provided in section 15152 (tiering), 15167 (staged EIRs) 15168 (program EIRs), 15175-15179.5 (Master EIRs), 15182 (EIRs Prepared for Specific Plans) and 15183 (EIRs Prepared for General Plans, Community Plans or Zoning).

(b) Plans for the Reduction of Greenhouse Gas Emissions. Public agencies may choose to analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions or similar document. A plan to reduce greenhouse gas emissions may be used in a cumulative impacts analysis as set forth below. Pursuant to sections 15064(h)(3) and 15130(d), a lead agency may determine that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances.

(1) Plan Elements. A plan for the reduction of greenhouse gas emissions should:

(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, 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.
(2) Use with Later Activities. A plan for the reduction of greenhouse gas emissions, once adopted following certification of an EIR or adoption of an environmental document, may be used in the cumulative impacts analysis of later projects. An environmental document that relies on a greenhouse gas reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project. If there is substantial evidence that the effects of a particular project may be cumulatively considerable notwithstanding the project’s compliance with the specified requirements in the plan for the reduction of greenhouse gas emissions, an EIR must be prepared for the project.

Senate Bill 375 – 2008 Sustainable Communities and Climate Protection Act: SB 375 established mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions and was adopted by the State of California in September 2008. In response, in 2010, CARB adopted vehicular GHG emissions reduction targets developed in consultation with the State of California’s metropolitan planning organizations (MPOs), which included the Southern California Association of Governments (SCAG), to which Riverside County belongs. The targets require a 7-8% reduction by 2020 and 13-16% reduction by 2035 for each MPO. The objective of these targets is to induce cities and counties to change their land use patterns and improve their transportation alternatives. Through the SB 375 process, MPOs, such as SCAG, are to work with local jurisdictions in the development of “Sustainable Communities Strategies” (SCS) designed to integrate development patterns and the transportation network in a way that reduces greenhouse gas emissions while meeting housing needs and other regional planning objectives. In particular, SCAG’s reduction target for per-capita vehicular emissions is 8% by 2020 and 13% by 2035 (CARB 2010b). SCAG is in the process of preparing its SCS according to its 2012 Regional Transportation Plan (RTP) update schedule. To date, different regions remain in different states regarding the completion and adoption of their SCSs.

Pertinent to Riverside County, the Southern California Association of Governments (SCAG) adopted the 2012 RTP including the SCS for the region on April 4, 2012; Riverside County is within the SCAG area and the SCAG 2012 RTP and SCS applies to Riverside County.

Executive Order S-13-08: On November 14, 2008, Governor Schwarzenegger issued Executive Order S-13-08, the Climate Adaptation and Sea Level Rise Planning Directive, to provide clear direction on how the State of California should plan for future climate impacts. Executive Order S-13-08 outlines four key actions to reduce the vulnerability of California to climate change:

- Initiate California’s first statewide Climate Change Adaptation Strategy (CAS) to assess the state’s expected climate change impacts, identify where California is most vulnerable and recommend climate adaptation policies.
- Request that the National Academy of Sciences establish an expert panel to report on sea level rise impacts in California in order to inform State of California planning and development efforts.
- Issue interim guidance to state agencies for how to plan for sea level rise in designated coastal and floodplain areas for new and existing projects.
- Initiate studies on critical infrastructure projects and land-use policies vulnerable to sea level rise.

The resultant 2009 “CAS Report” summarizes the best known science on climate change impacts in the state to assess vulnerability and outlines possible solutions that can be implemented within and across state agencies to
promote resiliency. This is the first step in an ongoing, evolving process to reduce California's vulnerability to climate impacts.

**California Energy Code (CCR Title 24, Part 6):** CCR Title 24, Part 6, the California Energy Code (also known as “Energy Efficiency Standards for Residential and Non-Residential Buildings”), commonly referred to simply as “Title 24,” were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically incorporate new energy efficiency technologies and methods as they become available. Since use of fossil fuels to produce energy results in GHG emissions, energy-efficient buildings that use less energy result in less GHG emissions as well. The State also enacted the “California Green Building Standards Code” under CCR Title 24, Part 11, to address other “holistic” aspects of green building, energy and resource conservation. See section 4.10 for more details on this and other energy conservation issues.

In 2013, the California Energy Commission (CEC) adopted updated Title 24 (Parts 1 and 6) standards which will go into effect on July 1, 2014. These changes are intended to:

- Provide California with an adequate, reasonably priced and environmentally sound supply of energy.
- Respond to the AB 32 mandate for California to reduce its GHG emissions to 1990 levels by 2020.
- Pursue California energy policy, which states that energy efficiency is the resource of first choice for meeting California's energy needs.
- Act on the findings of California's Integrated Energy Policy Report which concluded that the standards are the most cost-effective means to achieve energy efficiency, reduce electricity and peak demand, and reduce energy used in meeting California's water needs and reduce California’s GHG emissions.
- Meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of the California Building Standards Code.
- Meet the energy efficiency goals of Executive Order S-20-04, which established California’s Green Building Initiative to improve the energy efficiency of nonresidential buildings by 20% by the year 2015.

**C. Regional Regulations – Air Quality Management Districts**

As outlined in Section 4.6 (Air Quality), Riverside County spans three different air basins: South Coast, Salton Sea and Mojave Desert. The portions of Riverside County within the South Coast and Salton Sea air basins are regulated by the South Coast Air Quality Management District (SCAQMD), which also governs Los Angeles and Orange counties, plus a small portion of San Bernardino County. The easternmost third of Riverside County, that within the Mojave Desert Air Basin, is under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD), which also governs most of San Bernardino County. The AQMDs are charged by CARB and the State of California with promoting and improving the air quality of their jurisdictions' basins. This is accomplished through air quality monitoring, evaluation, education, implementation of control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations and by supporting and implementing measures to reduce emissions from motor vehicles.

After AB 32 was passed, SCAQMD formed a Climate Change Committee along with a Greenhouse Gases CEQA Significance Thresholds Working Group and the SoCal Climate Solutions Exchange Technical Advisory Group.
In September 2008, the SCAQMD Board or Directors approved the “SCAQMD Climate Change Policy,” which outlines actions the SCAQMD will take to assist businesses and local governments in implementing climate change measures, decrease the agency’s carbon emissions and provide information to the public regarding climate change. Also in 2008, the SCAQMD Board approved interim CEQA GHG significance thresholds for stationary sources of GHG emissions and related rules and plans. SCAQMD also adopted a tiered approach for determining significance of projects’ impacts relative to GHGs. Projects that are exempt from CEQA or consistent with an approved local GHG reduction plan can be found to be less than significant. Other threshold “tiers” capture various levels of GHG emissions. The adopted interim CEQA GHG significance thresholds for stationary sources were adopted by the SCAQMD Governing Board on December 5, 2008, and can be found on the SCAQMD website: www.aqmd.gov/hb/2008/December/081231a.htm.

D. Riverside County Regulations

The following Riverside County ordinances and County Board of Supervisors (BOS) policies address impacts related to global climate change and related issues, such as energy efficiency.

**Ordinance No. 706 - Mobile Source Air Pollution Reduction Programs (Funding):** This ordinance supports the SCAQMD’s imposition of the vehicle registration fee and brings the County into compliance with the requirements of the California Health and Safety Code in order to receive fee revenues for the purpose of implementing programs to reduce air pollution from motor vehicles. Motor vehicles are a large source of both air pollution and GHG emissions, and programs that reduce the use or increase the efficiency of motor vehicles reduce both air pollution and GHG emissions.

**Ordinance No. 726 - Transportation Demand Management for New Development:** This ordinance sets the following goals for efficiently utilizing Riverside County’s existing and planned transportation system and reducing vehicle emissions:

- Reduce vehicle trips generated by new development by 12% commencing in 1994, by 20% commencing in 2000 and by 30% commencing in 2006.
- Reduce overall projected 1994 vehicle trips emanating from the County of Riverside by 7%.
- Relieve traffic congestion in an effort to improve air quality.
- Produce an efficient transportation demand management (TDM) system which utilizes the existing system to its best potential.
- Maintain or achieve minimum level of service of “C” for all new development projects.

The ordinance further requires proposed projects prepare a traffic impact analysis, which must include a Transportation Demand Management Plan describing proposed trip levels and outlining proposed TDM measures for the project to achieve the necessary reductions. Since 40% of Riverside County’s GHG emissions come from vehicular sources, these traffic-reducing measures will also reduce GHG levels.

**Ordinance No. 748 - Mitigation of Traffic Congestion through Signalization:** This ordinance adopts and sets forth policies, regulations and fees for the funding and installation of traffic signals for mitigation of cumulative environmental impacts due to traffic congestion generated by new developments and land use changes. By aiding in reducing traffic, this ordinance also serves to help reduce GHG emissions in Riverside County.
Ordinance No. 782 - Golf Cart Transportation Plan: This ordinance establishes a golf cart transportation program within the County of Riverside. The golf cart transportation plan, authorized by California’s Streets and Highways Code, extends the use of golf carts for transportation beyond access to golf courses. Utilizing golf carts can reduce automobile trips and associated vehicular emissions, thus improving air quality and reducing GHG emissions.

Ordinance No. 824 - Western Riverside County Traffic Uniform Mitigation Fee (TUMF) Program: This ordinance authorizes Riverside County’s participation in the Western Riverside Council of Government (WRCOG) Transportation Uniform Mitigation Fee (TUMF) program. The purpose of the TUMF program is to fund scheduled improvements to the regional system of highways and arterials in western Riverside County. WRCOG studies show that future development within western Riverside County and its cities will result in traffic volumes exceeding the capacity of the regional system as it presently exists. Thus, TUMF is needed to provide improvements to the regional system to reduce traffic congestion. Increased traffic flow and decreased idling time as a result of the traffic improvements will decrease vehicle fuel consumption and reduce GHG emissions.

Ordinance No. 659 - Development Impact Fee (DIF) Program for Residential Development: The Development Impact Fee (DIF) established by this ordinance is collected by Riverside County for each residential unit, development project or portion thereof to be constructed in order to assist in providing revenue to acquire or construct public facilities, purchase regional parkland and preserve habitat and open space. Constructing public facilities and preserving open space associated with new developments is necessary to prevent adverse impacts and promote public health and safety. Specifically, air pollutants and GHG emissions are reduced by the convenient location of public facilities in close proximity to new developments, thus reducing vehicle travel. Preservation of open space both helps improve air quality and prevent urban sprawl into natural areas.

Ordinance No. 655 - Regulating Light Pollution: This ordinance limits the use of lights within the vicinity of the Palomar Observatory. Although the primary intent of the ordinance is to limit light pollution in order to avoid interference with astronomical observation and research, the ordinance also limits the amount of time lights can be on. This conserves electricity and indirectly reduces greenhouse gases emissions.

Ordinance No. 859 - Establishing Water-Efficient Landscaping Standards: This ordinance establishes provisions for water management practices and water waste prevention and creates a structure for planning, designing, installing, maintaining and managing water-efficient landscapes in new rehabilitated projects. It was adopted to implement the requirements of the 2006 California Water Conservation in Landscaping Act and CCR Title 23, Division 2, Chapter 2.7. It generally requires new development landscaping to not exceed a maximum water demand of 70% (or lower as may be required by state legislation). It also includes provisions to eliminate water waste from overspray and runoff and raise public awareness of the need to conserve water through education and motivation. Increasing water efficiency works towards reducing GHG emissions by reducing electricity associated with water use and, thus, the associated GHG emissions.

Ordinance No. 559 - Regulating the Removal of Trees: This ordinance states that “no person shall remove any living native tree on any parcel or property greater than one-half acre in size, located in an area above 5,000 feet in elevation and within the unincorporated area of the County of Riverside, without first obtaining a permit to do so.” Trees, as they grow, provide carbon storage; keeping trees in their place retains this storage of GHGs.

Ordinance No. 695 - Requiring the Abatement of Hazardous Vegetation: The main purpose of this ordinance is to protect Riverside County residents and homes from wildfires. The policy requires all owners or occupants to remove all combustible material and hazardous vegetation. This ordinance helps reduce fire risks; wildfires release large amounts of air pollutants, such as soot, and also naturally occurring GHGs.
Ordinance No. 810 - Establishing an Interim Open Space Mitigation Fee: This ordinance implements the Western Riverside County Multiple Species Habitat Conservation Plan (WRC-MSHCP) and mitigates impacts of new development in western Riverside County. It establishes a development mitigation fee in order to help finance the acquisition of lands containing species protected by the WRC-MSHCP. By preserving these habitats and assessing a fee to develop in these open space areas, the ordinance helps to limit sprawl and encourage concentrated development, thereby reducing GHG emissions that would arise from trips between wider-flung land uses.

Ordinance No. 875 - Establishing Mitigation Fees for Coachella Valley Multi-Species Habitat Conservation Plan: This ordinance helps to enable Riverside County to achieve the conservation goals set forth in the Coachella Valley Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan (CV-MSHCP). Similar to Ordinance No. 810, this ordinance establishes a fee to help finance the acquisition of lands supporting species protected by the CV-MSHCP.

Board of Supervisors (BOS) Policy A-64 - Environmental Purchasing: This policy directs Riverside County’s departments to purchase environmentally friendly materials whenever possible. These can include energy-efficient light bulbs, low emissions vehicles and items made from recycled content. By choosing energy-efficient technologies and recycled materials, GHG emissions from electricity and waste are reduced.

BOS Policy H-4 - Energy Conservation: Policy H-4 states that all County of Riverside departments are responsible for conserving energy. It also directs the Riverside County Economic Development Agency to oversee energy conservation efforts with regard to building heating and cooling systems, lighting, building controls and water conservation by county facilities. It also focuses on energy conservation and rebate/incentive programs as well as energy conservation education and awareness. Other Riverside County agencies and departments are instructed to appoint an energy conservation representative to enforce energy conservation measures.

BOS Policy H-25 - Water Efficient Landscaping: This policy provides for the design, installation and maintenance of water-efficient landscapes for county-owned or county-maintained facilities. This policy will help reduce public facility water consumption and prevent water waste. Transporting water to Southern California is energy-intensive and efforts to reduce water use translates to reduced electricity use to pump the water from Northern California and reduces GHG emissions associated with electricity use in Riverside County.

BOS Policy H-29 - Sustainable Building: This policy establishes the use of sustainable building practices in the design of Riverside County capital improvement projects in order to reduce pollution, protect natural resources, enhance asset value, optimize building performance and create healthier workplaces for Riverside County employees. In addition to reducing operating costs, the use of sustainable building design reduces GHG emissions associated with electricity use, natural gas use, water use and solid waste generation.

E. Existing County General Plan Policies

The following policies are already part of the General Plan and are not part of the project, GPA No. 960. Rather, these policies are considered to play a role in ensuring any potential environmental effects related to GHGs are avoided, reduced or minimized through their application on a case-by-case basis. The County of Riverside has existing programs in place that ensure applicable policies are imposed once a development proposal triggers a specific policy or policies. The need for specific policies is determined through subsequent CEQA analysis performed for site-specific projects. These measures are implemented, enforced and verified through their inclusion into project conditions of approval.
1. **Land Use (LU) Element**

**Policy LU 2.1:** Accommodate land use development in accordance with the patterns and distribution of use and density depicted on the General Plan Land Use Map (Figure LU-1) and the Area Plan land use maps, in accordance with the following:

a. Provide a land use mix at the countywide and area plan levels based on projected need and supported by evaluation of impacts to the environment, economy, infrastructure and services.

b. Accommodate a range of community types and character, from agricultural and rural enclaves to urban and suburban communities.

c. Provide for a broad range of land uses, intensities and densities, including a range of residential, commercial, business, industry, open space, recreation and public facilities uses.

d. Concentrate growth near community centers that provide a mixture of commercial, employment, entertainment, recreation, civic and cultural uses to the greatest extent possible.

e. Concentrate growth near or within existing urban and suburban areas to maintain the rural and open space character of Riverside County to the greatest extent possible.

f. Site development to capitalize upon multi-modal transportation opportunities and promote compatible land use arrangements that reduce reliance on the automobile.

g. Prevent inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards.

**Policy LU 8.12 (Previously LU 7.12):** Improve the relationship and ratio between jobs and housing so that residents have an opportunity to live and work within the county.

**Policy LU 11.1 (Previously LU 10.1):** Provide sufficient commercial and industrial development opportunities in order to increase local employment levels and thereby minimize long-distance commuting.

**Policy LU 11.3 (Previously LU 10.3):** Accommodate the development of community centers and concentrations of development to reduce reliance on the automobile and help improve air quality.

**Policy LU 11.4 (Previously LU 10.4):** Provide options to the automobile in communities, such as transit, bicycle and pedestrian trails, to help improve air quality.

**Policy LU 13.1 (Previously LU 12.1):** Provide land use arrangements that reduce reliance on the automobile and improve opportunities for pedestrian, bicycle and transit use in order to minimize congestion and air pollution.

**Policy LU 13.2 (Previously LU 12.2):** Locate employment and service uses in areas that are easily accessible to existing or planned transportation facilities.

**Policy LU 13.3 (Previously LU 12.3):** Locate transit stations in community centers and at places of public, employment, entertainment, recreation and residential concentrations.
Policy LU 13.4 (Previously LU 12.4): Incorporate safe and direct multi-modal linkages in the design and development of projects, as appropriate.

2. Circulation (C) Element

Policy C 1.2: Support development of a variety of transportation options for major employment and activity centers including direct access to transit routes, primary arterial highways, bikeways, park-n-ride facilities and pedestrian facilities.

Policy C 1.7: Encourage and support the development of projects that facilitate and enhance the use of alternative modes of transportation, including pedestrian-oriented retail and activity centers, dedicated bicycle lanes and paths, and mixed-use community centers.

Policy C 4.1: Provide facilities for the safe movement of pedestrians within developments, as specified in the County Ordinance regulating the division of land of the County of Riverside.

Policy C 5.2: Encourage the use of drought-tolerant native plants and the use of recycled water for roadway landscaping.

Policy C 11.2: Incorporate the potential for public transit service in the design of developments that are identified as major trip attractions (i.e., community centers, tourist and employment centers), as indicated in ordinances regulating the division of land of the County of Riverside.

Policy C 11.4: Offer incentives to new development to encourage it to locate in a transit-oriented area such as a community center or along a designated transit corridor near a station.

Policy C 11.5: Accommodate transit through higher densities, innovative design and right-of-way dedication.

Policy C 11.6 (Previously C 11.7): Promote development of transit centers and park-n-rides for use by all transit operators, including development of multi-modal facilities.

Policy C 12.1: Support the development and implementation of the Transit Oasis concept in conjunction with RCTC [Riverside County Transportation Commission], local transit operators and cities.

Policy C 13.1: Support continued development and implementation of the Riverside County Transportation Commission Rail Program including new rail lines and stations, the proposed California High Speed Rail System with at least two stations in Riverside County, the Coachella Valley Commuter Rail Service and the proposed InterCity Rail Corridor between Calexico and Los Angeles.

Policy C 13.2: Support continued improvements to AMTRAK and MetroLink rail passenger service within Riverside County and throughout the Southern California region.

Policy C 20.14 (Previously C 20.12): Encourage the use of alternative non-motorized transportation and the use of non-polluting vehicles.

Policy C 21.7 (Previously C 21.9): Encourage development of bus-only lanes and signal synchronization so that transit can help to alleviate congestion.
3. **Multipurpose Open Space (OS) Element**

**Policy OS 2.2 (Previously OS 2.1):** Encourage the installation of water-conserving systems such as dry wells and graywater systems, where feasible, especially in new developments. The installation of cisterns or infiltrators shall also be encouraged to capture rainwater from roofs for irrigation in the dry season and flood control during heavy storms.

**Policy OS 2.5:** Encourage continued agricultural water conservation and recommend the following practices where appropriate and feasible: lining canals, recovering tail water at the end of irrigated fields and appropriate scheduling of water deliveries.

**Policy OS 10.1:** Provide for orderly and efficient wind energy development in a manner that maximizes beneficial uses of the wind resource and minimizes detrimental effects to the residents and the environment of the county.

**Policy OS 11.1:** Enforce the state Solar Shade Control Act, which promotes all feasible means of energy conservation and all feasible uses of alternative energy supply sources.

**Policy OS 11.2:** Support and encourage voluntary efforts to provide active and passive solar access opportunities in new developments.

**Policy OS 11.3:** Permit and encourage the use of passive solar devices and other state-of-the-art energy resources.

**Policy OS 12.1:** Allow for the development of non-electrical, direct heat uses of geothermal heat and fluids for space, agricultural and industrial heating in situations and localities where naturally occurring hydrothermal features will not be degraded.

**Policy OS 16.2:** Specify energy efficient materials and systems, including shade design technologies, for county buildings.

**Policy OS 16.3:** Implement public transportation systems that utilize alternative fuels when possible, as well as associated urban design measures that support alternatives to private automobile use.

**Policy OS 16.4:** Undertake proper maintenance of County physical facilities to ensure that optimum energy conservation is achieved.

**Policy OS 16.5:** Utilize federal, State and utility company programs that encourage energy conservation.

**Policy OS 16.6:** Assist public buildings and institutions in converting asphalt to greenspace to address the heat island effect.

**Policy OS 16.7:** Promote purchasing of energy-efficient equipment based on a fair return on investment and use energy-savings estimates as one basis for making purchasing decisions regarding major energy-using devices.

**Policy OS 16.8:** Promote coordination of new public facilities with mass transit service and other alternative transportation services, including bicycles, and design structures to enhance mass transit, bicycle and pedestrian use.

**Policy OS 16.9:** Encourage increased use of passive, solar design and day-lighting in existing and new structures.
Policy OS 16.10: Encourage installation and use of cogenerating systems where they are cost-effective and appropriate.

4. **Air Quality (AQ) Element**

Policy AQ 1.1: Promote and participate with regional and local agencies, both public and private, to protect and improve air quality.

Policy AQ 1.2: Support the Southern California Association of Government’s (SCAG) Regional Growth Management Plan by developing intergovernmental agreements with appropriate governmental entities such as the Western Riverside Council of Governments (WRCOG), the Coachella Valley Association of Governments (CVAG), sanitation districts, water districts and those subregional entities identified in the Regional Growth Management Plan.

Policy AQ 1.3: Participate in the development and update of those regional air quality management plans required under federal and State law, and meet all standards established for clean air in these plans.

Policy AQ 1.4: Coordinate with the SCAQMD and MDAQMD to ensure that all elements of air quality plans regarding reduction of air pollutant emissions are being enforced.

Policy AQ 1.5: Establish and implement air quality, land use and circulation measures that improve not only the County’s environment but the entire regions.

Policy AQ 1.6: Establish a level field by working with local jurisdictions to simultaneously adopt policies similar to those in this Air Quality Element.

Policy AQ 1.7: Support legislation which promotes cleaner industry, clean fuel vehicles and more efficiently-burning engines and fuels.

Policy AQ 1.8: Support the introduction of federal, state or regional enabling legislation to permit the County to promote inventive air quality programs, which otherwise could not be implemented.

Policy AQ 1.9: Encourage publicly recognized and reward innovative approaches that improve air quality.

Policy AQ 1.10: Work with regional and local agencies to evaluate the feasibility of implementing a system of charges (e.g., pollution charges, user fees, congestion pricing and toll roads) that requires individuals who undertake polluting activities to bear the economic cost of their actions where possible.

Policy AQ 1.11: Involve environmental groups, the business community, special interests, and the general public in the formation and implementation of programs that effectively reduce airborne pollutants.

Policy AQ 2.1: The County land use planning efforts shall assure that sensitive receptors are separated and protected from polluting point sources to the greatest extent possible.

Policy AQ 2.2: Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible.

Policy AQ 2.3: Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution.
Policy AQ 2.4: Consider creating a program to plant urban trees to an Area Plan basis that removes pollutants from the air provides shade and decreases the negative impacts on the air.

Policy AQ 3.1: Allow the market place, as much as possible, to determine the most economical approach to relieve congestion and cut emissions.

Policy AQ 3.2: Seek new cooperative relationships between employers and employees to reduce vehicle miles traveled.

Policy AQ 3.4: Encourage employee rideshare and transit incentives for employers with more than 25 employees at a single location.

Policy AQ 4.5: Require stationary pollution sources to minimize the release of toxic pollutants through:

- Design features;
- Operating procedures
- Preventive maintenance;
- Operator training; and,
- Emergency response planning

Policy AQ 4.6: Require stationary air pollution sources to comply with applicable air district rules and control measures.

Policy AQ 4.8: Expand, as appropriate, measures contained in the County’s Fugitive Dust Reduction Program for the Coachella Valley to the entire County.

Policy AQ 4.9: Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.

Policy AQ 4.10: Coordinate with the SCAQMD and MDAQMD to create a communications plan to alert those conducting grading operations in the County of first, second, and third stage smog alerts, and when wind speeds exceed 25 miles per hour. During these instances all grading operations should be suspended.

Policy AQ 5.1: Utilize source reduction, recycling and other appropriate measures to reduce the amount of solid waste disposed of in landfills.

Policy AQ 5.2: Adopt incentives and/or regulations to enact energy conservation requirements for private and public developments.

Policy AQ 5.4: Encourage the incorporation of energy-efficient design elements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.

Policy AQ 6.1: Assist small business by developing education and job training programs, especially in job-poor areas.
Policy AQ 6.2: Collaborate with local colleges and universities to develop appropriate education programs to assist residents in obtaining job skills to meet market demands.

Policy AQ 7.1: Provide incentives to encourage new firms to locate within the County and existing firms to expand operations.

Policy AQ 7.2: Work with SCAQMD and MDAQMD to develop a means to encourage the location of new commercial and industrial development in those localities where jobs are most needed.

Policy AQ 7.3: Create a loan program to encourage small business to located within the County.

Policy AQ 7.4: Offer incentives to businesses to control emissions and implement the AQMP.

Policy AQ 7.5: Reduce regulations on small businesses wherever possible and thereby encourage small business development and job creation. The County shall set performance standards as well as design standards, thus giving small business owners as many options as possible to comply with County regulations.

Policy AQ 7.6: Adopt policies freeing small businesses from unnecessary and duplicative paperwork.

Policy AQ 7.7: Assemble information collected from County agencies and departments concerning the business community to develop programs that better serve their needs.

Policy AQ 8.1: Locate new public facilities in job-poor areas of the County.

Policy AQ 8.2: Emphasize job creation and reductions in vehicle miles traveled in job-poor areas to improve air quality over other less efficient methods.

Policy AQ 8.3: Time and locate facilities and services so that they further enhance job creation opportunities.

Policy AQ 8.4: Support new mixed-use land use patterns and community centers which encourage community self-sufficiency and containment, and discourage automobile dependency.

Policy AQ 8.5: Develop community centers in conformance with policies contained in the Land Use Element.

Policy AQ 8.6: Encourage employment centers in close proximity to residential uses.

Policy AQ 8.7: Implement zoning code provisions which encourage community centers, telecommuting and home-based businesses.

Policy AQ 8.8: Promote land use patterns which reduce the number and length of motor vehicle trips.

Policy AQ 8.9: Promote land use patterns that promote alternative modes of travel.

Policy AQ 9.1: Cooperate with local, regional, state and federal jurisdictions to reduce vehicle miles traveled and motor vehicle emissions through job creation.

Policy AQ 9.2: Attain performance goals and/or VMT reductions which are consistent with SCAG’s Growth Management Plan.
Policy AQ 10.1: Encourage trip reduction plans to promote alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking.

Policy AQ 10.2: Use incentives, regulations and Transportation Demand Management in cooperation with surrounding jurisdictions when possible to eliminate vehicle trips which would otherwise be made.

Policy AQ 10.3: Assist merchants in encouraging their customers to shift from single occupancy vehicles to transit, carpools, bicycles or foot.

Policy AQ 10.4: Continue to enforce the County’s Transportation Demand Management Ordinance and update as necessary.

Policy AQ 11.1: Establish requirements for special event centers to provide off-site parking and park-n-ride facilities at remote locations. Remote parking should be as close to practicable to the event site and the operator should supply shuttle services.

Policy AQ 11.2: Promote the use of peripheral parking by increasing on-site parking rates and offering reduced rates to peripheral parking with tickets sold for non-ridesharing patrons.

Policy AQ 11.3: Encourage special event center operators to advertise and offer discounted transit passes with event tickets.

Policy AQ 11.4: Encourage special event center operators to advertise and offer discount parking incentives to carpooling patrons, with two or more persons per vehicle, for on-site facilities.

Policy AQ 12.1: Manage traffic flow through signal synchronization, while coordinating with and permitted the free flow of mass transit vehicles, when possible.

Policy AQ 12.2: Synchronize signals through the County with those of its cities, adjoining counties and the California Department of Transportation.

Policy AQ 12.3: Construction and improve traffic signals with channelization and Automated Traffic Surveillance and Control systems at appropriate intersections.

Policy AQ 12.4: Eliminate traffic hazards and delays through highway maintenance, rapid emergency response, debris removal, and elimination of at-grade railroad crossings, when possible.

Policy AQ 12.5: Encourage business owners to schedule deliveries at off-peak traffic periods.

Policy AQ 13.1: Manage the County of Riverside transportation fleet fueling standards to achieve an appropriate alternate fuel fleet mix.

Policy AQ 13.2: Cooperate with local, regional state, and federal jurisdictions to better manage transportation facilities and fleets.

Policy AQ 13.3: Encourage the construction of high-occupancy-vehicle (HOV) lanes whenever possible to relieve congestion, safety hazards and air pollution described in the AQMP
Policy AQ 14.1: Emphasize the use of high occupancy vehicle lanes, light rail and bus routes, and pedestrian and bicycle facilities when using transportation facility development to improve mobility and air quality.

Policy AQ 14.2: When developing new capital facility improvement plans, also consider measures such as Transportation Demand Management, Transportation Systems Management, and job/housing balance strategies.

Policy AQ 14.3: Monitor traffic and congestion to determine when and where the County needs new transportation facilities to achieve increased mobility efficiency.

Policy AQ 14.4: Preserve transportation corridors with high demand potential or regional significance for future expansion to meet project demand.

Policy AQ 15.1: Identify and monitor sources, enforce existing regulations, and promote stronger control to reduce particulate matter.

Policy AQ 16.1: Cooperate with, regional, state and federal jurisdictions to better control particulate matter.

Policy AQ 16.2: Encourage stricter state and federal legislation on bias belted tires, smoking vehicles, and vehicles that spill debris on streets and highways, to better control particulate matter.

Policy AQ 16.3: Collaborate with SCAQMD and MDAQMD to require and/or encourage the adoption of regulations or incentives to limit the amount of time trucks may idle.

Policy AQ 16.4: Collaborate with EPA, SCAQMD, MDAQMD, and warehouse owners and operators to create regulations and programs to reduce the amount of diesel fumes released due to warehousing operations.

Policy AQ 17.1: Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way, and off-road vehicles to the extent possible.

Policy AQ 17.2: Enforce regulations against illegal fires.

Policy AQ 17.3: Identify and create a control plan for areas within the County prone to wind erosion of soil.

Policy AQ 17.4: Adopt incentives, regulations and/or procedures to manage paved and unpaved roads and parking lots so they produce the minimum practicable level of particulates.

Policy AQ 17.5: Adopt incentives and/or procedures to limit dust from agricultural lands and operations, where applicable.

Policy AQ 17.6: Reduce emissions from building materials and methods that generate excessive pollutants, through incentives and/or regulations.

Policy AQ 17.7: Separate trucks from other vehicles in industrial areas of the County with the creation of truck-only access lanes to promote the free flow of traffic.

Policy AQ 17.8: Adopt regulations and programs necessary to meet state and federal guidelines for diesel emissions.
Policy AQ 17.9: Encourage the installation and use of electric service units at truck stops and distribution centers for heating and cooling truck cabs, and particularly for powering refrigeration trucks in lieu of idling of engines for power.

Policy AQ 17.10: Promote and encourage the use of natural gas and electric vehicles in distribution centers.

Policy AQ 17.11: Create and implement street-sweeping plans, as appropriate, in areas of the County disproportionately affected by particulate matter pollution.

F. Proposed New or Revised County General Plan Policies

The following revisions, deletions and additions are proposed for the General Plan as part of GPA No. 960 to address greenhouse gases.

1. Land Use (LU) Element

Policy LU 1.5: The County shall participate in regional efforts to address issues of mobility, transportation, traffic congestion, economic development, air and water quality, watershed and habitat management, child care with cities, local and regional agencies, stakeholders, Indian nations and surrounding jurisdictions.

Policy LU 4.1: Require that new developments be located and designed to visually enhance, not degrade the character of the surrounding area through consideration of the following concepts:

   a. Compliance with the design standards of the appropriate area plan land use category.
   
   b. Require that structures be constructed in accordance with the requirements of the County’s zoning, building and other pertinent codes and regulations.
   
   c. Require that an appropriate landscape plan be submitted and implemented for development projects subject to discretionary review.
   
   d. Require that new development utilize drought tolerant landscaping and incorporate adequate drought-conscious irrigation systems.
   
   e. Pursue energy efficiency through street configuration, building orientation and landscaping to capitalize on shading and facilitate solar energy, as provided for in Title 24, Part 6 and/or Part 11, of the California Administrative Code of Regulations (CCR).
   
   f. Incorporate water conservation techniques, such as groundwater recharge basins, use of porous pavement, drought-tolerant landscaping and water recycling, as appropriate.
   
   g. Encourage innovative and creative design concepts.
   
   h. Encourage the provision of public art that enhances the community’s identity, which may include elements of historical significance and creative use of children’s art.
   
   i. Include consistent and well-designed signage that is integrated with the building’s architectural character.
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j. Provide safe and convenient vehicular access and reciprocal access between adjacent commercial uses.

k. Locate site entries and storage bays to minimize conflicts with adjacent residential neighborhoods.

l. Mitigate noise, odor, lighting and other impacts on surrounding properties.

m. Provide and maintain landscaping in open spaces and parking lots.

n. Include extensive landscaping.

o. Preserve natural features, such as unique natural terrain, *arroyos, canyons and other* drainage ways, and native vegetation, wherever possible, particularly where they provide continuity with more extensive regional systems.

p. Require that new development be designed to provide adequate space for pedestrian connectivity and access, recreational trails, vehicular access and parking, supporting functions, open space and other pertinent elements.

q. Design parking lots and structures to be functionally and visually integrated and connected.

r. Site buildings access points along sidewalks, pedestrian areas and bicycle routes, and include amenities that encourage pedestrian activity.

s. Establish safe and frequent pedestrian crossings.

t. Create a human-scale ground floor environment that includes public open areas that separate pedestrian space from auto traffic or where mixed, it does so with special regard to pedestrian safety.

u. Recognize open space, including hillsides, *arroyos, riparian areas and other natural features as* amenities that add community identity, beauty, recreational opportunities and monetary value to adjacent developed areas.

v. Manage wild land fire hazards in the design of development proposals located adjacent to natural open space.

**Policy LU 9.1 (Previously LU 8.1)**: Provide for permanent preservation of open space lands that contain important natural resources, *cultural resources, hazards, water features, watercourses including arroyos and canyons and scenic and recreational values.*

**2. Circulation (C) Element**

**Policy C 4.8 (Previously C 4.9)**: Coordinate with all transit operators to ensure that *ADA compliant* pedestrian facilities are provided along and/or near all transit routes, whenever feasible. New land developments may be required to provide pedestrian facilities due to existing or future planned transit routes even if demand for pedestrian facility *is may not be* otherwise warranted.

**Policy C 9.2:** Support *the expansion of Metrolink service and* transit operators’ programs to foster increase transit usage to implement bus rapid transit (BRT) services, and make other express and local bus service improvements.

**Policy C 12.2:** Support the development of high-speed transit linkages, *bus rapid transit (BRT)* or express routes between community centers and other major nodes of activity.
Policy C 13.3: Support implementation of the San Jacinto Branch Line to serve planned industrial development commuter uses.

Policy C 17.3: Ensure that the bikeway system incorporates the following:

a. Interconnection throughout and between cities and unincorporated communities.

b. Provision of Appropriate lanes to specific destinations such as state or county parks.

c. Provision for Appropriate opportunities for recreational bicycle riding and bicycle touring.

d. Encouragement of Opportunities for bicycle commuting and golf cart commuting within a community, as appropriate for the terrain, traffic levels and proximity to surrounding destinations.

e. Bikeways connecting to all urban transit centers and systems (bus stops and Metrolink stations) in the vicinity.

f. Bicycle parking at transit stops and park-and-ride lots.

Policy C 17.4: Ensure that alternative modes of motorized transportation, such as buses, trains, taxi cabs, etc., plan and provide for transportation of recreational and commuting bicyclists and bicycles on public transportation systems. Coordinate with all transit operators to ensure that bicycle facilities are provided along and/or near all transit routes, whenever feasible. New land developments shall be required to provide bicycle facilities due to existing or future planned transit routes.

Policy C 21.1: Encourage the installation and use of HOV lanes. Such lanes should be continuous, linking major population centers with employment centers. If HOV lanes are used, consider making them available for mixed flow traffic during non-peak periods where warranted and feasible. Consider and implement, where feasible and needed, direct HOV connections between freeways and arterial-to-freeway exclusive HOV ingress/egress ramps.

3. Air Quality (AQ) Element

Policy AQ 4.1: Require Encourage the use of all feasible building materials/methods which reduce emissions.

Policy AQ 4.2: Require Encourage the use of all feasible efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units.

Policy AQ 4.3: Require Encourage centrally heated facilities to utilize automated time clocks or occupant sensors to control heating where feasible.

Policy AQ 4.4: Require residential building construction to comply with energy use guidelines detailed in Part 6 (California Energy Code) and/or Part 11 (California Green Building Standards Code) of Title 24 of the California Administrative Code of Regulations.

Policy AQ 4.7: To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SOCAB–SCAB, the Environmental Protection Agency and the California Air Resources Board.

NEW Policy AQ 18.1: Baseline emissions inventory and forecast. Riverside County CAP has included baseline emissions inventory with data from the County’s CO2e emissions for specific sectors and specific years. The carbon inventory greatly aids the process of determining the type, scope and number of greenhouse gas reduction policies needed. It also facilitates the tracking of policy
implementation and effectiveness. The carbon inventory for the county consists of two distinct components; one inventory is for the county as a whole, as defined by its geographical borders and the other inventory is for the emissions resulting from the County’s municipal operations.

**NEW Policy AQ 18.2:** Adopt GHG emissions reduction targets. Pursuant to the results of the Carbon Inventory and Greenhouse Gas Analysis for Riverside County, future development proposed as a discretionary project pursuant to the General Plan shall achieve a greenhouse gas emissions reduction of 25% compared to Business As Usual (BAU) project in order to be found consistent with the County’s Climate Action Plan (CAP).

**NEW Policy AQ 18.3:** Develop a Climate Action Plan (CAP) for reducing GHG emissions. The Riverside County CAP has been developed to formalize the measures necessary to achieve county greenhouse gas emissions reduction targets. The CAP includes both the policies necessary to meet stated targets and objectives are met. These targets, objectives and Implementation Measures may be refined, superseded or supplemented as warranted in the future.

**NEW Policy AQ 18.4:** Implement policies and measures to achieve reduction targets. The County shall implement the greenhouse gas reduction policies and measures established under the County Climate Action Plan for all new discretionary development proposals.

**NEW Policy AQ 18.5:** Monitor and verify results. The County shall monitor and verify the progress and results of the CAP periodically. When necessary the CAP’s “feedback” provisions shall be used to ensure that any changes needed to stay “on target” with stated goals are accomplished.

**NEW Policy AQ 19.1:** Continue to coordinate with CARB, SCAQMD and the State Attorney General’s office to ensure that the milestones and reduction strategies presented in the General Plan and the CAP adequately address the county’s greenhouse gas emissions.

**NEW Policy AQ 19.2:** Utilize the County’s CAP as the guiding document for determining the County’s greenhouse gas reduction thresholds and implementation programs. Implementation of the CAP and its monitoring program shall include the ability to expand upon or, where appropriate, update or replace the Implementation Measures established herein so that the implementation of the CAP accomplishes the greenhouse gas reduction targets.

**NEW Policy AQ 19.3:** Require new development projects subject to County discretionary approval to achieve the greenhouse gas GHG reduction targets established in the CAP either through:

a. Garnishing 100 points through the Implementation Measures found the County’s CAP; or

b. Requiring quantification of project-specific GHG emissions and reduction of GHG emissions to, at minimum, the applicable GHG reduction threshold established in the CAP.

**NEW Policy AQ 19.4:** All discretionary project proposals shall analyze their project-specific GHG reduction targets in comparison to the “business as usual” (BAU) scenario for the development’s operational life and the “operational life” of a new development shall be defined as a 30-year span. Other methods for calculating BAU and showing GHG emissions reductions may be used provided such methods are both scientifically defensible and show actual emission reduction measures incorporated into project design, mitigation or alternative selection. Alternatively, a project may use the CAP Screening Tables to show the attainment of the applicable number of points needed to ensure adequate GHG reductions and CAP compliance.

**NEW Policy AQ 20.1:** Reduce VMT by requiring expanded multi-modal facilities and services that provide transportation alternatives, such as transit, bicycle and pedestrian modes. Improve connectivity of the multi-modal facilities by providing linkages between various uses in the developments.
**NEW Policy AQ 20.2:** Reduce VMT by facilitating an increase in transit options. In particular, coordinate with adjacent municipalities, transit providers and regional transportation planning agencies to develop mutual policies and funding mechanisms to increase the use of alternative transportation.

**NEW Policy AQ 20.3:** Reduce VMT and GHG emissions by improving circulation network efficiency.

**NEW Policy AQ 20.4:** Reduce VMT and traffic through programs that increase carpooling and public transit use, decrease trips and commute times, and increase use of alternative-fuel vehicles.

**NEW Policy AQ 20.5:** Reduce emissions from standard gasoline vehicles, through VMT, by requiring all new residential units to install circuits and provide capacity for electric vehicle charging stations.

**NEW Policy AQ 20.6:** Reduce emissions from commercial vehicles, through VMT, by requiring all new commercial buildings, in excess of 162,000 square feet, to install circuits and provide capacity for electric vehicle charging stations.

**NEW Policy AQ 20.7:** Reduce VMT through increased densities in urban centers and encouraging emphasis on mixed use to provide residential, commercial and employment opportunities in closer proximity to each other. Such measures will also support achieving the appropriate jobs-housing balance within the communities.

**NEW Policy AQ 20.8:** Reduce VMT by increasing options for non-vehicular access through urban design principles that promotes higher residential densities with easily accessible parks and recreation opportunities nearby.

**NEW Policy AQ 20.9:** Reduce urban sprawl in order to minimize energy costs associated with infrastructure construction and transmission to distant locations, and to maximize protection of open space.

**NEW Policy AQ 20.10:** Reduce energy consumption of the new developments (residential, commercial and industrial) through efficient site design that takes into consideration solar orientation and shading as well as passive solar design.

**NEW Policy AQ 20.11:** Increase energy efficiency of the new developments through efficient use of utilities (water, electricity, natural gas) and infrastructure design. Also, increase energy efficiency through use of energy efficient mechanical systems and equipment.

**NEW Policy AQ 20.12:** Support programs to assist the energy-efficient retrofitting of older affordable housing units, particularly residential units built prior to 1978 when Title 24 energy requirements went into effect.

**NEW Policy AQ 20.13:** Reduce water use and wastewater generation in both new and existing housing, commercial and industrial uses. Encourage increased efficiency of water use for agricultural activities.

**NEW Policy AQ 20.14:** Reduce the amount of water used for landscaping irrigation through implementation of County Ordinance 859 and increase use of non-potable water.

**NEW Policy AQ 20.15:** Decrease energy costs associated with treatment of urban runoff water through greater use of bioswales and other biological systems.

**NEW Policy AQ 20.16:** Preserve and promote forest lands and other suitable natural and artificial vegetation areas to maintain and increase the carbon sequestration capacity of such areas within the County. Artificial vegetation could include urban forestry and reforestation, development of parks and recreation areas, and preserving unique farmlands that provide additional carbon sequestration potential.
NEW Policy AQ 20.17: Protect vegetation from increased fire risk associated with drought conditions to ensure biological carbon remains sequestered in vegetation and not released to the atmosphere through wildfires.

NEW Policy AQ 20.18: Encourage the installation of solar panels and other energy-efficient improvements and facilitate residential and commercial renewable energy facilities (solar array installations, individual wind energy generators, etc.)

NEW Policy AQ 20.19: Facilitate development of siting of renewable energy facilities and transmission lines in appropriate locations.

NEW Policy AQ 20.20: Reduce the amount of solid waste generation by increasing solid waste recycle, maximizing waste diversion, and composting for residential and commercial generators. Reduction in decomposable organic solid waste will reduce the methane emissions at County landfills.

NEW Policy AQ 20.21: Provide homeowner education programs on the various voluntary ways in which they may reduce their homes’ GHG emissions, e.g. improving home insulation, adding solar energy capabilities, and providing information on energy saving landscaping techniques.

NEW Policy AQ 20.22: Develop motorist education programs on reducing VMT, idling and vehicle maintenance, while increasing carpooling and public transit usage.

NEW Policy AQ 20.23: Development education programs about green purchasing and waste reduction measures, e.g., use of sustainable materials, recycling, and composting.

NEW Policy AQ 20.24: Develop programs to improve job-housing balances, such as through small business development, for areas that are housing rich but jobs poor.

NEW Policy AQ 20.25: Coordinate County GHG emissions reduction efforts with those of other regional agencies and plans, i.e., SCAG’s Compass Blueprint, Regional Transportation Plan (RTP) and SCAQMD’s Air Quality Management Plans. In addition, coordinate with cities and sub-regional planning agencies, particularly WRCOG and CVAG, on efforts that jointly affect the County and the cities. Also, coordinate with utility and service providers to develop programs to improve energy efficiency, water efficiency and delivery or structural improvements to reduce demand or better coordinate infrastructure development, as appropriate.

NEW Policy AQ 20.26: Voluntary GHG reduction objectives for the community sector shall be achieved through development and implementation of specific implementation measures, as determined appropriate and feasible by the County.

NEW Policy AQ 20.27: Increase the average fuel efficiency of County-owned vehicles powered by gasoline and diesel through fleet transitioning programs. Also, reduce total vehicle miles travel by County employees, both community to work sites and travel for the conduction of County activities.

NEW Policy AQ 20.28: Increase the energy efficiency of all existing and new County buildings and infrastructure operations (roads, water, waste disposal and treatment, buildings, etc.) Also, decrease energy use through incorporating renewable energy facilities (such as, solar array installations, individual wind energy generators, geothermal heat sources) on County facilities where feasible and appropriate.

NEW Policy AQ 20.29: Establish purchasing and procurement policies that support the use of green products and services, minimize waste, and promote sustainability.

NEW Policy AQ 20.30: Reduce potable water use, wastewater and solid generation, and urban runoff at both new and existing County facilities and operations. Also, increase the amount of materials recycled from County facilities.
NEW Policy AQ 21.1: The County shall require new development projects subject to County discretionary approval to incorporate measures to achieve 100 points through incorporation of the Implementation Measures (IMs) found in the Screening Tables within the Riverside County Climate Action Plan. One hundred points represent a project’s fair-share of reduction in operational emissions associated with the developed use needed to reduce emissions down to the CAP Reduction Target.

a. This reduction shall be measured in comparison to the “business as usual” (BAU) scenario for the development’s operational life. The BAU scenario shall be consistent with the General Plan build out assumptions detailed in Appendix E-1 of the General Plan.

b. For the purposes of this policy, the “operational life” of a new development shall be defined as a 30-year span with construction emissions amortized over the 30 years.

c. For the purposes of this policy, “new development” refers to private development occurring pursuant to a discretionary land use approval issued by the County of Riverside and subject to binding Conditions of Approval. This definition generally corresponds to projects found non-exempt pursuant to the California Environmental Quality Act (CEQA), but is nevertheless subject to the sole discretion of the County of Riverside as lead agency.

d. Other methods for calculating BAU and showing GHG emissions reductions may be used provided such methods are both scientifically defensible and show actual emission reduction measures incorporated into project design, mitigation or alternative selection. That is, reductions must not be illusory “paper” reductions achieved merely through baseline manipulation.

e. Nothing in this policy shall be construed as accepting any proposed discretionary project from any legally applicable CEQA requirements or explicitly limiting the scope any analyses required to show CEQA compliance.

NEW Policy AQ 21.2: Implementation Measures found necessary for a given project pursuant to the CAP Screening Tables shall be incorporated into a project’s Conditions of Approval issued by the County to ensure the measures are implemented appropriately.

NEW Policy AQ 21.3: Discretionary Measures - Because of the varied nature of the private development proposals reviewed by the County, in some cases, the Implementing Measures in the CAP may not provide the most appropriate means for achieving the required Interim GHG reductions. In such cases, the following alternate measures may be utilized, at the County’s discretion:

a. For large-scale developments, such as specific plans, business parks, industrial centers and those triggering a full environmental impact report, a custom GHG analyses may be warranted to both assure compliance with the applicable targets herein and to provide a customized array of appropriate reduction measures.

b. In such cases, the resultant GHG analysis may be used to develop customized GHG reduction measures in place of the CAP’s Implementing Measures provided they achieve the stated targets or implement all feasible mitigation short of achieving the applicable targets.

c. Project-specific analysis may be particularly valuable when assessing large-scale mixed use developments. In such developments, significant energy efficiencies and VMT reductions can result from smart growth design features, such as provision of housing, jobs, services and recreation within a 5- to 10-minute walking radius. Project-specific analysis in these cases may result in the need for fewer add-on Implementing Measures and potentially yield substantial savings on construction costs.

NEW Policy AQ 21.4: Implementation of the Climate Action Plan (CAP) and monitoring progress toward the CAP reduction targets shall include the ability to expand upon or, where appropriate, update or replace the Implementation Measures established herein such that the implementation of the CAP accomplishes the county’s GHG reduction targets.
**NEW Policy AQ 22.1:** The County shall implement programs and requirements to achieve the following objectives related to reducing greenhouse gas emissions associated with transportation:

a. Reduce vehicle miles traveled by providing or requiring expanded multi-modal facilities and services that provide transportation alternatives, such as transit, bicycle and pedestrian modes.

b. Reduce vehicle miles traveled by facilitating an increase in transit options. In particular, coordinate with adjacent municipalities, transit providers and regional transportation planning agencies to develop mutual policies and funding mechanisms to increase the use of alternative transportation.

c. Improve connectivity by requiring pedestrian linkages between developments and transportation facilities, as well as between residential and commercial, recreational and other adjacent land uses.

d. Reduce air pollution and greenhouse gas emissions by improving circulation network efficiency.

e. Reduce traffic through programs that increase carpooling and public transit use, decrease trips and commute times and increase use of alternative-fuel vehicles.

f. Preserve transportation corridors for renewable energy transmission lines and for new transit lines, where appropriate.

**NEW Policy AQ 23.1:** The County shall implement programs and requirements to achieve the following objective related to reducing greenhouse gas emissions associated with land use patterns:

a. Reduce vehicle miles travelled (VMT) through increased densities in urban centers and emphasis on mixed use to provide localized residential, commercial and employment opportunities in closer proximity to each other.

b. Prevent urban sprawl in order to minimize energy costs associated with infrastructure construction and transmission to distant locations and to maximize protection of open space, particularly forests, which provide carbon sequestration potential.

c. Conserve energy by increasing the efficiency of delivery of services through the adoption and implementation of smart growth principles and policies.

d. Reduce vehicle miles travelled by commuters through implementation of planning measures that provide appropriate jobs-housing balances within communities.

e. Reduce vehicle miles travelled by increasing options for non-vehicular access through urban design principles that promote higher residential densities in attractive forms with easily accessible parks and recreation opportunities nearby.

f. Improve energy efficiency through implementation of standards for new residential and commercial buildings that achieve energy efficiencies beyond that required under Title 24 of the California Code of Regulations.

g. Reduce vehicle miles travelled by identifying sites for affordable housing for workers close to employment centers and encouraging development of such sites.

**NEW Policy AQ 23.2:** For discretionary actions, land use-related greenhouse gas reduction objectives shall be achieved through development and implementation of the appropriate Implementation Measures of the Climate Action Plan for individual future projects. County programs shall also be developed and implemented to address land use-related reductions for County operations and voluntary community efforts.
**NEW Policy AQ 24.1:** The County shall implement programs and requirements to achieve the following objectives related to reducing greenhouse gas emissions achieved through improving energy efficiency and increasing energy conservation:

- a. Require new development (residential, commercial and industrial) to reduce energy consumption through efficient site design that takes into consideration solar orientation and shading, as well as passive solar design. Passive solar design addressed the innate heating and cooling effects achieved through building design, such as selective use of deep eaves for shading, operable windows for cross-ventilation, reflective surfaces for heat reduction and expanses of brick for thermal mass (passive radiant heating).

- b. Require new development (residential, commercial and industrial) to design energy efficiency into the project through efficient use of utilities (water, electricity, natural gas) and infrastructure design.

- c. Require new development (residential, commercial and industrial) to reduce energy consumption through use of energy efficient mechanical systems and equipment.

- d. Establish or support programs to assist in the energy-efficient retrofitting of older affordable housing units.

- e. Actively seek out existing or develop new programs to achieve energy efficiency for existing structures, particularly residential units built prior to 1978 when CCR Title 24 energy efficiency requirements went into effect.

- f. Balance additional upfront costs for energy efficiency and affordable housing economic considerations by providing or supporting programs to finance energy-efficient housing.

**NEW Policy AQ 24.2:** For discretionary actions, energy efficiency and conservation objectives shall be achieved through development and implementation of the appropriate Implementation Measures of the Climate Action Plan for all new development approvals. County programs shall also be developed and implemented to address energy efficiency and conservation efforts for County operations and the community.

**NEW Policy AQ 25.1:** The County shall implement programs and requirements to achieve the following Objectives related to reducing greenhouse gas emissions through water conservation:

- a. Reduce water use in both new and existing housing, commercial and industrial uses.

- b. Reduce wastewater generation in both new and existing housing, commercial and industrial uses.

- c. Reduce the amount of water used for landscaping irrigation through implementation of County Ordinance No. 859.

- d. Increase use of non-potable water where appropriate, such as for landscaping and agricultural uses.

- e. Encourage increased efficiency of water use for agricultural activities.

- f. Decrease energy costs associated with treatment of urban runoff water through greater use of bioswales and other biological systems.

**NEW Policy AQ 25.2:** The County shall implement programs and requirements to achieve the following Objectives related to reducing greenhouse gas emissions through biota conservation:

- a. Conserve biota that provides carbon sequestration through implementation of the Multiple Species Habitat Conservation Plans for western and eastern Riverside County.
b. Preserve forest lands and other suitable natural vegetation areas to maintain the carbon sequestration capacity of such areas within the county.

c. Promote establishment of vegetated recreational uses, such as local and regional parks, that provide carbon sequestration potential in addition to opportunities for healthy recreation.

d. Promote urban forestry and reforestation, as feasible, to provide additional carbon sequestration potential.

e. Promote the voluntary preservation of farmlands for carbon sequestration purposes. In particular, protect important farmlands and open space from conversion and encroachment by urban uses. Also, seek to retain large parcels of agricultural lands to enhance the viability of local agriculture and prevent the encroachment of sprawl into rural areas.

f. Promote the voluntary preservation of areas of native vegetation that may contribute to biological carbon sequestration functions.

g. Protect vegetation from increased fire risks associated with drought conditions to ensure biological carbon remains sequestered in vegetation and not released to the atmosphere through wildfires. In particular, prevent unnecessary intrusion of people, vehicles and development into natural open space areas to lessen risk of wildfire from human activities.

NEW Policy AQ 25.3: For discretionary actions, greenhouse gas reduction objectives related to water and biota conservation shall be achieved through development and implementation of the applicable Implementation Measures of the Climate Action Plan. County programs shall also be developed and implemented to address conservation issues related to County operations and voluntary community efforts.

NEW Policy AQ 26.1: The County shall implement programs and requirements to achieve the following objectives related to reducing greenhouse gas emissions derived from energy generation:

a. Encourage the installation of solar panels and other energy-efficient improvements.

b. Facilitate residential and commercial renewable energy facilities (solar array installations, individual wind energy generators, etc.).

c. Facilitate development of renewable energy facilities and transmission lines in appropriate locations.

d. Facilitate renewable energy facilities and transmission line siting.

e. Provide incentives for development of local green technology businesses and locally produced green products.

f. Provide incentives for investment in residential and commercial energy efficiency improvements.

g. Identify lands suitable for wind power generation or geothermal production and encourage development of these alternative energy sources.

NEW Policy AQ 26.2: For discretionary actions, the objectives for greenhouse gas reduction through increased use of alternative energy sources shall be achieved through development and implementation of the applicable Implementation Measures of the Climate Action Plan. County programs shall also be developed and implemented to address use of alternative energy for County operations and within the community.
**NEW Policy AQ 27.1:** The County shall implement programs and requirements to achieve the following Objectives related to reducing greenhouse gas emissions associated with wastes:

- Reduce the amount of solid waste generated.
- Increase the amount of solid waste recycled by maximizing waste diversion, composting and recycling for residential and commercial generators.
- Promote reductions in material consumption.
- Decrease wastewater generation.
- Reduce fugitive methane emissions and increase methane conversion to alternative energies at County landfills.

**NEW Policy AQ 27.2:** Greenhouse gas reduction through the above waste reduction objectives shall be achieved through development and implementation of the applicable Implementation Measures of the Climate Action Plan for new development. County programs shall also be developed and implemented to address waste reductions for County operations and voluntary community efforts.

**NEW Policy AQ 28.1:** The County shall implement programs and requirements to achieve voluntary greenhouse gas emissions reductions through the following public education and outreach objectives:

- Provide homeowner education programs on the various voluntary ways in which they may reduce their homes’ GHG emissions.
- Develop and implement motorist education programs on reducing vehicle miles travelled (VMT), idling, vehicle maintenance, etc.
- Develop and implement incentive programs for increasing carpooling, public transit use and other similar means.
- Develop and implement incentive programs for residential energy conservation, such as through retrofitting to improve insulation values, adding solar energy capabilities, planting deciduous trees to provide summer shade, etc.
- Develop and implement programs designed to decrease transportation emissions, such as hybrid vehicle rebates, alternate fuel discounts, carpooling incentives, van pools, etc.
- Develop and implement education programs about green purchasing and waste reduction measures, consistent with the County’s Climate Action Plan e.g., use of sustainable materials, composting and such.
- Develop and implement programs to improve job-housing balances, such as through small business development, for areas that are housing rich but jobs poor.
- Develop and implement programs, consistent with the County’s Climate Action Plan to incentive recycling and other waste reduction programs.

**NEW Policy AQ 28.2:** The County shall implement programs and requirements to achieve greenhouse gas emissions reductions through the following interagency coordination Objectives:

- Coordinate County regional GHG reduction efforts with those of other regional agencies and plans, i.e.:
  - SCAG Regional Blueprint Plan
• SCAG Regional Transportation Plan (which will address SB 375)

• SCAQMD Air Quality Management Plans

• SB 375 Coordination and “Sustainable Communities Strategies”

  b. Coordinate with constituent cities and sub-regional planning agencies, particularly WRCOG and CVAG, on GHG reduction efforts that jointly affect the county and these cities.

  c. Coordinate with utility and service providers serving the county to develop programs to improve energy efficiency, water efficiency and delivery or structural improvements to reduce demand or better coordinate infrastructure development, as appropriate.

  d. Coordinate with regional agencies responsible for developing utility corridors, particularly for electricity transmission, to ensure alternate energy sources available to the county are used to their fullest extent.

NEW Policy AQ 28.3: Voluntary greenhouse gas reduction objectives for the community sector shall be achieved through development and implementation of specific implementation measures, as determined appropriate and feasible by the County.

NEW Policy AQ 29.1: The County shall implement programs and requirements to achieve the following objectives related to reducing greenhouse gas emissions from County transportation, such as fleet composition, construction equipment, employee commuting and travel on County business:

  a. Increase the average fuel efficiency of County-owned vehicles powered by gasoline and diesel.

  b. Increase use of alternative and lower carbon fuels in the County vehicle fleet.

  c. Reduce total vehicle miles traveled by County employees, both commuting to work sites and traveling for the conduction of County activities.

NEW Policy AQ 29.2: The County shall implement programs and requirements to achieve the following Objectives related to reducing greenhouse gas emissions through improving energy efficiency for County facilities and operations:

  a. Improve the energy efficiency of all existing and new County buildings.

  b. Improve the energy efficiency of County infrastructure operation (roads, water, waste disposal and treatment, buildings, etc.)

  c. Decrease energy use through incorporating renewable energy facilities (such as, solar array installations, individual wind energy generators, geothermal heat sources) on County facilities where feasible and appropriate.

NEW Policy AQ 29.3: The County shall implement programs and requirements to achieve the following objectives related to reducing greenhouse gas emissions through achieving waste reduction and resource efficiency for County facilities and operations:

  a. Establish purchasing and procurement policies that support the use of green products and services, minimize waste and promote sustainability.

  b. Reduce potable water use at both new and existing County facilities and operations.

  c. Reduce wastewater generation and urban runoff in both new and existing County facilities and operations.
d. Increase the amount of materials recycled from County facilities while decreasing the amount of solid waste generated by County facilities that requires landfill disposal.

**NEW Policy AQ 29.4:** Greenhouse gas emissions reduction objectives for County operations and facilities shall be achieved through development and implementation of enforceable and binding internal County policies, programs or similar means.

### 4. Multipurpose Open Space (OS) Element

**Policy OS 16.1:** Continue to implement Title 24 of the *California Building Code—California Code of Regulations* (the California Building Standards Code), particularly Part 6 (the California Energy Code) and Part 11 (the California Green Building Standards Code), as amended and adopted pursuant to County ordinance. Establish mechanisms and incentives to encourage architects and builders to exceed the energy efficiency standards of within CCR Title 24.

### 4.7.4 Thresholds of Significance for Greenhouse Gases

The proposed project would result in a significant greenhouse gas emissions impact if it would:

A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

B. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

### 4.7.5 Effect of GPA No. 960 on the General Plan and on Greenhouse Gases

As the GHG threshold for determining if emissions would be significant, this EIR uses compliance with AB 32. AB 32, the California Global Warming Solutions Act of 2006, requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. Per its Scoping Plan, CARB recommends to local governments that they adopt a 2020 reduction target that requires a decrease of approximately 15% below current GHG emissions to reach 1990 GHG levels (CARB AB 32 Scoping Plan, page 3). Thus, analysis for this EIR focused on two areas: a) determining the GHG reductions necessary to be found less than significant pursuant to AB 32, and b) developing a program that accomplishes the necessary reductions to ensure future development authorized pursuant to the General Plan is consistent with both AB 32 and the County's Climate Action Plan.

The baseline (2008) Riverside County scenario was calculated as presented in Section 4.7.2. The proposed project’s future GHG emissions were analyzed for three different timelines: 2020, 2035 and 2060. For each of these years, emissions were calculated under a BAU scenario and a reduced scenario. The BAU scenarios follow the growth projections in the General Plan update for the various land uses in Riverside County but does not include implementation of the policies to reduce GHG emissions. The inclusion of BAU scenarios allows for evaluation of the growth of emissions from various sectors and sources over time, which provides additional insight into where attention should focus in regard to reducing emissions through policies and implementation measures. The reduced scenarios provide an estimate of Riverside County’s emissions with the implementation of the GHG-reducing policies in the General Plan and CAP’s Implementation Measures.
Each year was analyzed for a different reason. The 2020 scenarios align with the AB 32 Global Warming Solutions Act and are used to assess consistency with the 2020 target established under AB 32. Both the 2020 (reduced scenario) and the 2035 emissions analyses are used to assess consistency with the targets established under SB 375 for the reduction of GHG emissions from passenger vehicles. The 2060 analysis presents emissions estimate for the build out of the proposed General Plan; to date, targets have not been established to reduce emissions at the year 2060.

A. Future Development Construction Emissions

Air pollutant emissions, including GHGs, are generally associated with two types of activities: construction and operation. Since the bulk of a project’s emissions come from operations, the various scenarios presented in this chapter all focus on operational emissions. Nevertheless, examination of construction emissions was also made where feasible to elucidate the scope of this type of emissions.

Construction activities include the clearing and grading of land, building of structures and the installation of utilities and road, as well as the vehicle trips associated with the site’s workers, deliveries of build materials, etc. Accordingly, the emissions associated with construction tend to be site specific and depend upon the type of construction and development proposed, as well as the location, time of year and duration, among other things. Because these factors can vary so widely, estimating construction emissions or impacts for future development expected as Riverside County builds out according to the plans in the General Plan (existing or proposed) is infeasible. Nevertheless, to provide a reference of the types of GHG emissions associated with “typical” construction activities, several hypothetical scenarios were modeled for three types of residential development. See Table 4.7-D (Construction GHG Emissions – Residential Examples), below. Construction estimates for commercial and industrial uses were not modeled as such uses vary too widely to be accurately typified. Generally, speaking emissions from construction of commercial and industrial uses can be roughly equivalent to the emissions shown for residential construction to three times higher than the emissions from similarly sized residential construction sites. Within that general range there are exceptions where some types of commercial construction may be much lower than or significantly higher than this approximate range.

<table>
<thead>
<tr>
<th>Construction Activity</th>
<th>5 Acre (190 MFR)</th>
<th>25 Acre (75 SFR)</th>
<th>50 Acre (150 SFR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>303.48</td>
<td>303.65</td>
<td>386.36</td>
</tr>
<tr>
<td>2013</td>
<td>218.22</td>
<td>171.85</td>
<td>267.39</td>
</tr>
<tr>
<td>Project Total</td>
<td>521.7</td>
<td>475.5</td>
<td>653.75</td>
</tr>
<tr>
<td>Annual Total, Amortized Over 30 Years</td>
<td>17.39</td>
<td>15.85</td>
<td>21.79</td>
</tr>
<tr>
<td><em><em>CUMULATIVE</em> TOTAL</em>*</td>
<td><strong>55.03 MT CO₂</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Total if all three [of the example] projects undergoing construction simultaneously.

For the residential examples analyzed, GHG emissions would result from onsite grading activities, transport of materials to and from the site and the actual building construction, painting and paving associated with the individual developments. Residential development acreages can range from less than an acre to well over a hundred in some cases. Keeping in mind that a variety of projects would be undertaken, examples of construction of residential development on 5, 25 and 50 acres are presented herein. These construction emission estimates are based on the default construction phase lengths and equipment usage provided in the URBEMIS2007 model. Table 4.7-D summarizes the annual CO₂ emissions for each project example. Following SCAQMD methodology found in the 2008 “SCAQMD Draft Guidance: Interim CEQA Greenhouse Gas Significance Thresholds,” the
construction emissions were amortized over a 30-year economic lifetime of the project. If all three development projects presented were occurring at the same time, the total amortized residential construction emissions would be 55.03 MT CO$_2$e per year.

Generalizing for both residential and commercial construction, total amortized construction emissions could be approximately 1.38 MT CO$_2$e per acre of construction per year. This value was approximated by taking the 55.03 MT CO$_2$e per year for 80 acres of residential construction, multiplying that value by 3 to approximate 80 acres of commercial/industrial construction (165.09 MT CO$_2$e) adding the two together, then dividing by the total acreage (160 acres). This value is an approximation for informational purposes and can vary widely depending upon the type and intensity of construction occurring at any given time.

B. Future 2020 Operational Emissions

GHG emissions are primarily important in the context of other statewide and global emissions, which on an aggregate basis have and will affect global climate. While the evaluation presented below is focused on and specific to the updated General Plan, it is also considered cumulative because it is only cumulative contributions of GHGs that have environmental consequences at the global scale. Therefore, the 2020 analysis below addresses both the project and cumulative impacts for GHGs.

1. 2020 Business as Usual (BAU) Scenario Emissions

For 2020, emissions estimates were based on the anticipated growth in population, housing and employment for Riverside County. The 2020 growth projections were interpolated from General Plan build out conditions as updated to reflect current trends and statistics pursuant to General Plan Appendix E-1 (Methods and Assumptions). Predicted 2020 BAU vehicle trips were estimated by using the given build out (2060) conditions for the updated Riverside County General Plan and interpolating back to year 2020.

The BAU emissions inventory for Riverside County represents the emissions expected in the year 2020 based on the General Plan build out conditions. These emissions do not include the proposed General Plan policies and Implementation Measures directed toward reducing emissions. In 2020, Riverside County is projected to emit a total of 10.27 MMT of CO$_2$e; this projection is based on existing emissions plus Riverside County’s anticipated growth, as projected by the updated General Plan. As per state guidelines, reduction initiatives coming from the state or other agencies are not included in the BAU scenario. Such reduction measures and their anticipated emission reductions in Riverside County are included in the reduced emissions inventory discussed in the subsection, Section 4.7.6. Table 4.7-E (2020 BAU – Operational GHG Emissions Inventory), below, describes the forecasted BAU emissions for Riverside County in the year 2020. Figure 4.7.2 (2020 BAU Greenhouse Gas Emissions) provides a graphical representation of the same data.

<table>
<thead>
<tr>
<th>Emissions Category &amp; Sub-category</th>
<th>Metric Tons of CO$_2$e</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>6,977,331</td>
<td>58%</td>
</tr>
<tr>
<td>On-road Vehicles</td>
<td>6,956,170</td>
<td></td>
</tr>
<tr>
<td>Airport Operations</td>
<td>21,161</td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>2,830,246</td>
<td>23%</td>
</tr>
<tr>
<td>Electricity</td>
<td>1,923,508</td>
<td></td>
</tr>
<tr>
<td>Natural Gas</td>
<td>906,738</td>
<td></td>
</tr>
</tbody>
</table>
### Greenhouse Gases

<table>
<thead>
<tr>
<th>Emissions Category &amp; Sub-category</th>
<th>Metric Tons of CO₂e</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Solid Waste</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landfill Offgassing 3</td>
<td>176,584</td>
<td></td>
</tr>
<tr>
<td>Onsite Equipment</td>
<td>5,145</td>
<td></td>
</tr>
<tr>
<td><strong>Area Sources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscaping Equipment</td>
<td>250,422</td>
<td>4%</td>
</tr>
<tr>
<td>Wood Burning</td>
<td>191,603</td>
<td></td>
</tr>
<tr>
<td><strong>Purchased Water</strong></td>
<td>175,344</td>
<td>2%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>1,522,823</td>
<td>13%</td>
</tr>
<tr>
<td>Enteric Fermentation</td>
<td>86,688</td>
<td></td>
</tr>
<tr>
<td>Manure Management</td>
<td>149,905</td>
<td></td>
</tr>
<tr>
<td>Agriculture Residue Burning</td>
<td>124</td>
<td></td>
</tr>
<tr>
<td>Crop Growth</td>
<td>924,811</td>
<td></td>
</tr>
<tr>
<td>Animals and Runoff</td>
<td>176,674</td>
<td></td>
</tr>
<tr>
<td>Fertilizer Use</td>
<td>184,621</td>
<td></td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td>12,129,497</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Footnotes:**
1. Includes electricity used for local water supply and wastewater treatment.
2. Includes natural gas-using stoves, grills, barbecues and other heating devices.
3. Per U.S. EPA standards, does not include landfill decomposition emissions.
4. Indirect (outside of county) electricity use for importation of water.


#### 2020 Adjusted BAU

As noted earlier, AB 32 calls for state reductions of GHGs by roughly 15% from current levels by the year 2020. With Riverside County’s BAU scenario for 2020 GHG emissions calculated, it is now possible to establish the GHG reduction measures necessary to reduce 2020 emissions. To accomplish this, Riverside County has prepared a Climate Action Plan (CAP) that details a variety of actions necessary to reduce GHGs across a number of sectors. Key to these measures are a series of IMs that may be used by new development proposals to demonstrate consistency with Riverside County’s CAP (and, hence, AB 32). Alternatively, individual future developments that wish to model and mitigate their projects directly may also do so. Such analyses would also have to show consistency with Riverside County’s CAP by demonstrating a 25% reduction in GHG emissions as compared to the adjusted BAU scenario for residential, commercial, industrial, institutional and mixed-use projects and by including all measures necessary to achieve such reductions in the project’s design (i.e., site plans), Riverside County Conditions of Approval or project-specific CEQA mitigation measures, as applicable. The adjusted BAU is based upon the 2020 adjusted BAU found in the Final Supplement to the AB 32 Scoping Plan (CARB 2011). See the mitigation measures outlined in Section 4.7.6 for additional details.

**Riverside County Climate Action Plan (CAP) Implementation Measures Program:** The CAP includes a series of IMs that address various steps to reduce GHGs in Riverside County. It also includes two sets of Screening Tables. These Screening Tables assign a point value to each IM in the CAP. They also assign points for each option incorporated into a project as mitigation or a project design feature (collectively referred to as “feature”). The point values correspond to the minimum emissions reduction expected from each feature. The menu of features allows maximum flexibility and options for how development projects can implement the GHG mitigation measures. Projects that garner at least 100 points would be consistent with the reduction quantities anticipated in Riverside County’s GHG analysis described below. As such, those projects that garner a total of 100 points or greater would not require quantification of project-specific GHG emissions and a GHG Reduction Plan. Consistent with the State CEQA Guidelines (Section 15183.5), such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
The total emission reductions offered by each measure is based on both changes in existing land use activities as well as how new development is designed and built. The points were proportioned by residential unit or square feet of commercial/industrial uses. This was accomplished by taking the predicted growth in households and commercial/industrial uses by the year 2020 and proportioning the appropriate IM reduction quantities for new development to the residential and commercial/industrial land use sectors within the Screening Tables. These calculations result in point values that are allocated by residential unit or commercial/industrial square footage. Because of this, the size of the project is not relevant to the Screening Tables. Regardless of size, each project needs to garner 100 points to demonstrate consistency with the CAP. If development projects each garner a minimum of 100 points in GHG emissions reductions, then Riverside County would be able to achieve the 2020 reduced scenario inventory shown in Table 4.7-F (2020 Reduced GHG Emissions Inventory) and Table 4.7-G (2020 Operational GHG Emissions – Scenario Comparisons), below, and achieve the reduction target. Therefore, the 100 points constitute a Project’s “fair share” of GHG emissions reductions within the County of Riverside.

2. 2020 Reduced Scenario Emissions

In 2020, total emissions from Riverside County are projected to total 10.27 MMT CO$_2$e, without the incorporation of any reduction measures. With the incorporation of both the state reduction measures and Riverside County’s Implementation Measures detailed in the CAP, Riverside County emissions for 2020 would be reduced to an estimated 6.03 MMT CO$_2$e. Emission reductions estimated for year 2020 were based on the efforts likely to be achieved pursuant to the Implementation Measures detailed in the CAP.

With the incorporation of the CAP’s IMs as mitigation for new development, Riverside County is predicted to reduce emissions by 4.23 MMT CO$_2$e from the BAU 2020 emissions. As this represents a 25% decrease from emissions from new development compared to the adjusted 2020 BAU and a 15% decrease from 2008 levels, Riverside County’s 2020 emissions would be below the AB 32 reduction target. Table 4.7-F (2020 Reduced GHG Emissions Inventory) describes the predicted 2020 inventory with implementation of GPA 960.
(2020 Reduced Scenario – Operational Greenhouse Gas Emissions) is a graphical representation of that same data.

### Table 4.7-F: 2020 Reduced GHG Emissions Inventory

<table>
<thead>
<tr>
<th>Emissions Categories</th>
<th>GHG Emissions (Metric Tons CO₂e)</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>2,454,032</td>
<td>44%</td>
</tr>
<tr>
<td>On-road Vehicles</td>
<td>2,432,871</td>
<td></td>
</tr>
<tr>
<td>Airport Operations</td>
<td>21,160</td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity ²</td>
<td>637,156</td>
<td>21%</td>
</tr>
<tr>
<td>Natural Gas ³</td>
<td>504,224</td>
<td></td>
</tr>
<tr>
<td>Solid Waste</td>
<td>92,273</td>
<td>2%</td>
</tr>
<tr>
<td>Landfill Off-gassing ⁴</td>
<td>87,128</td>
<td></td>
</tr>
<tr>
<td>Onsite Equipment</td>
<td>5,145</td>
<td></td>
</tr>
<tr>
<td>Area Sources</td>
<td>230,188</td>
<td>4%</td>
</tr>
<tr>
<td>Landscaping Equipment</td>
<td>126,463</td>
<td></td>
</tr>
<tr>
<td>Wood Burning</td>
<td>103,725</td>
<td></td>
</tr>
<tr>
<td>Purchased Water ⁵</td>
<td>109,021</td>
<td>2%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>1,507,220</td>
<td>27%</td>
</tr>
<tr>
<td>Enteric Fermentation</td>
<td>80,050</td>
<td></td>
</tr>
<tr>
<td>Manure Management</td>
<td>140,940</td>
<td></td>
</tr>
<tr>
<td>Agriculture Residue Burning</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Crop Growth</td>
<td>924,810</td>
<td></td>
</tr>
<tr>
<td>Animals and Runoff</td>
<td>176,670</td>
<td></td>
</tr>
<tr>
<td>Fertilizer Use</td>
<td>184,620</td>
<td></td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td><strong>5,534,113</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Footnotes:
1. All values rounded to nearest 10. Thus, totals may not sum precisely. See Appendix EIR-6 for full data.
2. Includes electricity used for local water supply and wastewater treatment.
3. Includes natural gas-using stoves, grills, barbecues and other heating devices.
4. Per U.S. EPA standards, does not include landfill decomposition emissions.
5. Indirect (outside of county) electricity use for importation of water.

Source: Atkins, Greenhouse Gas Study for General Plan Update, 2011. (See Appendix EIR-6.)
3. Emissions Comparison Summary

Table 4.7-G (2020 Operational GHG Emissions – Scenario Comparisons) summarizes existing 2008, BAU 2020 and reduced 2020 GHG emissions inventories. The reduced 2020 inventory describes Riverside County’s GHG emissions for implementation of the updated General Plan with the incorporation of the CAP’s Implementation Measures for new development.

<table>
<thead>
<tr>
<th>Source Category</th>
<th>2008</th>
<th>BAU 2020</th>
<th>Reduced 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>2,850,520</td>
<td>6,977,330</td>
<td>2,454,032</td>
</tr>
<tr>
<td>Energy</td>
<td>1,577,670</td>
<td>2,830,250</td>
<td>1,141,380</td>
</tr>
<tr>
<td>Area Sources</td>
<td>269,180</td>
<td>442,030</td>
<td>203,190</td>
</tr>
<tr>
<td>Water and Wastewater</td>
<td>152,470</td>
<td>175,340</td>
<td>109,020</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>132,670</td>
<td>181,730</td>
<td>92,273</td>
</tr>
<tr>
<td>Agriculture</td>
<td>2,030,430</td>
<td>1,522,820</td>
<td>1,507,220</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>7,012,940</strong></td>
<td><strong>12,129,823</strong></td>
<td>5,534,113</td>
</tr>
</tbody>
</table>

**AB 32 Target**

- 5,960,998

**Significant?**

- Yes $^3$

$^1$ Net Total Emissions (Metric tons of CO$_2$e)

Footnotes:
1. All values rounded to nearest 10. Thus, totals may not sum precisely. See study (Appendix EIR-6) for full results.
2. Target value based on necessary reductions from BAU per AB 32.
3. Result significant if no mitigation is applied. See Section 4.7.6 for mitigation discussion.

Source: Atkins, Greenhouse Gas Study for General Plan Update, 2011. (See Appendix EIR-6).
C. Consistency with Post 2020 Emissions Reduction Targets

1. SB 375 (Year 2035 Analysis)

In determining whether or not the project would “conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases,” the County of Riverside qualitatively demonstrates how the proposed General Plan, as updated pursuant to GPA No. 960, would comply with the policies, programs and reduction measures set forth in AB 32 and SB 375. To that end, an analysis was performed to evaluate whether the proposed amended General Plan would appropriately incorporate and support the reduction measures found in the AB 32 Scoping Plan; shown as “R1” measures in the CAP and quantitatively evaluated by the 2020 analysis in the prior section. In addition, GHG analysis to 2035 was also required to demonstrate consistency with SB 375.

In accordance with SB 375, CARB and SCAG have collaboratively established a reduction target for passenger car emissions. This target consists of two parts: a reduction of 8% per capita by the year 2020 and a conditional target of 13% by the year 2035. SCAG is currently in the process of updating its Regional Transportation Plan (RTP) which will include the SCS. Table 4.7-IH (SB 375 Target Comparisons), below, summarizes the per-capita emissions from automobiles and light-duty trucks for the existing conditions, forecasted emissions for 2020 and 2035 based on General Plan Build out (2020, 2035 BAU) and the reduced emissions for 2020 and 2035 to be achieved through implementation of the proposed General Plan policies, mitigation measures and the CAP. As per the targets stated above, CARB (2010a) calculated that the SCAG region, including Riverside County, would need to achieve 3.07 MTCO₂e per person per year for 2020 (8% reduction) and 2.90 MTCO₂e per person per year for 2035 (13% reduction). As shown by the data in Table 4.7-IH, without the incorporation of this project’s mitigation measures unincorporated Riverside County’s per-capita emissions from passenger vehicles would be 3.86 MTCO₂e per person in 2020 and 4.47 MTCO₂e per person in 2035.

Table 4.7-IH: SB 375 Target Comparisons

<table>
<thead>
<tr>
<th>Source Category</th>
<th>Per-Capita Passenger Vehicle Emissions (Metric Tons CO₂e)</th>
<th>2008</th>
<th>BAU 2020</th>
<th>Reduced 2020</th>
<th>BAU 2035</th>
<th>Reduced 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autos and Light Duty Truck Emissions (MT CO₂e)*</td>
<td>2,512,800</td>
<td>6,150,727</td>
<td>4,929,100</td>
<td>2,702,400</td>
<td>9,100,000</td>
<td>2,800,400</td>
</tr>
<tr>
<td>Population (persons)*</td>
<td>553,500</td>
<td>880,600</td>
<td>880,600</td>
<td>969,100</td>
<td>969,100</td>
<td></td>
</tr>
<tr>
<td><strong>Per Capita Emissions</strong></td>
<td><strong>4.54</strong></td>
<td><strong>6.98 5.60</strong></td>
<td><strong>2.45 3.07</strong></td>
<td><strong>9.39</strong></td>
<td><strong>2.89</strong></td>
<td></td>
</tr>
<tr>
<td><strong>SCAG SB 375 Target</strong></td>
<td>---</td>
<td>3.07</td>
<td>3.07</td>
<td>2.90</td>
<td>2.90</td>
<td></td>
</tr>
</tbody>
</table>

* Values in this category rounded to nearest 100. See study in Appendix EIR-6 for exact numbers.

With the incorporation of the mitigation measures herein, per-capita emissions would be reduced to 2.46 MTCO₂e per person in 2020, which achieves and is, in fact, below the SB 375 target. For 2035, it would be 2.85 MTCO₂e per person, which is also below the 2035 target. Most of the mitigation measures enforced at the state level (e.g., Pavley fuel efficiency standards, etc.) have implementation plans only through 2020. Future fuel efficiency legislation at the state or federal level will likely contribute to further reductions in GHG emissions from passenger vehicles by 2035. The 2035 reduced scenario assumes the implementation of these state policies will continue at a similar rate after 2020.
2. Executive Order S-3-05 (Year 2060 analysis)

In June 2005, California Governor Arnold Schwarzenegger issued Executive Order S-3-05 establishing the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels.
- By 2020, California shall reduce GHG emissions to 1990 levels.
- By 2050, California shall reduce GHG emissions to 80% below 1990 levels.

The State has provided clear guidance to local governments on a 2020 year reduction target and through implementation of AB-32 provided rules and regulations focused on GHG reductions at a statewide level to meet the 2020 reduction target shown above. In the AB-32 Scoping Plan, the State also recognized the need for local governments such as the County of Riverside to provide reduction measures within their jurisdiction to assist the state in meeting the 2020 reduction target. To that end, the County of Riverside Draft Climate Action Plan has focused the reduction measures to achieve the 2020 reduction target within the unincorporated areas of the County.

However, Executive Order S-3-05 also contains a 2050 GHG emissions reduction target of 80 percent below 1990 levels of emissions by 2050. The following discussion reviews potential GHG emissions at ultimate buildout which the County currently estimates will occur in approximately forty-five years (2060) and compares that with potential reductions to achieve the ultimate 2050 reduction target provided in Executive Order S-3-05.

2060 BAU Scenario Emissions

Table 4.7-H (2060 Operational GHG Emissions – Scenario Comparisons) summarizes the County of Riverside existing 2008, BAU 2060 and reduced 2060 GHG emissions inventories. The BAU 2060 inventory represents Riverside County’s forecasted emissions for the year 2060, the General Plan build out year under GPA 960, without the addition of any of the emissions-reducing strategies or mitigation measures described herein. The Reduced 2060 inventory includes the IMs used to reduce the 2020 emissions to below the AB 32 target. Given the level of growth and the current limitations on technology to further reduce emissions, GHG emissions for the full build out scenario in 2060 would not meet the 1990 reduction threshold, even with the included mitigation. Future planning efforts, including the forthcoming CAP, further advances in technology and additional (future project-specific) environmental analyses would be necessary to address this additional growth and its implications.
Section 4.7  

**Greenhouse Gases**

<table>
<thead>
<tr>
<th>Source Category</th>
<th>Net Total Emissions (Metric tons of CO₂e)¹</th>
<th>BAU 2060</th>
<th>Reduced 2060</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>2,850,520</td>
<td>10,338,870</td>
<td>10,338,870</td>
</tr>
<tr>
<td>Energy</td>
<td>1,577,670</td>
<td>6,084,370</td>
<td>6,084,370</td>
</tr>
<tr>
<td>Area Sources</td>
<td>269,180</td>
<td>721,400</td>
<td>721,400</td>
</tr>
<tr>
<td>Water and Wastewater</td>
<td>152,470</td>
<td>382,870</td>
<td>382,870</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>132,670</td>
<td>703,890</td>
<td>703,890</td>
</tr>
<tr>
<td>Agriculture</td>
<td>2,030,430</td>
<td>1,522,820</td>
<td>1,522,820</td>
</tr>
<tr>
<td>Totals</td>
<td>7,012,940</td>
<td>19,754,220</td>
<td>10,819,060</td>
</tr>
<tr>
<td>AB 32 Target²</td>
<td>5,960,998</td>
<td>5,960,998</td>
<td>5,960,998</td>
</tr>
<tr>
<td>2050 Target³</td>
<td>1,192,200</td>
<td>1,192,200</td>
<td>1,192,200</td>
</tr>
</tbody>
</table>

Footnotes:
1.   All values rounded to nearest 10. Thus, totals may not sum precisely. See study (Appendix EIR-610) for full results.
2.   Target value based on necessary reductions from BAU 1990 levels of emissions per AB 32.
3.   Target value based on 80% below 1990 levels of emissions per Executive Order S-3-05.
Source: Atkins, Greenhouse Gas Study for General Plan Update, 2011. (See Appendix EIR-610).

To ensure that GHG emissions continue on a downward trajectory after 2020, The County of Riverside will commence planning for the post-2020 period starting at the approximate midway point between plan implementation and the reduction target and after development of key ordinances and implementation of cost-effective measures. At that point, Riverside County will have implemented the first two phases of this CAP and will have a better understanding of the effectiveness and efficiency of different reduction strategies and approaches. Further, the state’s regulations under AB 32 would have been fully in force since 2012; federal programs and policies for the near term are likely to be well underway; market mechanisms like a cap and trade system are likely to be in force and will be influencing energy and fuel prices; and continuing technological change in the fields of energy efficiency, alternative energy generation, vehicles, fuels, methane capture and other areas will have occurred. Riverside County will then be able to take the local, regional, state and federal context into account. Further, starting at the approximate midway point between plan implementation and the reduction target will allow for development of the post-2020 plan so that it can be ready for full implementation, including potential new policies, revisions to the General Plan (as necessary), programs, ordinances, and financing by 2020. The new plan will include a specific target for GHG reductions for 2035 and 2050. The targets will be consistent with broader State and federal reduction targets and with the scientific understanding of the needed reductions by 2050. The County of Riverside will adopt the new plan by January 1, 2020.

The new CAP adopted on or before January 1, 2020, will keep on track through 2035 to meet the 2050 goal by implementing the following:

- Increase energy efficiency and green building efforts (for County municipal facilities as well as new private buildings within the unincorporated areas) so that the savings achieved in the 2020 to 2035 timeframe are approximately 69% those accomplished in 2020.
- Continue to implement land use and transportation measures to lower VMT and shift travel modes (assumed improvement of 8% compared to the unmitigated condition, which is within SCAG’s assumed range of 8% to 12% of GHG reductions for 2035).
- Capture more methane from landfills receiving regional waste, move beyond 75% local waste diversion goal for 2020, and utilize landfill gas further as an energy source.
- Continue to improve local water efficiency and conservation.
- Continue to support and leverage incentive and rebate and other financing programs for residential and commercial energy efficiency and renewable energy installations to shorten payback period and costs and to develop programs that encourage increased use of small-scale renewable power as it becomes more economically feasible.
The conceptual effects of these strategies are presented in Table 7-2 in the Climate Action Plan and would represent an approximate doubling of effort from that planned at the state and County level for 2020. In total, the measures described above would produce reductions to bring the region’s GHG emissions to an estimated 3 MMTCO2e by 2035. While the potential mix of future GHG reduction measures presented in this section is preliminary, it serves to demonstrate that the current measures in the CARB Scoping Plan and the County’s CAP can not only move the region to its 2020 goal, but can also provide an expandable framework for much greater long-term greenhouse gas emissions reductions toward the ultimate 2050 goal. Figure 4.7-4 below shows the trajectory of emissions within this Draft 2015 CAP that achieves an AB 32 compliant reduction target of 5.96 million metric tons (MMT) CO2e and the conceptual 2035 and 2050 reductions in a post 2020 CAP needed to reduce emissions down to 80% below 1990 levels by 2050 outlined in Executive Order S-3-05. Riverside County will develop the post-2020 CAP so that it can be ready for full implementation, including potential new policies, revisions to the General Plan (as necessary), programs, ordinances, and financing by 2020. The Post 2020 CAP will include a specific target for GHG reductions for 2035 and 2050. The targets will be consistent with broader state and federal reduction targets including Executive Order S-3-05 and with the scientific understanding of the needed reductions by 2050. The County of Riverside will adopt the new Post 2020 CAP by January 1, 2020.

Figure 4.7-4 Riverside County GHG Emissions with Reductions in Draft CAP and Post 2020 CAP

Source: Atkins, Greenhouse Gas Study for General Plan Update, 2011. (See Appendix EIR-6).
4.7.6 Greenhouse Gases - Impacts and Mitigation

A. Would the project generate greenhouse gas emissions, either directly or indirectly, that in conjunction with other global greenhouse gas emissions may have a substantial adverse physical effect on the environment?

**Impact 4.7.A – Generation of Greenhouse Gas Emissions:** Implementation of the Riverside County General Plan, as updated pursuant to the proposed project, (GPA 960), and associated Climate Action Plan (CAP) would result in future construction and operational activities that generate GHGs. Either individually or collectively, these activities have the potential to result in substantial emissions of GHGs; for example, exceeding the 3,000-10,000 MTY thresholds proposed by the SCAQMD in Tier 3 of its 2008 Interim CEQA Greenhouse Gas Significance Thresholds. However, implementation of the proposed General Plan policies and particularly, the Implementation Measures of the CAP, as well as existing EIR No. 441 and proposed mitigation measures would ensure that GHG emissions within Riverside County would be less than significant.

1. Analysis of Impact 4.7.A

GHGs are generally tracked in two ways, as arising from either construction or operational activities. Because of their differences each of these areas of impact are analyzed separately, as follows.

a. Construction Emissions

Construction activities occurring as individual public and private projects are implemented would emit GHGs over the course of the planning horizon of the updated General Plan. The exact amount of emissions would be dependent on the particular construction equipment used, the length of the construction period for each individual project undertaken and the number of projects occurring at any given time. Because this information is unknowable at the General Plan level, it is impossible to calculate the exact emissions of GHGs from future construction activities in Riverside County. Table 4.7-D in Section 4.7.5 provides estimates of annual construction emissions for three project examples. Following SCAQMD methodology, the construction emissions are amortized over a 30-year lifetime of the project. The combined annual emissions from the three project examples described in Section 4.7.5 totals 55 MT CO$_2$e/per year or the combined average of residential and commercial projects construction of 1.38 MT CO$_2$e per acre of construction per year. This represents a fraction of one percent of Riverside County’s total annual GHG emissions for 2020 and, thus, would not represent a substantial source of GHG emissions within Riverside County as a whole.

Climate change is cumulative in nature and is analyzed as tons of GHGs emitted per year in conjunction with operational emissions. Because construction activities result in limited, temporary emissions over a relatively short period of time, in respect to the average lifetime of the development impacts from construction activities are minor when compared to operational emissions. With current policies regarding construction waste diversion, anticipated continued advancement in equipment technology, the implementation of the CAP and the mitigation measures included for Impact 4.6.2 in Air Quality, construction emissions would be less than significant with respect to GHG emissions. Additionally, as advancements in equipment technology continue, GHG emissions from construction activities are anticipated to be further reduced.
b. Operational Emissions

Riverside County’s operational emissions are presented previously in Section 4.7.5 for three different horizon years: 2020, 2035 and 2060. The County of Riverside uses the GHG emissions reduction target of AB 32 in determining whether or not the proposed General Plan Update would “generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.” To that end, generated GHG emissions need to be at or below the 1990 emission levels for Riverside County, which is 6,036,971 metric tons of CO$_2$e, by the year 2020 in order to meet the AB 32 GHG reduction target. This quantitative threshold is Riverside County specific using the existing GHG inventory to estimate 1990 levels of emissions for Riverside County. As shown in Section 4.7.5, Riverside County’s annual GHG emissions with the proposed project would be 10,268,937 metric tons of CO$_2$e. This total exceeds the target for GHG reductions following AB 32 and would be potentially significant if not appropriately mitigated with General Plan policies, mitigation measures and the Riverside County CAP to reduce GHG emissions. The following discussion details the GHG reductions from various regulatory programs, General Plan Policies, mitigation measures and the CAP.

2. Regulatory Compliance for Impact 4.7.A

As detailed and explained below, compliance with the following existing laws, regulatory programs, General Plan policies and CAP would lessen significant impacts on GHG emissions within Riverside County.

a. Compliance with Federal, State, Regional and County Regulations

The following federal, state, regional and Riverside County regulations contribute to ensuring development impacts on greenhouse gas emissions are less than significant. See Section 4.7.3 for full text of each of these regulations.

**Federal Regulations:** The Climate Change Technology Program works to advance the development of renewable energy, energy efficiency and other technologies related to reducing GHG emissions. U.S. EPA regulations work to reduce GHG emissions from the largest emitters nationwide.

**State Regulations:** The California Ambient Air Quality Standards are intended to reduce emissions of criteria pollutants, however, sources of criteria pollutants often overlap with sources of GHGs. Therefore, by controlling criteria pollutants, the State of California is also indirectly reducing GHG emissions. Executive Order S-3-05 and Assembly Bill 32 set targets for California to reduce its emissions statewide. These targets motivate state policy action to reduce emissions particularly through vehicle fuel efficiency standards and energy efficiency requirements for buildings, such as CCR Title 24, Part 6. Senate Bill 97 updates the CEQA guidelines to require projects to address GHGs in their environmental analyses. Senate Bill 375 supports AB 32 and sets regional targets for the reduction of GHGs from passenger vehicles through coordinated land use and transportation planning. Executive Order S-13-08 led to the development of the Climate Adaption Strategy for the State of California to help the state prepare for impacts such as sea level rise and heat waves.

**Regional Regulations:** SCAQMD climate change policy works to establish project thresholds and guide the region in addressing climate change.

**Riverside County Regulations:** County Ordinance Nos. 706, 726, 748, 782 and 824 all work to relieve traffic and congestion on Riverside County roadways thereby reducing GHG emissions associated with transportation. Ordinance Nos. 659, 810 and 875 help to preserve open space and reduce urban sprawl. Ordinance No. 655 helps to conserve electricity from public lighting and indirectly reduces GHGs. The water-efficient landscaping
b. Compliance with Existing General Plan Policies

The following existing policies of the Riverside County General Plan would contribute to ensuring development impacts to greenhouse gas emissions are less than significant. See Section 4.7.3.E for full text of each policy.

**Land Use Policies:** Policies LU 2.1, 8.12, 11.1, 11.3, 11.4 and 13.1-13.4 all work to help guide development in addressing regional transportation, concentrating growth near existing urban and suburban areas, designing energy- and water-efficient projects, providing opportunities for residents to live and work in the same area, preserving open space and increasing use of alternative transportation modes. Each of these works to directly and indirectly reduce GHG emissions in Riverside County.

**Circulation Policies:** Policies C 1.2, 1.7, 4.1, 4.8, 5.2, 11.2, 11.4, 11.5, 11.6, 12.1, 13.1-13.3, 17.3, 17.4, and 21.7 per CAP Table 4-1 work to reduce GHG emissions from transportation sources by supporting development of alternative transportation modes, providing for pedestrian facilities, developing transit centers, improving rail service, encouraging bicycle commuting and reducing congestion through the use of HOV and bus-only lanes.

**Multipurpose Open Space Policies:** Policies OS 2.2 and 2.5 help reduce GHG emissions associated with water use. Policies OS 10.1, 11.1-11.3 and 12.1 encourage the development of renewable energy. Policies OS 16.3-16.8 help reduce GHG emissions by conserving energy in buildings, utilizing alternative fuel vehicles and promoting the use of alternative transportation.

**Air Quality Policies:** Policies AQ 1.1-1.4 and 1.7 help to reduce GHG emissions by encouraging regional coordination on air quality management. Policies AQ 3.2, 3.4 and 10.1-10.4 promote the use of employer-based policies for encouraging carpooling and transit use. Policies AQ 5.2 and 5.4 encourage increased building efficiency in buildings. Policies AQ 5.1 and 8.4-8.9 encourage land use patterns that reduce single-occupancy vehicle trips. Policy AQ 13.1 encourages the expansion of Riverside County's alternative fuel fleet.

c. Compliance with Proposed New or Revised General Plan Policies

The following new or revised policies of the Riverside County General Plan, proposed as part of GPA No. 960, would contribute to ensuring development impacts to greenhouse gas emissions are less than significant. See Section 4.7.3.E for full text of each of these policies.

**Policies LU 1.5 and 4.1:** These policies help to guide development to address regional transportation issues, concentrate growth near existing urban and suburban areas, include energy and water-efficient design standards, provide opportunities for residents to live and work in the same area, preserve open space and increase the use of alternative modes of transportation. Each of these works to directly and indirectly reduce GHG emissions in Riverside County.

**Circulation Policies:** Policies C 9.2, 12.2, 17.3, 17.4, and 21.1 work to reduce GHG emissions from transportation sources by supporting development of alternative transportation modes, providing for pedestrian
facilities, developing transit centers, improving rail service, encouraging bicycle commuting and reducing congestion through the use of HOV and bus-only lanes.

**Policies AQ 4.1, 4.2, 4.4, 5.2 and 5.4:** These policies encourage increased energy efficiency for buildings.

**Other AQ Policies:** A number of policies were introduced as part of GPA No. 960 specifically to address greenhouse gas emissions, these include: AQ 21.1-21.4, 22.1, 23.1, 23.2, 24.1, 24.2, 25.1-25.3, 26.1, 26.2, 27.1, 27.2, 28.1, 28.2 and 29.1-29.4. These policies help reduce vehicle miles traveled, improve energy efficiency, reduce energy consumption and increase renewable energy generation.

d. **Compliance with Existing Mitigation from EIR No. 441**

In EIR No. 441, prepared for the 2003 RCIP General Plan, Mitigation Measure 4.5.1C was imposed to reduce construction vehicle and exhaust emissions. Although potential impacts would be reduced to less than significant through regulatory compliance, as per above, EIR No. 441 was programmatic and thus this measure remains applicable to future development accommodated by this project as well.

**Existing Mitigation Measure 4.5.1C:** Mitigation measures for construction equipment and vehicles exhaust emissions:

a. The construction contractor shall select the construction equipment used on site based on low emission factors and high energy efficiency.

b. The construction contractor shall ensure that construction grading plans include a statement that all construction equipment will be tuned and maintained in accordance with the manufacturer's specifications.

c. The construction contractor shall utilize electric- or diesel-powered equipment, in lieu of gasoline-powered engines, where feasible.

d. The construction contractor shall ensure that construction grading plans include a statement that work crews will shut off equipment when not in use. During smog season (May through October), the overall length of the construction period will be extended, thereby decreasing the size of the area prepared each day, to minimize vehicles and equipment operating at the same time.

e. The construction contractor shall time the construction activities so as to not interfere with peak hour traffic and minimize obstruction of through traffic lanes adjacent to the site; if necessary, a flag person shall be retained to maintain safety adjacent to existing roadways.

f. The construction contractor shall support and encourage ridesharing and transit incentives for the construction crew.

g. [Item g, dust control measures omitted, since not applicable to GHGs].

e. **Additional Project-Specific Mitigation for Impact 4.7.A**

Despite all of the above measures that lessen impacts on climate change and reduce GHG emissions, as indicated, additional project-specific mitigation measures are necessary to further avoid, reduce or minimize impacts. Mitigation Measure 4.7.A-N1 would lessen the impact by requiring new development projects to reduce their
individual project emissions. Mitigation Measure 4.7.A-N2 would lessen the impact by allowing projects to demonstrate compliance with the Implementation Measures of the CAP by utilizing the Screening Tables. Mitigation Measure 4.7-N3 requires the County of Riverside to adopt an updated CAP on or before January 1, 2020 that will include 2035 and 2050 Reduction Targets and updated reduction measures designed to achieve the 2035 and 2050 Reduction Targets. Implementation of these mitigation measures would ensure that project impacts on GHG emissions are mitigated to less than significant.

**NEW Mitigation Measure 4.7.A-N1:** To ensure GHG emissions resulting from new development are reduced to levels necessary to meet state targets, the County of Riverside shall require all new discretionary development to comply with the Implementation Measures of the Riverside County Climate Action Plan or provide comparable custom measures backed by a project GHG study (for example, using CalEEMod modeling) demonstrating achievement of the same target. The target to be met is a GHG emissions reduction of 25% below emissions for the adjusted BAU scenario for residential, commercial, industrial, institutional and mixed-use projects. The adjusted BAU is based upon the 2020 adjusted BAU found in the Final Supplement to the AB 32 Scoping Plan (CARB 2011).

**NEW Mitigation Measure 4.7.A-N2:** In lieu of a project-specific analysis per Mitigation Measure 4.7.A-N1, a future discretionary project proposed pursuant to the Riverside County General Plan shall incorporate into the project design, operational features and/or Implementing Measures from the County Climate Action Plan, in such a manner as to garner at least 100 points. The point values within the CAP’s Screening Tables constitute GHG emission reductions.

**NEW Mitigation Measure 4.7.A-N3:** The County of Riverside will monitor implementation of the reduction measures and revise or amend the Climate Action Plan as needed based upon the results of monitoring to ensure achievement of the 2020 Reduction Target. In addition, the County of Riverside will start update process of the Climate Action Plan in 2017 to provide a post-2020 plan. The post-2020 Climate Action Plan update will include a specific target for GHG reductions for 2035 and 2050. The targets will be consistent with broader state and federal reduction targets including Executive Order S-3-05 and with the scientific understanding of the needed reductions by 2050. The post-2020 Climate Action Plan update will include a set of updated reduction measures to achieve the 2035 and 2050 Reduction Targets and updated monitoring system to ensure that the updated targets are achieved. The County of Riverside will adopt the new post-2020 Climate Action Plan update by January 1, 2020.

3. **Finding on Significance for Impact 4.7.A**

Before mitigation, Riverside County’s GHG emissions for 2020 would be an estimated 10.27 MMT CO$_2$e; with implementation of the mitigation measures described above, Riverside County’s emissions would be reduced to 6.03 MMT CO$_2$e. The AB 32 target for GHG emissions reductions is a return to 1990 levels by the year 2020. As calculated herein, that target “1990” level would be 6.03 MMT CO$_2$e per year, a reduction of 15% from the 2008 baseline, as per CARB’s AB 32 Scoping Plan. As demonstrated by the results presented in Section 4.7.5, implementation of and compliance with the above listed existing regulatory programs, as well as the new project-specific mitigation measures described above, would ensure that development authorized pursuant to the proposed updated General Plan would be 6.03 MMT CO$_2$e; a 25% reduction from 2020 BAU. As such, Riverside County GHG emissions as mitigated herein would be a less than significant impact on global climate change.

In addition, to ensure that GHG emissions continue on a downward trajectory, The County of Riverside will commence planning for the post-2020 period starting at the approximate midway point between plan implementation and the reduction target and after development of key ordinances and implementation of cost-effective measures. The new plan will include a specific target for GHG reductions for 2035 and 2050. The targets will be consistent with broader state and federal reduction targets and with the scientific understanding of the needed reductions by 2050. The County of Riverside will adopt the new plan by January 1, 2020.
In Section 4.7C2 above, Figure 4.7-4 shows the trajectory of emissions within this Draft 2015 CAP that achieves an AB 32 compliant reduction target of 3.96 million metric tons (MMT) CO$_2$e and the conceptual 2035 and 2050 reductions in a post 2020 CAP needed to reduce emissions down to 80% below 1990 levels by 2050 outlined in Executive Order S-3-05. Riverside County will develop the post-2020 CAP so that it can be ready for full implementation, including potential new policies, revisions to the General Plan (as necessary), programs, ordinances, and financing by 2020. The Post 2020 CAP will include a specific target for GHG reductions for 2035 and 2050. The targets will be consistent with broader state and federal reduction targets including Executive Order S-3-05 and with the scientific understanding of the needed reductions by 2050. The County of Riverside will adopt the new Post 2020 CAP by January 1, 2020.

Achievement of the 2050 reduction target (80% below 1990 levels of emissions by 2050) in Executive Order S-3-05 will require the State and the County to reduce emissions by approximately 95% below the 2008 baseline levels of GHG emissions by 2050 while also accommodating considerable population and economic growth within the unincorporated areas. Providing the post 2020 path forward for the County as shown in Table 7-2 of the Draft CAP and in Figure 4.7-3 above will require near carbon neutral energy and transportation by 2050. Carbon neutral (no emissions) of energy will require significant changes to the electric generating system in the United States where renewable energy and energy storage supply nearly all the electricity in the system and transportation eliminates fossil fueled trucks and passenger vehicles (electric vehicles or hydrogen fuel cell technology). This future system of carbon neutral energy and transportation sectors is technologically infeasible at this time. For this reason Executive Order S-3-05 provided a “stair-step” tiered approach (2010, 2020, and 2050 targets) to reducing GHG emissions. The “stair-step” approach allows the time needed to develop the technologies required to meet the 2050 goal in Executive Order S-3-05.

The State is currently working on post 2020 reductions to update the AB32 Scoping Plan and should have the proposed rules and regulations needed to achieve the post 2020 reductions within approximately two years. Because it is technologically infeasible to achieve the 2050 target at this time, the County provides Mitigation Measure 4.7.A-N3 that allows the County to work in sync with the State in providing post 2020 reductions and reduction targets. Measure 4.7.A-N3 requires the County to update the CAP by January 1, 2020 and including in that updated CAP reduction targets for 2035 and 2050, and post 2020 reduction measures designed to achieve the reduction targets and keep the County on the emissions reduction path shown in Figure 4.7-3.

Because achievement of the 2050 reduction target in Executive Order S-3-05 is technologically infeasible to achieve at this time, impacts on GHG emissions are considered significant and unavoidable.

### B. Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

**Impact 4.7.B – Conflict with GHG Reduction Plans, Policies or Regulations:** Implementation of the Riverside County General Plan, as updated pursuant to the proposed project (GPA No. 960), would result in future construction and operational activities that generate GHGs. This generation of GHGs would potentially conflict with the implementation of AB 32 and SB 375, California policies for reducing GHG emissions. However, implementation of the proposed General Plan policies and particularly the Implementation Measures of the Riverside County CAP, plus proposed new Mitigation Measures 4.7.A-N1 and 4.7.A-N2, would ensure that build out of the General Plan, as amended by GPA No. 960, would be consistent with both AB 32 and SB 375 and have a less than significant impact on their implementation.

1. **Analysis of Impact 4.7.B**

**Consistency With AB 32:** Data presented in Section 4.7.5 (Table 4.7-E) indicates that without the GHG reduction policies proposed for the updated General Plan, Riverside County levels of GHG emissions in 2020 would be 10.27 MMT CO$_2$e. This is the 2020 BAU scenario level. With the mitigation proposed in this project, in
particular implementation of CAP IMs (as discussed under Impact 4.7.1), analysis indicates that Riverside County’s 2020 GHG emissions would be at 6.03 MMT CO$_2$e. This value represents a reduction of 41.2% over the BAU scenario. Further, it represents a reduction of 15% compared to the baseline 2008 levels presented in Section 4.7.2. AB 32 sets forth the target of reducing statewide emissions to 80% below 1990 levels by 2050. Further, the State of California’s AB 32 Scoping Plan established that to achieve such a goal, 2020 levels must generally be reduced to levels that are 15% below present values and at least 28% below 2020 BAU values. Thus, the data presented herein demonstrate that the CAP’s proposed IMs and Screening Tables and other revisions to the General Plan included as part of the project would be sufficient to ensure that new development is consistent with AB 32. For these reasons, the project’s consistency with AB 32 would be rendered less than significant with mitigation as outlined below.

**Consistency With SB 375:** Data presented in Section 4.7.5 (Table 4.7-I) indicates that without the GHG reduction policies proposed for the updated General Plan, per-capita GHG emissions from passenger vehicles would be 5.60 MT CO$_2$e in 2020 and 9.39 MT CO$_2$e in 2035. These emissions follow the 2020 and 2035 BAU scenarios. With the mitigation proposed in this project, in particular implementation of the CAP IMs and Screening Tables, analysis indicates that Riverside County’s per-capita GHG emissions from passenger vehicles would be 3.06 MT CO$_2$e in 2020 and 2.89 MT CO$_2$e in 2035. Following SB 375, CARB set targets for the SCAG region to reduce emissions from passenger vehicles by 8% per capita by the year 2020 and 13% per capita by the year 2035. These percentages were calculated to be equivalent to 3.07 MT CO$_2$e per capita in 2020 and 2.90 MT CO$_2$e per capita in 2035. Thus, the data presented herein demonstrate that the proposed CAP Implementation Measures and other revisions to the General Plan included as part of the project would be sufficient to ensure that new development is consistent with SB 375. For these reasons, the project’s consistency with SB 375 would be rendered less than significant with the mitigation outlined below.

**Consistency With Executive Order S-3-05:** Executive Order S-3-05 provides state level reduction targets of achieving 1990 levels of emissions by 2020 and eighty percent below 1990 levels of emissions by 2050. Emission levels presented in Section 4.7.5 (Table 4.7-G) indicates that the Draft CAP will achieve the 2020 reduction target shown in Executive Order S-3-05. However, Table 4.7-H also indicates that without a post 2020 CAP to continue reducing emission after year 2020, emission levels associated with continued growth in the unincorporated areas of the County will begin rising after 2020 and not meet the 2050 reduction target within Executive Order S-3-05. Mitigation Measure 4.7.A-N3, requires the County to develop and adopt a post 2020 CAP by January 1, 2020, to continue reducing emissions post 2020. The Draft CAP (Table 7-2) shows the estimated reduction strategies needed to continue reducing after year 2020 and Figure 4.7-3 above provides the trend needed to achieve and maintain the ultimate 2050 reduction target in Executive Order S-3-05.

Achievement of the 2050 reduction target (80% below 1990 levels of emissions by 2050) in Executive Order S-3-05 will require the State and the County to reduce emission by approximately 95% below the 2008 baseline levels of GHG emissions by 2050 while also accommodating considerable population and economic growth within the unincorporated areas. Providing the post 2020 path forward for the County as shown in Table 7-2 of the Draft CAP and in Figure 4.7-3 above will require near carbon neutral energy and transportation by 2050. Carbon neutral (no emissions) of energy will require significant changes to the electric generating system in the United States where renewable energy and energy storage supply nearly all the electricity in the system and transportation eliminates fossil fueled trucks and passenger vehicles (electric vehicles or hydrogen fuel cell technology). This future system of carbon neutral energy and transportation sectors is technologically infeasible at this time. For this reason Executive Order S-3-05 provided a “stair-step” tiered approach (2010, 2020, and 2050 targets) to reducing GHG emissions. The “stair-step” approach allows the time needed to develop the technologies required to meet the 2050 goal in Executive Order S-3-05.

The State is currently working on post 2020 reductions to update the AB32 Scoping Plan and should have the proposed rules and regulations needed to achieve the post 2020 reductions within approximately two years. Because it is technologically infeasible to achieve the 2050 target at this time, the County provides Mitigation Measure 4.7.A-N3 that allows the County to work in sync with the State in providing post 2020 reductions and reduction targets. Measure 4.7.A-N3 requires the County to update the CAP by
2. Regulatory Compliance for Impact 4.7.B

a. Compliance with Federal, State and Riverside County Regulations

The same federal, state, regional and Riverside County regulations described above for Impact 4.7.A also contribute to ensuring development impacts to greenhouse gas emissions are less than significant with respect to consistency with AB 32 and SB 375. See Section 4.7.2 for discussion of these regulations; their contribution to GHG emission reduction in Riverside County is discussed under Impact 4.7.A, above.

b. Compliance with Existing General Plan Policies

The same existing General Plan policies described above for Impact 4.7.A also contribute to ensuring development impacts to greenhouse gas emissions are less than significant with respect to consistency with AB 32 and SB 375. See the prior impact for a discussion of these policies and how they contribute to reducing GHG emissions in Riverside County.

c. Compliance with Proposed New or Revised General Plan Policies

The same proposed or revised General Plan policies described above for Impact 4.7.A also contribute to ensuring development impacts to greenhouse gas emissions are less than significant with respect to consistency with AB 32 and SB 375. See the prior impact for a discussion of these policies and how they contribute to reducing GHG emissions in Riverside County.

d. Additional Project-Specific Mitigation for Impact 4.7.B

Despite all of the above measures that lessen impacts on climate change and reduce GHG emissions, as indicated, additional project-specific mitigation measures are necessary to further avoid, reduce or minimize impacts. New Mitigation Measure 4.7.A-N1 would lessen the impact by requiring new development projects to reduce the individual project emissions. Mitigation Measure 4.7.A-N2 would lessen the impact by allowing projects to demonstrate compliance with the Implementation Measures of the CAP by utilizing the Screening Table. See Impact 4.7.A for the text of these measures. In total, implementation of these mitigation measures would ensure that project impacts on GHG emissions are mitigated to less than significant.

3. Finding on Significance for Impact 4.7.B

Implementation of, and compliance with, the existing regulatory programs, General Plan policies and Riverside County CAP, as well as new Mitigation Measures 4.7.A-N1 and 4.7.A-N2, as described above, would ensure that development authorized pursuant to the General Plan, as amended by the proposed project, GPA No. 960, would have less than significant impacts on reduce GHG emissions achieving the AB32 and SB 375 reduction targets. However, implementation of, and compliance with, the existing regulatory programs General Plan policies and Riverside County CAP, as well as new Mitigation Measures 4.7.A-N1 and 4.7.A-N2, will not achieve the 2050 goal in Executive Order S-3-05 and achievement of that goal is technologically infeasible at this time. Mitigation Measure 4.7.A-N3 commits the County to develop a post 2020 CAP that demonstrates achievement of 2035 and 2050 reduction targets and that the post 2020 CAP is adopted by January 1,
This allows time for the development of new technology needed to achieve the 2050 goal and the County time to provide a post 2020 CAP in sync with the State goals and reductions.

Because achievement of the 2050 reduction target in Executive Order S-3-05 is technologically infeasible to achieve at this time, impacts on GHG emissions are considered significant and unavoidable.

4.7.7 Significance After Mitigation for Greenhouse Gases

Implementation of, and compliance with, the above regulations, policies and mitigation measures would ensure that impacts due to greenhouse gas emissions from future development within Riverside County are minimized to the greatest extent feasible at this time, a level that is less than significant. GHG emissions from construction and operational activities were determined to be reduced to a level consistent with the AB 32 target with the incorporation of mitigation. Following the 2020 emissions analysis, it was determined that future development authorized pursuant to the General Plan, as amended by the proposed project, would not conflict with the implementation of AB 32. Through an analysis of passenger vehicle emissions for 2020 and 2035, the amended General Plan was also determined to be consistent with the targets for the SCAG region under SB 375 with mitigation.

However, compliance with existing and proposed General Plan policies and, in particular, the Riverside County Climate Action Plan’s Implementing Measures and Screening Tables, plus the mitigation measures herein, would not ensure that any future development activities approved within Riverside County will reduce greenhouse gas emissions, fully mitigate or avoid any GHG impacts consistent with the 2050 GHG emissions reduction target in Executive Order S-3-05. Achievement of the 2050 reduction target in Executive Order S-3-05 will require nearly carbon neutral (zero emissions) energy and transportation sectors making the 2050 reduction target technologically infeasible at this time. Mitigation Measure 4.7.A-N3 commits the County to develop a post 2020 CAP that demonstrates achievement of 2035 and 2050 reduction targets and that the post 2020 CAP is adopted by January 1, 2020. This allows the time needed to develop the technology required to achieve the 2050 reduction target.

Because of this, implementation of the Riverside County General Plan, as updated pursuant to the proposed project (GPA No. 960), does not achieve all of the reduction targets within Executive Order S-3-05. This is considered a significant and unavoidable impact.

The County is committed toward the reduction of GHG emission. However, achievement of the 2050 reduction target in Executive Order S-3-05 is technologically infeasible to achieve at this time. Mitigation Measure 4.7.A-.N3 requires the County to provide by January 1, 2020, a post 2020 CAP that includes 2035 and 2050 reduction targets and reduction measures needed to achieve those targets. This allows technology, the State and the County the time needed to develop reduction measures able to achieve the 2050 reduction target. For these reasons the County is providing Overriding Consideration of this currently significant and unavoidable impact and are consistent with the State of California and Riverside County’s greenhouse gas reduction policies and the Climate Action Plan.