

4.7 GLOBAL CLIMATE CHANGE

4.7.1 Introduction

This section evaluates the potential changes in global climate associated with greenhouse gas emissions and the potential for emissions generated by implementation of the proposed General Plan Update to cumulatively contribute to climate change on a global scale. This section describes the conditions within Simi Valley, relevant state and federal climate change standards, regulatory agencies responsible for managing greenhouse gas (GHG) emissions, and legislation and plans focused on the reduction of these emissions. This analysis focuses on the three major GHGs, carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).

It is widely recognized that anthropogenic (human-made) emissions of GHGs⁴ and aerosols 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 to GHGs emitted from a particular source or location. However, 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. However, that quantity cannot be tied to a particular adverse effect on the environment of California associated with climate change.

During build-out of the General Plan Update, GHGs would be emitted as the result of (1) construction activities and deliveries; (2) new direct operational sources, such as operation of emergency generators, natural gas usage, and operation of vehicles attributed to uses within the City, including residences; and (3) indirect operational sources, such as production of electricity, steam and chilled water, transport of water, and decomposition of project-related wastes. GHGs would also be emitted by visitors and employees travelling to and from the City. This EIR section discusses how build-out of the General Plan Update would contribute to GHG emissions.

Air quality improvements, including climate change, are fundamental objectives that underlie policies throughout the General Plan. The General Plan addresses GHG emissions primarily by providing climate change, land use, air quality, and mobility policies intended to reduce automobile trips, energy and water consumption, and waste generation countywide.

No comments related to climate change were received during the public comment period for the Notice of Preparation (NOP).

Data for this section were taken from the Simi Valley Climate Action Plan (SV-CAP), U.S. Environmental Protection Agency (USEPA), the California Energy Commission (CEC), Ventura County

⁴ For the purposes of this analysis, the term “greenhouse gases” refers to carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, those gases regulated under California Assembly Bill 32 and the Kyoto Protocol of the United Nations Framework Convention on Climate Change.

Pollution Control District (VCPCD), and the California Air Resources Board (California ARB). The SV-CAP is included as Appendix C to this document.

4.7.2 Environmental Setting

■ Overview

The discussion of climate change included below is presented on a Citywide basis. Because climate change impacts are on a regional and global level, there are no unique issues present in any of the Study Areas associated with GHG emissions; therefore, these areas of the City are not discussed individually in this section.

Parts of the earth's atmosphere act as an insulating blanket, trapping solar energy to keep the global average temperature in a suitable range. The "blanket" is a collection of atmospheric gases called "greenhouse gases" based on the idea that these gases 'trap' heat similar to the glass walls of a greenhouse. These gases, mainly water vapor, CO₂, CH₄, N₂O, ozone (O₃), chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride, and aerosols act as global insulators, reflecting visible light and infrared radiation back to the earth. Without the natural heat trapping effect of greenhouse gas, the earth's surface would be about 34°C (93°F) cooler (California ARB 2007b). However, it is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the upper atmosphere beyond the naturally occurring level.

Changes in climate result from radiative forcing and feedback. Radiative forcing is the difference between the radiation energy entering the earth's atmosphere and the radiation energy leaving the atmosphere. Greenhouse gases allow solar radiation to penetrate the earth's atmosphere but slow the release of atmospheric heat. A feedback is an internal process that amplifies or dampens the climate's response to a specific forcing. For example, the heat trapped by the atmosphere may cause temperatures to rise or may alter wind and weather patterns. A gas or aerosol's global warming potential (GWP) is its ability to trap heat in the atmosphere; it is the "cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas" (USEPA 2006c).

Individual greenhouse gases have varying GWPs and atmospheric lifetimes (refer to Table 4.7-1 [Global Warming Potentials and Atmospheric Lifetimes of Select GHGs]). The carbon dioxide equivalent is a consistent methodology for comparing greenhouse gas emissions since it normalizes the various greenhouse gases to a consistent metric. The reference gas for GWP is CO₂, which has a GWP of one. By comparison, methane's GWP is 21, as CH₄ has a greater global warming effect than CO₂ on a molecule-to-molecule basis (USEPA 2006b). In order to combine the impacts of multiple greenhouse gases, the carbon dioxide equivalent (CO₂e) metric is used, this is total amount of each individual greenhouse gas multiplied by the that gas's GWP.

Of all greenhouse gases in the atmosphere, water vapor is the most abundant, important, and variable. It is not considered a pollutant in the atmosphere because it is naturally occurring, does not have pollutant characteristics, and it maintains a climate necessary for life. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other

water bodies, sublimation (change from solid to gas) from ice and snow, and transpiration from plant leaves.

Table 4.7-1 Global Warming Potentials and Atmospheric Lifetimes of Select GHGs		
<i>Gas</i>	<i>Atmospheric Lifetime (years)</i>	<i>Global Warming Potential (100 year time horizon)</i>
Carbon Dioxide	50–200	1
Methane	12±3	21
Nitrous Oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane (CF ₄)	50,000	6,500
PFC: Hexafluoroethane (C ₂ F ₆)	10,000	9,200
Sulfur Hexafluoride (SF ₆)	3,200	23,900

SOURCE: U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2004 (2006).

Carbon dioxide (CO₂) is an odorless, colorless gas, which has both natural and anthropogenic sources. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of CO₂ are from burning coal, oil, natural gas, and wood. CO₂ is the most common greenhouse gas generated by California activities, constituting approximately 84 percent of all greenhouse gas emissions. CO₂ emissions attributed to California activities are mainly associated with in-state fossil fuel combustion and fossil fuel combustion in out-of-state power plants supplying electricity to California. Other activities that produce CO₂ emissions include mineral production, waste combustion, and land use changes that reduce vegetation.

Methane (CH₄) is a flammable gas and is the main component of natural gas. When one molecule of CH₄ is burned in the presence of oxygen, one molecule of CO₂ and two molecules of water are released. A natural source of CH₄ is from the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH₄, which is extracted for fuel. Other sources are landfills, fermentation of manure, and cattle.

Nitrous oxide (N₂O), also known as laughing gas, is produced naturally by microbial processes in soil and water. Anthropogenic sources of N₂O include agricultural sources, industrial processing, fossil fuel-fired power plants, and vehicle emissions. Nitrous oxide also is used as an aerosol spray propellant and in medical applications.

The participation of water vapor and ozone as GHGs is poorly understood. It is unclear the extent to which water vapor acts as a GHG. The uncertainty is because water vapor can also produce cloud cover, which reflects sunlight away from the Earth and can counteract its effect, if any, as a GHG. In addition, water vapor tends to increase as the earth warms so it is not clearly defined whether an increase in water

vapor is contributing to climate change or rather a result of changes in the climate. Ozone tends to break down in the presence of solar radiation but the mechanism is not well understood.

Other gases that contribute to the greenhouse effect include chlorofluorocarbons (CFCs), HFCs, PFCs, sulfur hexafluoride (SF₆), and aerosols. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and has successfully reduced or stopped the increase in the levels of the major CFCs. However, due to the long atmospheric lifetimes, CFCs will remain in the atmosphere for over 100 years. CFCs, Tetrafluoromethane (CF₄), SF₆, and HFCs have been banned and are no longer commercially available. For these reasons, this analysis, which follows the methodologies approved by the Intergovernmental Panel on Climate Change (IPCC), USEPA, and the California ARB, focuses on carbon dioxide, methane, and nitrous oxide.

■ Potential Effects of Climate Change

The climate in California is expected to become increasingly warmer during the twenty-first century due to the accumulation of GHGs in the atmosphere. Exactly how much warmer the climate would become depends on the rate at which human activities, such as the burning of fossil fuels, continues. The IPCC Special Report on Emissions Scenarios (SRES) has developed a set of possible future GHG emissions scenarios based on different assumptions about global development. Based on a recent SRES for California, there are three general emissions scenarios: a higher emissions scenario, a medium-high emissions scenario, and a lower emissions scenario.

The higher emissions scenario represents rapid fossil-fuel intensive economic growth, global population that peaks mid-century then declines, and the introduction of new and more efficient technologies toward the end of the twenty-first century. Global warming emissions increase rapidly, anticipated to reach about 25 gigatonnes per year (Gt/yr), which is more than three times the present rate of emissions, by 2050.

The medium-high emissions scenario is based on a projection of continuous population growth combined with slower economic growth and technological changes than in the other scenarios. In contrast, the lower emissions scenario represents a world with population growth similar to the highest emissions scenarios, but with rapid changes towards a service and information economy with the introduction of clean and resource-efficient technologies.

The lower emissions scenario has CO₂ emissions peaking just below 10 Gt/yr in mid-century before dropping below the current-day level of 7 Gt/yr by 2100. Under this scenario, despite a reduction in CO₂ emissions, the global CO₂ concentration would double, relative to its pre-industrial level, by the end of this century.

It is important to note that even at the lower emissions scenario, increase in global temperatures is predicted to be between 1.7 and 3.0°C (3 to 5.5°F). In the medium-high emissions scenario and the higher emissions scenario, temperatures are predicted to increase between 3.1 and 4.3°C (5.5 to 8°F) and 4.4 to 5.8°C (8 to 10.5°F), respectively (CCAT 2006).

Water Resources

Global climate change is playing an increasingly important role in scientific and policy debates related to water management. The most consequential impacts of climate change on water resources in the United States are likely to occur in the mid-latitudes of the west, such as California, where the runoff cycle is largely determined by snow accumulation and subsequent melt patterns. It is well documented that the effects of a warmer climate on the timing of runoff in these regions likely would shift a portion of spring and summer runoff to periods earlier in the year. Despite the high degree of regulation in many water supply systems throughout the western United States, the effects of these shifts on runoff seasonality generally are considered to be undesirable, because the amount of water stored in snowpack can be substantial and, under normal (i.e., historical) conditions, this stored water is relied upon to augment low stream flows during the relatively dry summers.

Decreasing Sierra Nevada Snowpack

As increased GHG emissions accumulate in the atmosphere and average global temperatures rise, more precipitation would fall as rain instead of snow. In addition, the snow that does fall would melt earlier in the year, reducing the Sierra Nevada snowpack. Between 2070 and 2099, the Sierra Nevada is predicted to have a 30 to 60 percent loss of snowpack at the lower emissions scenario. Snowpack losses at the medium high emissions scenario are expected between 70 and 80 percent; at the higher emissions scenario, the Sierra Nevada Mountains would have losses of approximately 90 percent (CCAT 2006). The decreasing snowpack would have negative implications for water managers, hydropower generation, and seriously curtail or even eliminate snow-related recreational activities. A potential loss of 5 million acre-feet or more of average annual water storage is expected in the state's snowpack according to the California Department of Water Resources (DWR 2008). The decrease in snowpack has the potential to affect the Sacramento area through a potential in increased flooding. Further, impacts to fish and wildlife are anticipated due to the loss of snow-based habitat and drought-like conditions due to earlier snow melt. For example, as deep, cold pools become increasingly shallow and warm, many steelhead trout habitat and potentially all spring-run salmon habitat within the Sierra Nevada Mountains may disappear.

Sea Level Rise

The warming of the planet has resulted in an incremental increase in sea levels which has been observed in San Francisco and San Diego during the last century. Sea levels have risen an average of 7.6 inches from 1900 to 2000 (CCAT 2006). California's coast and estuaries would experience increasing sea levels during the next century. In the lower emissions scenario, sea levels are expected to rise 6 to 14 inches; in the medium high emissions scenario, sea levels are expected to rise 14 to 22 inches; and in the higher emission scenario, sea levels are expected to rise 22 to 30 inches (CCAT 2006). As sea level rises, beaches could be eroded and coastal wetlands and estuaries that abut developed areas along the south coast of California will be blocked from moving inland. Habitat for the Western snowy plover, light-footed clapper rail, California least tern, and other species would be especially at risk.

Seawater Incursion

Seawater (or saltwater) incursion involves contamination of freshwater aquifers with saltwater. Fresh water floats as a lens on denser salt water. If too much fresh water is removed, a cone of depression is

created in the fresh water lens. Through potential effects of global warming, an increase in groundwater withdrawal may be required due to a lowering of snowmelt. As a result, rising sea levels could potentially contaminate the groundwater basins below Los Angeles County, as well as other California groundwater basins along the Pacific coast.

Sea level rise is a product of two main processes: thermal expansion of seawater and widespread melting of ice sheets. The thermal expansion of water refers to an increase in the volume of water at constant mass due to heating. Sea level rise would also be affected by melting ice sheets. The only remaining ice sheets on Earth are in Antarctica and Greenland. The IPCC projects that ice mass loss from melting of the Greenland ice sheet would continue to outpace accumulation from snowfall. Accumulation from snowfall on the Antarctic ice sheet is projected to outpace losses from melting. However, loss of ice mass on the Antarctic ice sheet may continue, if there is sufficient loss of ice mass via outlet glaciers (IPCC 2007).

Increasing Wildfires

Wildfire risk is determined by a combination of factors including precipitation, winds, temperature, and landscape and vegetation conditions. Thus, future risks would not be uniform through the state. For example, if precipitation increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California would be expected to increase toward the end of the 21st century because more winter rain would stimulate the growth of more plant “fuel” available to burn in the hot and dry seasons, assuming late fall, winter, and early spring remain wet. Alternatively, a hotter, drier climate could promote more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation. The potential increase in wildfires could impact southern California and the City of Simi Valley, where residential uses are located adjacent to undeveloped vegetated hillside areas.

Public Health

Global warming under any of the three emissions scenarios would affect public health by exacerbating air pollution, intensifying heat waves, and expanding the range of infectious diseases. The IPCC warned that rising temperatures may result in altered spatial distribution of some infectious disease vectors and could have mixed effects, such as the decrease or increase of the range and transmission potential of malaria in Africa and other parts of the world. The primary concern in this case is not the change in average climate but the projected increase in extreme conditions, which poses the most serious health risks.

Severe Heat

As temperatures rise, there could be greater incidences of death due to dehydration, heat stroke and exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat. Those that are most vulnerable to the effects of extreme heat are children, the elderly, people with existing health problems, and the poor. In all emissions scenarios, it is expected that there would be two to four times as many heat wave days in major urban centers. There could also be a 3 to 20 percent increase in electricity demands in order to provide air conditioning to businesses and residences (CEC 2006).

■ Global, Federal, and State Greenhouse Gas Inventories

Worldwide anthropogenic emissions of GHGs in 2006 were approximately 49,000 million metric tons of CO₂e, including ongoing emissions from industrial and agricultural sources and emissions from land use changes (i.e., deforestation, biomass decay) (IPCC 2007). CO₂ emissions from fossil fuel use accounts for 56.6 percent of the total emissions. CH₄ emissions account for 14 percent and N₂O emissions for 8 percent of worldwide GHGs (IPCC 2007).

The USEPA publication, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2006*, provides a comprehensive emissions inventory of the nation’s primary anthropogenic sources of GHGs. In 2006, total nationwide GHG emissions were 7,054 million metric tons of CO₂e (USEPA 2008). Overall, total U.S. emissions have risen by about 15 percent from 1990 to 2006; however, emissions fell by 1 percent from 2005 to 2006. According to the USEPA, the primary contributors to the decrease were increased fuel prices and warmer weather conditions, which resulted in a decreased consumption of fossil fuels.

California is the second largest contributor of GHG emissions in the U.S. and the sixteenth largest in the world (CEC 2006b). In 2004, California produced 427 Tg CO₂e (CEC 2006b), which is approximately 6 percent of 2004 U.S. emissions and 0.9 percent of global emissions. In California, the most common GHG is CO₂ from fossil fuel combustion, which constitutes approximately 81 percent of all GHG emissions (CEC 2006b). The remainder of GHGs only makes up a small percentage of the total: nitrous oxide constitutes 6.8 percent, methane 6.4 percent, high GWP gases 3.5 percent, and non-fossil fuel CO₂ emissions constitute 2.3 percent (CEC 2006b). CO₂ emissions in California are mainly associated with fossil fuel consumption in the transportation sector (41.2 percent) with the industrial sector as the second-largest source (22.8 percent) (CEC 2006b). Electricity production, from both in-state and out-of-state sources, agriculture, forestry, commercial, and residential activities comprise the balance of California’s GHG emissions.

As part of the California Global Warming Solutions Act of 2006 (AB 32), discussed below, the California ARB is required to establish a statewide GHG emissions limit for 2020 equivalent to 1990 emissions. In addition, Executive Order S-3-05 sets the following statewide emissions targets: a reduction of GHG emissions to 2000 levels by 2010, a reduction of GHG emissions to 1990 levels by 2020, and a reduction of GHG emissions to 80 percent below 1990 levels by 2050. The California ARB estimates that California’s annual emissions were equivalent to 427 Tg CO₂e in 1990 and 452 Tg CO₂e in 2000 (California ARB 2007b).

Table 4.7-2 (California Greenhouse Gas Reduction Targets) shows quantified California statewide emissions targets (AB 32 and Executive Order S-3-05 targets) based on the California Energy Commission’s (CEC) 2007 Inventory of Greenhouse Gases and Sinks. Table 4.7-2 also indicates how these thresholds compare to future population projections by showing how the reduction thresholds would translate on a per capita basis as California’s population increases. This is provided for informational purposes only; there is no adopted per capita goal for GHG reductions.

Table 4.7-2 California Greenhouse Gas Reduction Targets

Year ^a	Estimated California Population	Reduction Goal	Greenhouse Gas Target (Tg CO ₂ e)	Per Capita Target (metric tons CO ₂ e per person) ^b
1990	29,828,000	N/A	427.0	14.3
2000	34,105,437	N/A	452.3	13.3
2010	39,135,676	GHG emissions at or below 2000 levels ^c	452.3	11.6
2020	44,135,923	GHG emissions at or below 1990 levels	427.0	9.7
2050	59,507,876	GHG emissions 80% below 1990 levels ^d	341.6	5.7

SOURCE: Population data are from California Department of Finance, Simi Valley Population (2007); greenhouse gas targets are derived from California ARB, *Greenhouse Gas Emissions Inventory Summary (1990–2004)*, 2007.

- a. Target years specified in Executive Order S-3-05 and/or AB 32. 1990 and 2000 data are provided as a baseline.
- b. Calculated by dividing the statewide GHG target by the projected population for each target year. 1 teragram (Tg) = 1 million metric tons = 1.1023 million short tons CO₂e.
- c. Based on 2004 estimate.
- d. Calculated by taking 80 percent of 427.0.

■ City of Simi Valley Inventories

In order to establish a GHG emissions baseline that is currently being emitted into the environment, an inventory of GHG emissions within the City and City government operations was conducted. 1990 GHG levels are illustrated in Table 4.7-3 (1990 Net Total Community Emissions by Land Use Category) and Table 4.7-4 (1990 Net Total Community Emissions by Emissions Source). Table 4.7-5 (2006 Net Total Community Emissions by Land Use Category) and Table 4.7-6 (2006 Net Total Community Emissions by Emissions Source) identify and categorize the major sources and quantities of GHG emissions being produced by City residents, businesses, and government operations currently in Simi Valley. The year 2006 was used to inventory emissions for existing conditions, as this is the most recent year with complete data. In 2006, the City of Simi Valley’s total annual GHG emissions were approximately 1.19 million metric tons (MMT) CO₂e.

Table 4.7-3 1990 Net Total Community Emissions by Land Use Category

Land Use Category	Metric tons of CO ₂ e
Municipal	15,492
Residential	636,441
Nonresidential	554,558
Total	1,206,491

SOURCE: Atkins, *Draft Simi Valley Climate Action Plan* (2011).

Table 4.7-4 1990 Net Total Community Emissions by Emissions Source

<i>Emissions Source</i>	<i>Metric tons of CO₂e</i>
Energy	370,731
Solid Waste	136,100
Landscape Emissions	378
Transportation	699,283
Total	1,206,491

SOURCE: Atkins, *Draft Simi Valley Climate Action Plan* (2011).

Table 4.7-5 2006 Net Total Community Emissions by Land Use Category

<i>Land Use Category</i>	<i>Metric tons of CO₂e</i>
Municipal	16,907
Residential	595,536
Nonresidential	573,683
Total	1,186,126

SOURCE: Atkins, *Draft Simi Valley Climate Action Plan* (2011).

Table 4.7-6 2006 Net Total Community Emissions by Emissions Source

<i>Emissions Source</i>	<i>Metric tons of CO₂e</i>
Energy	355,778
Solid Waste	23,692
Landscape Emissions	429
Transportation	806,227
Total	1,186,126

SOURCE: Atkins, *Draft Simi Valley Climate Action Plan* (2011).

4.7.3 Regulatory Setting

■ Federal/International

The following summarizes the international and federal regulations that have been put forth to assess and reduce the potential impacts of human induced climate change, as well as reducing human-produced GHGs. However, at this point, none of these international treaties or federal plans has been shown to reduce GHG production or limit the process of global climate change. Further, none of the treaties or plans pertains directly to the proposed project. They are listed to give the reader context regarding the current national regulatory and judiciary response to the climate change issue.

Kyoto Protocol

The United States participated in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). 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 percent 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.

United Nations Framework Convention on Climate Change (UNFCC)

The United States is one of 194 current member nations of the UNFCC, which was established in 1994. The initial effort of the UNFCC was the Kyoto Protocol, the first international agreement to regulate GHG emissions. The UNFCC has met every year since 1995, further developing work and agreements on climate change. In anticipation of providing an updated international treaty for the reduction of GHG emissions, representatives from 170 countries met in Copenhagen in December 2009 to ratify an updated UNFCCC agreement (Copenhagen Accord). The Copenhagen Accord, a voluntary agreement between the United States, China, India, and Brazil, 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. In December 2010, the UNFCC met in Cancun, Mexico to begin work on replacing the Kyoto Protocol and adopt more formal measures related to the Copenhagen Accords. Each year, additional progress is made toward adoption and implementation of plans and programs that will coordinate an international effort to reduce GHG emissions effectively. The next conference of the parties is scheduled for December 2011 in South Africa.

United States Environmental Protection Agency (USEPA)

The USEPA 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 intensity generated by the United States. 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 USEPA implements several voluntary programs that substantially contribute to the reduction of GHG emissions. Programs include the State Climate and Energy Partner Network that allows for 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.

In *Massachusetts v. Environmental Protection Agency* (Docket No. 05–1120), the U.S. Supreme Court held in April of 2007 that the USEPA has authority to regulate greenhouse gases, and the USEPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme

Court ruled that the USEPA should be required to regulate CO₂ and other greenhouse gases as pollutants under Section 202(a)(1) of the federal Clean Air Act (CAA).

The USEPA issued a Final Rule for mandatory reporting of GHG emissions in October of 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufactures of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. The Final Rule was effective December 29, 2009, with data collection beginning January 1, 2010, and the first annual reports 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 (USEPA 2009). USEPA adopted a Final Endangerment Finding for the six defined GHGs on December 7, 2009. The Endangerment Finding is required before USEPA can regulate GHG emissions under Section 202(a)(1) of the CAA in fulfillment of the U.S. Supreme Court decision.

On May 13, 2010, the USEPA issued a Final Rule that establishes a common sense approach to addressing greenhouse gas emissions from stationary sources under the CAA permitting programs. In the first phase of the Rule (January 2011-June 2011), only sources currently subject to the New Source Review Prevention of Significant Deterioration (PSD) permitting program (i.e., those that are newly-constructed or modified in a way that significantly increases emissions of a pollutant other than GHGs) are subject to permitting requirements for their GHG emissions under PSD. For these projects, only GHG increases of 75,000 tons per year (tpy) CO₂e or more need to determine the Best Available Control Technology (BACT) for their GHG emissions. This final rule sets a threshold of 75,000 tons per year for GHG emissions. Similarly for the operating permit program, only sources currently subject to the program are subject to title V requirements for GHG. In the second phase of the rule (July 2011–June 2013) new construction projects that exceed a threshold of 100,000 tpy and modifications of existing facilities that increase emissions by at least 75,000 tpy will be subject to permitting requirements. Additionally, operating facilities that emit at least 100,000 tpy will be subject to Title V permitting requirements (USEPA 2010a). New and existing industrial facilities that meet or exceed that threshold will require a permit under the New Source Review PSD and Title V Operating Permit programs. This rule took effect January 2, 2011.

Climate Change Technology Program

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

■ State

California Air Resources Board

California ARB, a part of the California EPA (Cal/EPA), is responsible for the coordination and administration of both federal and state air pollution control programs. California ARB conducts research, sets the California Ambient Air Quality Standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. California ARB establishes

emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), various types of commercial equipment and sets fuel specifications to further reduce vehicular emissions.

California Assembly Bill 32 (AB 32)

In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006, focusing on reducing GHG in California. GHGs as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. AB 32 required California ARB to adopt rules and regulations directing state actions that would achieve greenhouse gas emissions equivalent to 1990 statewide levels by 2020. On or before June 30, 2007, California ARB was required to publish a list of discrete early action GHG emission reduction measures that would be implemented to 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.

California ARB published its Final Report for Proposed Early Actions to Mitigate Climate Change in California in October 2007. This report described recommendations for discrete early action measures to reduce GHG emissions as part of California's AB 32 GHG reduction strategy. Resulting from this are three new regulations proposed to meet the definition of "discrete early action greenhouse gas reduction measures," including the following: a low carbon fuel standard; reduction of HFC 134a emissions from non-professional servicing of motor vehicle air conditioning systems; and improved landfill methane capture (California ARB 2007b). California ARB estimates that by 2020, the reductions from these measures would be approximately 13 to 26 million metric tons (MMT) CO₂e.

Under AB 32, California ARB has the primary responsibility for reducing GHG emissions. In 2007, California ARB released a report, California 1990 GHG Emissions Level and 2020 Emissions Limit (California ARB 2007a), that determined the statewide levels of GHG emissions in 1990 to be 427 MMT CO₂e. Additionally, in December 2008, California ARB adopted the Climate Change Scoping Plan, which outlines the state's strategy to achieve the 2020 GHG limit. This Scoping Plan proposes a comprehensive set of actions designed to reduce overall greenhouse gas 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 (California ARB 2008).

California Code of Regulations Title 24

CCR Title 24, Part 6 (California's Energy Efficiency Standards for Residential and Non-residential Buildings) (Title 24), were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Because 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 CEC adopted Updated Title 24 Standards in 2008 and they went into effect on August 1, 2009. These changes affect Building Energy Efficiency Standards, in order to:

- Provide California with an adequate, reasonably priced, and environmentally sound supply of energy
- Respond to AB 32, the Global Warming Solutions Act of 2006, which mandates that California must 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 (IEPR) that concludes that the Standards are the most cost effective means to achieve energy efficiency, expects the Building Energy Efficiency Standards to continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the Standards in reducing energy related to meeting California's water needs and in reducing GHG emissions
- Meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of state building codes
- Meet the energy efficiency goals of Executive Order S-20-04, in which established California's Green Building Initiative; the Executive Order seeks to improve the energy efficiency of nonresidential buildings through aggressive standards toward the target of a 20 percent reduction in building energy use from a 2003 baseline by the year 2015

California Code of Regulations (CCR) Title 24, Part 11 (CALGreen Code)

CCR Title 24, Part 11 (California's Green Building Standard Code) (CALGreen), was adopted in 2010 and went into effect on January 1, 2011. CALGreen is the first statewide mandatory green building code and significantly raises the minimum environmental standards for construction of new buildings in California. In addition to requiring more efficient buildings, the mandatory provisions in CALGreen will reduce the use of VOC-emitting materials, strengthen water conservation efforts, and require construction waste recycling.

Executive Order S-3-05

California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, 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 percent below 1990 levels

The first California Climate Action Team (CCAT) Report to the Governor in 2006 contained recommendations and strategies to help meet the targets in Executive Order S-3-05. The 2010 California Action Team (CAT) CCAT Biennial Report, finalized in December 2010, expands on the policy oriented 2006 assessment. The new information detailed in the CCAT Biennial Report includes development of revised climate and sea-level projections using new information and tools that have become available in the last two years; and an evaluation of climate change within the context of broader social changes, such as land-use changes and demographic shifts (CCAT 2010). The action items in the report focus on the preparation of the Climate Change Adaptation Strategy, required by Executive Order S-13-08, described below.

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 should plan for future climate impacts. Executive Order S-13-08 calls for the implementation of four key actions to reduce the vulnerability of California to climate change:

- Initiate California's first statewide Climate Change Adaptation Strategy (CAS) that will 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 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 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 Natural Resources Agency 2009a).

Senate Bill 97

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 CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions" and directed the Resources Agency to certify and adopt these revised CEQA Guidelines by January 2010. The revisions were completed March 2010 and codified into the California Code of Regulations and became effective within 120 days pursuant to CEQA. The amendments provide regulatory guidance for the analysis and mitigation of the potential effects of GHG emissions.

Among the changes resulting from SB 97, CEQA Guidelines Section 15183.5 (Tiering and Streamlining the Analysis of GHG Emissions), was added to describe the criteria needed in a Climate Action Plan to allow for the tiering and streamlining of CEQA analysis of GHGs for subsequent development projects. Specifically, the section reads:

§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.

The provisions of Senate Bill 97 enacted in August 2007 as part of the state budget negotiations, direct the Office of Planning and Research (OPR) to propose CEQA Guidelines advising lead agencies how to mitigate the impacts of GHG emissions. OPR was directed to promulgate such guidelines by July 2009, and the Resources Agency was directed to adopt such guidelines by January 2010. The preliminary OPR guidelines, titled *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*, were published June 19, 2008, and guide the analysis in this EIR. On January 8, 2009, the OPR published preliminary draft regulatory guidance with respect to the analysis and mitigation of the potential effects of GHG emissions.

Senate Bill 375

Senate Bill 375 (SB 375), which establishes mechanisms for the development of regional targets for reducing passenger vehicle greenhouse gas emissions, was adopted by the State on September 30, 2008. On September 23, 2010, California ARB adopted the vehicular greenhouse gas emissions reduction targets that had been developed in consultation with the metropolitan planning organizations (MPOs); the targets require a 7 to 8 percent reduction by 2020 and between 13 to 16 percent reduction by 2035 for each MPO. SB 375 recognizes the importance of achieving significant greenhouse gas reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs, such as the Southern California Association of Governments

(SCAG), which includes Ventura County, is working 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. SCAG's reduction target for per capita vehicular emissions is 8 percent by 2020 and 13 percent by 2035 (California ARB 2010). The MPOs will prepare their first SCS according to their respective regional transportation plan (RTP) update schedule; to date, no region has adopted an SCS. The first of the RTP updates with SCS strategies are expected in 2012.

■ Regional

Ventura County Pollution Control District

The Ventura County Air Pollution Control District (VCAPCD) is the agency principally responsible for comprehensive air pollution control in the South Central Coast Air Basin. In order to provide GHG emission guidance to the local jurisdictions within the Ventura County Air Basin, the VCAPCD has organized a Working Group to develop GHG emission analysis guidance and thresholds. Currently the VCAPCD recommends the use of existing methodologies while it develops a guidance plan.

■ Local

City of Simi Valley Energy Reach Code

Simi Valley has adopted an Energy Reach Code, which adopts energy efficiency performance standards that reach higher than is required by Title 24 minimums. As part of the first green building ordinance in Ventura County, Simi Valley received CEC approval for the reach code in 2010. The main focus is on efficiency measures that are simple to achieve and enforce, and have the greatest influence on community sustainability. The Reach Code increases energy efficiency requirements for residential and nonresidential structures beyond Title 24, set at 10 and 15 percent respectively for new construction and substantial remodels.

Transportation Demand Management

Chapter 9-39 of the City of Simi Valley Development Code promotes trip reduction and alternative transportation methods (e.g., carpools, vanpools, public transit, bicycles, walking, park-and-ride lots, improvement in the balance between jobs and housing), flexible work hours, telecommuting, and parking management programs to address traffic increases from new development.

Ordinance 1142

The Water Conservation Program Ordinance (Ordinance 1142) will reduce water consumption within the City of Simi Valley through conservation, effective water supply planning, prevention of waste, and will maximize the efficient use of water within the City of Simi Valley. The Water Conservation Ordinance is designed to reduce water use in the City to at least 15 percent below the 2009 baseline. The City's website, www.simivalley.org/departments/public-works/water-conservation/-fsiteid-1, provides additional information on the City's water conservation efforts.

Ordinance 1167

The City is an early adopter of the CALGreen Building Code, which is intended to improve sustainability of the built environment and reduce GHG emissions from new construction. The City's adopting Ordinance 1167 goes further by including a CEC-approved energy reach code, additional landscape water conservation, and increased recycling. As energy efficiency standards increase the City will periodically re-evaluate their reach code for feasibility. The City's website at www.simivalley.org/departments/city-manager-s-office/live-green/green-building provides additional information on the City's green building efforts.

Proposed Simi Valley Climate Action Plan (SV-CAP)

As part of this General Plan update, the City has prepared a Climate Action Plan that developed a baseline GHG emissions inventory, a methodology for tracking and reporting emissions in the future, and recommendations for GHG reduction strategies as a foundation for these efforts. Chapter 6 of the General Plan Update, the Natural Resources Element, addresses a number of different natural resources within the City that must be managed to maintain their long-term benefits. Among these resources are energy and air quality (which affect GHG emissions). Implementing energy and air quality goals in the General Plan's Natural Resources Element will provide a more livable, equitable and economically vibrant community, and preserve the attributes of Simi Valley's unique location and quality lifestyle. The SV-CAP will implement the General Plan through a focus on the various goals and policies of the General Plan relative to greenhouse gas emissions. The plan is designed to ensure that the impact of future development on air quality and energy resources is minimized and that land use decisions made by the City and internal operations within the City are consistent with adopted state legislation.

4.7.4 Project Impacts and Mitigation

■ Analytic Method

The impact analysis for this project estimates and compares project GHG emissions with available data on statewide GHG emissions to determine whether the project's GHG emissions would be cumulatively considerable. The analysis also discusses characteristics of the project—energy efficiency measures, trip reduction features, etc.—which would help to reduce GHG emissions and achieve state GHG reductions targets. An inventory of the project's three most relevant GHG emissions (i.e., CO₂, CH₄, and N₂O) is presented below. The emissions of the individual gases were estimated and then converted to their CO₂ equivalents (CO₂e) in metric tons using the individually determined GWP of each gas.

The analysis methodology used for the inventory conservatively assumes that all emissions sources generated by development under the draft General Plan Update are new sources and that emissions from these sources are 100 percent additive to existing conditions. This is a standard approach taken for air quality analyses and represents a worst-case, "business as usual" scenario. The inventory does not take into account the effect that the emissions reducing features of the proposed project and the mitigation measures applied at the end of the analysis would have on the total emissions generated by the proposed project.

The GHG calculations by emission source follow the California Climate Action Registry (CCAR) General Reporting Protocol, version 3.1 (January 2009), Local Government Protocol, version 1.1 (May 2010), the Landscape Emissions Protocol, version 1.1 (Climate Action Reserve, March 2010) and California ARB's Mandatory GHG Reporting Regulations (Title 17, California Code of Regulations, Sections 95100 et seq.). These protocols are consistent with the methodology and emission factors endorsed by VCAPCD, California ARB, and USEPA or current industry standards and emission factors published by USEPA.

Construction Emissions

Construction of future new development and infill projects allowed by the General Plan Update would result in GHG emissions from the use of construction equipment. The General Plan Update would allow for development of new uses within the City; however, specific development plans for individual projects are unknown at this time. Since no individual development or infill projects have been identified in the General Plan Update, no specific construction-related emissions can be determined. In order to determine construction-related GHG emissions, specific information, including, but not necessarily limited to, the number of individual construction equipment that would be utilized, the amount of time that construction equipment would operate on a daily basis, and the amount and duration of grading and demolition activities, must be available. Typically, this is conducted during a project-level CEQA analysis. Such specific analysis would be conducted, as necessary, as individual development project applications are submitted to the City in the future. Therefore, due to the speculative nature of estimating construction emissions, no construction-related GHG emissions have been quantified with respect to the draft General Plan Update.

Operational Emissions

Operational emissions include both direct sources, such as vehicles, natural gas consumption for heating/cooling buildings, and indirect sources, such as water supply demand and power plants outside the incentive area that would supply the City's electricity. GHG emission estimates for operation of the proposed project are based on total build-out summaries under the General Plan Update. Data sources from various City, regional, and state agencies, as well as other service providers, were used to estimate Simi Valley's total greenhouse gas emissions. The sources include the City Departments of Environmental Services; Public Works; Community Services; the City Attorney's Office, Southern California Edison; the Southern California Gas Company; California ARB; Ventura County Air Pollution Control District; California Department of Transportation; Amtrak; the California Department of Motor Vehicles; California Department of Resources Recycling and Recovery; and Waste Management. In cases where specific historical or forecast data was not available, estimates were made by extrapolating from existing data. General estimate calculations and assumptions are compiled in Appendix C of this EIR. All of the contributors to greenhouse gas emissions (kilowatt-hours of electricity generated by fossil fuel combustion in power plants, natural gas in therms, vehicle travel in vehicle miles traveled, and solid waste in tons) are uniformly expressed as tons of CO₂e released into the atmosphere in a given year.

■ Thresholds of Significance

For the purposes of this EIR, impacts to climate change are considered significant by the City if implementation of the proposed General Plan would:

- Generate greenhouse gas emissions above the City of Simi Valley's 1990 emissions level of 1.2 MMT CO₂e, either directly or indirectly, that would have a significant impact on the environment
- Conflict with any plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of greenhouse gases

Neither the VCAPCD nor the CEQA Guidelines provides quantitative or qualitative thresholds of significance for greenhouse gas emissions. The CEQA Guideline Amendments, adopted in December 2011, state that each local lead agency must develop its own significance criteria based on local conditions, data, and guidance from public agencies and other sources.

For the purposes of this analysis and based on full consideration of the available information, compliance with AB 32 is used in evaluating the project's incremental contribution to global warming impacts. 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. Therefore, emissions above the City's 1990 GHG emissions of 1.2 MMT of CO₂e would be considered a significant impact. Additionally, the 2020 reduction target equates to a decrease of approximately 29 percent below the current BAU emissions (the anticipated 2020 emissions based on 2005 consumption and generation rates as well as emission factors). BAU is defined for this analysis as the anticipated emissions from a project not accounting for anticipated laws or project features that will reduce construction or operational emissions from the project.

■ General Plan Policies that Mitigate Potential Impacts on Global Climate Change

Policies and goals from the Community Development, Mobility and Infrastructure, Natural Resources, Community Services, and Safety and Noise Chapters that would mitigate potential impacts on biological resources include the following. All General Plan policies are followed by a set of numbers in parentheses. These numbers reference applicable measures that will be undertaken by the City to implement the policy.

Policy LU-1.2 **Development Location.** Limit development to lands within the Simi Valley City Urban Restriction Boundary (CURB), as shown in Figure LU-1, thereby protecting existing agriculture, open space, viewsheds, wildlife, and watersheds surrounding the City from development impacts and limiting urban sprawl. (*Imp A-1, A-2, LU-6, LU-10, LU-18*)

Policy LU-1.3 **Development Priorities.** Prioritize future growth as infill and redevelopment of existing developed areas re-using and, where appropriate, intensifying development of vacant and underutilized properties within the CURB. Allow for growth on the immediate periphery of existing development in limited designated areas, where this is guided by standards to assure seamless integration and connectivity with adjoining areas and open spaces. The Growth Diagram below

illustrates the locations in which new development will be permitted. (*Imp A-1, A-2, A-3, LU-6, LU-10, LU-18*)

- Policy LU-1.4 Growth Management.** Manage growth to assure that it does not exceed the limits of Simi Valley's Measure C, adopted in 2004, by the annual allocation of residential building permits, with priorities for the development of affordable housing. (*Imp A-1, A-2, A-3, LU-5, LU-18*)
- Policy LU-1.5 Development and Services Concurrency.** Work with applicable public entities and providers to assure that adequate public facilities are available at the time of occupancy. (*Imp A-1, A-2, A-3, LU-1, LU-2, LU-13, LU-18, ED-6, ED-8, M-1, NR-2*)
- Policy LU-2.1 Housing.** Provide opportunities for a full range of housing types, locations, and densities to address the community's fair share of regional housing needs and to provide market support to economically sustain commercial land uses in Simi Valley. The mix, density, size, and location of housing shall be determined based on the projected needs specified in the Housing Element, as amended periodically. (*Imp A-1, A-2, A-3, LU-1, LU-3, LU-4, LU-5, LU-10, LU-16, LU-18*)
- Policy LU-2.2 Retail Services.** Provide for, and encourage, the development of a broad range of uses in Simi Valley's commercial centers and corridors that reduce the need to travel to adjoining communities, and which subsequently capture a greater share of local spending. (*Imp A-1, A-2, A-3, LU-1, LU-3, LU-4, LU-16, LU-18, ED-9*)
- Policy LU-2.3 Employment Opportunities.** Provide for a broad spectrum of land uses that offer job opportunities for Simi Valley's residents, including commercial, office, industrial, and business parks. (*Imp A-1, A-2, A-3, LU-1, LU-3, LU-4, LU-15, LU-18, ED-9*)
- Policy LU-2.5 Community Services.** Provide a diversity of uses and services supporting Simi Valley's residents such as facilities for civic governance and administration, public safety (police), seniors and youth, community gatherings, and comparable activities. Work with external agencies to encourage the provision of services and facilities not under the City's jurisdiction, such as public schools, parks and recreation, fire protection, and quasi-public infrastructure. (*Imp A-1, A-2, A-3, LU-1, LU-4, LU-13, LU-18*)
- Policy LU-3.1 Primary Contributor to Urban Form.** Locate and design development to respect Simi Valley's environmental setting, concentrating development on the valley floor and configuring development to respect hillside slopes, topographic contours, and drainage corridors, when located in hillside areas. Figure LU-2 (Environmental Setting) depicts the key environmental elements that shape the City. (*Imp A-1, A-2, LU-1, LU-2, LU-3, LU-4, LU-5, LU-7, LU-8, LU-11, LU-17, LU-18, NR-1, NR-2, NR-3*)
- Policy LU-3.2 Citywide Development Pattern.** Provide for an overall pattern of land uses that promotes efficient development; minimizes the impact of traffic congestion; reduces transportation distances, energy consumption, air pollution, and greenhouse gas emissions; ensures compatibility between uses; protects the natural hillsides, major watercourses, and trees; enhances community livability and

public health; and sustains economic vitality. (*Imp A-1, A-2, LU-1, LU-2, LU-3, LU-4, LU-5, LU-6, LU-7, LU-8, LU-9, LU-10, LU-18, NR-1, NR-2, NR-3*)

- Policy LU-3.3 Connected Open Space Network.** Maintain and, where incomplete, develop a Citywide network of open spaces that is connected to and provides access for all neighborhoods and districts incorporating greenbelts, drainage corridors, parklands, bicycle and pedestrian paths, equestrian trails, and natural open spaces and coordinate with other agencies, such as Rancho Simi Recreation and Park District and Santa Monica Mountains Conservancy. (*Imp A-1, A-2, A-3, LU-1, LU-4, LU-8, LU-10, LU-13, LU-18, M-13, NR-1*)
- Policy LU-3.4 Organization of Places.** Maintain a development pattern of distinct residential neighborhoods oriented around parks, schools, and community meeting facilities that are connected with neighborhood-serving businesses. Provide business park/employment uses in centers and along the freeway corridor to minimize traffic congestion. (*Imp A-1, A-2, LU-1, LU-3, LU-4, LU-15, LU-18*)
- Policy LU-3.7 Building Relationship to Public Places.** Require buildings in principal commercial and mixed-use districts to be oriented toward the public realm through such features as location, incorporation of windows, avoidance of blank walls, articulation of building elevations fronting sidewalks and public spaces, and location of parking to the rear, side, or underground, as appropriate while minimizing parking in front of buildings. Priority shall be placed on locating parking underground or in structures. (*Imp A-1, A-2, LU-1, LU-3, LU-4, LU-11, LU-16, LU-18*)
- Policy LU-3.8 Plans for Cohesive Development.** Encourage the use of specific plans for residential, commercial, industrial, and mixed-use developments to provide for the cohesive and integrated development of large areas, complex or multi-parcel sites, areas with multiple property owners, and/or in areas of particular importance to the community. (*Imp A-1, A-2, LU-4, LU-18*)
- Policy LU-4.1 Preservation of Natural Features.** Maintain significant natural landmarks, such as prominent ridgelines visible from the valley floor, and other natural scenic features in their natural state, to the extent feasible. (*Imp A-1, A-2, A-3, LU-1, LU-2, LU-3, LU-4, LU-7, LU-8, LU-11, LU-18, NR-1, NR-2, NR-3*)
- Policy LU-4.4 Hillside Development.** Locate and design development to maintain the existing visual character of the hillsides as a natural backdrop. (*Imp A-1, A-2, LU-1, LU-2, LU-3, LU-4, LU-7, LU-8, LU-11, LU-18, NR-1, NR-2, NR-3*)
- Policy LU-4.5 Hillside Grading.** Minimize terrain disruption and design grading using generally accepted principles of civil engineering with the objective to blend the project into the natural topography. (*Imp A-1, A-2, LU-1, LU-2, LU-3, LU-4, LU-7, LU-18, NR-2, NR-3*)
- Policy LU-4.6 Hillside Development Density.** Maintain land having a slope of over 20 percent as permanent open space. Commercial and industrial development shall be limited to slopes of 10 percent or less, unless otherwise approved by a specific plan that justifies and provides appropriate design measures for the development of these areas, in which case development shall be limited to slopes

of 20 percent or less. (*Imp A-1, A-2, LU-1, LU-2, LU-3, LU-7, LU-8, LU-18, NR-1, NR-2, NR-3*)

- Policy LU-6.1 Scenic and Natural Areas.** Provide for the preservation of significant scenic areas and corridors, plant and animal habitat, riparian areas, and significant geologic features within the City. (*Imp A-1, A-2, A-3, LU-1, LU-2, LU-3, LU-4, LU-7, LU-8, LU-13, LU-18, NR-1, NR-2, NR-3*)
- Policy LU-6.2 Mature Trees.** Continue to sustain mature trees, which are an integral part of the City’s character. (*Imp A-1, A-2, A-3, LU-1, LU-2, LU-3, LU-4, LU-18, NR-2*)
- Policy LU-6.3 Creeks and Natural Drainages.** Maintain and improve the form and health of resources and habitat in the City’s natural drainages. Explore restoration of those that have been degraded or channelized, such as the Arroyo Simi, as feasible, while continuing to maintain stormwater conveyance and property protection requirements. (*Imp A-1, A-2, A-3, LU-1, LU-2, LU-3, LU-4, LU-18, NR-2*)
- Policy LU-8.1 Regulating Sustainable Development.** Implement the most current version of the California Green Building Standards Code with amendments and update periodically to reflect future amendments and require development projects, major renovations, and municipal structures to be consistent with these. (*Imp A-1, A-2, A-3, LU-1, LU-9, LU-18*)
- Policy LU-8.2 Sustainable Building Practices.** Promote sustainable building practices that utilize architectural design features, materials, interior fixtures and finishes, and construction techniques to reduce energy and water consumption, human exposure to toxic and chemical pollution, and disposal of waste materials. (*Imp A-1, A-2, LU-1, LU-9, LU-11, LU-18*)
- Policy LU-8.3 Existing Structure Reuse.** Encourage the retention, adaptive reuse, and renovation of existing buildings with “green” building technologies and standards. (*Imp A-1, A-2, LU-1, LU-9, LU-11, LU-18*)
- Policy LU-8.4 Sustainable Land Development Practices.** Promote land development practices that reduce energy and water consumption, pollution, greenhouse gas emissions, and disposal of waste materials incorporating such techniques as:
- a. Concentration of uses and design of development to promote walking and use of public transit in lieu of the automobile
 - b. Capture and re-use of stormwater on-site for irrigation
 - c. Management of wastewater and use of recycled water
 - d. Orientation of buildings to maximize opportunities for solar energy use, daylighting, and ventilation
 - e. Use of landscapes that protect native soil, conserve water, provide for wildlife, reduce green waste, and reduce the risk of wildfires
 - f. Use of permeable paving materials or reduction of paved surfaces
 - g. Shading of surface parking, walkways, and plazas
 - h. Recycling and/or salvaging for reuse of construction and demolition debris (*Imp A-1, A-2, LU-1, LU-2, LU-3, LU-4, LU-9, LU-10, LU-16, LU-18, NR-2*)

- Policy LU-8.5 Revitalization of Obsolete and Underused Properties.** Encourage use of redevelopment tools such as tax increment financing, consolidation of small parcels, joint public-private partnerships, and land clearance and resale, to facilitate revitalization of underused and obsolete commercial and industrial properties. (*Imp A-1, A-2, LU-10, LU-13, LU-18, ED-2*)
- Policy LU-8.6 Building Rehabilitation.** Encourage the rehabilitation of existing commercial facades and signage that are deteriorated or inconsistent with the intended character and quality of the City. (*Imp A-1, A-2, LU-4, LU-11, LU-13, LU-18, ED-2*)
- Policy LU-8.7 Housing Maintenance.** Encourage the continued high maintenance levels of the City's housing stock. (*Imp A-1, A-2, LU-12, LU-18*)
- Policy LU-8.8 Affordable Housing.** Target local funds to assist affordable housing developers in incorporating sustainable building and site design and features. (*Imp A-1, A-2, LU-9, LU-18*)
- Policy LU-8.9 Green Buildings.** Require all new construction and/or retrofitting of structures to be built to an identified green building standard. (*Imp A-1, A-2, LU-3, LU-9, LU-18*)
- Policy LU-9.1 Equitable Distribution of Uses and Amenities.** Strive to ensure that uses and amenities that foster livable and complete neighborhoods such as parks and community facilities are distributed equitably throughout the City. (*Imp A-1, A-2, A-3, LU-1, LU-2, LU-13, LU-18, NR-2*)
- Policy LU-9.3 Housing Type Distribution.** Promote an equitable distribution of housing types for all income groups throughout the City and promote mixed-income developments. (*Imp A-1, A-2, LU-1, LU-13, LU-18*)
- Policy LU-9.4 Jobs-Housing Balance.** Encourage a balance between job type, the workforce, and housing development to reduce the negative impacts of long commutes and provide a range of employment opportunities for all residents. (*Imp A-1, A-2, A-3, LU-1, LU-4, LU-9, LU-18*)
- Policy LU-10.3 Senior Housing.** Provide senior housing that is accessible to commercial services, health and community facilities, and public transit. (*Imp A-1, A-2, LU-1, LU-3, LU-13, LU-18*)
- Policy LU-10.4 Complete Neighborhoods.** Maintain, improve, and, where necessary, expand parklands and community facilities to serve and provide easy access from Simi Valley's neighborhoods. (*Imp A-1, A-2, A-3, LU-1, LU-4, LU-13, LU-18*)
- Policy LU-10.5 Walkable Neighborhoods.** Maintain sidewalks, parkways, street tree canopies, and landscaping throughout the residential neighborhoods to promote walking as an enjoyable and healthy activity and alternative to automobile use. (*Imp A-1, A-2, LU-1, LU-3, LU-4, LU-9, LU-11, LU-18, M-13*)
- Policy LU-10.6 Neighborhood Connectivity.** Maintain sidewalks or other means of pedestrian and bicycle connections to neighborhood commercial centers, parks, schools, work places, and other community activity centers. (*Imp A-1, A-2, LU-1, LU-3, LU-4, LU-11, LU-18, M-13*)

- Policy LU-10.7 Complete Streets.** Provide infrastructure consistent with the “Complete Streets” Program that accommodate multiple modes of transportation including the automobile, bicycle, pedestrian, and where appropriate, public transit. (*Imp A-1, A-2, A-3, LU-1, LU-3, LU-4, LU-11, LU-18, M-4, M-8, M-10*)
- Policy LU-11.1 Placement of Residential Structures.** Encourage the siting of residential units to preserve open space and natural resources while maintaining the overall density. (*Imp A-1, A-2, LU-1, LU-2, LU-4, LU-7, LU-8, LU-11, LU-18, NR-1, NR-2, NR-3*)
- Policy LU-11.2 Greenbelts.** Promote the use of greenbelts around and within residential projects or between residential and other land uses. (*Imp A-1, A-2, LU-1, LU-18*)
- Policy LU-11.3 Distribution of Density.** Concentrate residential development on the valley floor, with overall densities decreasing in the outlying areas, in consideration of the following principles:
- a. Density should decrease as distance from arterials and commercial shopping increases
 - b. Overall density and intensity of development should decrease as the slope increases
 - c. The minimum parcel size for areas designated as Open Space or over 20 percent slope shall be 40 acres (*Imp A-1, A-2, LU-3, LU-4, LU-7, LU-10, LU-18, NR-3*)
- Policy LU-11.4 Density in Outlying Areas.** Require that residential development in outlying areas, which is defined as new development located on the periphery of existing developed areas, be limited to single-family, detached dwelling units with a maximum of 7 units per acre, except for the following types of projects:
- a. Housing projects for senior citizens
 - b. Residential projects located on a parcel not visible from viewpoints from the valley floor and containing at least 25 percent of the units that are affordable for low-income and very low-income households that meet state housing law. In no event shall these exceptions allow development on the areas with over 20 percent slope. (*Imp A-1, A-2, LU-3, LU-7, LU-18, NR-3*)
- Policy LU-11.5 Density Transfer.** Direct residential development in outlying areas to less-steep slope areas through the use of density transfers to preserve areas designated as Open Space in a largely undeveloped state. (*Imp A-1, A-2, LU-3, LU-7, LU-18, NR-3*)
- Policy LU-14.2 Second Units.** Allow second units in single-family residential districts as required by state legislation. (*Imp A-1, A-2, LU-3, LU-5, LU-9, LU-10, LU-18*)
- Policy LU-14.3 Parks and Open Space Amenities.** Ensure that existing neighborhoods contain a diverse mix of parks and open spaces that are connected by trails, pathways, and bikeways and are within easy walking distance of residents. (*Imp A-1, A-2, LU-1, LU-3, LU-4, LU-10, LU-11, LU-18*)
- Policy LU-15.4 Streetscapes.** Provide ample public spaces and tree-lined sidewalks or pathways furnished with appropriate pedestrian amenities that contribute to comfortable

and attractive settings for pedestrian activity in multi-family neighborhoods. *(Imp A-1, A-2, LU-1, LU-3, LU-4, LU-11, LU-18, M-13)*

- Policy LU-16.1 Home Occupations.** Accommodate home occupation uses in residential neighborhoods provided that they have no significant traffic, parking, delivery, or other impacts associated with the business activity on the neighborhood. *(Imp A-1, A-2, LU-2, LU-3, LU-12, LU-18, NR-2)*
- Policy LU-17.1 Diversity of Uses.** Provide for, and encourage the development of, a broad range of uses in Simi Valley’s commercial centers and corridors that reduce the need to travel to adjoining communities, and capture a greater share of local spending. *(Imp A-1, A-2, LU-1, LU-3, LU-4, LU-9, LU-18)*
- Policy LU-17.3 Revitalization.** Promote the redevelopment of older commercial areas, allowing upgrades with exceptions from current Development Code standards as deemed necessary to achieve an economically feasible project that benefits the community, as long as all health and safety requirements are met. *(Imp A-1, A-2, A-3, LU-1, LU-3, LU-4, LU-18)*
- Policy LU-17.6 Traffic Impacts.** Plan commercial development to minimize traffic impacts, encourage pedestrian flow, and increase sales from shared foot traffic. *(Imp A-1, A-2, LU-1, LU-2, LU-9, LU-18, M-2, NR-2)*
- Policy LU-18.2 Architecture and Site Design.** Locate and design new development and existing buildings that are renovated, expanded, or remodeled in existing commercial centers and corridors to complement existing uses, as appropriate, and exhibit a high quality of architecture and site planning in consideration of the following principles:
- a. Seamless connections and transitions with existing buildings, in terms of building scale, elevations, and materials
 - b. Incorporation of signage that is integrated with the buildings’ architectural character and provides meaningful identification
 - c. Landscaping contributing to the appearance and quality, and reducing the heat-island effect, of development
 - d. Clearly delineated pedestrian connections between business areas, parking areas, and to adjoining neighborhoods and districts
 - e. Incorporation of plazas and expanded sidewalks to accommodate pedestrian, outdoor dining, and other activities *(Imp A-1, A-2, LU-1, LU-4, LU-11, LU-18)*
- Policy LU-18.4 Retail Streetscapes.** Maintain and, where deficient, improve street trees, plantings, furniture (such as benches, trash receptacles, newsracks, and drinking fountains), signage, public art, and other amenities that promote pedestrian activity in retail commercial districts. *(Imp A-1, A-2, LU-1, LU-4, LU-9, LU-11, LU-14, LU-18, M-13)*
- Policy LU-18.5 Connectivity to Neighborhoods.** Link commercial districts to adjoining residential neighborhoods and other districts, where appropriate, by well-designed and attractive pedestrian sidewalks and corridors. *(Imp A-1, A-2, LU-1, LU-4, LU-9, LU-11, LU-18, M-8, M-13)*

- Policy LU-18.6 Bicycle Facilities.** Encourage developers of commercial centers to incorporate facilities that promote customer and employee access by bicycles, such as secured storage, and showers and lockers for employees. (*Imp A-1, A-2, LU-1, LU-4, LU-9, LU-18*)
- Policy LU-19.1 Land Use Mix.** Allow for mixed-use districts that integrate housing with retail, office, entertainment, and public uses where the housing may be developed on the upper floors of multi-use buildings or located in stand-alone buildings on the project site. (*Imp A-1, A-2, LU-3, LU-4, LU-9, LU-16, LU-18*)
- Policy LU-19.2 Development Scale.** Establish standards to assure that a sufficient scale and footprint of any single use is achieved in mixed-use areas to establish a cohesive environment that minimizes impacts attributable to the adjacency of differing uses. This may define minimum parcel and building sizes, number of housing units, and/or nonresidential square footage, as well as relationships and setbacks among the uses. (*Imp A-1, A-2, LU-1, LU-3, LU-4, LU-16, LU-18*)
- Policy LU-19.3 Design.** Design mixed-use development projects to enhance pedestrian activity, including the following elements:
- a. Expanded sidewalks along building frontages and incorporation of a public plaza containing benches, landscaping, public art, directional signage, pedestrian-scaled lighting, and other amenities
 - b. Uses with outdoor seating, such as restaurants
 - c. Pedestrian corridors connecting parking areas with buildings that are clearly defined by paving materials, landscaping, lighting, and well-designed directional signage
 - d. Site landscaping that contributes to the aesthetic and economic value of the center and provides a tree canopy reducing the heat island effect and greenhouse gas emissions
 - e. Buildings oriented toward the street with parking located to the rear of the buildings, underground, or in structures (*Imp A-1, A-2, LU-1, LU-4, LU-9, LU-11, LU-16, LU-18*)
- Policy LU-19.4 On-Site Amenities.** Incorporate recreational areas and other pedestrian-scale amenities in mixed-use projects, such as benches, fountains, and landscaping, to support residents or contribute to their development within proximity of the project. (*Imp A-1, A-2, LU-1, LU-3, LU-4, LU-11, LU-16, LU-18*)
- Policy LU-19.5 Design Integration.** Integrate residential and nonresidential portions of mixed-use buildings through architectural design, development of pedestrian walkways, and landscaping. (*Imp A-1, A-2, LU-3, LU-4, LU-11, LU-16, LU-18*)
- Policy LU-19.6 Compatibility of Residential and Nonresidential Uses.** Design buildings that integrate housing with nonresidential uses to assure compatibility among uses and public safety, including separate accesses, fire suppression barriers, secured resident parking, noise insulation, and other similar elements. (*Imp A-1, A-2, LU-1, LU-3, LU-4, LU-11, LU-16, LU-18, S-6, N-1*)

- Policy LU-20.1 Diversity of Uses.** Provide for a variety of office, industrial, and research and development uses that offer job opportunities for Simi Valley’s residents. *(Imp A-1, A-2, LU-3, LU-15, LU-18)*
- Policy LU-20.2 Supporting Uses.** Encourage the integration of compatible uses in business park and industrial districts that serve the needs of employees and reduce their need to travel off-site during the workday, including such uses as financial services, business services, restaurants, and health clubs. *(Imp A-1, A-2, LU-1, LU-3, LU-15, LU-18)*
- Policy LU-20.3 Location.** Locate industrial and business park areas near major transportation routes such as freeways, railways, or arterials to reduce traffic on residential streets while providing efficient transportation of supplies and workers. *(Imp A-1, A-2, LU-3, LU-4, LU-15, LU-18)*
- Policy LU-20.4 Childcare Facilities.** Encourage major business park and industrial development projects to incorporate childcare facilities on site. *(Imp A-1, A-2, LU-1, LU-3, LU-15, LU-18)*
- Policy LU-20.5 Bicycle Facilities.** Encourage major business park and industrial projects to incorporate facilities that promote employee access by bicycles such as secured storage, showers, and lockers. *(Imp A-1, A-2, LU-1, LU-3, LU-9, LU-15, LU-18)*
- Policy LU-20.6 Site Planning and Design.** Require new and renovated multi-tenant business and industrial park development projects to be designed to accommodate safe and convenient access by vehicles, pedestrians, and bicycles and exhibit a high-quality, attractive, and cohesive environment, which may be characterized by the following:
- a. Location of buildings around common plazas, courtyards, walkways, and open spaces, including amenities for the comfort of employees, such as outdoor seating areas
 - b. Incorporation of landscape that enhances a park-like setting along property edges, building frontages, and to break the visual continuity of surface parking lots
 - c. Common signage program for tenant identification and directions
 - d. Readily observable site access, entrance drives, building entries, and pedestrian paths through parking lots, to create a safe haven and access for pedestrians and minimize conflict between service vehicles, private automobiles, and pedestrians *(Imp A-1, A-2, LU-1, LU-3, LU-4, LU-11, LU-15, LU-18)*
- Policy LU-21.1 Adequate Community-Supporting Uses.** Seek to ensure that adequate public and private community-supportive facilities and services, such as schools, parks, and public gathering places, are located throughout the City. *(Imp A-1, A-2, LU-1, LU-3, LU-4, LU-13, LU-18)*
- Policy LU-21.3 Co-Location of Community Facilities.** Promote the co-location of parks, schools, libraries, health services, recreation facilities, and other community facilities to support resident needs and leverage limited resources. *(Imp A-1, A-2, LU-9, LU-13, LU-18)*

- Policy LU-21.6 Care Facilities.** Encourage the development of senior daycare facilities, assisted living facilities, hospice, child care, and other care facilities in areas where they can be located, designed, and managed to assure compatibility with and the safety of adjoining uses and in accordance with state legislation. (*Imp A-1, A-2, LU-1, LU-3, LU-13, LU-18*)
- Policy LU-21.8 Parks and Open Spaces.** Seek to expand the City’s parklands, greenways, and open spaces as land becomes available and coordinate with other agencies, such as Rancho Simi Recreation and Park District and Santa Monica Mountains Conservancy. (*Imp A-1, A-2, LU-3, LU-8, LU-13, LU-18, NR-1*)
- Policy LU-21.9 Design of Civic Buildings and Spaces.** Lead by example, demonstrating design excellence in new buildings and properties developed by the City, such as civic facilities and public parking structures, by incorporating sustainable building practices, providing a high level of architectural quality, designing landscape areas that are water efficient, and including other features that demonstrate exceptional standards for development. (*Imp A-1, A-2, LU-3, LU-9, LU-11, LU-13, LU-18*)
- Policy LU-21.12 Landscaping of Infrastructure.** Work with applicable City departments and external agencies to assure that major valley-floor improvements, such as the railroad, arroyo channels, major roadways and the freeway, are well landscaped. (*Imp A-1, A-2, LU-11, LU-13, LU-18*)
- Policy LU-22.1 Open Space Buffer.** Encourage agricultural or recreational uses in buffer areas between Simi Valley and adjacent communities. (*Imp A-1, A-2, LU-1, LU-3, LU-6, LU-8, LU-17, LU-18, NR-1*)
- Policy LU-23.1 Mixed-Use Development.** Encourage the improvement and higher economic use of properties along the Tapo Street corridor as a series of distinct centers and nodes containing a mix of retail, office, and residential uses, as follows:⁵
- a. Area A
 - Vertical mixed-use development, with commercial on the ground floor and residential on the upper floors
 - General Commercial
 - Office Commercial
 - Very High Density Residential
 - b. Area B
 - Mixed-use office and residential uses
 - Office Commercial
 - Very High Density Residential
 - c. Area C
 - Two- and three-story vertical mixed-use, with retail commercial on the ground floor and residential on the upper floors
 - General Commercial

⁵ Any land use listed for each subarea may be developed within that area. Refer to Land Use Element, Section 5 (Land Use Designations) for description of land use categories and permitted development densities (units per acre) and floor area ratio (FAR) for each specified land use category.

d. Area D

- Three-story vertical mixed-use commercial and residential
- Retail Commercial
- Office Commercial
- Very High Density Residential uses (*Imp A-1, A-2, LU-1, LU-3, LU-4, LU-9, LU-10, LU-16, LU-18*)

Policy LU-23.2 Business Park Node. Promote the infill and enhancement of properties in Area E, south of Los Angeles Avenue, for business park and supporting uses, as the southern anchor of the Tapo Street corridor. (*Imp A-1, A-2, LU-3, LU-15, LU-18*)

Policy LU-23.3 Mixed-Use Village. Promote the redevelopment of underutilized commercial properties east of Tapo Street in Area D as a pedestrian-oriented, mixed-use “village environment,” where buildings are clustered along and front sidewalks, plazas, and open spaces. (*Imp A-1, A-2, LU-3, LU-4, LU-9, LU-16, LU-18*)

Policy LU-23.5 Streetscape Improvements. Improve sidewalks and crosswalks with distinctive paving materials and pedestrian-oriented amenities, and develop bikeways, where feasible, to improve the connectivity of the properties with one another and adjoining residential neighborhoods. (*Imp A-1, A-2, LU-1, LU-4, LU-11, LU-18, M-13*)

Policy LU-24.1 Mixed-Use Development. Encourage the improvement and higher economic use of properties along the Los Angeles Avenue and First Street corridors as a series of distinct centers and nodes containing a mix of retail, office, business park, and residential uses, as follows:

a. Area A

- Three or more stories mixed-use buildings, with ground floor retail and/or office uses and residential on the upper floors
- General Commercial
- Very High Density Residential

b. Area B

- Vertical mixed-use developments to include housing, commercial, and entertainment uses
- General Commercial
- Very High Density Residential

c. Area C

- Mixed-use development with commercial on the ground floor and residential on the upper floors
- General Commercial
- Commercial Office uses of two-three stories
- Very High Density Residential (*Imp A-1, A-2, LU-1, LU-3, LU-4, LU-10, LU-16, LU-18*)

Policy LU-24.2 Transit-Oriented Development. Promote the development of a new Metrolink transit station to serve the western portion of Simi Valley and intensify development within its proximity to foster transit use and reduce automobile trips, energy consumption, air pollution, and greenhouse gas emissions.

Incorporate retail uses in the ground floor of street-facing elevations of parking structures developed to serve transit riders and or office uses that are designed for continuity with development on adjoining parcels. (*Imp A-1, A-2, A-3, LU-3, LU-9, LU-10, LU-16, LU-18, ED-9, M-15*)

- Policy LU-24.3 Mountain Gate Mixed-Use Village.** Promote the redevelopment of the Mountain Gate commercial center as a pedestrian-oriented mixed-use “village environment,” where buildings are clustered along and front sidewalks, plazas, and open spaces, capitalizing on the development of a Metrolink station. (*Imp A-1, A-2, LU-3, LU-4, LU-9, LU-10, LU-16, LU-18, ED-1, ED-9*)
- Policy LU-24.5 Streetscape Improvements.** Improve sidewalks and crosswalks with distinctive paving materials and pedestrian-oriented amenities, and develop bikeways, where feasible, to improve the connectivity among properties. (*Imp A-1, A-2, LU-4, LU-9, LU-14, LU-18, M-13*)
- Policy LU-25.1 Uses and Connectivity.** Accommodate High Density and Very High Density Residential development projects in this area to be connected by sidewalks, crosswalks, and bikeways to mixed-use development along and north of Los Angeles Avenue and the Arroyo Simi. (*Imp A-1, A-2, LU-3, LU-4, LU-9, LU-10, LU-11, LU-14, LU-18*)
- Policy LU-27.1 Office and Business Park Uses.** Promote the development of vacant and underutilized properties for office and business park uses that provide job opportunities for Simi Valley’s residents, while capitalizing on its proximity to a potential Metrolink transit station. Consider locating the highest densities within walking distance of the transit station. (*Imp A-1, A-2, LU-3, LU-10, LU-15, LU-18, ED-9*)
- Policy LU-27.3 Connectivity to Transit.** Promote the development of sidewalks and bikeways connecting and providing direct access between the business park and a potential Metrolink transit station serving the western portion of Simi Valley. (*Imp A-1, A-2, LU-1, LU-3, LU-9, LU-14, LU-18*)
- Policy LU-28.1 High Density Residential Corridors.** Accommodate the development of High Density Residential uses, up to three stories in height, between California Avenue and Pacific Avenue, in Area A. (*Imp A-1, A-2, LU-3, LU-9, LU-10, LU-18*)
- Policy LU-30.1 Business Park Enhancement.** Promote the infill and enhancement of properties in Area A for business park development with improved pedestrian access to support the adjacent transit oriented development area. (*Imp A-1, A-2, LU-3, LU-15, LU-18*)
- Policy LU-30.2 Mixed-Use Development and Transit-Oriented Uses.** Promote the development of a mix of business park, commercial, and multi-family residential uses in proximity to the Metrolink Station. Accommodate mixed-use projects in any of the following areas:
- a. Area B
 - Vertical mixed-use with residential located above ground floor retail or office uses
 - General Commercial

b. Area C

- Vertical mixed-use with residential located above ground floor retail or office uses
- General Commercial
- Commercial Office (*Imp A-1, A-2, LU-3, LU-4, LU-9, LU-10, LU-16, LU-18*)

- Policy LU-30.3 Transit Village.** Locate and design development adjacent to the Metrolink station in Area C to create a cohesive and distinctly identifiable transit village. Parking should be accommodated in a structure. (*Imp A-1, A-2, LU-1, LU-3, LU-4, LU-9, LU-11, LU-16, LU-18*)
- Policy LU-30.5 Very High Density Residential Development.** Promote the development of Very High Density Residential uses in Area D to support the adjacent transit-oriented development area and assist in the City's efforts to achieve its regional fair share housing allocation. (*Imp A-1, A-2, LU-3, LU-9, LU-10, LU-18*)
- Policy M-1.1 Comprehensive Mobility System.** Establish a diverse transportation system that provides mobility options for the community, including adequate roads, transit service, bike paths, pedestrian walkways, and commuter rail services. (*Imp A-1, A-2, LU-18, M-1*)
- Policy M-1.2 Integrated Multi-Modal System.** Provide an integrated transportation system that supports the land use plan set forth in the Land Use Element. (*Imp A-1, A-2, LU-18, M-1, M-8, M-10, M-13, M-15*)
- Policy M-1.3 Complete Streets.** Accommodate and balance the needs of all users of the transportation system including pedestrians, bicyclists, transit users, freight, and motor vehicle drivers through all phases of transportation and development projects so that all users can travel safely within the various public rights-of-way. (*Imp A-1, A-2, LU-18, M-4, M-8*)
- Policy M-1.4 Roadway Design Elements.** Incorporate, where practical, complete streets design elements into projects including sidewalks and other measures to improve pedestrian safety, median and intersection curbing treatments, better bus stop placement, traffic-calming measures, bicycle accommodations, and treatments for disabled travelers to improve safety. (*Imp A-1, A-2, LU-18, M-2, M-4, M-8, M-10, M-13, M-15*)
- Policy M-2.1 State Route 118 Expansion.** Support Caltrans in finding financial assistance for, and the expeditious construction of, additional permanent lanes in each direction of State Route 118 within the City and for other local freeway improvements, and promote and support interim freeway improvements and management to alleviate congestion. (*Imp A-1, A-2, LU-18, ED-6, M-12*)
- Policy M-2.2 Integration of Transportation Systems with the Region.** Maintain a working relationship with regional and surrounding local agencies, to implement systems that serve the needs of regional travelers in a way that minimizes impacts on Simi Valley's local street network. (*Imp A-1, A-2, LU-18, M-12*)

- Policy M-2.3** **Regional Consistency.** Maintain consistency between the City of Simi Valley Master Plan of Streets and the Ventura County Regional Roadway Network. *(Imp A-1, A-2, LU-18, M-12)*
- Policy M-2.4** **Regional Traffic Mitigation.** Participate in programs (Congestion Management Program, Growth Management Program, etc.) to reduce regional traffic congestion. *(Imp A-1, A-2, LU-18, M-12)*
- Policy M-2.5** **Intersection Improvements.** Work collaboratively with regional agencies to help improve the capacity at intersections in the City that connect to regional facilities to improve traffic flows along major roadways. *(Imp A-1, A-2, LU-18, M-1, M-12)*
- Policy M-3.1** **Street Character.** Design roadways, pedestrian areas, walkways, street name signs and utilities in applicable outlying areas to provide for low maintenance costs, safe and adequate drainage, and passage of vehicles, pedestrians, and bicyclists. Drought-tolerant natural landscaping should be used in parkways adjacent to open space areas. *(Imp A-1, A-2, LU-18, M-1, M-4)*
- Policy M-5.1** **Traffic Control Design.** Design traffic control measures to ensure City streets and roads function with safety and efficiency, including separate left- or right-turn lanes to improve safety and alleviate traffic congestion or excessive delays. *(Imp A-1, A-2, LU-18, M-5)*
- Policy M-5.2** **Monitor Traffic Conditions.** Monitor traffic conditions and optimize traffic signal operations and coordination on an ongoing basis. *(Imp A-1, A-2, LU-18, M-5)*
- Policy M-5.3** **Advanced Signal Technology.** Implement advanced signal and intersection technologies that improve traffic flow and optimize traffic signal timing and coordination to reduce travel time and delay along major corridors. *(Imp A-1, A-2, LU-18, M-5)*
- Policy M-6.1** **Current Traffic Data.** Monitor traffic conditions on an ongoing basis as necessary to comply with the City’s Congestion Management Program. *(Imp A-1, A-2, A-3, LU-18, M-5)*
- Policy M-6.2** **Roadway Maintenance.** Carry out roadway maintenance programs that inspect, repair, and rehabilitate pavement surfaces in order to preserve the quality of City streets and thoroughfares. *(Imp A-1, A-2, LU-18, M-1)*
- Policy M-6.3** **Improvements to Reflect Changing Traffic Conditions.** Consider additional improvements in areas with operational issues identified by monitoring traffic conditions, such as intersections with heavy turn volumes. *(Imp A-1, A-2, LU-18, M-1, M-5)*
- Policy M-6.4** **Railroad Grade Crossings.** Encourage the railroad entities to continue to improve their railroad grade crossing surfaces and safety devices to minimize crossing delay and street maintenance. *(Imp A-1, A-2, LU-18, M-12)*
- Policy M-7.1** **Intelligent Transportation Systems (ITS) Program and Implementation.** Create and implement ITS programs and infrastructure improvements that will reduce peak-hour traffic volumes and prioritizes needs. Implement ITS measures to achieve cost-effective improvements in transportation system performance and operations. *(Imp A-1, A-2, LU-18, M-1, M-5)*

- Policy M-7.2** **Traffic Management Devices.** Secure state-of-the-art traffic management devices, such as synchronized traffic signals. *(Imp A-1, A-2, LU-18, M-1, M-5)*
- Policy M-7.3** **Traffic Signal Operations.** Improve traffic signal operations by optimizing signal timing, interconnecting signalized intersections along arterial streets, and installing computerized master traffic signal control systems in intensively utilized areas. *(Imp A-1, A-2, LU-18, M-1, M-6)*
- Policy M-8.4** **Accommodate Alternative Modes.** Condition discretionary development to minimize traffic impacts by incorporating sidewalks and bicycle pathways, bicycle racks and lockers, ridesharing programs, transit improvements (bus turnouts, shelters, benches), transportation demand measures, and/or transit subsidies for employees or residents of the proposed development. *(Imp A-1, A-2, LU-1, LU-18, M-2)*
- Policy M-9.1** **Neighborhood Transportation System.** New development that proposes or is required to construct street improvements shall develop a transportation network that provides for well-connected neighborhoods wherein local streets are designed to discourage through traffic, but that encourage residents to travel to schools, parks, commercial centers, etc. without driving. *(Imp A-1, A-2, LU-18, M-1, M-2, M-8, M-9, M-10, M-13, M-16)*
- Policy M-10.5** **Parking Provisions.** Ensure that adequate parking is provided for existing and future uses while considering shared parking opportunities, TDM plans, and availability of alternate modes of travel, based on the site's proximity to transit. *(Imp A-1, A-2, LU-18, M-2, M-3)*
- Policy M-10.6** **Public-Private Partnerships.** Consider public-private partnerships to meet the City's parking demand in areas where it may be desirable for example to remove on-street parking to modify street frontages, increase transit parking opportunities, or provide mixed-use/transit-oriented development opportunities. *(Imp A-1, A-2, LU-18, M-2, M-3)*
- Policy M-10.7** **Parking and Shared Parking Area.** Support measures that help to reduce the space required for parking and parking demand. This may encompass such techniques as shared parking opportunities, automated parking facilities, and flex vehicles in mixed-use, transit-oriented, and pedestrian-oriented areas throughout the City. *(Imp A-1, A-2, LU-18, M-3)*
- Policy M-11.1** **Transportation Demand Management (TDM).** Utilize and promote TDM measures to encourage and create incentives for the use of alternative travel modes, reduce vehicle miles traveled, disperse peak traffic, and better utilize the existing transportation infrastructure. *(Imp A-1, A-2, LU-18, M-9, M-11)*
- Policy M-11.2** **Alternative Transportation Modes.** Promote and encourage the use of alternative transportation modes, such as ridesharing, carpools, van pools, public transit, bicycles, and walking; and provide facilities that support such alternative modes. *(Imp A-1, A-2, LU-18, M-9, M-11)*
- Policy M-11.3** **Airport Shuttles.** Work with area transit providers to develop and promote a transportation system that serves the Los Angeles International Airport and the Glendale-Pasadena-Burbank Airport. *(Imp A-1, A-2, LU-18, M-11, M-12)*

- Policy M-11.4 Demand Reduction Programs.** Work with area businesses to develop programs that promote the use of multiple-occupancy vehicle programs for shopping, business, and other uses to reduce vehicle miles traveled. (*Imp A-1, A-2, LU-18, M-11*)
- Policy M-11.5 Transportation Demand Management (TDM) Programs.** Encourage existing major employers to develop and implement TDM programs to reduce peak period trip generation such as the use of flex time, staggered working hours, high occupancy company-sponsored vehicles, ride-sharing programs, and any other means to lessen peak-hour commuter traffic. (*Imp A-1, A-2, LU-18, M-11*)
- Policy M-11.6 Transportation Demand Amenities.** Encourage major employers to provide transit subsidies, bicycle facilities (including changing/shower facilities), alternative work schedules, ridesharing, telecommuting, work-at-home programs, employee education, and preferential parking for carpools/vanpools. (*Imp A-1, A-2, LU-18, M-11*)
- Policy M-12.1 Bicycle Master Plan.** Maintain and update the City's Bicycle Master Plan to determine desired improvements to the City's bicycle network and plan, including the Arroyo Simi Greenway, and prioritize improvements for orderly implementation coordinated with the capital improvement program. (*Imp A-1, A-2, LU-18, M-10*)
- Policy M-12.2 Bicycle Usage.** Promote bicycling as an option for short trips and allow bicycles to connect to mass transit. (*Imp A-1, A-2, LU-18, M-9*)
- Policy M-12.3 Bicycle Facilities.** Incorporate bicycle and pedestrian facilities in the design plans for new streets and highways and, where feasible, in plans for improving existing roads. (*Imp A-1, A-2, LU-18, M-1, M-4, M-8, M-13*)
- Policy M-12.4 Regional Bikeway System.** In cooperation with the adjacent cities and the Ventura County Transportation Commission, plan and provide a system of bicycle lanes and trails within Simi Valley, including the Arroyo Simi Greenway, that links the City to the surrounding region. (*Imp A-1, A-2, LU-18, M-8, M-10, M-12*)
- Policy M-12.5 Bicycle Access.** Require new development projects on existing and potential bicycle routes to provide bicycle and pedestrian access to and through the project and to construct links to adjacent uses where appropriate. (*Imp A-1, A-2, LU-1, LU-18, M-2*)
- Policy M-12.6 Bicycle Network Connections.** Provide a continuous bicycle network, including the Arroyo Simi Greenway, that connects community facilities and other public and private buildings to each other, to the street, and to transit facilities. (*Imp A-1, A-2, LU-1, LU-18, M-2, M-10*)
- Policy M-12.7 Bikeway Amenities.** Require that new development projects (e.g., employment centers, educational institutions, and commercial centers) provide bicycle-support facilities, such as bicycle racks and storage facilities, to promote bicycle use. (*Imp A-1, A-2, LU-1, LU-3, LU-18, M-2*)

- Policy M-12.8 Bicycle Parking.** Coordinate with transit operators to provide for secure short- and long-term bicycle parking at primary transit stations. *(Imp A-1, A-2, LU-18, M-12, M-15)*
- Policy M-13.1 Transit.** Provide alternative forms of public and private transit and give routing, scheduling and planning for work force, youth, handicapped, senior citizens and shoppers a priority. *(Imp A-1, A-2, LU-18, M-9, M-12, M-15)*
- Policy M-13.3 Transit Frequency.** Support increased frequency transit service and capital investments to serve high-density employment, commercial, residential, or mixed-use areas and activity centers. *(Imp A-1, A-2, LU-18, M-6, M-9, M-12, M-15)*
- Policy M-13.4 Transit Priority Measures.** Consider improvements in transit efficiency and travel times by implementing transit priority measures to help bypass congested areas, which may include transit signal priority, queue bypass lanes, and exclusive transit lanes. *(Imp A-1, A-2, LU-18, M-9, M-12, M-15)*
- Policy M-13.5 Transit Support Facilities.** Participate in efforts to develop transit support facilities, including park-and-ride lots, bus stops, and shelters. *(Imp A-1, A-2, LU-18, M-9, M-12, M-15)*
- Policy M-13.6 Multi-Modal Transit.** Promote a variety of transit services including rail, enhanced buses, express buses, local buses, and school buses to meet the needs of residents, workers, and visitors. *(Imp A-1, A-2, LU-18, M-9, M-12, M-15)*
- Policy M-13.7 Interconnected Transit System.** Create an interconnected transportation system that allows a shift in travel from private passenger vehicles to alternative modes, including public transit, ride sharing, car-sharing, bicycling, and walking. Before funding transportation improvements that increase vehicle miles traveled, consider alternatives such as increasing public transit or improving bicycle and pedestrian travel routes. *(Imp A-1, A-2, LU-18, M-9, M-12, M-15)*
- Policy M-13.8 Transit System Review and Interjurisdictional Cooperation.** Work with the Ventura County Transit Commission to ensure the full coordination of the City's municipal transit system with other transit systems in adjacent areas. Work collaboratively with regional agencies and adjacent jurisdictions to improve transit service, accessibility, frequency, and connectivity resulting in increased ridership and fewer personal automobile trips. *(Imp A-1, A-2, LU-18, M-9, M-12, M-15)*
- Policy M-13.9 Second Train Station Location.** Work with Union Pacific Railroad (UPRR) and Metrolink to open a west side railroad station in the vicinity of Mountain Gate Plaza when it is shown to be cost effective. *(Imp A-1, A-2, LU-18, M-9, M-12, M-15)*
- Policy M-13.10 Transit Services for Special Needs Populations.** Support efforts to increase accessible transit services and facilities for the elderly, disabled, and other transportation disadvantaged persons. *(Imp A-1, A-2, LU-18, M-9, M-12, M-15)*
- Policy M-13.11 Demand-Responsive Service.** Support the provision of demand-responsive service (e.g., paratransit) and other transportation services for those unable to use conventional transit. *(Imp A-1, A-2, LU-18, M-9, M-12, M-15)*

- Policy M-13.12 Development Contributions.** Require developer contributions for transit facilities and improvements and programs adopted by the City. (*Imp A-1, A-2, LU-18, M-2*)
- Policy M-13.13 Development Review.** Development projects should provide for transit right-of-way needs to offset impacts of the development on the Simi Valley transit system. (*Imp A-1, A-2, LU-18, M-2*)
- Policy M-13.14 Bus Turnouts.** Provide bus turnouts in new development projects when located on established bus routes. (*Imp A-1, A-2, LU-18, M-2*)
- Policy M-14.1 Pedestrian Safety.** Design and maintain sidewalks along all roadways, streets, and intersections to emphasize pedestrian safety and comfort through a variety of street design and traffic management solutions. (*Imp A-1, A-2, LU-18, M-1, M-2, M-13*)
- Policy M-14.3 Streetscape Enhancements.** Update or prepare Design Guidelines that foster the enhancement of streets, sidewalks, and other public rights-of-way, including the Arroyo Simi Greenway, with amenities such as lighting, street trees, benches, plazas, public art, or other measures to encourage walking. (*Imp A-1, A-2, LU-18, M-13*)
- Policy M-14.5 Pedestrian Network—Cohesiveness.** Develop a cohesive pedestrian network of public sidewalks and street crossings that makes walking a convenient and safe way to travel. (*Imp A-1, A-2, LU-18, M-8, M-9, M-13*)
- Policy M-14.6 Pedestrian Network—Connections.** Provide a continuous pedestrian network that connects community facilities and other public and private buildings to each other, to the street, and to transit facilities. (*Imp A-1, A-2, LU-18, M-8, M-9, M-13*)
- Policy M-14.10 Safe Routes to Schools.** Work with local school officials in the development, review, and implementation of a Safe Route to Schools Program that includes identification of design and operational elements along designated student routes to and from schools for both new development and existing areas in the City, including the Arroyo Simi Greenway. Incorporate these elements into the development and review of street, development, improvement, and maintenance plans in those areas. (*Imp A-1, A-2, LU-18, M-14*)
- Policy M-15.2 Truck Impacts and Deliveries.** Minimize noise and other impacts of truck traffic, deliveries, and staging in residential and mixed-use neighborhoods. (*Imp A-1, A-2, LU-1, LU-2, LU-18, M-2*)
- Policy IU-1.7 Recycled Water.** Construct and develop infrastructure that provides for recycled water service throughout the community. (*Imp A-1, A-2, LU-18, IU-1, IU-4*)
- Policy IU-1.10 Efficient Irrigation Systems.** Require that water-efficient irrigation systems be installed for all private and City landscaping and parkways. (*Imp A-1, A-2, LU-18, IU-1, IU-12, IU-13*)
- Policy IU-1.11 Irrigation System Timing.** Require that public and private irrigation systems use weather sensors to facilitate optimum irrigation timing. Utilize technology to monitor and enforce restrictions on the timing of irrigation to reduce water consumption. (*Imp A-1, A-2, LU-18, IU-12, IU-13*)

- Policy IU-2.2** **Recycled Water Master Plan.** Expand the Recycled Water Master Plan to explore the feasibility of installing infrastructure to provide recycled water for nonpotable uses such as landscape irrigation and fire fighting. (*Imp A-1, A-2, LU-18, IU-4*)
- Policy IU-3.3** **Water Conservation.** Require that wastewater flows be minimized in existing and future developments through water conservation and recycling efforts. (*Imp A-1, A-2, LU-18, IU-12*)
- Policy IU-4.6** **Conservation of Open Space Areas.** Conserve undeveloped open space areas and drainage channels as practical for the purpose of protecting water resources and water quality in the City’s watersheds. (*Imp A-1, A-2, LU-18, LU-8, IU-6, IU-13*)
- Policy IU-5.3** **Diversion of Waste.** Require recycling, composting, and waste separation to reduce the volume and toxicity of solid wastes sent to landfill facilities, with the objective of diverting 50 percent of non-hazardous waste through source reduction, reuse, and recycling. (*Imp A-1, A-2, LU-18, IU-7, IU-8*)
- Policy IU-5.6** **Composting and Green Waste Recycling Programs.** Sponsor solid waste educational programs on backyard waste composting and grass recycling (i.e., mulching grass clippings back into the lawn). (*Imp A-1, A-2, LU-18, IU-7, IU-8*)
- Policy IU-5.7** **Recycling and Reuse of Construction Wastes.** Require recycling and reuse of construction wastes, including recycling materials generated by the demolition and remodeling of buildings, with the objective of diverting 85 percent of construction wastes through source reduction, reuse, and recycling. (*Imp A-1, A-2, LU-18, IU-8, IU-12*)
- Policy IU-5.8** **Methane Monitoring and Control.** Promote methods for methane monitoring, control, and recapture in landfills and other sustainable strategies to reduce the release of greenhouse gas (GHG) emissions from waste disposal or management sites and to generate additional energy such as electricity. (*Imp A-1, A-2, LU-18, IU-7*)
- Policy IU-5.9** **Educational Programs.** Sponsor public educational programs regarding the benefits of solid waste diversion and recycling and encourage residents and businesses to redistribute reusable materials (e.g., at garage sales or materials exchanges). (*Imp A-1, A-2, LU-18, IU-8*)
- Policy IU-6.3** **Energy Conservation.** Install energy efficient appliances and alternative energy infrastructure such as photovoltaic panels (solar power panels) on all City facilities. (*Imp A-1, A-2, LU-18, IU-1, IU-10, NR-6*)
- Policy IU-6.4** **Renewable Energy.** Promote the installation and construction of renewable energy systems and facilities such as wind, solar, hydropower, geothermal, and biomass facilities where appropriate. (*Imp A-1, A-2, LU-18, IU-10, NR-6*)
- Policy IU-6.5** **Photovoltaic Panels for Private Projects.** Continue to provide incentives for the installation of solar energy panels on private development. (*Imp A-1, A-2, LU-18, IU-10, NR-6*)
- Policy IU-6.6** **Photovoltaic Panels for Public Projects.** Satisfy some or all of the City’s electrical power needs through the installation of photovoltaic panels (solar power

panels). These panels could be located on parking structures and roofs. (*Imp A-1, A-2, LU-18, IU-10, NR-6*)

- Policy IU-6.7 Energy Efficiency Audits.** Conduct energy efficiency audits of existing buildings by evaluating, repairing, and readjusting heating, ventilation, air conditioning, and lighting systems. (*Imp A-1, A-2, LU-18, IU-10, NR-6*)
- Policy IU-6.8 Education.** Continue to promote energy conservation measures and options to all residents, businesses, consultants, contractors, etc., through a variety of methods including newsletters, brochures, and the City’s website. (*Imp A-1, A-2, LU-18, IU-10, NR-6*)
- Policy NR-1.1 Open Space Preservation and Buffer Zone.** Protect, conserve, and maintain the open space, hillside, and canyon areas that provide a buffer zone around the City’s urban form, serve as designated habitat for sensitive species, and provide recreation opportunities for residents and visitors. (*Imp A-1, A-2, LU-8, LU-18, NR-1*)
- Policy NR-1.3 Partnerships to Fund Open Space Protection.** Establish partnerships with public and private conservation agencies such as the Rancho Simi Recreation and Park District, Santa Monica Mountains Conservancy, Mountains Recreation and Conservation Authority, and the Nature Conservancy, adjoining cities, and non-governmental organizations to maximize funding for open space land acquisition and preservation opportunities. (*Imp A-1, A-2, LU-8, LU-18, NR-1, NR-13*)
- Policy NR-1.4 Tierra Rejada Greenbelt.** Maintain the Tierra Rejada Greenbelt located to the west of the Simi Valley City limits, which serves as an important visual, biological, and open space resource separating and defining a distinct edge for urbanized development. Additionally, support the County of Ventura efforts to reduce development density within the Greenbelt. (*Imp A-1, A-2, LU-8, LU-18, NR-1, NR-13*)
- Policy NR-1.5 Development Regulations.** Amend the Development Code as necessary to provide effective preservation of open space areas. (*Imp A-1, A-2, LU-7, LU-8, LU-18, NR-1, NR-4*)
- Policy NR-1.6 Open Space for Wildlife Habitat.** Preserve open space in its natural form. Prioritize preservation of open space that can support Sensitive, Endangered, and Protected species, as defined by the county, state, and federal governments, as part of a contiguous system that allows the movement of wildlife from one habitat area to another. (*Imp A-1, A-2, LU-8, LU-18, NR-1*)
- Policy NR-1.7 Tools to Preserve Open Space.** Maximize the protection of open space through the following actions:
- City land use, development and zoning regulations
 - Fee-title dedications associated with new private developments
 - Mitigation requirements for loss of habitat areas
 - Development agreements that maintain open space in private developments
 - Establishment of conservation easements
 - Easement acquisition that retains open space

- Tax sale, donation, life estate, eminent domain, and leaseback arrangements
(*Imp A-1, A-2, LU-1, LU-2, LU-7, LU-8, LU-18, NR-1, NR-2, NR-4, NR-5*)
- Policy NR-1.8** **Density Transfer.** In lieu of providing open space, allow concentrated development and limit development to low density residential or low intensity recreational uses for more effective protection of open space and environmental resources. (*Imp A-1, A-2, LU-1, LU-7, LU-18, NR-4, NR-5*)
- Policy NR-1.9** **Restoration of Degraded Areas.** Require replanting of vegetation and remediation of associated erosion in conjunction with requested land use approvals in hillside areas. (*Imp A-1, A-2, LU-1, LU-2, LU-18, NR-2, NR-3, NR-5*)
- Policy NR-1.11** **Arroyo Simi.** Enhance and conserve the Arroyo Simi and its tributaries as a natural resource for scenic and passive recreational enjoyment by the community. (*Imp A-1, A-2, LU-8, LU-18, NR-1, NR-8*)
- Policy NR-2.1** **Tree Preservation.** Encourage the preservation of trees and native vegetation in development projects. Require that new development utilize creative land planning techniques to preserve any existing healthy, protected trees to the greatest extent possible. (*Imp A-1, A-2, LU-1, LU-7, LU-18, NR-4, NR-5*)
- Policy NR-3.1** **Maintenance of Natural Topography.** Preserve hills, ridgelines, canyons, bluffs, significant rock outcroppings, and open space areas surrounding the City as a visual resource, and locate buildings and utility infrastructure to minimize alteration of natural topography. (*Imp A-1, A-2, LU-2, LU-8, LU-18, NR-1, NR-2*)
- Policy NR-3.3** **Location and Design of Developments.** Require development within visually sensitive areas to minimize impacts to scenic resources and to preserve unique or special visual features, particularly in hillside areas, through the following:

 - Creative site planning
 - Integration of natural features into the project
 - Appropriate scale, materials, and design to complement the surrounding natural landscape
 - Clustering of development so as to preserve open space vistas and natural features
 - Minimal disturbance of topography
 - Creation of contiguous open space networks (*Imp A-1, A-2, LU-1, LU-18, NR-5*)
- Policy NR-4.1** **Water Conservation.** Establish water conservation goals and benchmarks for the next 20-year period. Establish auditing methods to evaluate the extent of success in meeting goals as well as the effectiveness of conservation programs and technology. (*Imp A-1, A-2, LU-18, IU-2, NR-9*)
- Policy NR-4.3** **Water Conservation Measures.** Require water conservation measures/devices that limit water usage for all new construction projects and major alterations to existing facilities, including public facilities. These measures should include the use of water-efficient landscaping and irrigation, stormwater capture, efficient

appliances and fixtures, and use of “gray water” for irrigation. (*Imp A-1, A-2, LU-7, LU-18, IU-2, NR-4, NR-9*)

- Policy NR-4.4 Partnerships for Conservation.** Explore partnerships with other public agencies (such as the Simi Valley Unified School District, Rancho Simi Recreation and Park District, Ventura County Watershed Protection District) to reduce water consumption. (*Imp A-1, A-2, LU-18, NR-13*)
- Policy NR-4.5 Water Efficient Landscaping.** Require that drought-tolerant landscaping be installed for all private and City landscaping and parkways. (*Imp A-1, A-2, LU-7, LU-18, NR-4*)
- Policy NR-4.6 Irrigation Timing.** Require that public and private irrigation be done at optimum times of the day, such as early mornings or late afternoon, and use weather sensors to facilitate optimum irrigation. (*Imp A-1, A-2, LU-7, LU-18, NR-4*)
- Policy NR-4.7 Monitoring System.** Adopt state-of-the-art water monitoring systems to remotely monitor the City’s water usage, leaks, and ruptures. (*Imp A-1, A-2, LU-18, IU-1, NR-12*)
- Policy NR-4.8 Infrastructure Upgrades.** Continue to upgrade the City’s water infrastructure to minimize water leakage and ensure adequate supply for residents and businesses. (*Imp A-1, A-2, LU-18, IU-1, IU-2, NR-9, NR-12*)
- Policy NR-4.9 Funding.** Explore methods to provide financial support for water conservation efforts. (*Imp A-1, A-2, LU-18, IU-2, NR-9*)
- Policy NR-5.2 Protect Open Space Areas and Water Resources.** Conserve undeveloped open space areas and drainage channels for the purpose of protecting water resources in the City’s watershed. For new development and post-development runoff, control sources of pollutants and improve and maintain urban runoff water quality through stormwater protection measures consistent with the City’s National Pollution Discharge Elimination System (NPDES) Permit. (*Imp A-1, A-2, LU-8, LU-18, IU-6, NR-1, NR-10*)
- Policy NR-5.5 Arroyo Simi.** Restore and protect the Arroyo Simi as a natural resource that contributes to recharge and filtration capability for the watershed. (*Imp A-1, A-2, LU-8, LU-18, NR-1, NR-8*)
- Policy NR-7.1 Monitor Climate Action Plan (CAP).** Monitor progress toward meeting the emissions reduction targets identified in the City’s Climate Action Plan (CAP) which complies with statewide greenhouse gas (GHG) reduction goals as established by AB32. Revise and update the CAP, as necessary. (*Imp A-1, A-2, LU-2, LU-9, LU-18, NR-2, NR-11*)
- Policy NR-7.2 Public Education.** Continue to promote energy conservation measures and options to all residents, businesses, consultants, contractors, etc., through newsletters, brochures, and the City’s website. (*Imp A-1, A-2, LU-18, IU-10, NR-6*)
- Policy NR-7.3 Energy Award Program.** Develop an annual energy conservation award program for new sustainable development in the community that demonstrates

leadership in energy efficiency and involves innovation in conservation applications. (*Imp A-1, A-2, LU-9, LU-18, IU-10, NR-6, NR-11*)

- Policy NR-7.4 Solar-Ready Buildings.** Require that, where feasible, all new buildings be constructed to allow for easy, cost-effective installation of solar energy systems in the future addressing such elements as: optimal roof orientation, clear access, adequacy of structural support, and installation of electrical conduit and plumbing. (*Imp A-1, A-2, LU-7, LU-9, LU-18, NR-4, NR-11*)
- Policy NR-8.1 Green Building Retrofit.** Promote the retrofitting of existing structures with green building technologies/practices and encourage municipal structures under renovation to be built to a green energy standard such as LEED. (*Imp A-1, A-2, LU-18, NR-7*)
- Policy NR-8.2 Community Education for Green Building Practices.** Create a program to educate and assist residents and businesses in increasing their knowledge and awareness of Green Building Practices to increase energy performance for existing structures. (*Imp A-1, A-2, LU-9, LU-18, IU-2, IU-10, NR-6, NR-7, NR-9, NR-11*)
- Policy NR-8.3 Urban Heat Island Effects.** Seek to reduce the “heat island” effect of developed areas by promoting such features as white roofs, light colored hardscape/paving materials, and shade trees, and by reducing the extent of unshaded areas in parking lots. (*Imp A-1, A-2, LU-2, LU-18, NR-2, NR-7*)
- Policy NR-8.4 Solar Homes Partnership.** Require that projects of five or more housing units participate in the California Energy Commission’s new solar homes partnership, which provides rebates to developers who offer solar power in at least 50% of new units, or a program with similar provisions. (*Imp A-1, A-2, LU-7, LU-18, NR-4*)
- Policy NR-9.3 Improved Technology.** Promote and implement state and federal regulations that improve transportation technology, vehicle mileage performance, and cleaner fuels. (*Imp A-1, A-2, LU-7, LU-18, IU-10, NR-4, NR-6*)
- Policy NR-9.4 Contractors.** Require that government contractors minimize greenhouse gas emissions in building construction, operations, etc. For example, contractors can use low or zero-emission vehicles and equipment. (*Imp A-1, A-2, LU-7, LU-18, NR-4, NR-7*)
- Policy NR-9.5 Dust and Particulate Control.** Adopt procedures to regulate and minimize particulate emissions from paved and unpaved roads, parking lots, and building construction activities. (*Imp A-1, A-2, LU-2, LU-18, NR-2*)
- Policy NR-9.6 Construction and Operation.** Evaluate development project applications using the procedures and thresholds established in the most recent version of the Ventura County Air Quality Assessment Guidelines as published by the Ventura County Air Pollution Control District and ensure that projects incorporate all applicable construction and operation mitigation measures contained therein. (*Imp A-1, A-2, LU-2, LU-18, NR-2, NR-13*)
- Policy PR-1.1 Park and Recreation System.** Support RSRPD in its efforts to develop, operate, and maintain a system of parks, recreational facilities, and open space areas

throughout Simi Valley that provide opportunities for both passive and active recreation and leisure activities. (*Imp A-1, A-2, LU-18, PR-1*)

- Policy PR-1.5 Conservation of Natural and Historical Assets.** Support, encourage, and participate in enhancing community aesthetics by conserving natural assets such as mature trees, fragile animal habitats, endangered species, and historically significant sites, as part of park and facilities development. (*Imp A-1, A-2, LU-18, NR-1, NR-2, PR-1*)
- Policy PR-1.12 Recycled Water.** Encourage RSRPD to utilize recycled water for irrigating landscaping at new and existing parks and golf courses, when infrastructure is available to do so. (*Imp A-1, A-2, LU-18, IU-4, PR-1*)
- Policy PR-1.13 Arroyo Simi Greenway Recreational Amenities.** Provide for the development of new parks and the expansion of existing parks, including rest areas and other amenities, as part of the Arroyo Simi Greenway system to link these resources to provide recreation, pedestrian, and visual amenities. (*Imp A-1, A-2, LU-18, PR-4*)
- Policy PR-1.19 Funding.** Work with RSRPD to fund the costs of acquisition and development of parks and recreation facilities through land dedication, Quimby Act funds, federal and state grants, in lieu fees, development impact fees, and other funding sources, as appropriate. (*Imp A-1, A-2, LU-14, LU-18, ED-6, ED-8, PR-1, PR-5*)
- Policy PR-3.1 Multi-Use Trails.** Provide trails where visitors desiring access to nature are permitted travel using various options (e.g., on foot, on bike, on horseback, with dogs on leashes, etc.), when travel options are compatible and are environmentally sustainable, and offer a variety of experiences/challenge levels. (*Imp A-1, A-2, LU-18, PR-6*)
- Policy PR-3.8 Sustainable Trails.** Consider and implement sustainable, best practices for the location and design of trails including the use of long-lasting natural materials and permeable surfaces; reduction or avoidance of chemicals; construction that follows natural terrain and minimizes intrusion on natural habitat; prevention of run-off into habitat or streams to minimize erosion; and care in scheduling maintenance activities to minimize disturbance of nesting and breeding of sensitive species. (*Imp A-1, A-2, LU-18, NR-2, NR-7, PR-6*)
- Policy CS-4.2 Joint Use Facilities.** Encourage libraries to be sited and consolidated with other community facilities such as civic centers, community centers, and educational facilities. (*Imp A-1, A-2, LU-18, CS-1*)
- Policy S-7.2 Fire Department Review.** Continue review by the Ventura County Fire Protection District of all proposed structures and developments within the community to mitigate potential wildland fire loss and damage. (*Imp A-1, A-2, LU-18, S-2, S-5, S-7*)
- Policy S-7.4 Fire Protection Systems.** Encourage existing commercial and multiple-unit residential uses to install fire protection systems, as required by the state, building, and fire codes for new development, and encourage the use of automatic sprinkler systems in existing structures. (*Imp A-1, A-2, LU-18, S-6*)

- Policy S-7.5 Fuel Modification.** Ensure that new development complies with fuel modification requirements of the Ventura County Fire Protection District, as applicable. (*Imp A-1, A-2, LU-18, S-5*)
- Policy S-7.6 Post-Fire Debris Flow.** Develop and implement a comprehensive approach to mitigate damage and loss due to post-fire debris flow. (*Imp A-1, A-2, LU-18, S-8*)
- Policy S-7.7 Public Education.** Promote public education of residents regarding site design, landscaping, location of materials, and brush landscaping to prevent and reduce fire hazards. (*Imp A-1, A-2, LU-18, S-3*)
- Policy S-8.1 Floodplain Requirements.** Regulate new development and protect existing development within flood prone areas in accordance with City, state, and federal building codes. Follow federal requirements to reduce damage and loss due to flooding and to maintain the City's eligibility under the National Flood Insurance Program (NFIP). (*Imp A-1, A-2, LU-18, S-5, S-6, S-9*)
- Policy S-8.3 Flood Prevention Design.** Require that new development incorporates sufficient measures to mitigate flood hazards, including the design of on-site drainage systems linking with Citywide storm drainage, gradation of the site so that runoff does not impact adjacent properties or structures on the site, and elevation of any structures above the localized flooding elevation. (*Imp A-1, A-2, LU-18, S-5, S-6*)
- Policy S-8.4 Critical Facilities.** Prohibit the location of critical facilities within an area subject to significant inundation during any flood event unless the facility can be adequately protected from inundation, and provide for updating of critical facilities within these areas when practical. (*Imp A-1, A-2, LU-18, S-6*)
- Policy S-8.6 New Development.** Ensure that new development is properly located and designed to avoid flooding, and require upgrades and improvements of the existing storm drain system for on-site retention to handle the increased runoff generated from the development site. (*Imp A-1, A-2, LU-18, S-5*)
- Policy S-8.7 Preservation of Flood Plains.** Require preservation of flood plains as open space, when practical, as the preferred alternative to development or channelization in project environmental impact reports (EIRs). (*Imp A-1, A-2, LU-8, LU-18, S-6*)

■ Less-Than-Significant Impacts

- Impact 4.7-1** Implementation of the General Plan Update could contribute to GHG emissions in the State of California and could conflict with any applicable plans, policies or regulations of an agency adopted for the purpose of reducing the emissions of GHGs. However, these impacts would be reduced to less than significant levels through the implementation of the General Plan goals and policies and compliance with relevant local, state, and federal regulations. This is a *less-than-significant* impact.

In California, the most common GHG pollutant is CO₂, which constitutes approximately 84 percent of all GHG emissions. CO₂ emissions in California are mainly associated with in-state fossil fuel combustion and with fossil fuel combustion from in and out-of-state power plants supplying electricity

to California. Other activities that produce CO₂ emissions include mineral production, waste combustion, and land use changes that reduce vegetation as well as water distribution to southern California.

Implementation of the General Plan Update could generate GHGs through the construction and operation of new residential, commercial, or office facilities and the related increase in vehicle traffic within the City. GHG emissions from the proposed project would specifically arise from individual construction projects and from sources associated with individual project operation, including direct sources such as motor vehicles, natural gas consumption, solid waste handling/treatment, and indirect sources such as electricity generation.

Construction Emissions

Construction of future new development and infill projects would result in GHG emissions from the use of construction equipment, import of construction materials, and the generation of demolition and/or construction debris. As discussed above, the details of these future construction activities are unknown at this time and cannot be quantified without details relating to demolition requirements, construction time frames, and total size of projects. In order to determine construction-related GHG emissions, specific information, including but not necessarily limited to, the number of individual construction equipment that would be utilized, the amount of time that construction equipment would operate on a daily basis, and the amount and duration of grading and demolition activities, must be available. Typically, this is conducted during a project-level CEQA analysis. Therefore, determining potential constructing emissions under the General Plan Update would be speculative. As such, development projects resulting from implementation of the General Plan Update would be required to undergo separate environmental review, at which time GHG emissions would be quantified. However, several policies contained within the General Plan Update would serve to reduce the effects of construction activities within the City on climate change. Policy NR-9.3 promotes implementation of state and federal regulations that improve transportation technology, vehicle mileage performance, and cleaner fuels. Policy NR-9.4 requires that government contractors minimize greenhouse gas emissions in building construction, operations, etc. For example, contractors can use low or zero-emission vehicles and equipment. Policy NR-9.5 adopts procedures to regulate and minimize particulate emissions from paved and unpaved roads, parking lots, and building construction activities. Policy NR-9.6 requires that projects incorporate all applicable construction and operational mitigation measures contained in the most recent version of the Ventura County Air Quality Assessment Guidelines as published by the Ventura County Air Pollution Control District. Many of these measures would serve to reduce GHG emissions from construction and operation of new development with the City. General Plan Infrastructure Policy IU-6.5 (Photovoltaic Panels for Private Projects) requires incentives for providing solar energy panels on private development. Additional General Plan Land Use Policy LU-8.2 (Sustainable Building Practices), Policy LU-8.4 (Sustainable Land Development Practices), and Policy LU-8.9 (Green Buildings) would further reduce GHG emissions from construction.

Operational Emissions

Total land use build-out under the General Plan Update was determined for the proposed project (identified in Table 3-1 [Existing, Proposed, and Net Difference in Land Uses] in Chapter 3 [Project

Description] of this Draft EIR). Carbon dioxide (CO₂), primarily from vehicle exhaust and consumption of natural gas for heating, is the major constituent in GHG emissions within the City of Simi Valley. Emissions from methane and nitrous oxide are the other major GHG elements in the City. Methane is directly generated from natural gas and petroleum systems, landfilled waste generation, and wastewater treatment, while nitrous oxide results predominantly from motor vehicle use.

Implementation of the General Plan update would generate greenhouse gases through the construction and operation of new residential and commercial uses. Greenhouse gas emissions from the proposed project would specifically arise from sources associated with project operation, including direct sources such as motor vehicles, and natural gas consumption, and indirect sources such as solid waste handling and treatment and electricity generation. Emissions from these operational sources are estimated and presented below.

In 2020, approximately 1.5 MMT CO₂e would be emitted within Simi Valley following a business-as-usual (BAU), unmitigated scenario. BAU refers to continued operations and development of the City according to 2006 policies, without the inclusion of proposed or recently adopted sustainability initiatives described in Chapter 4 of the SV-CAP. Table 4.7-7 (2020 Unmitigated Net Total Community Emissions by Land Use Category) and Table 4.7-8 (2020 Unmitigated Net Total Community Emissions by Source) summarize the net 2020 Citywide emissions of CO₂e as broken down by land use category and source.

<i>Land Use Category</i>	<i>Metric tons of CO₂e</i>
Municipal	20,640
Residential	679,007
Nonresidential	815,441
Total	1,515,088

<i>Emissions Source</i>	<i>Metric tons of CO₂e</i>
Energy	532,211
Solid Waste	23,853
Landscape Emissions	460
Transportation	958,564
Total	1,515,088

In 2030, Simi Valley is projected to emit approximately 1.8 MMT CO₂e from a business-as-usual (BAU) standpoint. Table 4.7-9 (2030 Unmitigated Net Total Community Emissions by Land Use Category) and Table 4.7-10 (2030 Unmitigated Net Total Community Emissions by Emissions Source) summarize the

net 2030 Citywide emissions of CO₂e as broken down by land use category and emissions source. A detailed breakdown of 2030 emissions by category is available in Appendix F of the SV-CAP.

Table 4.7-9 2030 Unmitigated Net Total Community Emissions by Land Use Category	
<i>Land Use Category</i>	<i>Metric tons of CO₂e</i>
Municipal	22,375
Residential	765,032
Nonresidential	1,051,019
Total	1,838,426

Table 4.7-10 2030 Unmitigated Net Total Community Emissions by Source	
<i>Emissions Source</i>	<i>Metric tons of CO₂e</i>
Energy	698,921
Solid Waste	23,973
Landscape Emissions	489
Transportation	1,115,044
Total	1,838,426

The 1.5 MMT CO₂e of GHG emissions for 2020 is an estimated increase of 328,962 MT CO₂e above 2006 levels and 308,597 MT CO₂e above 1990 levels following BAU projections. GHG emissions for 2030 are estimated at 1.8 MMT CO₂e, which is an increase of 652,300 MT CO₂e and 631,935 MT CO₂e over 2006 and 1990 levels, respectively.

Simi Valley is anticipated to show an increase of 25 percent in residential land use and 45 percent in non-residential land use between 2006 and 2030. A combination of factors, including a slow growth rate, projected infill development of the City, and the reduction in methane released from the landfill by using it to generate electricity, are the primary reasons that the increase in emissions is modest (approximately 34 percent) between 1990 and 2030. Table 4.7-11 (Unmitigated Net Total Community Emissions by Year) summarizes the total BAU community emissions.

Over the last few years, Simi Valley has implemented several programs that have already begun to reduce the City’s GHG emissions and will continue to provide reductions throughout the implementation of the General Plan update and the SV-CAP. While these measures are currently in place, they were not in place during the baseline inventory year. The proposed General Plan update would provide for targeted development in an established urban area. This, along with the implementation of state-mandated regulations and the GHG-reduction measures in the SV-CAP, would result in the reduction of GHG emissions.

Table 4.7-11 Unmitigated Net Total Community Emissions by Year

<i>Land Use Category</i>	<i>Metric tons of CO₂e</i>			
	<i>1990</i>	<i>2006</i>	<i>2020 BAU</i>	<i>2030 BAU</i>
Municipal	15,492	16,907	20,640	22,375
Residential	636,441	595,536	679,007	765,032
Nonresidential	554,558	573,683	815,441	1,051,019
Total	1,206,491	1,186,126	1,515,088	1,838,426
% Increase from 1990	—	-1.72%	20.37%	34.37%

SOURCE: Atkins, Draft Simi Valley Climate Action Plan (2011).

In 2020, the City is projected to emit a total of 1.5 MMT CO₂e without the incorporation of reduction measures. With incorporation of the reduction measures, the City emissions for 2020 are estimated to be reduced to 1.1 MMT CO₂e, which is below the 1990 levels of 1.2 MMT CO₂e. Emission reductions estimated for year 2020 were based on the accomplishments likely to be achieved as indicated in the measures detailed in Section 4 of the SV-CAP.

Table 4.7-12 (Reduced 2020 Net Total Community Emissions by Land Use Category) and Table 4.7-13 (Reduced 2020 Net Total Community Emissions by Emissions Source) summarize the net reduced 2020 City emissions of CO₂e as broken down by land use category and emissions sources. Reductions in emissions are attributed to state, community, and municipal measures as outlined in the SV-CAP.

Table 4.7-12 Reduced 2020 Net Total Community Emissions by Land Use Category

<i>Land Use Category</i>	<i>Metric tons of CO₂e</i>
Municipal	15,521
Residential	496,998
Nonresidential	601,458
Total	1,113,977

Table 4.7-13 Reduced 2020 Net Total Community Emissions by Emissions Source

<i>Emissions Category</i>	<i>Metric tons of CO₂e</i>
Energy	406,315
Solid Waste	18,203
Landscape Emissions	460
Transportation	689,000
Total	1,113,977

Beyond AB 32's 2020 target, Executive Order S-0-05 calls for a reduction of 80 percent below 1990 statewide emissions by 2050. For Simi Valley, this means reducing emissions to less than 241,298 MT CO₂e. In order for the City to stay on course to meet this goal, the City would need to reduce emissions to below 823,084 MT CO₂e by 2030, even when California's population is anticipated to grow by 12 percent between 2020 and 2030.

While this level of reduction is not currently feasible, increases in technological advances and continued strengthening of existing policies will be the key to achieving these future reductions. The following are examples of ways in which future emissions can potentially be reduced at the state or local level:

- Instituting a regional or national cap-and-trade system to further limit emissions from transportation, electrical, natural gas, and industrial sources
- Achieving a 40 percent fleet-wide passenger vehicle reduction
- Increase the use of renewable energy
- Further reducing the carbon intensity of transportation fuels
- Increasing energy efficiency and green building efforts
- Continued implementation of land use and transportation policies to further lower VMT and shift travel modes

Although the full impact of these measures is not known, it is anticipated that technological advances and continued increases in efficiency requirements could provide an additional reduction of 30 percent or more between 2020 and 2030 at the state level. As indicated in the SV-CAP, the City will commence planning for the post-2020 period in 2017, 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, the City will have implemented the first two (2) phases of the SV-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. The City will then be able to take the local, regional, state, and federal context into account. Further, commencing planning in 2017 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 2030, 2040, 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 City will adopt the new plan by January 1, 2020.

The 1,113,977 MT CO₂e of reduced GHG emissions for 2020 is an estimated decrease of 401,112 MT CO₂e from 2020 BAU and a decrease of 92,514 MT CO₂e from 1990 levels. Table 4.7-14 (Net Total Emissions by Year) shows a comparison between the 1990, 2006, and 2020 levels, including the 2020 BAU and reduced emissions.

<i>Land Use Category</i>	<i>Metric tons of CO₂e</i>			
	<i>1990</i>	<i>2006</i>	<i>2020 BAU</i>	<i>2020 Reduced</i>
Municipal	15,492	17,214	20,640	15,521
Residential	636,441	595,536	679,007	496,998
Nonresidential	554,558	573,376	815,441	601,458
<i>Total</i>	<i>1,206,491</i>	<i>1,186,126</i>	<i>1,515,088</i>	<i>1,113,977</i>

Reduction measures provided in the SV-CAP will ensure that Simi Valley meets the AB 32 reduction target of meeting 1990 levels by 2020. Such programs include strengthening the City's existing ordinances as well as implementing energy efficiency programs, solar rebates, conservation programs, incentives, and ordinances. In some cases, implementation will require the cooperation of other agencies, private businesses, and residents. The success of these measures will be tracked using indicators and targets such as those described in the SV-CAP. Even with the anticipated growth, the slow growth rate, and modernization of vehicle fleets, combined with the continued implementation of the proposed R2, R3, M2, and M3 measures, will reduce GHG emissions by approximately 401,112 MT CO₂e. The proposed project, with implementation of the SV-CAP, would achieve the goals of AB 32.

The SV-CAP shows that by 2030 there is a potential to reduce emissions by an additional 30 percent statewide, which if achieved at the City level, would reduce emissions in 2030 to approximately 553,924 MT CO₂e annually which is significantly below the linearly projected goal of 823,084 MT CO₂e. Because implementation of the proposed General Plan update and SV-CAP will reduce GHG emissions to below AB 32 thresholds, the proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs and the impact would be *less than significant*.

■ Significant and Unavoidable Impacts

There are no significant and unavoidable impacts from implementation of the General Plan Update with regard to green house gases and/or climate change.

■ Cumulative Impacts

Due to the nature of assessment of GHG emissions and the effects of global climate change, impacts can currently only be analyzed in a cumulative context. Therefore, the analysis provided above includes the analysis of both the project and cumulative impacts. Impacts are considered *less than significant*.

4.7.5 References

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