

## 4.6 GREENHOUSE GAS EMISSIONS

This section of the EIR analyzes the potential contribution of the SGCP to greenhouse gas emissions (GHGs). The City received a letter dated September 21, 2016, from the SCAQMD on the Notice of Preparation of the SGCP Draft EIR. That letter, included in Appendix A of this EIR, requests that the City provide SCAQMD with a copy of the Draft EIR, but it also requests the City refer to and use SCAQMD's 1993 Air Quality Handbook and guidance for purposes of conducting air quality and GHG emissions analysis. The letter further requests the City, as Lead Agency, analyze all phases of the proposed project, and requests that the City use SCAQMD's recommended regional significant thresholds and localized significance thresholds (LSTs) using SCAQMD's guidance for LSTs. In addition, the letter requests the City perform a mobile source health risk assessment based on SCAQMD's guidance, and use CARB's handbook for Air Quality and Land Use as a general guide for evaluating and reducing air pollution impacts. The letter notes concerns about placing sensitive receptors near freeways or close to high volume urban roads and recommends the City carefully consider appropriate mitigation to ensure effectiveness is quantitatively demonstrable.

Data for this section were obtained from the above referenced sources as well as the California Air Pollution Control Officers Association, CARB, California Energy Commission, EPA, the Greener Glendale Plan, the Glendale General Plan, Intergovernmental Panel on Climate Change (IPCC), and SCAQMD. Full reference-list entries for all cited materials are provided in Section 4.6.5 (References).

### 4.6.1 Environmental Setting

#### ■ Greenhouse Gas Emissions and Climate Change

GHGs are naturally present in the Earth's atmosphere and play a critical role in maintaining the planet's temperature. Light from the sun passes through the atmosphere and a portion of it is absorbed by the surface of the land and water. The Earth then emits a portion of this energy out into the atmosphere as heat. GHGs reflect some of this heat back toward the surface of the Earth rather than allowing it to escape into space. This process can be thought of as similar to how the panes of glass in the walls and ceiling of a greenhouse trap some heat within the building—hence the terms “greenhouse gas” and “greenhouse effect,” which describe this process. Without the presence of these gases, the Earth's average temperature would be approximately 0°F (Solomon et. al. 2007). The most prominent GHG are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O).

Different GHGs have varying climate change impacts. The most commonly accepted metric for the radiative forcing (heat trapping) impact of GHGs is the global warming potential (GWP), which is a ratio intended to quantify the mass of CO<sub>2</sub> that would produce the same impacts over 100 years as one unit mass of GHG. Most current regulatory and voluntary reporting programs in the United States GWP estimates from the IPCC Fourth Assessment Report (AR4) although some may still use older estimates from the IPCC Second Assessment Report (SAR, and updated estimates are provided in the IPCC Fifth Assessment Report (AR5). The California mandatory GHG reporting program uses SAR's GWP. As an example, per IPCC SAR, the GWP of CH<sub>4</sub> is 21. By definition, the GWP of CO<sub>2</sub> is one, whereas, N<sub>2</sub>O and the fluorinated gases have much higher GWPs. Thus, the emissions of 1 ton of CH<sub>4</sub> and 1 ton of CO<sub>2</sub> would total 22 tons of carbon dioxide equivalents (CO<sub>2</sub>e) using SAR GWPs.

Scientific consensus indicates a causative relationship between various human activities and an increase in the concentration of atmospheric GHG. Higher levels of GHG are the primary driver of an increase in

the amount of heat trapped in the atmosphere. This in turn causes a warming of the planet that result in changes in the Earth's global climate system, called "climate change" (NASA 2016).

GHGs in the atmosphere regulate the earth's temperature. Without the natural heat trapping effect of GHGs, the earth's surface would be about 34 degrees Celsius (°C) cooler (CCAT 2006). However, it is known that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of GHGs in the atmosphere beyond the level of naturally occurring concentrations. The following paragraphs provide information on the primary GHGs in more detail.

**Carbon Dioxide.** The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO<sub>2</sub> are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (EPA 2016). CO<sub>2</sub> was the first GHG demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements being made in the last half of the 20th Century. As noted above, CO<sub>2</sub> has a GWP of one. Concentrations of CO<sub>2</sub> in the atmosphere have risen approximately 35 percent since the Industrial Revolution. According to the IPCC (2007), the global atmospheric concentration of CO<sub>2</sub> has increased from a pre-industrial value of approximately 280 parts per million (ppm) to 379 ppm in 2005. By 2011, concentrations increased to 391 ppm (IPCC 2013).

**Methane.** CH<sub>4</sub> is an extremely effective absorber of radiation, though its atmospheric concentration is less than CO<sub>2</sub>, and its lifetime in the atmosphere is brief (10 to 12 years) compared to some other GHGs. Based on a number of factors, scientific assessments of the climate impact of methane have increased with time. As noted above, the IPCC SAR estimated the GWP of CH<sub>4</sub> as 21, while, the IPCC AR4 estimates it at 25. The IPCC AR5 reports 100 year GWP of CH<sub>4</sub> and fossil CH<sub>4</sub> of 28 and 30, respectively, although few if any reporting organizations have adopted the higher estimates yet. Methane concentrations have increased by an estimated 150 percent since pre-industrial times (IPCC 2013). Anthropogenic sources of CH<sub>4</sub> include natural gas and petroleum systems, agricultural activities, coal mining, wastewater treatment, stationary and mobile combustion, landfills, and certain industrial processes (EPA 2016).

**Nitrous Oxide.** Concentrations of N<sub>2</sub>O also began to rise at the beginning of the Industrial Revolution. N<sub>2</sub>O is produced by microbial processes in soil and water, including reactions that occur in fertilizers containing nitrogen, as well as a number of industrial processes and other sources. Concentrations of N<sub>2</sub>O are estimated to exceed pre-industrial levels by 20 percent (IPCC 2013). The SAR and AR4 estimates of GWP for N<sub>2</sub>O are 310 and 298, respectively.

**Fluorinated Gases (HFCS, PFCS, and SF6).** Fluorinated gases, such as HFCs, PFCs, and SF<sub>6</sub>, are powerful GHGs that are emitted from a variety of industrial processes. Some fluorinated gases are used as substitutes for ozone-depleting substances, such as chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), and halons, which have been regulated since the mid-1980s because of their ozone-destroying potential and are being phased out under the Montreal Protocol and CAA Amendments of 1990. Some are used for other industrial processes, and SF<sub>6</sub> is used in high voltage electrical equipment. Fluorinated gases are typically emitted in smaller quantities than CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, and have a much greater global warming effect per unit of mass. For example, SAR and AR4 estimates of the GWP for SF<sub>6</sub> are 23,900 and 22,800, respectively.

From 1750 to 2011, global CO<sub>2</sub> emissions to the atmosphere from fossil fuel combustion and cement production totaled 365 gigatonnes of carbon (GtC) (1,340,000 million metric tons [MMT] CO<sub>2</sub>), while

deforestation and other land use changes are estimated to have released 180 GtC (661,000 MMT CO<sub>2</sub>). This results in cumulative anthropogenic emissions of 545 GtC (2,000,000 MMT CO<sub>2</sub>) (IPCC 2013).

Total United States GHG emissions in 2014 were estimated to be 6,870 MMT CO<sub>2</sub>e (EPA 2016). Overall, total United States GHG emissions have risen by 7.4 percent from 1990 to 2014, and GHG emissions increased from 2013 to 2014 by 1.0 percent (70 MMT CO<sub>2</sub>e). The increase from 2013 to 2014 was driven primarily by increased fuel for space heat driven by the relatively cool winter, increase in vehicle miles traveled, and increased industrial production across multiple sectors. Since 1990, United States GHG emissions have increased at an average annual rate of 0.4 percent (EPA 2016). The primary GHG emitted by human activities in the United States was CO<sub>2</sub>, representing approximately 76 percent of total GHG emissions in terms of CO<sub>2</sub>e (EPA 2016). The largest source of CO<sub>2</sub>, and of overall GHG emissions, was fossil fuel combustion. CH<sub>4</sub> emissions, which have declined from 1990 levels, resulted primarily from enteric fermentation associated with domestic livestock, decomposition of wastes in landfills, and natural gas systems. Agricultural soil management was the major source of N<sub>2</sub>O emissions.

In 2015, human activities in California released 440.4 MMT CO<sub>2</sub>e, which equaled approximately 6.4 percent of the United States' 2014 total. The primary source of GHGs in California is transportation, contributing 37 percent of the State's total GHG emissions (CARB 2017a). Industrial emissions were the second largest source, contributing 23 percent of the State's total GHG emissions (CARB 2017a). In 2014, approximately 84 percent of California's GHG emissions were CO<sub>2</sub> (in terms of CO<sub>2</sub>e), 9 percent were CH<sub>4</sub>, 2.7 percent were N<sub>2</sub>O, and 4.3 percent were high GWP gases. Landfill emissions were 2 percent of the total California anthropogenic emissions (CARB 2017a).

While the terms "global warming" and "climate change" often are used interchangeably, there is a difference in their meanings. The National Aeronautics and Space Administration (NASA) describes global warming as a long-term increase in global temperature. Climate change describes a broader range of changes in the global climate system, which includes global warming as well as other changes, such as sea level rise and altered precipitation patterns (NASA 2016). Climate change is the generally preferred term, as it encompasses all changes to the global climate system resulting from increased GHG concentrations, not only increases in temperature.

Global climate change is expressed as changes in the average weather of the Earth that are measured by temperature, wind patterns, precipitation, and storms over a long period of time (IPCC 2013). Scientific understanding of the causes and effects of climate change has evolved, and consensus regarding the link between climate change and anthropogenic GHG emissions has increased tremendously.

The IPCC now states that the warming of the climate system is "unequivocal;" "...human influence on the climate system is clear..." "...it is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century;" and "Continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system" (IPCC 2013). The most recent U.S. National Climate Assessment explains that, "While scientists continue to refine projections of the future, observations unequivocally show that climate is changing and that the warming of the past 50 years is primarily due to human-induced emissions of heat-trapping gases;" and that "Global climate is projected to continue to change over this century and beyond, but there is still time to act to limit the amount of change and the extent of damaging impacts" (USGCRP 2014). The EPA states that, "GHG pollution threatens the American public's health and welfare by contributing to long-lasting changes in our climate that can have a range of negative effects on human health and the environment" (EPA 2015).

## ■ Climate Change Impacts

Unlike criteria air pollutants and toxic air contaminants, which have the greatest impact on the region where they are emitted, GHG emissions affect the entire planet regardless of where the emissions themselves occur. California has drawn on extensive scientific research conducted by experts at various universities and other institutions to determine how climate change is already affecting the state, and what effects it may have in the future.

Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st Century than were observed during the 20th Century. The global mean surface temperature change for the period 2016–2035 relative to 1986–2005 will likely be in the range of 0.3°C to 0.7°C (IPCC 2013). According to CARB, California is facing a range of climate change impacts, including increases in extreme heat, wildfires, drought, extreme storms, coastal flooding, and erosion, and reductions in springtime snowpack in the Sierra Nevada mountains (CARB 2014).

The connection between climate change and anthropogenic GHGs, and the types of impacts that will result, are known with a high level of certainty. However, our ability to predict and quantify the new extremes of climate-related variables, and procedures for “downscale” modeling to estimate localized impacts, are still evolving. Thus, the following discussion reviews some of the possible types and ranges of impacts.

**Air Quality.** Higher temperatures are conducive to some types of air pollution formation, and could potentially worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. However, studies prepared under the direction of CARB estimated that climate change may cause ozone pollution in California to exceed federal standards by 6 to 30 additional days per year, and that ozone concentrations in Southern California could increase by 9 to 19 parts per billion by 2050 (CARB 2014). Increased particulate emissions from wildfire and dusty conditions are also possible.

**Water Supply.** Uncertainty also remains with respect to the overall impact of global climate change on future water supplies in California. However, California Department of Water Resources (DWR) stated that, “Climate change is having a profound impact on California water resources, as evidenced by changes in snowpack, sea level, and river flows. These changes are expected to continue in the future and more of our precipitation will likely fall as rain instead of snow. This potential change in weather patterns will exacerbate flood risks and add additional challenges for water supply reliability” (DWR 2015).

In discussing uncertainties regarding the magnitude of climate change impacts on California water supplies, DWR cites the following known changes:

- **Snowpack.** California’s snowpack, a major part of annual water storage, is decreasing with increasing winter temperatures.
- **Hydrologic Pattern.** Warmer temperatures and decreasing snowpack cause more winter runoff and less spring/summer runoff.
- **Rainfall Intensity.** Regional precipitation changes remain difficult to determine, but larger precipitation events could be expected with warmer temperatures in some regions.
- **Sea Level Rise.** Sea level rise is increasing the threat of coastal flooding, salt water intrusion, and even disruption of water exports from the Sacramento-San Joaquin Delta (Delta) should levees fail on key islands and tracts.

- Water Demand. Plant evapotranspiration increases with increased temperature.
- Aquatic Life. Higher water temperatures are expected to have a negative effect on some species and may benefit species that compete with native species (DWR 2013).

**Hydrology.** Climate change could potentially affect the amount of snowfall, rainfall, and snowpack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide, and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion.

**Agriculture.** California has a \$37 billion agricultural industry and is the nation's leading producer of nearly 80 different crop and livestock commodities. Statewide reports identify the following effects of climate change on California:

- Higher temperatures, particularly in the summer and in inland areas.
- More frequent and more severe extreme heat events.
- Reduced precipitation, and a greater proportion of precipitation falling as rain rather than snow.
- Increased frequency of drought conditions.
- Rising sea levels.
- Ocean water becoming more acidic, harming shellfish and other species in the oceanic ecosystems.
- Changes in wind patterns.

These direct effects of climate change may in turn have a number of other impacts, including economic consequences, creation or exacerbation of public health threats, increased risk to coastal development and infrastructure, increases in flooding risks, reduced water supplies, damage to California's biodiversity and ecological systems, increases in wildfires, and threats to the state agricultural operations. There is also a risk that the impacts of climate change may disproportionately affect California's disadvantaged communities, creating equity concerns (CNRA 2012).

## 4.6.2 Regulatory Framework

### ■ Federal

The EPA is the federal agency responsible for setting and enforcing the federal ambient air quality standards for atmospheric pollutants. The EPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The EPA also has jurisdiction over emission sources outside state waters (outer continental shelf), and establishes various emissions standards for vehicles sold in states other than California.

In 2006, twelve U.S. states and cities, in conjunction with several environmental organizations, sued to require the EPA to regulate GHGs as a pollutant pursuant to the federal CAA. On April 2, 2007, the Supreme Court in *Massachusetts v. EPA* (2007) 549 U.S. 497, found that GHGs are air pollutants covered by the CAA. The Supreme Court held that the EPA must determine whether or not GHG emissions from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare. On December 7, 2009, the EPA signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

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

These findings do not themselves impose any requirements on industry or other entities. However, this action was a prerequisite for implementing GHG emission standards for vehicles. In collaboration with the National Highway Traffic Safety Administration, the EPA finalized emission standards for light-duty vehicles (2012-2016 model years) in May 2010 and heavy-duty vehicles (2014-2018 model years) in August 2011. On August 28, 2012, EPA and National Highway Traffic Safety Administration issued a joint Final Rulemaking to extend the National Program of harmonized GHG and fuel economy standards to model year 2017 through 2025 passenger vehicles. Regulations adopted to date by the EPA to address both global climate change and GHG emissions include the following:

**40 CFR Part 52:** Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule. GHG emissions are covered by the Prevention of Significant Deterioration (PSD) and Title V operating permit programs as of January 2, 2011. These permitting programs are required under the CAA. However, according to EPA the thresholds established in the CAA for determining applicability of the PSD and Title V programs (100 and 250 tons per year, respectively) would have created an “overwhelming burden” for regulation of GHGs. Therefore, a “common sense” approach to permitting GHG emissions under PSD and Title V was established under EPA’s GHG Tailoring Rule, issued in May 2010.

The GHG Tailoring Rule set initial emission thresholds for PSD and Title V permitting based on CO<sub>2</sub>e emissions. Under Step 1 of the rule, new facilities with GHG emissions of at least 75,000 short tons per year (tpy) CO<sub>2</sub>e and existing facilities making changes that would increase GHG emissions by at least 75,000 tpy CO<sub>2</sub>e, and which are subject to PSD based on emissions of other air pollutants, are required to obtain PSD permits for and apply “Best Available Control Technology” for GHGs. Under Step 2 of the rule, in addition to the criteria for Step 1, new and existing sources of GHG emissions or GHG emission increase above 100,000 short tpy CO<sub>2</sub>e were required to apply PSD permitting for both GHGs and conventional air pollutants, regardless of whether conventional air pollutants would otherwise trigger the rule. Under Step 1, all sources subject to Title V for criteria air pollutants must include any applicable GHG regulations in those permits, and under Step 2, any source with GHG emissions above 100,000 tpy CO<sub>2</sub>e were required to obtain Title V permits for conventional air pollutants and GHGs, regardless of conventional air pollutant emission rates.

Step 3 of the GHG Tailoring Rule, originally issued on June 29, 2012, continued the focus of GHG permitting on the largest emitters by retaining the permitting thresholds that were established in Steps 1 and 2. In addition, Step 3 improved the usefulness of plant-wide applicability limitations (PAL) by allowing GHG PALs to be established on CO<sub>2</sub>e emissions, in addition to the already available PALs for mass emissions, and to use the CO<sub>2</sub>e-based applicability thresholds for GHGs provided in the “subject to regulation” definition in setting the PAL on a CO<sub>2</sub>e basis. Step 3 also revised the PAL regulations to allow a source that emits or has the potential to emit at least 100,000 tpy of CO<sub>2</sub>e, but that has minor source emissions of all other regulated New Source Review pollutants, to apply for a GHG PAL while still maintaining its minor source status (EPA 2017).

In June of 2014, the US Supreme Court issued a decision that EPA may not treat GHGs as an air pollutant for determination of whether a facility is a “major source” under the PSD and Title V permitting programs. This vacates Step 2 of the Tailoring Rule. Based on anticipated increases in criteria air pollutant emissions, the Proposed Project will not be a PSD major modification, and as such no federal requirements exist for permitting or control technology analyses for GHGs.

## ■ State

### **Executive Order S-3-05**

Executive Order (S-3-05 (issued June 1, 2005) established the following GHG emissions reduction targets: (1) by 2010, reduce GHG emissions to 2000 levels; (2) by 2020, reduce GHG emissions to 1990 levels; and (3) by 2050, reduce GHG emissions to 80 percent below 1990 levels. The initial California Climate Action Team (CCAT) Report in 2006 contained recommendations and strategies to help ensure the targets in Executive Order S 3-05 are met. The latest CCAT Report in 2010 expands on the policy-oriented 2006 Report and provides new information and scientific findings. The 2010 Report includes development of new climate and sea-level projections, using new information and tools that have become available since the preparation of the previous report, and 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 2010 Report focus on the preparation of the Climate Adaptation Strategy, as required by Executive Order S-13-08 (described below).

### **Executive Order S-13-08**

Executive Order S-13-08 (issued November 14, 2008), the Climate Adaptation and Sea Level Rise Planning Directive, provides direction for how the State should plan for future climate impacts. Executive Order S-13-08 calls for the implementation of four key actions to reduce California’s vulnerability to climate change:

1. Initiate California's first statewide Climate Adaptation Strategy that will assess the state's expected climate change impacts, identify where California is most vulnerable, and recommend climate adaptation policies;
2. Request the National Academy of Science establish an expert panel to report on sea level rise impacts in California in order to inform state planning and development efforts;
3. 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; and
4. Initiate studies on critical infrastructure projects, and land-use policies, vulnerable to sea level rise.

The California Natural Resources Agency coordinated with ten state agencies, multiple scientists, a consulting team, and stakeholders to develop the California Climate Adaptation Strategy (CNRA 2009), which summarizes the best-known science to assess the vulnerability of the State to climate change impacts, and outlines possible solutions that can be implemented within and across state agencies to promote resiliency.

### **Executive Order B-30-15**

On April 29, 2015, the Governor issued Executive Order B-30-15 which added an interim target of GHG emissions reductions to help ensure the State meets its 80 percent reduction by 2050, as set in Executive Order S-3-05. The interim target is reducing GHG emissions to 40 percent below 1990 levels by 2030. It also directs State agencies to update the State's Climate Change Scoping Plan, update the adaptation strategy every three years, and take climate change into account in their planning and investment strategies. Additionally, it requires the state Five-Year Infrastructure Plan to take current and future climate change impacts into account in all infrastructure projects.

### **Assembly Bill 32, the California Global Warming Solutions Act**

In September 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006, which focuses on reducing GHG emissions in California. AB 32 makes the CARB responsible for monitoring and reducing GHG emission, and continues the existing CCAT to coordinate statewide efforts and promote strategies that can be undertaken by many other California agencies. Under AB 32, the CARB is required to adopt rules and regulations for quantifiable, verifiable, and enforceable emissions reduction measures that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020. The CARB has identified 427 MMT of CO<sub>2</sub>e as the total statewide aggregated 1990 GHG emissions level, which serves as the 2020 emissions limit. The main strategies for reducing California's GHG emissions pursuant to AB 32 are outlined in the Climate Change Scoping Plan (CARB 2017). The Climate Change Scoping Plan has a range of GHG emissions reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and a cost-of-implementation fee to fund the program. In addition, the Climate Change Scoping Plan emphasizes the need to better connect land use and transportation planning to help the state achieve its GHG emissions reduction target for 2020.

### **Assembly Bill 32 Climate Change Scoping Plan and Updates**

CARB adopted its Climate Change Scoping Plan in 2008, which contains the main strategies California will implement to achieve reduction of approximately 118 MMT CO<sub>2</sub>e emissions, or approximately 21.7 percent from the State's projected 2020 emission level of 545 MMT CO<sub>2</sub>e under a business-as-usual scenario (this is a reduction of 47 MMT CO<sub>2</sub> or almost 10 percent from 2008 emissions). In May 2014, CARB released and subsequently adopted the First Update to the Climate Change Scoping Plan to identify the next steps in reaching AB 32 goals and evaluate progress that has been made between 2000 and 2012. According to the update, California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020. The update also reports the trends in GHG emissions from various emissions sectors (e.g., transportation, building energy, agriculture).

On January 20, 2017, CARB released its proposed 2017 Climate Change Scoping Plan Update (2017 Scoping Plan Update), which lays out the framework for achieving the 2030 reductions as established in more recent legislation (discussed below). The proposed 2017 Scoping Plan Update identifies the GHG reductions needed by each emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels before 2030. The second update was adopted by CARB on December 14, 2017.

The 2017 update also identifies how GHGs associated with local plan-level projects could be evaluated under CEQA. Specifically, CARB recommends that local-plan level projects resulting in no more than 6 metric tons CO<sub>2</sub>e per capita by 2030 and no more than 2 metric tons CO<sub>2</sub>e per capita by 2050 would



not result in substantial increase in GHGs or conflict with local or state plans adopted for the purpose of reducing GHG emissions.

### **Senate Bill 32 and Assembly Bill 197 of 2016**

SB 32, was approved by the Governor on September 8, 2016 and, became effective when its companion bill, AB 197, was also signed by the Governor on the same day. SB 32 requires California to reduce GHG emissions 40 percent below 1990 levels by 2030. and AB 197 gives the Legislature greater authority over CARB, to ensure strategies to lower emissions favor those most impacted by climate change.

### **Senate Bill 375**

SB 375, the Sustainable Communities and Climate Protection Act of 2008, enhances California's ability to reach its AB 32 goals by promoting good planning with the goal of more sustainable communities. SB 375 requires the CARB to develop regional GHG emissions reduction targets for passenger vehicles to be achieved by 2020 and 2035, and requires the regional Metropolitan Planning Organizations, including SCAG, to develop Sustainable Communities Strategies in their regional transportation plans. The Sustainable Communities Strategies demonstrate how each region will meet the CARB's emissions reduction targets through integrated land use, housing, and transportation planning to reduce the amount of vehicle miles travelled (VMT) within their respective regions.

### **Senate Bill X1-2, the California Renewable Energy Resources Act of 2011**

Signed by the Governor April 12, 2011, SB X1-2 expanded the California Energy Commission's role to include the following responsibilities, most of which are specific to publicly owned utilities:

- Adopt regulations specifying procedures for enforcement of the Renewables Portfolio Standards for publicly owned utilities (completed in 2013).
- Certify and verify eligible renewable energy resources procured by publicly owned utilities and to monitor their compliance with the Renewables Portfolio Standards.
- Continue to certify and verify Renewables Portfolio Standards procurements by retail sellers.
- Refer publicly owned utilities found to be non-compliant to the Air Resources Board, which may impose penalties.

### **Advanced Clean Cars Program**

In January 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

The components of the Advanced Clean Cars Program are the Low-Emission Vehicle regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years.

## **California Building Efficiency Standards of 2016 (Title 24, Part 6)**

Although not originally intended to reduce GHGs, CCR Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted 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 efficient technologies and methods. The 2016 Title 24 standards have been published and will become effective July 1, 2017. The requirement for when the 2016 standards must be followed is dependent on when the application for the building permit is submitted.

The 2016 Title 24 focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential standards include improvements for attics, walls, water heating, and lighting. The most significant efficiency improvements to the nonresidential standards include alignment with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 2013 national standards.

### **■ Regional**

#### **Southern California Association of Governments**

On April 7, 2016, SCAG's Regional Council adopted the 2016-2040 RTP/SCS, a long-range visioning plan that balances future mobility and housing needs and economic, environmental, and public health goals. The 2016-2040 RTP/SCS would result in an 8 percent reduction in GHG emissions per capita by 2020, an 18 percent reduction by 2035, and a 21 percent reduction by 2040. Combination of efficient land use patterns and improved transit service would reduce VMT per capita by more than 7 percent and increase daily travel by transit by nearly one third (SCAG 2016).

#### **South Coast Air Quality Management District**

SCAQMD has not formally adopted any threshold or methodology for any local plan-level projects. SCAQMD has developed a significance threshold of 10,000 metric tons CO<sub>2</sub>e for industrial stationary sources. SCAQMD also released an interim GHG significance threshold of 3,000 metric tons CO<sub>2</sub>e for residential and commercial sources (SCAQMD 2008). However, the proposed SGCP is a General Plan-level document and as discussed in further detail below, in accordance with recommendations from CARB, plan-level analyses should be measured on a per capita basis, in line with methods used to calculate statewide GHG emissions reduction targets. See discussion below for applicable thresholds of significance.

### **■ Local**

#### **Glendale General Plan**

The Glendale General Plan outlines policies, goals, and objectives that are applicable to greenhouse gas emissions in the Air Quality Element, Housing Element, and Open Space and Conservation Element.

## Air Quality Element

- **Goal 1:** Air Quality will be healthful for all residents of Glendale.
  - **Objective 1.a:** Reduce Glendale’s contribution to regional emissions in a manner both efficient and equitable to residents and businesses, since emissions generated within Glendale affect regional air quality.
  - **Objective 1.c:** Comply with the Air Quality Management Plan prepared by the SCAQMD and SCAG.
- **Goal 3:** Air emissions from City operations will be minimized, while meeting public service requirements.
  - **Objective 3.a:** Continue the aggressive programs of recycling, energy conservation, and hazardous waste collection in order to minimize emissions from the Grayson power plant and Scholl Canyon landfill.
  - **Objective 3.e:** Provide leadership as a City by utilizing and advancing innovative technology to reduce air emissions.
- **Goal 4:** The reliance on automobile transportation will be reduced.
  - **Objective 4.b:** Promote the use of public transportation and non-polluting transportation in standards for new construction.
  - **Objective 4.c:** Expand existing public transportation and non-polluting transportation systems and develop new systems in order to reach a greater number of potential users. Continue to seek federal, state, and regional funding sources.
  - **Objective 4.d:** Coordinate various transportation modes with transfer facilities to increase convenience.
  - **Objective 4.e:** Coordinate non-automobile transportation systems with surrounding jurisdictions.
  - **Objective 4.f:** Increase carpooling opportunities in Glendale.
  - **Objective 4.g:** Develop incentives for businesses with fewer than 100 employees to reduce vehicle trips. These businesses are not regulated by SCAQMD Rule 1501, but account for the majority of Glendale’s work force.
- **Goal 5:** Air quality programs will assist businesses in Glendale.
  - **Objective 5.a:** Inform the businesses of Glendale on ways to reduce air pollution, both directly, as well as by reducing waste, minimizing energy usage, reducing vehicle trips, and managing truck delivery schedules and routes.
  - **Objective 5.b:** Provide incentives for existing and new businesses in Glendale to reduce both stationary and mobile emissions.
  - **Objective 5.c:** Assist businesses, schools, and colleges in reducing vehicle trips by using City-operated services and facilities.
  - **Objective 5.d:** Continue and expand public/private partnerships which reduce air pollution.
  - **Objective 5.e:** Support the use of new air pollution control technologies by Glendale’s business community.

- **Objective 5.f:** Assist the business community with environmental regulations through improved communication and technical assistance.

#### Housing Element

- **Goal 1:** A City with a wide range of housing types to meet the needs of current and future residents.
  - **Policy 1.3:** Provide higher density residential development in close proximity to public transportation, services, and recreation.
  - **Policy 1.4:** Continue to promote residential/mixed used development, including live-work units in appropriate locations.
- **Goal 6:** A City with housing that is livable and sustainable.
  - **Policy 6.8:** Continue providing brochures and technical assistance that promotes the use of energy conservation features in new and existing dwellings.
  - **Policy 6.9:** Continue promoting energy and resource efficiency by implementing the City’s residential recycling, bulk item collection, household hazardous waste, horse accounts, backyard composting, chopper rebates, Christmas Tree Recycling, electronics recycling, recycling drop-off and worn composting services/programs.
  - **Policy 6.10:** Encourage the use of sustainable building practices in residential developments.
  - **Policy 6.11:** Provide opportunities for residential locations and design that encourage transit, pedestrian, bicycle, and other mobility options.

#### Open Space and Conservation Element

- **Policy 1:** Natural resources, including open spaces, biological habitats and native plant communities should be maintained and, where necessary restored.
- **Policy 5:** Proper management of environmental resources, especially natural resources, can assist in reducing hazards to the life and property of the City’s residents and should be considered in project planning.
- **Policy 8:** Important open space and conservation resources should be protected and preserved through acquisition, development agreements, easements, development exactions, and other regulatory strategies

### **Greener Glendale Plan**

The City has had a long-standing commitment to the environment through eco-friendly programs and projects. In March 2012, the City completed the Greener Glendale Plan, consisting of the Greener Glendale 2010 Report (Glendale 2010), the Greener Glendale Plan for Municipal Operations (Glendale 2011), and the Greener Glendale Plan for Community Activities (Glendale 2012). The Greener Glendale Plan promotes sustainable living and conservation programs within the community and government operations.

The Community Activities component of the Greener Glendale Plan focusses on helping the community achieve better sustainability, including identifying and reducing sources of GHGs through increasing the amount of energy generated from renewable sources, and focusing on conservation programs and identifying milestones for achieving sustainability planning that include: 1) preparing an inventory

existing conditions, 2) adopting a target, 3) developing a plan to meet the target, 4) implementing the plan, and 5) monitoring progress and reporting results, and then repeating the cycle as necessary.

The key issue addressed by the Greener Glendale Plan is how the City will contribute to the mitigation of global climate change. The Greener Glendale Plan analyzes City activities related to sustainability and GHG emissions to show how implementing sustainability measures will result in reduced GHG emissions. The Greener Glendale Plan inventory of GHG emissions within the City's geographic boundaries indicates that as of 2004, 98 percent of the GHG emissions were generated within the community, while 2 percent of the GHGs were generated from municipal operations. From 2004-2009, the Greener Glendale Plan GHG inventory reflected decreases in GHG emissions from natural gas (11 percent), water transport (20 percent), waste generation (23 percent), electricity (18 percent), increases in landfill (19 percent), and transportation (5 percent).

The Greener Glendale Plan developed a GHG emissions forecast and reduction targets from its 2004-2009 data trend and based the SCAG's GHG reduction targets of 8 per cent by 2020 and 13 percent by 2035. The GGP emissions forecast includes a "business as usual" estimate of future GHG emissions, if no further action is taken. The Greener Glendale Plan "business as usual" (BAU) scenario indicates a slow decline of GHG emissions, but not enough to meet the reduction targets. Accordingly, the Greener Glendale Plan includes goals, strategies, and recommendations to achieve sustainability that are expected to have quantifiable GHG reduction results, which reflect a list of community priorities that account for both the GHG reduction potential and implementation feasibility.

The list of quantifiable GHG reduction categories in the Greener Glendale Plan includes 2020 emissions reduction targets to be achieved through California vehicle and fuel standards, building energy efficiency audits and upgrades, smart grid applications, green building standards, Zero Waste Plans, EV charging station installation, and a plastic bag ban, to name a few. The Greener Glendale Plan identified 2035 reduction targets through continued implementation of California vehicle and fuel standards, building energy and water efficiency audits and upgrades, Zero Waste Plan 90 percent diversion by 2030, tree planning programs, and turf reduction rebates.

The Greener Glendale Plan's Community Priorities list includes: facilitating the permitting and construction of alternative building structures, materials, and locations; providing turf reduction rebates; converting to biodegradable take-out containers; developing fuel efficient vehicle infrastructure and pedestrian friendly streets with destinations; including more shade trees; cool paving and roofing and increasing surface permeability; removing toxic products; reducing energy and water consumption; increasing accessible parks and open spaces; and promoting locally grown organic foods. The final Community Priority List which takes into account the effectiveness in reducing GHGs is:

1. Conduct community outreach and education to promote and encourage sustainable practices.
2. Retrofit existing development for increased energy and water efficiency, waste reduction, reduction in use of toxics, and increased use of natural landscaping including native trees and plants.
3. Promote and support alternative forms of transportation and vehicle fuel.
4. Promote and support the use of renewable energy.
5. Install public works conservation demonstration projects within the community.

6. Continue to implement urban planning strategies to increase sustainability and livable environments.

The Greener Glendale Plan also identified nine sustainability focus areas which include seven topics described in the UN Urban Environmental Accords. These include: Cross-Cutting Approaches, Economic Development, Urban Design, Waste, Energy, Urban Nature, Water, Transportation and Environmental Health. Each of these nine sustainability focus areas has identified objectives and strategies to accomplish sustainability goals generally and which also pertain specifically to GHG emissions reductions and climate change adaptation.

With respect to the Cross-Cutting sustainability focus, the objectives that support climate change adaptation and GHG reduction goals are:

- CC1 – Implement Smart Grid Applications
- CC2 – Implement Community Business and School Sustainability Efforts
- CC3 – Implement Sustainability Outreach and Education
- CC4 – Implement Municipal Operations Sustainability Efforts
- CC5 – Collaborate with Schools on Strategies within this Plan
- CC7 – Develop a Climate Adaptation Plan

The Economic Development objectives recommend support for local business in order to, among other goals, reduce transportation emissions. Economic Development objectives also include expanding green building programs and green jobs training. The Urban Design objectives also include recommendations to expand green building standards and practices (Urban Design -- UD1, UD2, UD3, UD4), to implement zone changes that encourage infill and mixed use development, and to complete community plans for all areas of Glendale that incorporate the Greener Glendale Plan sustainability concepts into Community Plans and other General Plan Documents (UD5). This last Urban Design objective, UD5, specifies certain Urban Design concepts be incorporated into Community Plans and General Plan documents, these include:

1. Utilize natural, local, renewable resources for energy, water, and environmental management processes when possible and cost effective.
2. Plan and build infrastructure for alternative forms of transportation such as walking, biking, and public transit, in accordance with strategies to ensure streets are designed for all users (“Complete Streets”).
3. Plan and build infrastructure for alternative fueled vehicles.
4. Encourage the retrofit of existing development to increase energy and water efficiency, reduce waste, reduce use of toxics, and increase the use of natural landscaping including native trees and plants. Encourage new development to build to these standards.
5. Install public works conservation demonstration projects within the community.
6. Work toward achieving Zero Waste in the community.
7. Develop economically successful streets that act as destination centers in Glendale.
8. Facilitate permitting and construction of alternative building structures, materials, and site location.

The Greener Glendale Plan sustainability objectives for **Waste** include objectives that reduce waste, which in turn slow down the amount of waste being added to the City's existing landfill at Scholl Canyon which, over time, will reduce the amount of methane gas production from decaying waste. The Waste objectives include:

- WS1 – Promote Zero Waste through community education and outreach
- WS2 – Reduce use of disposable, non-renewable product
- WS3 – Improve commercial waste diversion
- WS4 – Expand waste diversion services

The Greener Glendale Plan sustainability objectives for **Energy** include activities that support climate change adaptation and GHG reduction:

- E1 – Increase the use of renewable energy citywide
- E2 – Reduce citywide energy consumption through promotion, education, and outreach
- E3 – Reduce citywide energy consumption by facilitating and coordinating community energy efficiency projects
- E4 – Encourage the reduction of citywide energy consumption through City municipal codes and policies

The Greener Glendale Plan sustainability objectives for **Urban Nature** that support climate change adaptation and GHG reduction include:

- UN1 – Update the Urban Forest Management Plan
- UN2 – Increase Glendale's tree canopy coverage by 20,000 trees by 2035
- UN3 – Implement programs to increase biodiversity in Glendale
- UN4 – Ensure there is accessible park and recreational open space to serve residents

The Greener Glendale Plan sustainability objectives for **Water** that support climate change adaptation include:

- WT1 – Reduce community water consumption through promotion, education, and outreach campaigns
- WT2 – Reduce community water consumption through incentive and rebate programs
- WT3 – Encourage or require water efficiency upgrades at the time of building sale
- WT4 – Facilitate and coordinate community water conservation projects
- WT5 – Implement stormwater management practices to protect water quality and replenish local groundwater sources

The GGP sustainability objectives for **Transportation** that support climate change adaptation and GHG reduction include:

- T1 – Facilitate the provision of alternative transportation infrastructure
- T2 – Promote and encourage the use of alternative forms of transportation
- T3 – Facilitate the provision of alternative fuel transportation infrastructure
- T4 – Promote and encourage the use of alternative fuel transportation options

The Greener Glendale Plan sustainability objective for **Environmental Health** that support climate change adaptation and GHG reduction include:

- EH2 – Improve air quality
- EH3 – Promote the use of locally grown, organic foods

### 4.6.3 Project Impacts and Mitigation

#### ■ Analytic Method

The proposed land uses of the SGCP were assumed for the purposes of modeling GHG emissions for a Program EIR. GHG emissions associated with the project would be generated during project construction and by operation of the various land uses after construction is complete. Operational emissions of GHG were estimated for the following sources: area sources (e.g., the use of landscape maintenance equipment), energy use associated with residential and nonresidential buildings, water and wastewater treatment and distribution, solid waste, and mobile sources.

Any project that emits GHG emissions has the potential to contribute cumulatively to global climate change. Under CEQA, GHG impacts relative to global climate change are inherently cumulative. Specific methods for construction and operational emissions modeling are discussed separately below.

#### **Construction Emissions**

Construction-related emissions of GHGs were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.1 computer program (CAPCOA 2016), as recommended by SCAQMD. Modeling was based on available information (e.g., land uses, acreage, number of units); reasonable assumptions based on typical construction activities; and default values in CalEEMod that are based on the project's location and land use type.

The construction emissions modeling assumed an operational year of 2040, the horizon year by which complete buildout of the proposed SGCP is anticipated. Construction emissions modeling was also adjusted to account for future emissions standards in California for construction equipment and passenger vehicles, based on default emission factors in CalEEMod for each year of potential construction until 2040. Construction-related GHG emissions were amortized over 30-years and combined with annual operational emissions consistent with SCAQMD guidance (SCAQMD 2008). For further details regarding modeling inputs and assumptions refer to Attachments A and B of the South Glendale Community Greenhouse Gas Assessment (Appendix D of this EIR).

#### **Operation Emissions**

Operation-related emissions of GHG were also estimated using CalEEMod Version 2016.3.1. Operational emissions of GHGs were estimated for the following sources: area sources (e.g., landscaping-related fuel combustion sources), energy use (i.e., electricity and natural gas consumption), water use, solid waste, and mobile sources. Mobile-source emissions were estimated using CalEEMod Version 2016.3.1 with default VMT rates and annual trip generation rates adjusted based on information in the project-specific traffic study (Fehr & Peers 2017), included in the Transportation Analysis Report for the proposed project (Appendix F in this EIR). Indirect emissions associated with electricity and natural gas consumption were estimated using GHG emissions factors for Glendale Water & Power based on the 2015 Power Content Label and adjusting for SB 350 efforts to achieve at least 50 percent renewable energy by 2030 (GWP 2017). The project's level of electricity and natural gas usage were based



on 2016 Title 24-adjusted consumption provided by CalEEMod for each land use type. Adjustments were based on the California Energy Commission's estimate that single-family houses are 28 percent more energy efficient than 2013 Title 24 standards and non-residential buildings are 5 percent more efficient than 2013 Title 24 standards. Land use assumptions, based on anticipated plan buildout, include the addition of 10,337 dwelling units and 3,765 thousand square feet of nonresidential land uses within the proposed SGCP area.

To evaluate per capita emissions, the expected population supported by the project (i.e., 27,910 persons) was estimated based on the 2016 household size for City limits (i.e., 2.7 people per household). Household size was obtained from SCAG's Profile of the City 2017 (SCAG 2017). Household size was applied to total proposed residential dwelling units (i.e., 10,337 dwelling units) to obtain the SGCP population.

## ■ Thresholds of Significance

The CEQA Guidelines include several provisions that address the evaluation of the significance of the potential GHG impacts of a project. The relevant portions of the CEQA Guidelines are excerpted below. The basic provisions governing the determination of significance are set forth in Guideline 15064.4:

**CEQA Guideline 15064.4 (a).** The determination of the significance of GHG emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based on available information, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

1. Use a model or methodology to quantify GHG emissions resulting from a project. The lead agency has discretion to select the model it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; or
2. Rely on a qualitative analysis or performance based standards.

**CEQA Guideline 15064.4 (b).** A lead agency may consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

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

The following CEQA guideline may be applicable if there is a previously approved plan or mitigation program that is relevant to the analysis.

CEQA Guideline 15064 (h)(3). A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including, but not limited to, water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, and plans or regulations for the reduction of GHG emissions) which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, or integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency.

When relying on a plan, regulation or program, the lead agency should explain how implementing the particular requirements in the plan, regulation, or program ensure that the project's incremental contribution to the cumulative effect is not cumulatively considerable.

If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable, notwithstanding that the project complies with the specified plan or mitigation program addressing the cumulative problem, an EIR must be prepared for the project.

Based on the 2017 CEQA Guidelines Appendix G thresholds of significance implementation of the proposed project may have a significant adverse impact on greenhouse gas emissions if it would do any of the following:

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

The directives in the CEQA Guidelines, cited above in Section 4.6.3, have been considered in several court decisions, most notably the decision by the California Supreme Court in *Center for Biological Diversity vs. California Dep't of Fish and Wildlife (Newball)* 62 Cal.4th 204 (2015). That decision set forth several options that lead agencies may consider for evaluating the cumulative significance of a proposed project's GHG emissions:

- A calculation of emissions reductions compared to a BAU scenario based upon the emissions reductions in CARB's Scoping Plan, including examination of the data to determine what level of reduction from BAU scenario a new land use development at the proposed location must contribute in order to comply with statewide goals.
- A lead agency might assess consistency with AB 32's goals by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities.
- Use of geographically specific GHG emission reduction plans to provide a basis for tiering and streamlining of project-level CEQA analysis.
- A lead agency may rely on existing numerical thresholds of significance for GHG emissions, though use of such thresholds is not required.

As described below, this evaluation assesses significance of the proposed project's impacts to GHG emissions and climate change in accordance with the first through third methods of analysis provided by the Court in Newhall. Each method described below provides an independent and alternative analysis regarding the proposed project's impacts. There is no applicable existing numerical threshold of significance for GHG emissions, and the Newhall decision specifically found that use of a numerical threshold is not required. Accordingly, this Draft EIR does not include the fourth and final method of analysis provided for by the Court in Newhall.

First, the significance of the proposed project's GHG emissions is assessed by comparing CARB's BAU forecast and estimated reductions against that forecast needed to achieve California's emissions targets. BAU emissions are assumed to be the future net GHG emissions without the implementation of Cap-and-Trade, sector-specific GHG reduction programs (such as that for solid waste management), and other mitigation actions. The latest available estimates for BAU emissions totals 509 MMT CO<sub>2e</sub> in 2020; in light of historical 1990 emissions of 431 MMT CO<sub>2e</sub>, a reduction of 249 MMT CO<sub>2e</sub> (48 percent) from forecast 2020 BAU emissions will be required for the State to achieve the 2030 statewide target of 260 MMT CO<sub>2e</sub> mandated under SB 32 (2016).

The Court in Newhall held that a lead agency may use "the AB 32 goals themselves to determine whether the project's projected GHG emissions are significant." Newhall, at 223. The Court also noted that several Court of Appeal decisions have reached the same result. *Id.* The Court stated, however, that there is a further requirement when a lead agency uses AB 32 goals and emissions reductions calculated from those goals as a significance criterion. The lead agency must also demonstrate that the project-level emissions reductions are sufficient to be consistent with achieving the statewide goal. Newhall, at 225–26. Stated another way, "a lead agency might be able to determine what level of reduction from business as usual a new land use development at the proposed location must contribute in order to comply with statewide goals." Newhall, at page 229.

Applying this logic to the proposed project, the analysis examines the proposed project's consistency with targeted GHG emission reductions resulting from implementation of a community plan that anticipates increased development over a particular build out period. According to the 2014 first updated CARB 2020 BAU forecast, contributions to future emissions from sustainable regional transportation and local land use planning consistent with SB 375 are estimated to be 3.0 MMT CO<sub>2e</sub>, the latest available estimate for this relevant assumption. Thus, the first updated Scoping Plan targets a 15.3 percent reduction as compared to BAU for statewide total emissions, and a 0.6 percent reduction due to sustainable regional transportation and local land use planning; the second updated Scoping Plan (2017) reflects a target of 40 percent emissions reductions below 1990 levels, or 260 MMT CO<sub>2e</sub>, though it does not provide revised estimates for 2030 BAU or reduction targets specific to sustainable regional transportation and local land use planning. However, as of December 14, 2017, CARB is in process of updating SB 375's Greenhouse Gas Emission Reduction Targets per capita for 2018 as required by law; the currently adopted target for the SCAG region is 13 percent compared to 2005, while the current SCS anticipated performance is 18 percent, such that CARB is proposing a revised target of 19 percent compared to 2005 (CARB 2017b).

Because of uncertainties regarding future state emission targets for the land use intensification stemming from implementation of a community plan, the lack of post-2020 BAU forecasts, and the increasing actual project emission impacts as shown below, the same certainty does not exist regarding consistency with State and regional GHG reduction plans in subsequent years. It is therefore assumed that proposed project impacts are potentially significant and unavoidable in years after 2020.

## Consistency Analysis

### Regional Policies

The 2016 RTP/SCS provides a regional investment framework to address the region’s transportation and related challenges through the year 2040. The RTP/SCS reaffirms the 2008 Advisory Land Use Policies that were incorporated into the 2012 RTP/SCS. SCAG identified regional goals that reflect a balanced approach to transportation planning and decision-making (SCAG 2016).

Although implementation of the proposed SGCP does not include any direct changes to the existing transportation system in the SGCP area or vicinity, the mere implementation of permitted increased mixed-use density throughout the SGCP area is reflective of the RTP goals listed in Table 4.6-1. Mixed-use projects encourage alternative modes of transportation by allowing more live-work opportunities to reduce automobile trips and subsequently help to improve regional air quality. Therefore, by permitting a higher density of mixed uses to occur throughout the SGCP area, the proposed SGCP would not conflict with the RTP goals. Table 4.6-1 presents the consistency analysis of the proposed SGCP with the SCAG RTP/SCS.

**Table 4.6-1 Consistency with SCAG RTP/SCS**

SCAG Goal/Policy	Analysis of Relevant SGCP Principles/Policies/Guidelines
<p><b>Goal 2:</b> Maximize mobility and accessibility for all people and goods in the region.</p>	<p><b>Consistent:</b> The proposed SGCP has specific design guidelines that will maximize mobility and accessibility throughout the SGCP area. Measures that achieve this goal include improved transit service and frequency (see section 3.6.2, 4A.2.1(A)); incorporating transit stops near new development (3.2.2, 3.4.2); enhanced accessible rider accommodations (3.2.2, 4A.2.2(B), 4B.1.1(C), 4B.3.1(A), 4B.5.1(B), 4B.4.1(A), 4B.5.2(B)); street improvements to incorporate bike lanes (3.6.2, 3.8.2, 3.9.2, 4A.2.1(C), 4B.3.1(F)); expanded sidewalks and improved crosswalks (3.2.2, 3.6.2, 3.8.2, 3.9.2, 4A.3.1(C), 4A.4.1(F), 4B.2.1(B), 4B.3.1(B-C), 4B.5.2(B), 4C.1.1(C), 4C.2.1(C), 4C.2.1(E)); and increased access to services via side streets, alleys, and clear pedestrian walkways (4A.2.2(D), 4A.3.1(E), 4A.3.2(D), 4A.3.2(F), 4A.4.1(F), 4B.1.1(A-B), 4B.3.2(E-F), 4B.4.1(A-C), 4B.4.2(F), 4B.5.1(B), 4C.1.2(C)).</p>
<p><b>Goal 3:</b> Ensure travel safety and reliability for all people and goods in the region.</p>	<p><b>Consistent:</b> The proposed SGCP includes specific design guidelines to protect pedestrians, bicyclists (4B.3.1(F)), and vehicle operators to ensure the safe travel through South Glendale. Measures include improved and expanded sidewalks and crosswalks (3.2.2, 3.6.2, 3.8.2, 3.9.2, 4A.3.1(C), 4A.4.1(F), 4B.2.1(B), 4B.3.1(B-C), 4B.5.2(B), 4C.1.1(C), 4C.2.1(C), 4C.2.1(E), 4B.1.1(A-B), 4B.2.1(B), 4B.2.1(D), 4B.3.1(B-C), 4B.3.2(E-F), 4B.4.1(A), 4B.4.1(C), 4B.4.2(F), 4B.5.1(B), 4B.5.2(F), 4C.2.1(C), 4C.3.2(E)); improved street lighting (4B.5.1(D), 4A.4.1(E), 4B.1.1(A), 4B.1.4(E), 4B.2.1(D), 4B.4.4(E), 4B.5.4(E), 4C.2.1(D)); traffic calming areas (4B5.1(E), 4A.4.1(F), 4C.1.1(C), 4C.2.1(E)); and signage to support safe navigation (4A.2.1(F), 4A.3.1(F), 4A.3.4(F), 4A.4.4(F), 4B.1.1(A), 4B.1.1(F), 4B.1.4(F), 4B.2.1(E), 4B.2.4(F), 4B.4.4(F), 4B.5.1(A), 4B.5.4(F), 4C.3.1(F)). The proposed SGCP supports the enhancement of transit stops and service (3.2.2, 3.6.2, 4A.2.1(A), 4A.2.2(B), 4B.1.1(C), 4B.3.1(A), 4B.5.1(B), 4B.4.1(A), 4B.5.2(B), 4B.3.1(A), 4B.4.1(A), 4B.5.1(B)).</p>
<p><b>Goal 4:</b> Preserve and ensure a sustainable regional transportation system.</p>	<p><b>Consistent:</b> The proposed SGCP includes guidelines for encouraging and enhancing the transportation system in South Glendale and the surrounding region. Provisions designed to increased rider participation include locating aesthetically inviting and comfortable transit amenities near transit stops (4A.2.1(A), 4A.2.2(B), 4B.1.1(C), 4B.3.1(A), 4B.4.1(A), 4B.5.1(B), 4B.5.2(B)), managed parking and reduced parking requirements (4B.1.1(E)), and expanding local and regional transit opportunities (3.6.2). The proposed SGCP also implements the Tropico Center Plan, which encourages transit, walking, and bicycling by focusing TOD around Tropico’s transit resources through TOD zoning (Tropico 3.3), parking management (Tropico 3.7, Tropico 5.3), pedestrian-oriented design guidelines (Tropico Chapter 4), Complete Streets (Tropico 3.6, Tropico 4.5, Tropico 5.1), transit service and stop enhancements (Tropico 3.5, Tropico 5.2), and wayfinding (Tropico 3.8).</p>

**Table 4.6-1 Consistency with SCAG RTP/SCS**

SCAG Goal/Policy	Analysis of Relevant SGCP Principles/Policies/Guidelines
<p><b>Goal 5:</b> Maximize the productivity of our transportation system.</p>	<p><b>Consistent:</b> South Glendale’s mobility vision includes maintaining existing local transit, expanding regional transit along corridors with Bus Rapid Transit and streetcar service, providing improved transit stops (4A.2.1(A), 4A.2.2(B), 4B.1.1(C)), and implementing the Bicycle Transportation Plan (3.6.2) and proposing new bikeways (3.8.2, Tropico Center Plan 3.6). Compliance with the City of Glendale’s Complete Streets policy, parking management strategies and transportation demand management policies (3.6.2) will enhance the productivity of the transportation network in Glendale. The proposed SGCP also implements the Tropico Center Plan, which encourages transit, walking, and bicycling by focusing TOD around Tropico’s transit resources through TOD zoning (Tropico 3.3), parking management (Tropico 3.7, Tropico 5.3), pedestrian-oriented design guidelines (Tropico Chapter 4), Complete Streets (Tropico 3.6, Tropico 4.5, Tropico 5.1), transit service and stop enhancements (Tropico 3.5, Tropico 5.2), and wayfinding (Tropico 3.8).</p>
<p><b>Goal 6:</b> Protect the environment and health of our residents by improving air quality and encouraging active transportation (i.e. non-motorized transportation, such as bicycling and walking).</p>	<p><b>Consistent:</b> The proposed SGCP includes guidelines that encourage non-motorized forms of transportation and safety measures to protect people who engage in active transportation, including improved pedestrian streets, crossings, access, and pedestrian-oriented urban design (4A.2.1(A), 4A.3.1(C), 4A.3.1(E), 4A.2.2(D), 4A.3.2(D), 4A.3.2(F), 4B.1.1(A), 4B.1.1(B), 4B.2.1(D), 4B.3.1(B-F), 4B.3.2(E-F), 4B.4.1(A-F), 4B.4.2(F), 4B.5.1(A-E), 4C.1.2(C), 4C.2.1(A-E)); and bike lanes and bike stations (4A.2.1(C), 4B.3.1(F)). The proposed SGCP includes implementation of the Citywide Pedestrian Plan and the Tropico Center Plan; the latter of which encourages walking, and bicycling through pedestrian-oriented design guidelines (Tropico Chapter 4), Complete Streets (Tropico 3.6, Tropico 4.5, Tropico 5.1), and wayfinding (Tropico 3.8).</p>
<p><b>Goal 7:</b> Actively encourage and create incentives for energy efficiency, where possible.</p>	<p><b>Consistent:</b> Principles within the SGCP area that encourage energy efficiency include the Glendale Smart Grid technology and public benefits programs that improve service and promote energy-efficiency and conservation. Parks and community centers within the SGCP area utilize recycled water, auto shut-off faucets, drought tolerant landscaping, reduced turf areas, high efficiency irrigation systems, permeable ground materials, and shade structures to reduce the heat island effect and water demand. Additionally, affordable housing projects sponsored by the City must be rated Greenpoint or Silver Level LEED equivalent or better (3.7.2).</p>
<p><b>Goal 8:</b> Encourage land use and growth patterns that facilitate transit and non-motorized transportation.</p>	<p><b>Consistent:</b> The proposed SGCP encourages mixed-use buildings in South Glendale’s centers and transit-oriented development around the Larry Zarian Transportation Center (3.2.2), the proposed Colorado Street Metrolink station and along the proposed Bus Rapid Transit routes (3.4.2). Additionally, the proposed SGCP allows for the development of affordable housing (3.1, 3.2.2, 3.4.2, 3.7.2) and expansion of housing choices in areas near transportation facilities (3.4.2). Further, the proposed SGCP includes design guidelines that encourage non-motorized forms of transportation in mixed-use areas and elsewhere, including new or enhanced bikeways; and improved pedestrian streets, crossings, access, and pedestrian-oriented urban design (3.6.2, 4A.2.1(A), 4A.2.1(C), 4A.2.2(D), 4A.3.1(C), 4A.3.1(E), 4A.2.2(D), 4A.3.2(D), 4A.3.2(F), 4B.1.1(A), 4B.1.1(B), 4B.2.1(D), 4B.3.1(B-F), 4B.3.2(E-F), 4B.4.1(A-F), 4B.4.2(F), 4B.5.1(A-E), 4C.1.2(C), 4C.2.1(A-E)). The proposed SGCP also implements the Tropico Center Plan, which TOD around Tropico’s transit resources through TOD zoning (Tropico 3.3), parking management (Tropico 3.7, Tropico 5.3), pedestrian-oriented design guidelines (Tropico Chapter 4), Complete Streets (Tropico 3.6, Tropico 4.5, Tropico 5.1), transit service and stop enhancements (Tropico 3.5, Tropico 5.2), and wayfinding (Tropico 3.8).</p>
<p><b>Goal 9:</b> Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.</p>	<p><b>Partially Consistent:</b> The proposed SGCP does not directly include monitoring or coordination guidelines; however, it does include a framework for expansion and reliance on the transit system throughout the SGCP area (3.6.2); and supportive policies such as transit street and transit stop improvements (4A.2.1(A)); wayfinding (4A.2.1(F), 4A.3.1(F), 4A.3.4(F)); and improved pedestrian conditions (3.6.2, 4A.2.1(A), 4A.2.1(C), 4A.2.2(D), 4A.3.1(C), 4A.3.1(E), 4A.2.2(D), 4A.3.2(D), 4A.3.2(F), 4B.1.1(A), 4B.1.1(B), 4B.2.1(D), 4B.3.1(B-F), 4B.3.2(E-F), 4B.4.1(A-F), 4B.4.2(F), 4B.5.1(AE), 4C.1.2(C), 4C.2.1(A-E)). Refer to the discussions above, Goal 2-Goal 5, for explanation as to how the proposed SGCP will achieve an expanded and safer transportation network.</p>
<p><b>Policy 4:</b> Transportation demand management (TDM) and active transportation will be focus areas.</p>	<p><b>Consistent:</b> The proposed SGCP will implement transportation demand management measures for South Glendale’s office and government employees; TDM has been identified as a top priority (3.6.2, Tropico 3.7.1). Additionally, see response to Goal 6, above, for a discussion regarding active transportation.</p>

**Table 4.6-1 Consistency with SCAG RTP/SCS**

SCAG Goal/Policy	Analysis of Relevant SGCP Principles/Policies/Guidelines
<b>Policy 5:</b> HOV gap closures that significantly increase transit and rideshare usage will be supported and encouraged.	<b>Consistent:</b> See response to Goal 2 and Goal 3, above, for a discussion regarding accessibility and reliability, and measures to increase ridesharing throughout the SGCP area.
<b>Policy 7:</b> The RTP/SCS will encourage transportation investments that result in cleaner air, a better environment, a more efficient transportation system and sustainable outcomes in the long run.	<b>Consistent:</b> See response to Goal 5, above, for a discussion regarding transportation efficiency and response to Goal 6 regarding development and expansion of the non-motorized transportation system.

Source: Glendale 2017

SCAQMD considers a project to be consistent with existing air quality plans and other relevant documents, if the project’s land use changes and growth rates remain consistent with those in the existing plan. Projects that do not increase dwelling unit density, vehicle trips or VMT above the projected rates included in relevant air quality plans are not considered to exceed this threshold (SCAQMD 1993).

The most relevant and applicable air quality plans for the proposed SGCP area is SCAQMD’s 2016 AQMP and SCAG’s 2016 RTP/SCS. Regional air quality emissions projections used in the SIP and the AQMP are based on the growth projections included in the RTP/SCS; therefore, projects that are consistent with these growth projections would also be consistent with regional air quality emission projections and attainment status regarding CAAQS and NAAQS.

Table 4.6-2 compares the dwelling units, employment, and annual growth rates of the proposed SGCP area and the growth rates included in the SCAG 2016 RTP/SCS. As seen in Table 4.6-2, population and employment increases within the SGCP area are greater than those included in the growth rates forecasted for Glendale in the SCAG 2016 RTP/SCS. Additionally, the household growth rate in the proposed SGCP area is higher than the regional household growth rates established in the SCAG RTP/SCS.

**Table 4.6-2 Summary of Project, City and Regional Forecasted Growth Rates**

	2015	2040	Annual Growth Increase
<b>Proposed SGCP Growth</b>			
Dwelling Units	37,903	48,240	1.1%
Population	102,338	130,248	1.1%
Employment	46,511	57,747	1%
<b>SCAG RTP/SCS Glendale Forecast</b>			
Dwelling Units	72,400	81,100	0.4%
Population	193,200	214,000	0.4%
Employment	111,300	127,000	0.5%
<b>SCAG RTP/SCS Regional Forecast</b>			
Dwelling Unit	5,885,000	7,412,000	0.9%
Population	18,322,000	22,138,000	0.7%
Employment	7,440,000	9,872,000	1.2%

Source: Ascent Environmental 2017 (Appendix D to this EIR)

**Local Policies**

The analysis of whether the proposed SGCP is consistent with each applicable policy from the Glendale General Plan is included in Table 4.6-3; an analysis of consistency with relevant policies in the Greener Glendale Plan is included in Table 4.6-4.

While the proposed SGCP is generally consistent with relevant local goals, policies, and objectives in the Glendale General Plan, it is inconsistent with Air Quality Element Goal 1, Objectives 1.a (Reduce Glendale’s contribution to regional emissions in a manner both efficient and equitable to residents and businesses, since emissions generated within Glendale affect regional air quality) and 1.c (Comply with the AQMP prepared by the SCAQMD and SCAG) per the regional plans discussed above regarding the SCAG 2016 RTP/SCS.

The proposed project is consistent with the goals and objectives of the Greener Glendale Plan goals and objectives that are applicable to implementation of the proposed project, recognizing that some of the Greener Glendale Plan goals and objectives are not relevant to the adoption and implementation of a Specific Plan and may be more appropriate to incorporate into relevant sections of the City’s General Plan “as Elements are amended, and funding becomes available.”

**Table 4.6-3 Consistency with Glendale General Plan**

General Plan Goal/Policy	Proposed SGCP Compliance with Goal/Objective/Policy/Program
<b>Air Quality Element</b>	
<p><b>Goal 1:</b> Air Quality will be healthful for all residents of Glendale.</p>	<p><b>Consistent:</b> South Glendale’s planning and mobility vision includes maintaining existing local transit, expanding existing transit with new Bus Rapid Transit and streetcar service, providing improved transit stops (4A.2.1(A), 4A.2.2(B), 4B.1.1(C)), implementing the Bicycle Transportation Plan (3.6.2) and proposing new bikeways (3.8.2) to reduce reliance on polluting forms of transportation, thereby contributing to improved air quality for all residents of Glendale. The proposed SGCP includes guidelines that encourage non-motorized forms of transportation and safety measures to protect people who engage in active transportation, including improved pedestrian streets, crossings, access, and pedestrian-oriented urban design (4A.2.1(A), 4A.3.1(C), 4A.3.1(E), 4A.2.2(D), 4A.3.2(D), 4A.3.2(F), 4B.1.1(A), 4B.1.1(B), 4B.2.1(D), 4B.3.1(B-F), 4B.3.2(E-F), 4B.4.1(A-F), 4B.4.2(F), 4B.5.1(A-E), 4C.1.2(C), 4C.2.1(A-E)); and bike lanes and bike stations (4A.2.1(C), 4B.3.1(F)). The proposed SGCP also implements the Tropic Center Plan, which encourages transit, walking, and bicycling by focusing TOD around Tropic’s transit resources through TOD zoning (Tropico 3.3), parking management (Tropico 3.7, Tropico 5.3), pedestrian-oriented design guidelines (Tropico Chapter 4), Complete Streets (Tropico 3.6, Tropico 4.5, Tropico 5.1), transit service and stop enhancements (Tropico 3.5, Tropico 5.2), and wayfinding (Tropico 3.8). See also response to Air Quality Element Goal 4.</p>
<p><b>Goal 1, Objective 1.a:</b> Reduce Glendale’s contribution to regional emissions in a manner both efficient and equitable to residents and businesses, since emissions generated within Glendale affect regional air quality.</p>	<p><b>Inconsistent:</b> SCAQMD considers a project to be consistent with existing air quality plans and other relevant documents if the project’s land use changes and growth rates remain consistent with those in the existing plan. Projects that do not increase dwelling unit density, vehicle trips or VMT above the projected rates included in relevant air quality plans are not considered to exceed this threshold. The most relevant and applicable air quality plans for the proposed SGCP area is SCAQMD’s 2016 AQMP and SCAG’s 2016 RTP/SCS. Regional air quality emissions projections used in the SIP and the AQMP are based on the growth projections included in the RTP/SCS; therefore, projects that are consistent with these growth projections would also be consistent with regional air quality emission projections and attainment status regarding CAAQS and NAAQS. Population and employment increases within the proposed SGCP area are greater than those included in the growth rates forecasted for Glendale in the SCAG 2016 RTP/SCS. Additionally, the household growth rate in the proposed SGCP area is higher than the regional household growth rates established in the SCAG RTP/SCS.</p>

**Table 4.6-3 Consistency with Glendale General Plan**

<i>General Plan Goal/Policy</i>	<i>Proposed SGCP Compliance with Goal/Objective/Policy/Program</i>
<p><b>Goal 1, Objective 1.c:</b> Comply with the Air Quality Management Plan prepared by the SCAQMD and SCAG.</p>	<p><b>Inconsistent:</b> See response to Air Quality Element Goal 1, Objective 1.a.</p>
<p><b>Goal 3:</b> Air emissions from City operations will be minimized, while meeting public service requirements.</p>	<p><b>Consistent:</b> Principles and policies in the SGCP include expanding existing transit with new Bus Rapid Transit and streetcar service, providing improved transit stops (4A.2.1(A), 4A.2.2(B), 4B.1.1(C)), implementing the Bicycle Transportation Plan (3.6.2) and proposing new bikeways (3.8.2) to reduce reliance on polluting forms of transportation. In so doing, the proposed SGCP would help the City meet its public service requirements with regards to the provision of transportation service and infrastructure while minimizing associated air emissions.</p>
<p><b>Goal 3, Objective 3.a:</b> Continue the aggressive programs of recycling, energy conservation, and hazardous waste collection in order to minimize emissions from the Grayson power plant and Scholl Canyon landfill.</p>	<p><b>Consistent:</b> Solid waste generated within the proposed SGCP area would be disposed of in accordance with all applicable federal, state, and local regulations related to solid waste, including AB 939, which requires city and county jurisdictions to identify an implementation schedule to divert 50 percent of the total waste stream from landfill disposal by the year 2000 and 75 percent by the year 2020. Glendale currently meets the requirements and is working to further reduce waste entering landfills to meet future mandates; the proposed SGCP would not curtail or otherwise impact these efforts. See also response to Housing Element Goal 6, Policy 6.8.</p>
<p><b>Goal 3, Objective 3.e:</b> Provide leadership as a City by utilizing and advancing innovative technology to reduce air emissions.</p>	<p><b>Consistent:</b> The proposed SGCP calls for maintaining the existing local Beeline Bus's 100% Compressed Natural Gas fleet and expanding existing transit with new Bus Rapid Transit and streetcar service (4A.2.1(A), 4B.1a, 4B.5.1(A), 4C.1a, 4C.1c). These technologies, while not new, are advancing in their methods for contributing to emissions reductions beyond providing an alternative to polluting travel modes, including through the use of fully electric or natural gas vehicles. The proposed SGCP also calls for the introduction of first-last mile bike sharing technology (4A.2.1(C)), new to Glendale and among the most cutting-edge emissions reduction strategies in the region.</p>
<p><b>Goal 4:</b> The reliance on automobile transportation will be reduced.</p>	<p><b>Consistent:</b> The proposed SGCP has specific design guidelines that will coordinate land-use planning with existing and planned transportation systems to reduce the reliance on automobile transportation; relevant measures include improved transit service and frequency (see section 3.6.2, 4A.2.1(A)); an emphasis on transportation demand management for new development (3.6.2, Tropic 3.7.1); incorporating transit stops near new development (3.2.2, 3.4.2); enhanced accessible rider accommodations (3.2.2, 4A.2.2(B), 4B.1.1(C), 4B.3.1(A), 4B.5.1(B), 4B.4.1(A), 4B.5.2(B)); street improvements to incorporate bike lanes (3.6.2, 3.8.2, 3.9.2, 4A.2.1(C), 4B.3.1(F)); expanded sidewalks and improved crosswalks (3.2.2, 3.6.2, 3.8.2, 3.9.2, 4A.3.1(C), 4A.4.1(F), 4B.2.1(B), 4B.3.1(B-C), 4B.5.2(B), 4C.1.1(C), 4C.2.1(C), 4C.2.1(E)); and increased access to services via side streets, alleys, and clear pedestrian walkways (4A.2.2(D), 4A.3.1(E), 4A.3.2(D), 4A.3.2(F), 4A.4.1(F), 4B.1.1(A-B), 4B.3.2(E-F), 4B.4.1(A-C), 4B.4.2(F), 4B.5.1(B), 4C.1.2(C)). Additionally, the proposed SGCP encourages mixed-use buildings in South Glendale's centers and transit-oriented development around the Larry Zarian Transportation Center (3.2.2), the proposed Colorado Street Metrolink station and along the proposed Bus Rapid Transit routes (3.4.2). The proposed SGCP also calls for the development of affordable housing (3.1, 3.2.2, 3.4.2, 3.7.2) and expansion of housing choices in areas near transportation facilities (3.4.2); and implements the Tropic Center Plan, which focuses TOD around Tropic's transit resources through TOD zoning (Tropic 3.3), parking management (Tropic 3.7, Tropic 5.3), pedestrian-oriented design guidelines (Tropic Chapter 4), Complete Streets (Tropic 3.6, Tropic 4.5, Tropic 5.1), transit service and stop enhancements (Tropic 3.5, Tropic 5.2), and wayfinding (Tropic 3.8).</p>



**Table 4.6-3 Consistency with Glendale General Plan**

<i>General Plan Goal/Policy</i>	<i>Proposed SGCP Compliance with Goal/Objective/Policy/Program</i>
<b>Goal 4, Objective 4.b:</b> Promote the use of public transportation and non-polluting transportation in standards for new construction.	<b>Consistent:</b> The proposed SGCP will implement transportation demand management measures for South Glendale's office and government employees, including promotion of the use of public transportation and nonpolluting transportation for new construction (3.6.2, Tropic 3.7.1); the project includes amendments to the Circulation Element to incorporate mandatory Transportation Demand Management measures for new development projects by Center, Corridor, Neighborhood, or District as proposed in the SGCP or identified as mitigation measures in the SGCP EIR.
<b>Goal 4, Objective 4.c:</b> Expand existing public transportation and non-polluting transportation systems and develop new systems in order to reach a greater number of potential users. Continue to seek federal, state, and regional funding sources.	<b>Consistent:</b> See response to Air Quality Element Goal 1.
<b>Goal 4, Objective 4.d:</b> Coordinate various transportation modes with transfer facilities to increase convenience.	<b>Consistent:</b> In its vision for the Glendale (Larry Zarian) Transportation Center (Tropic 4.1), the Tropic Center Plan notes its role as the confluence of rail and bus service, and as an opportunity to integrate more robust first-last mile transportation modes, including walking and bicycling (Tropic 4.1.3, 4.1.7, 4.1.8, 4.1.9), alongside emerging transportation modes to increase convenience (Tropic 4.1.1, 4.1.4).
<b>Goal 4, Objective 4.e:</b> Coordinate non-automobile transportation systems with surrounding jurisdictions.	<b>Consistent:</b> The Tropic Center Plan calls for improving pedestrian, bicycle, and transit access between the Glendale Transportation Center and the Los Angeles City neighborhood of Atwater Village (Tropic 4.1.4, 4.1.5, 4.1.8, 4.1.10). The plan includes specific recommendations relative to High-Speed Rail service that directly serves surrounding jurisdictions and only indirectly serves Glendale (Tropic 4.1c).
<b>Goal 4, Objective 4.f:</b> Increase carpooling opportunities in Glendale.	<b>Consistent:</b> See response to Air Quality Element Goal 4, Objective 4b.
<b>Goal 4, Objective 4.g:</b> Develop incentives for businesses with fewer than 100 employees to reduce vehicle trips. These businesses are not regulated by SCAQMD Rule 1501, but account for the majority of Glendale's work force.	<b>Consistent:</b> See response to Air Quality Element Goal 4, Objective 4b.
<b>Goal 5:</b> Air quality programs will assist businesses in Glendale.	<b>Consistent:</b> The proposed SGCP will implement transportation demand management measures for South Glendale's office and government employees, including promotion of the use of public transportation and nonpolluting transportation for new construction (3.6.2, Tropic 3.7.1); the project includes amendments to the Circulation Element to incorporate mandatory Transportation Demand Management measures for new development projects by Center, Corridor, Neighborhood, or District as proposed in the SGCP or identified as mitigation measures in the SGCP EIR and supporting the work of Transportation Management Association/Organizations with businesses in achieving air quality improvement or pollution/emissions reductions. The Tropic Center Plan describes a framework and specific measures for achieving trip reduction and travel demand management (Tropic 5.3).
<b>Goal 5, Objective 5.a:</b> Inform the businesses of Glendale on ways to reduce air pollution, both directly, as well as by reducing waste, minimizing energy usage, reducing vehicle trips, and managing truck delivery schedules and routes.	<b>Consistent:</b> See response to Air Quality Element Goal 5.
<b>Goal 5, Objective 5.b:</b> Provide incentives for existing and new businesses in Glendale to reduce both stationary and mobile emissions.	<b>Consistent:</b> See response to Air Quality Element Goal 5.
<b>Goal 5, Objective 5.c:</b> Assist businesses, schools, and colleges in reducing vehicle trips by using City-operated services and facilities.	<b>Consistent:</b> See response to Air Quality Element Goal 4.

**Table 4.6-3 Consistency with Glendale General Plan**

<i>General Plan Goal/Policy</i>	<i>Proposed SGCP Compliance with Goal/Objective/Policy/Program</i>
<p><b>Goal 5, Objective 5.d:</b> Continue and expand public/private partnerships which reduce air pollution.</p>	<p><b>Consistent:</b> The Tropico Center Plan would expand the supply of parking through shared parking and leasing agreements between the City and property owners or businesses before evaluating the construction of new public supply (Tropico 3.7.3). This supports compact, walkable development that reduces air pollution from driving alone and/or circling looking for parking, by allowing visitors to park once and walk between nearby destinations.</p>
<p><b>Goal 5, Objective 5.e:</b> Support the use of new air pollution control technologies by Glendale’s business community.</p>	<p><b>Consistent:</b> See also response to Air Quality Element Goal 5, Objective 5.d.</p>
<p><b>Goal 5, Objective 5.f:</b> Assist the business community with environmental regulations through improved communication and technical assistance.</p>	<p><b>Consistent:</b> See response to Air Quality Element Goal 5.</p>
<p><b>Housing Element</b></p>	
<p><b>Goal 1:</b> A City with a wide range of housing types to meet the needs of current and future residents.</p>	<p><b>Consistent:</b> Principle 3.2.2 in the proposed SGCP identifies three levels of future change within the SGCP area: areas to transform, areas to enhance, and areas to maintain. Areas to transform will experience deep-seated change by the introduction of new uses. This will include new housing opportunities to meet the needs of current and future residents. Future housing projects will include mixed-use buildings in South Glendale’s centers, multi-family building in its neighborhoods, and more affordable housing along transit corridors. Additionally, Principle 3.4.2 calls for developers in South Glendale to work with the Housing Authority to provide housing choices for senior and special needs populations, including assisted living and residential congregate care living opportunities.</p>
<p><b>Policy 1.3:</b> Provide higher density residential development in close proximity to public transportation, services, and recreation.</p>	<p><b>Consistent:</b> Per Principle 3.2.2, the proposed SGCP encourages mixed-use buildings in South Glendale’s centers and transit-oriented development around the Larry Zarian Transportation Center, the proposed Colorado Street Metrolink station, and along the proposed Bus Rapid Transit routes. Additionally, Principle 3.4.2 in the proposed SGCP envisions the development of affordable housing and expansion of housing choices in areas near transportation facilities. Additionally, establishing mixed-use standards along public transportation corridors implements Program 2e of the Housing Element.</p>
<p><b>Policy 1.4:</b> Continue to promote residential/mixed used development, including live-work units in appropriate locations.</p>	<p><b>Consistent:</b> The proposed SGCP provides specific guidance on and promotion of mixed-use residential development in South Glendale’s commercial centers (Chapter 4A) and corridors (Chapter 4B). The proposed SGCP also promotes creation of affordable housing corridors adjacent to streets with expanded public transportation (3.4.2). Due to their appropriateness, Chapter 4 includes a vision of new live/work uses accommodated in Urban Center and Industrial/Creative planning areas.</p>
<p><b>Goal 6:</b> A City with housing that is livable and sustainable.</p>	<p><b>Consistent:</b> The siting of populations near services will increase economic vitality and create areas that are both livable and sustainable (Principles 3.2.2, 3.3.2, 3.4.2). In so doing, the proposed SGCP implements Program 7a of the Housing Element.</p>
<p><b>Goal 6, Policy 6.8:</b> Continue providing brochures and technical assistance that promotes the use of energy conservation features in new and existing dwellings.</p>	<p><b>Consistent:</b> Principles within the SGCP area that encourage energy efficiency include the Glendale Smart Grid technology and public benefits programs that improve service and promote energy-efficiency and conservation. Parks and community centers within the SGCP area utilize recycled water, auto shut-off faucets, drought tolerant landscaping, reduced turf areas, high efficiency irrigation systems, permeable ground materials, and shade structures to reduce the heat island effect and water demand. Additionally, affordable housing projects sponsored by the City must be rated Greenpoint or Silver Level LEED equivalent or better (3.7.2).</p>

**Table 4.6-3 Consistency with Glendale General Plan**

<i>General Plan Goal/Policy</i>	<i>Proposed SGCP Compliance with Goal/Objective/Policy/Program</i>
<p><b>Goal 6, Policy 6.9:</b> Continue promoting energy and resource efficiency by implementing the City’s residential recycling, bulk item collection, household hazardous waste, horse accounts, backyard composting, chopper rebates, Christmas Tree Recycling, electronics recycling, recycling drop-off and worm composting services/programs.</p>	<p><b>Consistent:</b> The proposed SGCP does not propose limiting or in any way modifying existing efforts to promote City energy and resource efficiency programs, and is supportive of programs includes design guidelines that encourage energy and resource efficiency. See also response to Housing Element Goal 6, Policy 6.8.</p>
<p><b>Goal 6, Policy 6.10:</b> Encourage the use of sustainable building practices in residential developments.</p>	<p><b>Consistent:</b> See response to Housing Element Goal 6, Policy 6.8.</p>
<p><b>Goal 6, Policy 6.11:</b> Provide opportunities for residential locations and design that encourage transit, pedestrian, bicycle, and other mobility options.</p>	<p><b>Consistent:</b> The proposed SGCP encourages mixed-use buildings in South Glendale’s centers and transit-oriented development around the Larry Zarian Transportation Center (3.2.2), the proposed Colorado Street Metrolink station and along the proposed Bus Rapid Transit routes (3.4.2). Additionally, the proposed SGCP allows for the development of affordable housing (3.1, 3.2.2, 3.4.2, 3.7.2) and expansion of housing choices in areas near transportation facilities (3.4.2). Further, the proposed SGCP includes design guidelines that encourage non-motorized forms of transportation in mixed-use areas and elsewhere, including new or enhanced bikeways; and improved pedestrian streets, crossings, access, and pedestrian-oriented urban design (3.6.2, 4A.2.1(A), 4A.2.1(C), 4A.2.2(D), 4A.3.1(C), 4A.3.1(E), 4A.2.2(D), 4A.3.2(D), 4A.3.2(F), 4B.1.1(A), 4B.1.1(B), 4B.2.1(D), 4B.3.1(B-F), 4B.3.2(E-F), 4B.4.1(A-F), 4B.4.2(F), 4B.5.1(A-E), 4C.1.2(C), 4C.2.1(A-E)). The proposed SGCP also implements the Tropico Center Plan, which focuses TOD around Tropico’s transit resources through TOD zoning (Tropico 3.3), parking management (Tropico 3.7, Tropico 5.3), pedestrian-oriented design guidelines (Tropico Chapter 4), Complete Streets (Tropico 3.6, Tropico 4.5, Tropico 5.1), transit service and stop enhancements (Tropico 3.5, Tropico 5.2), and wayfinding (Tropico 3.8). Additionally, the SGCP implements Program 7c of the Housing Element by creating housing standards for transit-oriented development through implementation of the Tropico Center Plan.</p>
<p><b>Open Space and Conservation Element</b></p>	
<p><b>Policy 1:</b> Natural resources, including open spaces, biological habitats and native plant communities should be maintained and, where necessary restored.</p>	<p><b>Consistent:</b> The proposed SGCP will implement design guidelines that encourage the protection of natural features, including trees, natural vegetation, and rock outcroppings (4C.3.2(D)). No primary ridgelines, secondary ridgelines or blueline streams are identified in South Glendale (Principle 3.10.2).</p>
<p><b>Policy 5:</b> Proper management of environmental resources, especially natural resources, can assist in reducing hazards to the life and property of the City’s residents and should be considered in project planning.</p>	<p><b>Consistent:</b> The proposed SGCP will encourage development that results in a community that is physically safe and prepared for emergencies, and will reduce environmental hazards to life and property through proper planning (3.11.2, 4C.3.2(G)).</p>
<p><b>Policy 8:</b> Important open space and conservation resources should be protected and preserved through acquisition, development agreements, easements, development exactions, and other regulatory strategies</p>	<p><b>Consistent:</b> The proposed SGCP will implement design guidelines that establish standards for safe hillside development, minimize landform alteration, protect ridgelines, and preserve natural features (4C.3.1(F), 4C.3.2(A), 4C.3.2(C), 4C.3.3(D), 4C.3.3(A)).</p>

**Table 4.6-3 Consistency with Glendale General Plan**

<i>General Plan Goal/Policy</i>	<i>Proposed SGCP Compliance with Goal/Objective/Policy/Program</i>
<p><b>Goal 4, Policy A:</b> Coordinate land-use planning with existing and planned transportation systems to encourage the use of public transportation systems and non-polluting transportation in future development.</p>	<p><b>Consistent:</b> The proposed SGCP has specific design guidelines that will coordinate land-use planning with existing and planned transportation systems to encourage the use of public transportation systems and non-polluting transportation in future development; relevant measures include improved transit service and frequency (see section 3.6.2, 4A.2.1(A)); an emphasis on transportation demand management for new development (3.6.2, Tropic 3.7.1); incorporating transit stops near new development (3.2.2, 3.4.2); enhanced accessible rider accommodations (3.2.2, 4A.2.2(B), 4B.1.1(C), 4B.3.1(A), 4B.5.1(B), 4B.4.1(A), 4B.5.2(B)); street improvements to incorporate bike lanes (3.6.2, 3.8.2, 3.9.2, 4A.2.1(C), 4B.3.1(F)); expanded sidewalks and improved crosswalks (3.2.2, 3.6.2, 3.8.2, 3.9.2, 4A.3.1(C), 4A.4.1(F), 4B.2.1(B), 4B.3.1(B-C), 4B.5.2(B), 4C.1.1(C), 4C.2.1(C), 4C.2.1(E)); and increased access to services via side streets, alleys, and clear pedestrian walkways (4A.2.2(D), 4A.3.1(E), 4A.3.2(D), 4A.3.2(F), 4A.4.1(F), 4B.1.1(A-B), 4B.3.2(E-F), 4B.4.1(A-C), 4B.4.2(F), 4B.5.1(B), 4C.1.2(C)). Additionally, the proposed SGCP encourages mixed-use buildings in South Glendale’s centers and transit-oriented development around the Larry Zarian Transportation Center (3.2.2), the proposed Colorado Street Metrolink station and along the proposed Bus Rapid Transit routes (3.4.2). The proposed SGCP also calls for the development of affordable housing (3.1, 3.2.2, 3.4.2, 3.7.2) and expansion of housing choices in areas near transportation facilities (3.4.2); and implements the Tropic Center Plan, which focuses TOD around Tropic’s transit resources through TOD zoning (Tropic 3.3), parking management (Tropic 3.7, Tropic 5.3), pedestrian-oriented design guidelines (Tropic Chapter 4), Complete Streets (Tropic 3.6, Tropic 4.5, Tropic 5.1), transit service and stop enhancements (Tropic 3.5, Tropic 5.2), and wayfinding (Tropic 3.8).</p>
<p><b>Goal 4, Policy B:</b> Promote the use of public transportation and nonpolluting transportation in standards for new construction.</p>	<p><b>Consistent:</b> The proposed SGCP will implement transportation demand management measures for South Glendale’s office and government employees, including promotion of the use of public transportation and nonpolluting transportation for new construction (3.6.2, Tropic 3.7.1); the project includes amendments to the Circulation Element to incorporate mandatory Transportation Demand Management measures for new development projects by Center, Corridor, Neighborhood or District as proposed in the SGCP or identified as mitigation measures in the SGCP EIR.</p>
<p><b>Goal 4, Policy C:</b> Expand existing public transportation and non-polluting transportation systems and develop new systems in order to reach a greater number of potential users. Continue to seek federal, state, and regional funding sources.</p>	<p><b>Consistent:</b> South Glendale’s mobility vision includes maintaining existing local transit, expanding existing transit with new Bus Rapid Transit and streetcar service, providing improved transit stops (4A.2.1(A), 4A.2.2(B), 4B.1.1(C)), implementing the Bicycle Transportation Plan (3.6.2) and proposing new bikeways (3.8.2). The proposed SGCP includes guidelines that encourage non-motorized forms of transportation and safety measures to protect people who engage in active transportation, including improved pedestrian streets, crossings, access, and pedestrian-oriented urban design (4A.2.1(A), 4A.3.1(C), 4A.3.1(E), 4A.2.2(D), 4A.3.2(D), 4A.3.2(F), 4B.1.1(A), 4B.1.1(B), 4B.2.1(D), 4B.3.1(B-F), 4B.3.2(E-F), 4B.4.1(A-F), 4B.4.2(F), 4B.5.1(A-E), 4C.1.2(C), 4C.2.1(A-E)); and bike lanes and bike stations (4A.2.1(C), 4B.3.1(F)). The proposed SGCP also implements the Tropic Center Plan, which encourages transit, walking, and bicycling by focusing TOD around Tropic’s transit resources through TOD zoning (Tropic 3.3), parking management (Tropic 3.7, Tropic 5.3), pedestrian-oriented design guidelines (Tropic Chapter 4), Complete Streets (Tropic 3.6, Tropic 4.5, Tropic 5.1), transit service and stop enhancements (Tropic 3.5, Tropic 5.2), and wayfinding (Tropic 3.8).</p>

Source: Glendale 2017

Specifically, the proposed project incorporates the following relevant Greener Glendale Plan GHG emission reduction goals and is therefore consistent with the Greener Glendale Plan:

- **Cross-Cutting objectives** include implementing Smart Grid Applications, Community Business and School Sustainability Efforts, Sustainability Outreach and Education, Municipal Operations Sustainability Efforts, and collaboration with Schools on Greener Glendale Plan strategies. The proposed project will be consistent with these objectives through implementation of its vision to maintain, enhance, and transform neighborhoods, centers, and corridors by focusing growth into areas that support higher density and mixed use along transportation corridors and affordable housing developments in an overlay zone that are within walking distance to transportation corridors that provide links to Metrolink, a proposed street car and light rail expansion, within the City (SGCP Section 2.3). New development in the SGCP area will become part of the City's existing smart grid network, and new businesses and housing will be able to take advantage of the new transportation options that reduce VMTs, increase LOS, which help the City achieve municipal operations sustainability efforts. (SGCP Sections 2.3; 3.7.2). GDSP Section 3.7 discusses community level sustainability efforts that will be enhanced through specific implementation of the proposed project.
- **Economic Development objectives** include supporting a strong local economy, encouraging sustainable business practices, and supporting local businesses. The proposed project plan identifies specific economic development areas and identifies the citywide principle and goals to create vibrant areas that promote economic opportunities scaled to the needs and economic potential of the various community areas; support a diversity of business and job opportunities sustained by a skilled labor and educated labor force and a fiscally prudent and financially healthy government; and which takes advantage of the City's geographic proximity to regional destinations and surrounding economic and transportation centers (SGCP Section 3.3.). The proposed project will implement transformation within higher density commercial, industrial, and mixed use corridors with the objective of retaining and expanding local serving businesses; it supports the Verdugo Jobs Center which provides education, placement, and training for a local work force that will support and sustain the local economic vitality of the City (SGCP Section 3.3.2).
- **Urban Design objectives** are to incorporate green building practices into community sustainability outreach and education; continue existing efforts to encourage affordable housing development projects; exceed Glendale's Green Building Standards, such as by utilizing additional measures in the Green Point Rated and LEED for Homes checklists, to consider expansion of the City's Green Building Standards; to continue implementing the SCAG Compass Blueprint strategies in Glendale to coordinate with regional efforts to increase sustainability and livable environments; and to incorporate sustainability concepts from the Greener Glendale Plan into Community Plans and other General Plan documents. SGCP Section 3.5 incorporates the eight Greener Glendale Plan Urban Design Concepts (UD5) and is also included in SGCP Section 3.7 pertaining to Infrastructure and Sustainability.
- **Waste objectives** are to promote Zero Waste through community education and outreach; reduce use of disposable, non-renewable products; improve commercial waste diversion; and expand waste diversion services. Accomplishing these goals will directly assist with sustainability goals, and will indirectly reduce GHG emissions. The Greener Glendale Plan

Waste objectives will be implemented through the proposed project via the proposed project's Infrastructure and Sustainability efforts (SGCP Section 3.7) and Growth Management (SGCP Section 3.2), by incorporating sustainability principles into land use planning and configuration, design, construction, and materials of buildings. The Greener Glendale Plan objectives focusing on waste reduction that impact reductions in GHGs are incorporated into the overall guiding principles of the proposed project. Specifically, a proposed project's citywide principle is to include the goal of waste reduction through plan implementation (SGCP Section 3.7.1).

- **Energy Objectives** are to: Increase the use of renewable energy citywide; Reduce citywide energy consumption through promotion, education, and outreach; Reduce citywide energy consumption by facilitating and coordinating community energy efficiency projects; and Encourage the reduction of citywide energy consumption through City municipal codes and policies. The Greener Glendale Plan strategies for fulfilling these objectives are principally dependent on the administration of the City's public utility, but are also accomplished through green building technologies that reduce building energy consumption that are to be implemented through the proposed project (SGCP Section 3.2 Growth Management; Section 3.7 Infrastructure and Sustainability).
- **Urban Nature Objectives** are to: Update the Urban Forest Management Plan; Increase Glendale's tree canopy coverage by 20,000 trees by 2035; Implement programs to increase biodiversity in Glendale; and Ensure there is accessible park and recreational open space to serve residents. These objectives impact GHG emission reduction, because preservation and expansion of the urban forest creates natural shading and cooling of buildings and structures, thereby lowering energy demands for cooling, which in turn reduce GHG emissions. The proposed project promotes the protection, restoration, and enhancement of the City's natural environment and resources through limiting development in natural areas, protecting indigenous trees and habitats, and promoting development away from ridgelines and streams (SGCP Section 3.10 Natural Resources).
- **Water Objectives** are to: Reduce community water consumption through promotion, education, and outreach campaigns; Reduce community water consumption through incentive and rebate programs; Encourage or require water efficiency upgrades at the time of building sale; Facilitate and coordinate community water conservation projects; and Implement stormwater management. The Greener Glendale Plan attributes 2 percent of Glendale's total GHGs to the supply and distribution of water. Accordingly, the Greener Glendale Plan strategies to meet the Greener Glendale Plan objectives are also incorporated into the proposed project. Specifically, a proposed project citywide principle is to provide high-quality, reliable utility and public infrastructure that takes advantages of new technologies to improve energy efficiency, energy and water conservation, air and water quality, and waste reduction (SGCP Section 3.7.1). The proposed project principles are implemented through the plan and are therefore consistent with the Greener Glendale Plan.
- **Transportation Objectives** are to: Facilitate the provision of alternative transportation infrastructure; Promote and encourage the use of alternative forms of transportation; Facilitate the provision of alternative fuel transportation infrastructure; and to Promote and encourage the use of alternative fuel transportation options. These Greener Glendale Plan attributes 45 percent of Glendale's GHG emissions to transportation activities. The Greener Glendale Plan's strategic focus is to support, sustain, and expand public transit options to

achieve these objectives. The proposed project achieves consistency with these objectives by implementing alternatives to automotive transportation by designing healthy, attractive, and safe streets; and by implementing the Safe and Healthy Streets Plan, Bicycle Transportation Plan, Safe Routes to School, the Citywide Pedestrian Plan, and other multi-modal policies and programs (SGCP Section 3.6.1). Furthermore, the proposed project identifies transportation corridors and TOD that increases multi-modal transportation connectivity, walkability, and mixed use that will reduce VMT and increase LOS (SGCP Section 3.6).

- **Environmental Health Objectives** are to: Reduce the use of toxics citywide; Improve air quality; and Promote the use of locally grown, organic foods, and strengthen anti-litter efforts. These objectives affect GHG emissions, because toxic and VOCs emit GHGs, and shipping food over long distances increases GHG emissions. The GHG emissions for this category is not quantified, nonetheless, implementing strategies to meet the Environmental Health Objectives will either directly or indirectly contribute to a reduction of GHG emissions. The City is a built out urban environment, such that large-scale efforts to produce locally grown organic food are not feasible, but the City does encourage creating vibrant areas that promote economic opportunities that are scaled to the needs and potential of various community areas (SGCP Section 3.3 Economic Development). The City has an active farmer’s market culture that includes organic produce that is grown within southern California. Implementation of the proposed project will allow for the creation of community spaces that support the expansion of farmers’ markets. The proposed project also encourages, among other things, waste reduction strategies that will reduce carbon emissions and GHGs, as discussed above in the Greener Glendale Plan Waste Objective Section. These efforts will improve air quality as well.

## ■ Potentially Significant Impacts

In addition to the determination of significance of impacts from GHGs set forth in CEQA Guidelines §15064.4, thresholds for determining the impact of GHG were added to Appendix G in 2016.

Threshold	Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
Threshold	Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

**Impact 4.6-1**     **Implementation of the proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Additionally, the proposed project would conflict with an applicable plan policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gasses. This is considered a potentially significant impact. Implementation of mitigation would reduce this impact, but not to a less than significant level. Therefore, this would be a *significant and unavoidable* impact.**

GHG emissions associated with the proposed SGCP would be generated during project construction and as a result of operations within the proposed SGCP area during and after buildout. Estimated levels of construction- and operation-related GHG emissions are presented below, followed by a discussion of

the project’s consistency with applicable regulations and policies established to enable the achievement of mandated statewide GHG reduction goals.

Project construction activities would result in the generation of GHG emissions from the use of heavy-duty, off-road construction equipment, materials transport, and worker commute. Total construction and amortized construction emissions are presented below in Table 4.6-4.

**Table 4.6-4 Greenhouse Gas Emissions - Construction**

<i>Category</i>	<i>MT CO<sub>2</sub>e/year</i>
Total Construction GHG Emissions	20,265
Amortized Emissions (30 years)	675

Notes: 2018 modeled using CalEEMod Version CalEEMod.2016.3.1 on July 20, 2017 with slightly accelerated growth rate to account for a worst-case scenario year. Totals may not add due to rounding.

MT CO<sub>2</sub>e/year: metric tons carbon dioxide equivalent per year

See Appendix D GHG Technical Report in this EIR for detailed input parameters and modeling results

Model CalEEMod.2016.3.1, Run July 20, 2017

Source: Ascent Environmental 2017 (Appendix D to this EIR)

Operation of the proposed SGCP would result in mobile-source GHG emissions associated with project-generated vehicle trips (i.e., project-generated VMT); area-source emissions from the combustion of natural gas for space and water heating and operation of landscape maintenance equipment; energy-source emissions from the consumption of electricity; water-source emissions from water use and the conveyance and treatment of wastewater; and waste-source emissions from the transport and disposal of solid waste. Mobile-source emissions would result from new vehicle trips generated by anticipated land use development (i.e., 10,337 new dwelling units and 3,765 thousand square feet of non-residential development). It should be noted that mobile source emissions would be expected to decrease over time due to fleet turnover and State regulations requiring reductions in carbon emissions from vehicles. Operational emissions would be highest during the first year and would decline due to fleet turnover and implementation of additional regulations at the State level; operation emissions would be the lowest at proposed SGCP buildout (2040). Construction and operational emissions are summarized in Table 4.6-5.

**Table 4.6-5 Operational Greenhouse Gas Emissions at SGCP Buildout (2040)**

<i>Category</i>	<i>MT CO<sub>2</sub>e/year</i>
Area	3,491
Energy Use	38,559
Mobile Source	67,825
Waste Generation	17,957
Water-Related	4,988
Total Annual Operation Emissions	132,819
Amortized Construction Emissions	676
<b>Total Annual Project Emissions</b>	<b>133,495</b>
2040 Population Increase Associated with SGCP	27,910
2040 SGCP GHG Efficiency (MT CO <sub>2</sub> e/capita/year)	4.8
2040 GHG Efficiency Target (MT CO <sub>2</sub> e/capita/year)	4.0
Exceeds Efficiency Target	<b>Yes</b>

Notes: Totals may not add due to rounding.

See Appendix D GHG Technical Report for detailed input parameters and modeling results

Source: Ascent Environmental 2017 (Appendix D to this EIR)



As of the 2014 first updated Scoping Plan, CARB recommends GHG emissions at the local plan-level not exceed 6 metric tons CO<sub>2</sub>e per capita per year by 2030 and no more than 2 metric tons CO<sub>2</sub>e per capita by 2050. The proposed project would exceed these per capita and mass emissions goals; therefore, the SGCP would not be consistent with statewide emissions limits established by AB 32, SB 32, SB 391, and Executive Orders S-3-05 and B-30-15.

Based on the emissions modeling conducted using CalEEMod version 2016.3.1, project-generated GHG emissions would result in 4.8 metric tons CO<sub>2</sub>e per capita per year at buildout of the proposed project in 2040, thus exceeding recommended levels needed to meet overall state GHG emissions targets. Although the 2017 Scoping Plan Update has been approved by CARB at the time of this EIR, the relevant forecasts and specific targets and outcomes modeled in the 2014 are the most up-to-date resources available that support statewide compliance with emissions levels identified in SB 32 (2006) and AB 197 (2016).

This is considered a potentially significant impact. Implementation of mitigation measures *MM 4.6-1*, as well as *MM 4.2-1* and *MM 4.2-2* would reduce this impact, but not to a less than significant level, resulting in a significant and unavoidable impact.

## ■ Mitigation Measures

***MM 4.6-1:*** *The following policies shall be incorporated into the SGCP to reduce GHG emissions associated with future development projects implemented under the proposed SGCP:*

- ***Policy GHG-1:*** *The City shall update the Greener Glendale Plan for community and municipal operations and establish GHG reduction goals that are consistent with California's established goals of 40 percent below baseline emissions by 2030 and 80 percent below baseline emissions by 2050; this update shall be evaluated against potential environmental impacts and qualified under CEQA as a Climate Action Plan. The updated plan shall include quantifiable and feasible measures that the City can implement to achieve established GHG reduction targets;*
- ***Policy GHG-2:*** *The City shall require any new development proposals within the SGCP to demonstrate consistency with an applicable adopted Climate Action Plan, or other applicable thresholds that demonstrate how the development would not conflict with the City of Glendale's GHG reduction targets. Specific GHG reduction requirements for individual development applications shall be determined at the time of discretionary approval and in accordance with all applicable local (e.g., City, SCAQMD) and State GHG emissions targets;*
- ***Policy GHG-3:*** *The City shall reduce GHG emissions from new development by discouraging auto-dependent sprawl and dependence on the private automobile; promoting water conservation and recycling; promoting development that is compact, mixed use, pedestrian friendly, and transit oriented; promoting energy-efficient building design and site planning; improving the jobs/housing ratio in each community; and other methods of reducing emissions; and*
- ***Policy GHG-4:*** *The City shall continue to evaluate the feasibility and effectiveness of new policies, programs, and regulations that contribute to achieving the City's long-term GHG emissions reduction goals.*

## ■ Level of Significance After Mitigation

Implementation of mitigation measure *MM 4.6-1* would help establish GHG reduction goals and establish a plan for meeting long-term City goals. Any new development subject to CEQA proposed within the SGCP area would be required to show consistency with City and State GHG reduction targets by incorporating GHG reduction measures identified in an adopted Climate Action Plan; however, currently no future GHG reduction targets have been established for Glendale. Upon adoption of an updated Greener Glendale Plan, the City’s progress toward achieving future GHG reduction targets will be evaluated, and any additional GHG reduction measures needed to meet future targets will be identified. Once a plan is adopted, subsequent development within the SGCP area can show consistency with recommendations included within the plan, thus also not interfering with the City or State’s ability to meet GHG reduction targets. Nonetheless, at this time, individual development (e.g., size, type, location) that may occur within the proposed SGCP area is unknown. GHG emissions and the level of GHG reduction that may be achieved by on and off-site mitigation measures for future individual development projects remain unknown. While the City previously adopted the Greener Glendale Plan as its citywide sustainability plan, it is not yet a qualified Climate Action Plan, as it lacks future GHG reduction targets against which future development projects may be analyzed. Without a qualified plan outlining a clear path towards achieving GHG reduction targets, it cannot be determined whether or not all future development would be consistent with City or State plans adopted for the purpose of reducing GHG emissions. This impact would remain significant and unavoidable.

### 4.6.4 Cumulative Impacts

Threshold	Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
Threshold	Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As discussed above in Section 4.6.3 (Analytical Method), impacts regarding global climate change are inherently cumulative; therefore, the proposed SGCP would result in significant and unavoidable cumulative impacts associated with GHG emissions or applicable plans, policies or regulations.

### 4.6.5 References

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