

2.6 Greenhouse Gas Emissions and Climate Change

This section of the Supplemental Environmental Impact Report (SEIR) presents a summary of regulations applicable to greenhouse gas (GHG) emissions, a summary of climate change science and GHG sources in California and San Diego County, quantification of GHGs anticipated to be emitted from construction and operation of the Alpine Community Plan Update (CPU) (proposed project), and a discussion of their contribution to global climate change.

This section incorporates information and analysis from the 2011 General Plan Environmental Impact Report (EIR) as it applies to the proposed project. Section 1.3, *Project Background*, of this SEIR provides a background for both the 2011 General Plan EIR and the Forest Conservation Initiative (FCI) General Plan Amendment (GPA) EIR. The 2011 General Plan EIR analyzed the entirety of the Alpine Community Plan Area (CPA) while the FCI GPA EIR provided an updated analysis of impacts of land use changes within the former FCI lands. Only the 2011 General Plan EIR will be used for analysis of GHGs due to the outcome of litigation of the FCI GPA. Goals, policies, and mitigation measures from the 2011 General Plan and General Plan EIR are relevant to this section and will be referenced throughout.

Table 2.6-1 summarizes the impact conclusions identified in this section. The “Prior EIR Conclusion” column of the table contains conclusions from the 2011 General Plan EIR only.

Table 2.6-1. Summary of Greenhouse Gas and Climate Change Impacts.

Issue Number	Issue Topic	Prior EIR Conclusion	Project Direct Impact(s)¹	Project Cumulative Impact(s)	Level of Significance After Mitigation
GHG-1	Generation of GHG Emissions in 2030	Less than Significant	Potentially Significant	Potentially Significant	Significant and Unavoidable
GHG-2	Generation of GHG Emissions in 2050	N/A ²	Potentially Significant	Potentially Significant	Significant and Unavoidable
GHG-3	Conflict with Applicable Plan(s) in 2030	Less than Significant	Potentially Significant	Potentially Significant	Significant and Unavoidable
GHG-4	Conflict with Applicable Plan(s) in 2050	N/A ²	Potentially Significant	Potentially Significant	Significant and Unavoidable

N/A – not applicable

¹ For the purposes of CEQA, impacts from GHGs are inherently cumulative as described in Section 2.6.3.

² The 2011 General Plan EIR analyzed impacts related to emissions of GHGs consistent with AB 32. This analysis did not provide an impact discussion for emissions from plan buildout to a 2050 horizon year.

Comments received in response to the NOP related to GHGs and climate change included recommendations to encourage land use development activities that reduce vehicle miles traveled (VMT) and GHG emissions from on-road vehicles, including improving walkways and bicycle infrastructure to encourage walkable and bikeable community centers. These comments are addressed in this section.

A copy of the Notice of Preparation (NOP) and associated comment letters are included in Appendix A of this SEIR. This section incorporates information and analyses from the prior EIR where applicable to the proposed project.

2.6.1 Existing Conditions

A discussion of the existing understanding of global climate change and its effects are included in Section 2.17.1, *Existing Conditions*, of the 2011 General Plan EIR and is incorporated by reference. The global climate change existing conditions described in the 2011 General Plan EIR are similar to the existing conditions evaluated in this SEIR. This section includes updates to existing conditions since the adoption of the 2011 General Plan that are relevant to the proposed project.

2.6.1.1 Greenhouse Gas Emissions

Physical Scientific Basis of Greenhouse Gas and Climate Change

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected toward space. The absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The earth has a much lower temperature than the sun; therefore, the earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-generated emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropomorphic increase in GHG concentrations and other anthropomorphic forcing (IPCC 2014). This warming is observable considering the 20 hottest years ever recorded occurred within the past 30 years (McKibben 2018).

Climate change is a global problem; thus, GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with perfect certainty, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remain stored in the atmosphere (IPCC 2013).

The quantity of GHGs in the atmosphere responsible for climate change is not precisely known, but it is substantial. No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of the California

Environmental Quality Act (CEQA), GHG impacts relative to global climate change are inherently cumulative.

Greenhouse Gas Emission Sources

State

As discussed previously, GHG emissions are attributable in large part to human activities. The total GHG inventory for California in 2017 was 424 million metric tons of carbon dioxide equivalent (MMTCO_{2e}) (CARB 2018). This is less than CARB's Assembly Bill (AB) 32 target to reduce emissions to 1990 levels by 2020 equal to 431 MMTCO_{2e} (CARB 2019). Table 2.6-2 summarizes the statewide GHG inventory for California.

Table 2.6-2. Statewide Greenhouse Gas Emissions by Economic Sector

Sector	Emissions (MMTCO_{2e})	Percent
Transportation	174.3	41
Industrial	101.1	24
Electricity generation (in state)	38.6	9
Electricity generation (imports)	24.0	6
Agriculture	32.4	8
Residential	30.4	7
Commercial	23.3	5

MTCO_{2e} = metric tons of carbon dioxide equivalent

Source: CARB 2019

San Diego County

In addition to the State inventory discussed above, a regional GHG inventory accounting for emissions generated by activities in 2012 was prepared for the San Diego region by the San Diego Association of Governments (SANDAG) in 2015. This inventory details the GHG emissions sources generated from activities occurring in the county. Table 2.6-3 provides a summary of the 2012 baseline inventory and forecast years. This inventory represents the most recent inventory prepared for the region that includes the unincorporated County, consistent with regional sustainability planning efforts.

Table 2.6-3 shows that, in 2012, a total of 34.67 MMTCO_{2e} were generated by activities in the county. The largest contributor of GHG emissions was on-road transportation, which includes emissions from gasoline and diesel fuel use from vehicles operating on roadways. The second largest contributor was electricity consumption, which accounts for electricity generated from non-renewable sources and consumed at buildings and developments.

In addition to the emissions sectors listed above, wildfires can also contribute to emissions of GHGs. Wildfires are not included in the County or State GHG inventories because a standard accounting protocol is not available, and wildfires occur intermittently rather than year-to-year at a predictable frequency. Most recently, the Valley Fire occurred in September 2020, burning approximately 16,390 acres of wildland in the Cleveland National Forest near the Alpine CPA (Cleveland National Forest 2020). GHG emissions related to wildfires would not be a direct result of the project. Therefore, GHG emissions from wildfires are not quantitatively accounted for in this GHG emissions analysis. It should be noted that the EIR includes mitigation measures and project design considerations that intend to aid in the prevention

of and preparation for wildfires, as addressed in Chapter 2.7, *Wildfire*. These would also assist in attempting to minimize future GHG emissions from wildfires occurring in and near the Alpine CPA.

Table 2.6-3. San Diego Regional Greenhouse Gas Emissions Inventory and Forecast (MMTCO_{2e})

Emissions Categories	2012 Inventory	2020	2025	2035	2050
On-Road Transportation ¹	15.03	13.07	11.23	9.72	9.79
Electricity	7.97	6.41	6.32	6.05	5.76
Industrial	3.07	3.09	3.11	3.15	3.26
Natural Gas	2.84	2.79	2.76	2.73	2.69
Off-Road Transportation ²	2.45	2.67	2.95	3.47	3.96
Solid Waste	1.75	0.84	0.88	0.93	0.98
Other ³	1.45	1.46	1.48	1.52	1.58
Water and Wastewater	0.68	0.69	0.72	0.78	0.82
Agriculture	0.08	0.06	0.05	0.03	0.02
Regulatory Reductions ⁴	-0.65	-2.94	-2.92	-2.88	-2.83
Total	34.67	28.14	26.58	25.5	26.03

MTCO_{2e} = metric tons of carbon dioxide equivalent

Notes:

¹ On-road transportation emissions consist of passenger cars and light-duty vehicles, and heavy-duty trucks and vehicles.

² Off-road transportation emissions include emissions from aviation, off-road vehicles, rail, and marine vessels.

³ Other emissions include estimated emissions from wildfires and thermal cogeneration.

⁴ Regulatory reductions account for emissions reductions from sequestration, Low Carbon Fuel Standard, Cap-and-Trade, and High Global Warming Potential gas requirements.

Source: SANDAG 2015

Effects of Climate Change on the Environment

According to the Intergovernmental Panel on Climate Change (IPCC), which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature will increase by 3.7 to 4.8 degrees Celsius (°C) (6.7 to 8.6 degrees Fahrenheit [°F]) by the end of the century unless additional efforts to reduce GHG emissions are made (IPCC 2014). According to the California Energy Commission (CEC), temperatures in California will warm by approximately 2.7°F above 2000 averages by 2050 and by 4.1°F to 8.6°F by 2100, depending on emission levels (CEC 2012).

Other environmental resources could be indirectly affected by the accumulation of GHG emissions and the resulting rise in global average temperature. In recent years, California has been marked by extreme weather and its effects. According to California Natural Resources Agency's (CNRA) *Safeguarding California Plan: 2018 Update*, California experienced the driest 4-year statewide precipitation on record from 2012 through 2015; the warmest years on average in 2014, 2015, and 2016; and the smallest and second smallest Sierra snowpack on record in 2015 and 2014. In contrast, the northern Sierra Nevada experienced its wettest year on record during the 2016–2017 water year (CNRA 2018). The changes in precipitation exacerbate wildfires throughout California, increasing their frequency, size, and devastation. As temperatures increase, the amount of precipitation falling as rain rather than snow also increases, which could lead to increased flooding because water that would normally be held in the snowpack of the

Sierra Nevada and Cascade Range until spring would flow into the Central Valley during winter rainstorm events. This scenario would place more pressure on California's levee/flood control system (CNRA 2018). Furthermore, in the extreme scenario involving the rapid loss of the Antarctic ice sheet, the sea level along California's coastline could rise up to 10 feet by 2100, which is approximately 30–40 times faster than the sea-level rise experienced over the last century (CNRA 2017). Changes in temperature, precipitation patterns, extreme weather events, wildfires, and sea-level rise have the potential to threaten transportation and energy infrastructure and crop production (CNRA 2018).

Cal-Adapt is a climate change scenario planning tool developed by CEC that downscales global climate model data to local and regional resolution under two emissions scenarios, the Representative Concentration Pathway (RCP) 8.5 scenario and the RCP 4.5 scenario. The RCP 8.5 scenario represents a business-as-usual future emissions scenario, and the RCP 4.5 scenario represents a future with reduced GHG emissions. Cal-Adapt can provide climate change scenarios information specific to the local geography. The geography available in Cal-Adapt most representative of the entire Alpine CPA is the "Alpine Census Designated Place." According to Cal-Adapt, Alpine CPA experienced an annual average high temperature of 74.4°F between 1950 and 2005. Under the RCP 8.5 scenario, the Alpine CPA's annual average high temperature is projected to increase by 3.1°F to 77.5°F by 2050 and increase by an additional 2.3°F to 79.8°F by 2099 (CEC 2020). Under the RCP 4.5 scenario, the Alpine CPA's annual average high temperature is projected to increase by 2.8°F to 77.2°F by 2050 and increase by an additional 1.2°F to 78.4°F by 2099 (CEC 2020).

The Alpine CPA experienced an average precipitation of 19.3 inches per year between 1950 and 2005. Under the RCP 8.5 scenario, the Alpine CPA is projected to experience an increase of 1.4 inches per year by 2050 and an increase of 2.3 inches per year by 2099 (CEC 2020). Under the RCP 4.5 scenario, the Alpine CPA is projected to experience an increase of 2.4 inches per year by 2050 and an increase of 2 inches per year by 2099 (CEC 2020).

2.6.2 Regulatory Framework

Section 2.17.2 of the 2011 General Plan EIR describes the regulatory framework related to GHGs and climate change and is hereby incorporated by reference. This section also describes updates or changes to regulations and any new regulations enacted since the approval of the 2011 General Plan EIR.

Applicable federal regulations from the 2011 General Plan EIR include:

- Supreme Court ruling in *Massachusetts et al. v. Environmental Protection Agency et al.*, U.S. 497 (2007)
- Federal Clean Air Act (CAA)
- Energy Independence and Security Act of 2007

Applicable State regulations include:

- California Code of Regulations (CCR) Title 24, Part 6
- Executive Order S-3-05
- AB 32, *California Global Warming Solutions Act*
- Senate Bill (SB) 375

Applicable regulations not included or enacted after adoption of the General Plan are described below.

2.6.2.1 Federal Regulations

Regulations for Greenhouse Gas Emissions from Passenger Cars and Trucks

In August 2019, the U.S. Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA) jointly published a notice of proposed rulemaking for Part One of the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule). The SAFE Rule proposes new and amended CO₂, Corporate Average Fuel Economy (CAFE), and GHG emissions standards for passenger cars and light trucks. Additionally, Part One of the SAFE Rule withdraws the State's waiver, afforded under the CAA to set GHG and zero-emissions vehicle (ZEV) standards separate from the federal government. Part One of the SAFE Rule became effective in November 2019. In March 2020, Part Two of the SAFE Rule was published which sets amended fuel economy and CO₂ standards for passenger cars and light trucks for model years 2021 through 2026. Part Two became effective 60 days after publication in the Federal Register. CARB has prepared off-model adjustment factors for the Emissions Factor model (EMFAC) to account for the impact of the SAFE Rule. These adjustment factors account for changes in criteria pollutant estimates from mobile sources for nitrogen dioxide (NO₂), respirable particulate matter (PM₁₀) and fine particulate matter (PM_{2.5}), and carbon monoxide (CO) and GHGs for CO₂, and were applied within this analysis to account for the potential changes to estimated vehicle emissions as a result of the SAFE Rule.

2.6.2.2 State Regulations

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of ZEVs, into a single package of regulatory standards for vehicle model years 2017–2025. The new regulations strengthen the GHG standards for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's ZEV regulation requires battery, fuel cell, and plug-in hybrid electric vehicles (EVs) to account for up to 15 percent of California's new vehicle sales by 2025 (CARB 2016a). The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, GHG emissions from the statewide fleet of new cars and light-duty trucks will be reduced by 34 percent, and cars will emit 75 percent less smog-forming pollution than the statewide fleet in 2016 (CARB 2016b). However, as described previously in Section 2.6.2.1, the implementation of the SAFE Rule would limit CARB's ability to implement this program.

California Renewables Portfolio Standard

SB X1-2 of 2011 required all California utilities to generate 33 percent of their electricity from renewables by 2020. SB 100 of 2018 sets a three-stage compliance period requiring all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, to generate 50 percent of their electricity from renewables by December 31, 2026; 60 percent by December 31, 2030; and 100 percent carbon-free electricity by December 31, 2045.

Executive Order B-30-15

On April 20, 2015, Executive Order (EO) B-30-15 was signed into law and established a California GHG reduction target of 40 percent below 1990 levels by 2030. EO B-30-15 aligns California's GHG reduction targets with those of leading international governments, such as the 28-nation European Union, which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32). California's emission reduction target of 40 percent below 1990 levels by 2030 sets the next interim step in the State's continuing efforts to pursue the long-term target expressed under EO S-3-05 to reach the goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the United States to limit global warming below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Senate Bill 32

In August 2016, SB 32 was signed into law and serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continued efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the State's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which aims to result in the generation of fewer GHG emissions. Effective January 1, 2020, the 2019 California Energy Code requires builders to use more energy-efficient building technologies for compliance with increased restrictions on allowable energy use from the prior 2016 Standards. Additionally, new residential units are required to include solar panels, which are sized to offset the estimated electrical requirements of each unit (CCR, Title 24, Part 6, Section 150.1[c]14). CEC estimates that the combination of required energy-efficiency features and mandatory solar panels in the 2019 California Energy Code will result in new residential buildings that use 53 percent less energy than those designed to meet the 2016 California Energy Code. CEC also estimates that the 2019 California Energy Code will result in new commercial buildings that use 30 percent less energy than those designed to meet the 2016 standards, primarily through the transition to high-efficiency lighting (CEC 2018).

Low Carbon Fuel Standard

In January 2007, EO S-1-07 established a Low Carbon Fuel Standard (LCFS). The EO calls for a statewide goal to be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 and for an LCFS for transportation fuels to be established for California. The LCFS applies to all refiners, blenders, producers, or importers (providers) of transportation fuels in California, including fuels used by off-road construction equipment (Wade, pers. comm. 2017). The LCFS is measured on the total fuel cycle and may be met through market-based methods. For example, providers exceeding the performance required by an LCFS receive credits that may be applied to future obligations or traded to providers not meeting the LCFS.

In June 2007, CARB adopted the LCFS as a Discrete Early Action item under AB 32 pursuant to Health and Safety Code Section 38560.5, and in April 2009, CARB approved the new rules and carbon intensity reference values with new regulatory requirements taking effect in January 2011. The standards require providers of transportation fuels to report on the mix of fuels they provide and demonstrate they meet the LCFS intensity standards annually. This is accomplished by ensuring that the number of “credits” earned by providing fuels with a lower carbon intensity than the established baseline (or obtained from another party) is equal to or greater than the “deficits” earned from selling higher-intensity fuels.

CARB readopted the LCFS regulation in September 2015, and the LCFS went into effect on January 1, 2016.

Climate Change Scoping Plan

In December 2008, CARB adopted its first version of its *Climate Change Scoping Plan*, which contained the main strategies California will implement to achieve the mandate of AB 32 (2006) to reduce statewide GHG emissions to 1990 levels by 2020. In May 2014, CARB released and subsequently adopted the *First Update to the Climate Change Scoping Plan* to identify the next steps in reaching the goals of AB 32 (2006) and evaluate the progress made between 2000 and 2012 (CARB 2014). After releasing multiple versions of proposed updates in 2017, CARB adopted the final version titled *California’s 2017 Climate Change Scoping Plan* (2017 Scoping Plan) in December (CARB 2017). The 2017 Scoping Plan indicated that California is on track to achieve the 2020 statewide GHG target mandated by AB 32 of 2006 (CARB 2017). It also laid out the framework for achieving the mandate of SB 32 of 2016 to reduce statewide GHG emissions to at least 40 percent below 1990 levels by the end of 2030 (CARB 2017).

The 2017 Scoping Plan identifies the GHG reductions needed by each emissions sector and in *Appendix B, Local Action*, provides examples of local actions that can be implemented to support the State’s climate goals. Specifically, this appendix provides a list of example mitigation measures that could be required of individual projects under CEQA, if feasible, when the local jurisdiction is the lead agency.

Senate Bill 743 of 2013

SB 743 of 2013 required that the Governor’s Office of Planning and Research (OPR) propose changes to the State CEQA Guidelines to address transportation impacts in transit priority areas and other areas of the state. In response, Section 15064.3 was added to CEQA in December 2018, requiring that transportation impacts no longer consider congestion related to Levels of Service (LOS), but instead focus on the impacts of VMT. Agencies were required to implement these changes effective July 1, 2020. In support of these changes, OPR published its *Technical Advisory on Evaluating Transportation Impacts in CEQA*, which recommended that the transportation impact of a project be based on whether the project would generate a level of VMT per capita (or VMT per employee or some other metric) that is 15 percent lower than that of existing development in the region (OPR 2017), or allowed for other thresholds to be used to analyze projects based on substantial evidence. OPR’s technical advisory explains that this criterion is consistent with PRC Section 21099, which states that the criteria for determining significance must “promote the reduction in greenhouse gas emissions” (OPR 2017). This metric is intended to replace the use of delay and level of service to measure transportation-related impacts. More detail about SB 743 is provided in the Regulatory Setting section of Section 3.13, *Transportation*.

Executive Order B-48-18: Zero-Emission Vehicles

In January 2018, EO B-48-18 was signed into law and requires all state entities to work with private sector entities to have at least 5 million ZEVs on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 EV charging stations by 2025. It specifies that 10,000 of the EV charging stations should be

direct current fast chargers. This EO also requires all state entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a *Plug-in Charging Station Design Guidebook* and update the *2015 Hydrogen Station Permitting Guidebook* (Eckerle and Jones 2015) to aid in these efforts. All state entities are required to participate in updating the *2016 Zero-Emissions Vehicle Action Plan* (Governor's Interagency Working Group on Zero-Emission Vehicles 2016) to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. Additionally, all state entities are required to support and recommend policies and actions to expand ZEV infrastructure at residential land uses, through the LCFS program, and to recommend how to ensure affordability and accessibility for all drivers.

2.6.2.3 Local Regulations

San Diego County Air Pollution Control District

The San Diego County Air Pollution Control District (SDAPCD) has jurisdiction over air quality programs in the county. SDAPCD regulates most air pollutant sources, except for mobile sources, which are regulated by CARB or EPA. State and local government projects, as well as projects proposed by the private sector are subject to SDAPCD requirements if the sources are regulated by the SDAPCD.

Under the requirements of the California Clean Air Act, each local air district is required to develop its own strategies to achieve both state and federal air quality standards for its air basin. Accordingly, SDAPCD developed the San Diego Regional Air Quality Strategy (RAQS), which includes trigger levels for criteria air pollutants that were subsequently adopted as screening level thresholds for CEQA purposes by the County. To date, however, the SDAPCD has not formally adopted a regional strategy for reducing GHGs similar to criteria air pollutants or developed thresholds of significance under CEQA.

San Diego Association of Governments

Sustainable Communities Strategy

Since passage of SB 375 in 2008, CARB requires metropolitan planning organizations (MPOs) to develop and adopt sustainable communities strategies (SCSs) in addition to the federally-prepared regional transportation plans (RTPs) that show reductions in GHG emissions from passenger cars and light-duty trucks in their respective regions for 2020 and 2035. These plans link land use and housing allocation to transportation planning and related mobile-source emissions. SANDAG serves as the MPO for the San Diego region. In 2011, the SANDAG Board of Directors adopted the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). In 2015, CARB set targets for SANDAG to achieve a 7 percent per capita reduction compared to 2005 level emissions by 2020 and a 13 percent per capita reduction by 2035 (CARB 2015). In March of 2018, CARB approved the proposed Target Update for the SB 375 targets tasking SANDAG to achieve a 15 percent and a 19 percent per capita reduction by 2020 and 2035, respectively (CARB 2018).

County of San Diego

General Plan Policies

The General Plan includes goals and policies within the Land Use Element and Conservation and Open Space Element that would encourage GHG reducing land use practices and activities throughout the unincorporated County. Within the Land Use Element, Goal LU-5 addresses climate change and land use by creating a land use plan that reduces emissions of GHGs to support state initiatives and promote public

health. Policy LU-5.3 would support this goal by preserving existing undeveloped and rural areas and provide carbon sequestration benefits. Within the Conservation and Open Space Element, Goal COS-15 promotes sustainable agriculture and building techniques that reduce emissions of criteria pollutants and GHGs, while protecting public health, including Policies COS-15.1, COS-15.2, and COS-15.3. Goal COS-17 promotes sustainable solid waste management (supported through Policies COS-17.1 and COS-17.5), Goal COS-18 promotes energy systems that reduce consumption of non-renewable resources and GHGs (supported through Policy COS-18.2), and Goal COS-20 promotes GHG reductions through governance and administration (supported through Policies COS-20.1, COS-20.2, and COS-20.4).

Climate Action Plan

In February 2018, the County Board of Supervisors adopted the *County of San Diego Climate Action Plan* (CAP) that included strategies and measures to reduce GHG emissions from the unincorporated County and County government operations. These strategies and measures were developed to reduce GHG emissions by 2020 and 2030, in line with the State's legislative GHG reduction targets through AB 32 and SB 32 and demonstrate progress toward the State's 2050 GHG reduction goal. In December 2018, as a result of the lawsuit filed against the County and the CAP, the San Diego County Superior Court issued a writ ordering the approval of the CAP and associated SEIR be set aside. In June 2020, this decision was upheld by the California Court of Appeal, Fourth District following the County's appeal of the San Diego County Superior Court decision and the County Board of Supervisors subsequently rescinded approvals of the CAP, SEIR and related approvals in September 2020. Through the holding of this decision, the County's CAP can no longer be considered the applicable plan in the unincorporated County for the purpose of reducing GHG emissions, and consistency with the CAP cannot be used as a determination of significance until such a time as it is reapproved in compliance with CEQA. However, GHG reduction strategies and measures included in the CAP continue to be implemented pending preparation of an updated CAP for consideration by the County Board of Supervisors.

Green Building Incentive Program

The County of San Diego's Green Building Incentive Program is designed to promote the use of resource efficient construction materials, water conservation, and energy efficiency in new and remodeled residential and commercial buildings. The program offers incentives of reduced plan check turnaround time and a 7.5 percent reduction in plan check and building permit fees for projects meeting program requirements.

Construction and Demolition Recycling Ordinance

The Construction and Demolition Debris Ordinance is designed to divert debris from construction and demolition projects from the landfill disposal in the unincorporated County. The ordinance requires that 90 percent of inerts and 70 percent of all other construction materials from a project be recycled. In order to comply with the ordinance, a Construction and Demolition Debris Management Plan must be submitted and a fully refundable Performance Guarantee must be paid prior to building permit issuance.

Strategic Plan to Reduce Waste

The County of San Diego Strategic Plan to Reduce Waste is designed to reduce waste sent to landfills. The plan includes 15 programs and policies that focus on different waste types and sources, such as reducing food and other organic waste generated from residential and commercial uses and sets a 75 percent waste diversion target by 2025.

Landscape Ordinance

The County of San Diego's Landscaping Ordinance was adopted in accordance with the State's Model Water Efficient Landscape Ordinance (MWELo), which establishes water efficiency standards for new and existing landscapes. The County's ordinance applies to new construction for which the County issues a building permit or a discretionary review where the aggregate landscaped area is 500 square feet or more to obtain outdoor water use authorization. For those projects between 500 and 2,500 square feet, the County has a more streamlined process called the Prescriptive Compliance Option. All landscape areas are subject to a Maximum Applied Water Allowance (MAWA), which sets an upper limit of allowable water use per landscape area.

2.6.2.4 Alpine CPU Policies

Specific Alpine CPU goals and policies in the Land Use, Mobility, and Conservation and Open Space Elements relevant to impacts and resources related to greenhouse gases are summarized below.

Land Use Element

Goal LU-6 states that the built environment should be in balance with the natural environment, scarce resources, natural hazards, and the unique local character. Policies LU-6.1, LU-6.2, LU-6.3, LU-6.4, LU-6.6, and LU-6.7 support this goal by describing how development should be designed, sited, and implemented. Policies LU-6.1 and LU-6.7 require the protection of natural resources and creation of open space. Policies LU-6.2, LU-6.3, LU-6.4, and LU-6.6 require that projects and subdivisions be designed to consolidate the project footprint and use sustainable development practices (including incorporation of natural features) as well as maintain low-density land uses in areas with sensitive natural resources.

Goal LU-7 recommends analyzing a Transfer of Development Rights (TDR) Pilot Program, and Policy LU-7.1 specifically implements a TDR Pilot Program in support of this goal. This program would promote environmental sustainability by directing density toward planned growth areas within Village boundaries to reduce the generation of VMT and GHG emissions.

Mobility Element

Goal M-1 works to support a multi-modal transportation system that serves the general convenience and safety of Alpine citizens and enhances the beauty and quality of the built environment. This goal would be supported by policies that result in improved air quality through reduced vehicle trips on roadways including Policy M-1.1 through M-1.9, which support the development of housing and services near existing and planned transit stops; encourage traffic calming and efficient circulation design improvement throughout the CPA; and promote bicycling, walking, and taking transit and efficient and safe modes of transportation. Policy M-1.6 encourages the replacement of all trees lost during road construction/renovation project, which would increase carbon sequestration and reduce carbon lost during roadway projects.

Conservation and Open Space Element

Goal COS-1 promotes management of valuable resources, natural and man-made, and prevention of resource destruction and wasteful exploitation. Policy COS-1.1 supports this by promoting conservation education in community schools.

Goal COS-2 encourages planting of trees to absorb CO₂ and provide air quality benefits through runoff retention. Policy COS-2.1 recommends exploring incentives and tax breaks to meet this goal and consideration of support for removal of non-native vegetation.

2.6.3 Analysis of Project Effects and Determination as to Significance

Global climate change is inherently cumulative; thus, the proposed project's impact on climate change is addressed only as a cumulative impact.

Amendments to Section 15064.4 of the CEQA Guidelines were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions. Section 15064.4 specifies that a lead agency "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." Section 15064.4 also provides lead agencies with the discretion to determine whether to assess those emissions quantitatively or to rely on a qualitative analysis or performance-based standards. If a qualitative analysis is used, in addition to quantification, this section recommends certain qualitative factors that may be used in the determination of significance (i.e., extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs). Under Appendix G of the State CEQA Guidelines, implementing a project would result in a cumulatively considerable contribution to climate change if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or
2. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Section 15064.4 of the CEQA Guidelines does not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions. Section 15064.7(c) states that "a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence." Several agencies throughout the state, including multiple air districts, have drafted and/or adopted varying thresholds approaches and guidelines for analyzing GHG emissions and climate change in CEQA documents. However, no thresholds of significance or guidelines for general use within the County have been adopted by CARB, the County, or SDAPCD.

In the absence of an adopted numeric threshold, the significance of the proposed project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such a plan or program 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. Examples

of such programs include a “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 greenhouse gas emissions.” Thus, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of non-significance for GHG emissions if a project complies with a program and/or other regulatory schemes to reduce GHG emissions.

As described above, the California Global Warming Solutions Act of 2006 (AB 32) established a target of reducing GHG emissions to 1990 levels by 2020. SB 32 (2016) authorized CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. The California Supreme Court decision in *Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming* (2015) 62 Cal. 4th 204 (“Newhall Ranch” case) states that “a lead agency might assess consistency with Assembly Bill 32’s goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities.” The Court further states that “to the extent a project’s design features comply with or exceed the regulations outlined in the Scoping Plan and adopted by the Air Board or other state agencies, a lead agency could appropriately rely on their use as showing compliance with ‘performance based standards’ adopted to fulfill ‘a statewide plan for the reduction or mitigation of greenhouse gas emissions.’ (Guidelines, § 15064.4, subds. (a)(2), (b)(3); see also *id.*, § 15064, subd. (h)(3) [determination that impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including ‘plans or regulations for the reduction of greenhouse gas emissions’].)”

CARB’s 2017 Scoping Plan is intended to reduce GHG emissions to meet the statewide targets set forth in AB 32 and SB 32 and provides examples of local actions that can be implemented to support the State’s climate goals. In addition, as part of its discussion about different viable thresholds for analyzing GHG emissions associated with projects, the 2017 Scoping Plan states, “Absent conformity with an adequate geographically-specific GHG reduction plan as described in the preceding section above, CARB recommends that projects incorporate design features and GHG reduction measures, to the degree feasible, to minimize GHG emissions” (CARB 2017). Therefore, if a project demonstrates consistency with the State’s overall strategy and ability to meet the 2030 target as laid out in the 2017 Scoping Plan, then the project’s incremental contribution to climate change would be less than significant. Based on the foregoing, the County has determined that the proposed project would not have a significant effect on the environment if it is found to be consistent with the applicable regulatory plans and policies to reduce GHG emissions, i.e., emissions reduction measures discussed within CARB’s 2017 Scoping Plan. The determination of consistency with the 2017 Scoping Plan including the methodology to identify consistency, is described further in Section 2.6.3.2, *Issue 1: Generate GHGs That May Have a Significant Impact on the Environment*.

2.6.3.1 Analysis Methodology

As there is no applicable adopted or accepted numerical threshold of significance for GHG emissions from County guidelines or SDAPCD, the methodology for evaluating the Alpine CPU’s impacts related to GHG emissions focuses on its consistency with statewide plans adopted for the purpose of reducing and/or mitigating GHG emissions. This evaluation of consistency is the sole basis for determining the significance of the Alpine CPU’s GHG-related impacts on the environment.

Emissions of GHGs were estimated in accordance with Section 15064.4 of the CEQA Guidelines. The severity of potential impacts related to the GHG emissions caused by the increase in development potential above allowable General Plan buildout was assessed based on the proposed project’s total increase in development above existing conditions (set to a base year of “on-the-ground” development in

2012, consistent with SANDAG modeling).¹ Potential impacts from buildout of the Alpine CPU were determined based on two scenario buildout years in 2030 and 2050, relative to the development of the General Plan buildout for the same years. The 2030 impact determination assumes full buildout of the Alpine CPU by that year, consistent with SB 32. The same analysis was performed for the buildout of General Plan land uses within the Alpine CPA for comparison. Since the 2017 Scoping Plan identifies a pathway to achieve the statewide 2030 target, consistency with Scoping Plan measures would determine if a project or plan impact would be cumulatively considerable in 2030. This analysis of buildout in 2030 was provided to illustrate anticipated emissions from allowable Alpine CPU growth by the SB 32 milestone year. However, as indicated by existing growth trends in the Alpine CPA (see Chapter 1.0, *Project Description*) and the projected buildout timeline for allowable Alpine CPU buildout, it would likely take longer than 10 years for buildout to occur. Emissions estimates in 2050 also assume full buildout of both the Alpine CPU and General Plan, consistent with the Alpine CPU horizon year. However, the 2017 Scoping Plan does not identify specific actions that should be taken to achieve the 2050 goal. While consistency with Scoping Plan measures would assist in substantially reducing statewide emissions and set the state on a pathway toward the 2050 emissions reduction goal, the Scoping Plan measures would not be adequate to achieve the statewide 2050 goal.

Consistent with CEQA Guidelines Section 15064.4, the analysis also calculates the amount of GHG emissions that would be attributable to the Alpine CPU and General Plan buildout, and the net change in GHG emissions between the two scenarios. GHG emissions associated with the Alpine CPU would be generated during construction and operation. Construction activities associated with allowable development construction would result in the generation of GHG emissions from the use of heavy-duty off-road construction equipment, delivery trucks associated with materials transport, and vehicle use during worker commute. Operations of plan buildout would result in mobile-source GHG emissions from vehicle trips, area-source emissions from the operation of landscape maintenance equipment, energy use emissions from consumption of electricity and natural gas, water-related energy consumption associated with water use and the conveyance and treatment of wastewater, and waste-generated emissions from the transport and disposal of solid waste. Emissions were modeled using the California Emissions Estimator Model (CalEEMod) Version 2016.2.3 and CARB's EMFAC2017 model with the application of the SAFE Rule emissions adjustment factors. The significance of the proposed project's GHG impacts is not based on the quantitative amount of GHG emissions resulting from buildout, and instead is based on the consistency of the proposed project to CARB's 2017 Scoping Plan, assessed qualitatively.

CalEEMod provides estimated emissions of criteria air pollutants and GHG emissions using user defined inputs and default data when local or project-specific data are not available. The primary inputs for emissions estimates are land uses associated with a project. As described previously in Chapter 1, *Project Description*, land use data for the proposed project are available at the community plan level (i.e., allowable buildout of dwelling units for residential land uses and acreage for commercial uses). The total single-family and multi-family dwelling units were used to estimate emissions associated with residential uses. To provide the most representative estimates for commercial uses, the total building square footage is needed to input into CalEEMod. Thus, for the purposes of the modeling of GHG emissions (as well as the modeling of criteria air pollutant emissions provided in Chapter 2.3 *Air Quality*, and energy consumption provided in Chapter 2.15, *Energy*), the acreage for these uses was converted to square feet. The anticipated

¹ To determine VMT for inventories and projections, SANDAG provides jurisdiction-specific VMT data for a base year and requested horizon year(s) depending on the jurisdiction's planning milestone years. The base year VMT data for the unincorporated County that most closely represents actual conditions is the 2012 base year, consistent with the Series 13 base year. This base year is used as the overall baseline for this analysis as it represents the most available dataset reflective of all existing land uses and emissions sources and is most closely calibrated in SANDAG's model.

square footage of buildout of commercial uses through the implementation of the proposed project and allowable General Plan buildout were estimated based on the total acreage of commercial, and mixed-use land uses, multiplied by the existing floor area ratio (FAR) of similar uses in the Alpine CPA. The existing FAR was estimated based on a reasonable rate of commercial buildout on existing sites in the Alpine CPA. An additional adjustment was made for estimated development on parcels zoned “Village Core Mixed Use (C-5)” to account for the potential mix of uses on these sites (i.e., estimated retail land use was reduced to account for additional residential uses developed on the site). This mixed-use adjustment assumed that 70 percent of the square footage on mixed-use sites would be occupied by commercial uses. This conversion was prepared by Chen Ryan and Associates (Chen Ryan 2020), and a detailed description of this methodology is provided in Appendix G. For consistency with other Alpine CPU SEIR sections, commercial land uses within this section are described based on acreage.

2.6.3.2 Issue 1: Generate GHG Emissions That May Have a Significance Impact on the Environment

Guidelines for the Determination of Significance Analysis

As described previously in Section 2.6.3, the potential impacts from the proposed project’s GHG emissions were evaluated relative to consistency with the 2017 Scoping Plan.

CARB’s 2017 Scoping Plan

The 2017 Scoping Plan outlines a framework that relies on a broad array of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, incentives, voluntary actions, and market-based mechanisms such as cap-and-trade. There are multiple state laws, regulations, and policies the Alpine CPU would need to comply with, including:

- California Renewables Portfolio Standard, SB 350, and SB 100
- California Code of Regulations Title 24, Building Standards Code
- AB 1109 (Lighting Efficiency and Toxics Reduction Act)
- AB 1493 (Pavley Regulations)
- Executive Order S-01-07 (Low Carbon Fuel Standard)
- Advanced Clean Cars Program and Low-Emission Vehicle regulations
- SB 375 (regional targets for reducing passenger vehicle GHG emissions)
- SB X7-7 (Water Conservation Act of 2009)
- California Integrated Waste Management Act of 1989 and AB 341 (statewide goal for 75 percent disposal reduction)

In addition to compliance with statewide laws and regulations, consistency with the 2017 Scoping Plan would be determined through implementation of applicable project-level GHG reducing actions. As briefly described in Section 2.6.2.2, CARB provides 43 project-level GHG reduction measures in Appendix B, *Local Action*, of the 2017 Scoping Plan. The 43 measures, herein referred to as Scoping Plan measures, provide “examples of potentially feasible mitigation measures that could be considered for individual projects under CEQA when the local jurisdiction is the lead agency” (CARB 2017).

The examples of measures provided in the Scoping Plan are used in this analysis as best management practices (BMPs) for establishing a threshold of significance for the Alpine CPU. These BMPs would require future projects in the Alpine CPA that are subject to the discretionary review process to determine potential impacts from emissions of GHGs and consistency with applicable plans through consistency with CARB's 2017 Scoping Plan. These BMPs are measures that would minimize the GHG emissions associated with development under the proposed project. By showing consistency with the BMPs, development would comply with the State's overall strategy and ability to meet future reduction targets as laid out in the 2017 Scoping Plan. Thus, compliance with the State's future reduction targets would result in a less than significant incremental contribution to climate change. However, consistency with the 2017 Scoping Plan can only be used to determine a less than significant impact for a 2030 horizon year. The 2017 Scoping Plan notes that the identified measures to meet California's 2030 reduction target would not be adequate to meet the 2050 reduction goal. Thus, even if consistent with the Scoping Plan measures, a project would still generate GHG emissions that would be cumulatively considerable for a 2050 horizon year.

Appendix B, *Local Action*, provides a list of 43 project-level GHG reduction measures. The feasibility of implementing these project-level measures varies by jurisdiction, location, and regional climate. For this reason, CARB provides only generalized measures that should be further developed by local agencies to match local policies to the extent feasible, and apply only measures that would be feasible within the climate (e.g., requirements for improving energy efficiency in buildings would change between climates. Areas with cold winters may apply insulation or hearth measures that would not be applicable in warmer climates.) From the project-level Scoping Plan measures, BMPs were developed based on feasibility in the San Diego region. These BMPs expand the Scoping Plan measures to include regionally specific activities, feasible construction or operational requirements that have been included in recent CEQA documents, and regulations and requirements applied in similar air districts (i.e., South Coast Air Quality Management District [SCAQMD] and Sacramento Metropolitan Air Quality Management District [SMAQMD]). This methodology for determining BMPs based on Scoping Plan measures is consistent with the methodology used by SMAQMD in developing BMPs for use in the air districts alternative thresholds for determining significance for GHGs (SMAQMD 2020). The analysis presented herein translates recommended project-level measures from Appendix B of the Scoping Plan into BMPs to assign "performance based standards" consistent with the Court's recommendation in *Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming* (2015) 62 Cal. 4th 204 ("Newhall Ranch" case) and CEQA Guidelines Section 15064.4(a)(2). The Newhall Ranch case states that "a lead agency might assess consistency with Assembly Bill 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities." The Court further states that "to the extent a project's design features comply with or exceed the regulations outlined in the Scoping Plan and adopted by the Air Board or other state agencies, a lead agency could appropriately rely on their use as showing compliance with 'performance based standards' adopted to fulfill 'a statewide plan for the reduction or mitigation of greenhouse gas emissions.' (Guidelines, § 15064.4, subs. (a)(2), (b)(3); see also *id.*, § 15064, subd. (h)(3) [determination that impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including 'plans or regulations for the reduction of greenhouse gas emissions'.])" A summary of the BMPs applicable to project-level implementation in the Alpine CPA and the related Scoping Plan measures is provided in Table 2.6-4. Additional determination of measures feasibility is provided in Appendix E.

Table 2.6-4. Project-Level Best Management Practices Consistent with CARB Scoping Plan Measures

Best Management Practice	Description	Applicable Project Types
Construction-Related BMPs		
BMP-1: Idling Restrictions for Construction Equipment	All on- and off-road diesel equipment shall not idle for more than 5 minutes while on site. Signs shall be posted in the designated queuing areas and/or job sites to inform drivers and operators of the 5-minute idling limit. Implementation of these measures shall be required in the contract the project applicant establishes with its construction contractors.	All construction activities.
BMP-2: Off-Road Equipment Emission Standards	All diesel-powered off-road equipment used in construction shall meet EPA's Tier 4 emission standards as defined in 40 CFR 1039 and comply with exhaust emission test procedures and provisions of 40 CFR Parts 1065 and 1068. Tier 3 models can be used if a Tier 4 version of the equipment type is not yet produced by manufacturers. This measure can also be achieved by using battery-electric off-road equipment as it becomes available. Implementation of this measure shall be required in the contract the project applicant establishes with its construction contractors.	All construction activities.
BMP-3: Alternative Fuels for Diesel-Powered Construction Equipment	<p>Only RD fuel should be used in diesel-powered construction equipment. RD fuel must meet the following criteria:</p> <ul style="list-style-type: none"> ▪ Meet California's Low Carbon Fuel Standards and be certified by CARB Executive Officer; ▪ Be hydrogenation-derived (reaction with hydrogen at high temperatures) from 100 percent biomass material (i.e., non-petroleum sources), such as animal fats and vegetables; ▪ Contain no fatty acids or functionalized fatty acid esters; and ▪ Have a chemical structure that is identical to petroleum-based diesel and complies with American Society for Testing and Materials D975 requirements for diesel fuels to ensure compatibility with all existing diesel engines. <p>Implementation of this measure shall be required in the contract the project applicant establishes with its construction contractors.</p>	All construction activities.
BMP-4: Electrification of Power Tools and Temporary Office Buildings	Instead of using fossil fuel-based generators for temporary jobsite power, grid-sourced electricity from the local utility shall be used to power tools (e.g., drills, saws, nail guns, welders) and temporary office buildings. This measure is required during all construction phases except site grubbing; site grading; and the installation of electric, water, and wastewater infrastructure. This measure shall be implemented during building demolition, the framing and erection of new buildings, all interior work, and the application of architectural coatings. Electrical outlets shall be placed in accessible locations throughout the project area. Contractors shall coordinate with the utility to activate a temporary service account prior to proceeding with	All land development construction. This measure would not apply to the construction of projects, infrastructure, or buildings that will not be connected to the electrical grid

Best Management Practice	Description	Applicable Project Types
	construction. Implementation of this measure shall be required in the contract the project applicant establishes with its construction contractors.	when they are completed and operational.
BMP-5: Construction Worker Commute Trips	<p>Implement a program supportive of SANDAG iCommute that incentivizes workers to carpool, use EVs, or use public transit to commute to and from the construction site. At minimum, the program shall include a virtual or real “ride board” for workers to organize carpools and reimburse workers for any expenses they incur from using local public transit to commute to and from the construction site. The program may also include the following features, if feasible:</p> <ul style="list-style-type: none"> ▪ Provide preferential parking to carpool vehicles, vanpool vehicles, and EVs; and ▪ Schedule work shifts to be compatible with the schedules of local transit services. <p>Implementation of these measures shall be required in the contract the project applicant establishes with its construction contractors.</p>	All construction activities.
BMP-6: construction Waste Reduction, Disposal, and Recycling	All construction activities shall implement waste reduction, disposal and recycling strategies in accordance CALGreen. In addition, projects shall achieve or exceed the enhanced Tier 2 targets for reusing or recycling construction waste of 75 percent for residential and 80 percent for nonresidential buildings as described in Sections A4.408 and A5.408 of the CALGreen standards.	Construction and demolition of all residential and non-residential buildings.
Building-Related BMPs		
BMP-7: Energy Efficiency and Solar Photovoltaic Systems for Single Family Residential Buildings	New single-family residential buildings construction within the Alpine CPA shall be designed consistent with the energy efficiency performance standards set forth in Tier 2 of the 2019 CALGreen, Section A4.203.1. These reductions shall be achieved by employing energy efficient design features and/or solar photovoltaics. Compliance shall be demonstrated using CEC-approved residential energy modeling software.	New single-family residential buildings.
BMP-8; Energy Efficiency and Solar Photovoltaic Systems for Multi-Family Residential Buildings	New multi-family residential buildings constructed within the Alpine CPA shall be consistent with the energy efficiency performance standards set forth in Tier 1 of 2019 CALGreen, Section A4.203.1. These reductions shall be achieved by employing energy efficient design features and/or solar photovoltaics. Compliance shall be demonstrated using CEC-approved residential modeling software.	New multi-family residential buildings that are three stories or less.
BMP-9: Energy Efficiency of Non-Residential Buildings	Newly constructed non-residential buildings shall be designed consistent with Tier 1 of CALGreen Section A5.203.1. Alternatively, this measure can be met by installing on-site renewable energy systems that achieve equivalent reductions in building energy use.	New non-residential buildings and new residential buildings exceeding four stories.

Best Management Practice	Description	Applicable Project Types
BMP-10: Cool Roofs	Newly constructed buildings shall be designed to include Cool Roofs in accordance with the requirements set forth in Tier 2 of CALGreen Section A5.106.11.2.	All new residential and non-residential buildings.
BMP-11: Water Efficiency and Conservation	Newly developed buildings shall comply with requirements for water efficiency and conservation as described in CALGreen Divisions A4.3 and A5.3.	All new residential and non-residential buildings.
BMP-12: Natural Gas Outlets for Residential Backyards and Common Outdoor Activity Areas	Natural gas connections must be provided in all residential backyards and within the common outdoor activity areas of multi-family land uses. Natural gas connections are only required in areas served by natural gas infrastructure.	Single family homes with backyards and multi-family land uses with common outdoor activity areas in locations where natural gas service is provided.
BMP-13: Outdoor Electrical Receptacles	Multiple electrical receptacles shall be included on the exterior of newly constructed non-residential buildings and accessible for purposes of charging or powering electric landscaping equipment and providing an alternative to using fossil fuel-powered generators. The electrical receptacles shall have an electric potential of 100 volts. There should be a minimum of one electrical receptacle on each side of the building and one receptacle every 100 linear feet around the perimeter of the building.	All electrified non-residential buildings.
BMP-14: Parking Lot Shading	New outdoor parking lots for multi-family and non-residential buildings shall include trees and/or solar canopies designed to result in 50 percent shading of parking lot surface areas.	New multi-family and non-residential buildings with outdoor, on-site parking lots.
Transportation-Related BMPs		
BMP-15: Limit Parking Capacity to Meet On-Site Demand	Provide no more on-site parking spaces than necessary to accommodate the number of employees working at a project site and/or the number of residents living at a project site, as determined by the project size and design.	Office, industrial, and multi-family residential land uses.
BMP-16: Electric Vehicle Parking at New Single-Family Residential Buildings	Newly constructed single-family residential buildings shall install at least one EVSE parking space in each unit. Each EVSE shall include the installation of a listed raceway, associated overcurrent protective device and the balance of a dedicated 208/240-volt branch circuit rated at 40amperes minimum, and EV charging equipment. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or unit subpanel and shall terminate into a listed cabinet, box	New single-family residential buildings.

Best Management Practice	Description	Applicable Project Types
	or at the location of the EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity for a 40-ampere minimum dedicated branch circuit. All electrical circuit components and EVSE, including a receptacle or box with a blank cover, related to this section shall be installed in accordance with the California Electrical Code.	
BMP-17: Electric Vehicle Parking and Charging in New Multi-Family Residential Buildings	Newly constructed multifamily residential buildings shall design at least 10 percent of parking spaces to include EVSE, or a minimum of 2 spaces to be installed with EVSE for buildings with 2–10 parking spaces. EVSE includes EV charging equipment for each required space connected to a 208/240-Volt, 40-amp panel with conduit, wiring, receptacle, and overprotection devices.	New multi-family residential buildings of three stories or less.
BMP-18: Electric Vehicle Parking and Charging in New Non-Residential Buildings	Newly constructed non-residential buildings shall design at least 10 percent of parking spaces to include EVSE, or a minimum of 2 spaces to be installed with EVSE for buildings with 2–10 parking spaces. EVSE includes EV charging equipment for each required space connected to a 208/240-Volt, 40-amp panel with conduit, wiring, receptacle, and overprotection devices.	New non-residential buildings and all residential buildings exceeding four stories.
BMP-19: Preferential Parking for High-Occupancy Vehicles and Zero Emission Vehicles	Non-residential land uses with 20 or more on-site parking spaces shall dedicate preferential parking spaces to vehicles with more than one occupant and Zero Emission Vehicles (including battery electric vehicles and hydrogen fuel cell vehicles). The number of dedicated spaces should be no less than two spaces or 5 percent of the total parking spaces on the project site, whichever is greater. These dedicated spaces shall be in preferential locations such as near the main entrances to the buildings served by the parking lot and/or under the shade of a structure or trees. These spaces shall be clearly marked with signs and pavement markings. This measure shall not be implemented in a way that prevents compliance with requirements in the California Vehicle Code regarding parking spaces for disabled persons or disabled veterans.	All non-residential land uses with off-street parking.
BMP-20: Bicycle Parking at Retail and Commercial Buildings	Provide adequate, safe, convenient, and secure on-site bicycle parking racks at retail and commercial buildings. Bicycle parking racks shall be permanently anchored, be located in a convenient location within 200 feet of the primary visitor's entrance, and be easily visible. The number of bike parking spaces shall be a minimum of 15 percent of new visitor motorized vehicle parking spaces (rounded up to the nearest whole number). At minimum, there should be one two-bike capacity rack.	New commercial and retail land uses.
BMP-21: On-Site Amenities for Bicycles at Multi-Family Residential Buildings	Provide adequate, safe, convenient, and secure on-site bicycle parking and storage in multi-family residential projects. The bicycle parking area shall be under a roof and in a locked area that is only accessible by residents. Bicycle parking facilities should be designed in a manner that	New multi-family residential land uses.

Best Management Practice	Description	Applicable Project Types
	provides adequate space for all bicycle types including e-bikes, tandems, recumbent bikes, and cargo bikes, as well as bike trailers. Alternatively, a separate bicycle storage area can be included in the design of each dwelling unit near the main entrance to each dwelling unit. The total bicycle storage capacity on the project site shall be sufficient to accommodate a number of bikes that is equivalent to the number of residents for which the project is designed as well as one bike trailer for every dwelling unit on the project site. The project should also include elevators large enough to accommodate bikes and a common space with a shared bike tool station and compressor air pump for inflating tires.	
BMP-22: On-Site Bicycle Amenities for Places of Employment	All newly constructed places of employment shall include amenities for employees who commute by bicycle including a shower and changing room, as well as a secure bicycle parking area. The bicycle parking area shall be under a roof and in a locked area that is only accessible by employees. Bicycle parking facilities should be designed in a manner which provides adequate space for all bicycle types, including e-bikes, tandems, recumbent bikes, and cargo bikes, as well as bike trailers. The project should also include a common space with a shared bike tool station and compressor air pump for inflating tires.	New commercial and industrial uses.
BMP-23: Connections to Nearby Bicycle Network	The project site shall be designed to create safe paths of travel to building access points. At a minimum this shall include pavement markings to guide cyclists and signs alerting passenger vehicles of bicycle pathways. This may also include separate ingress and egress points for bicycles than for cars. The project applicant shall install signage that directs cyclists to any Class I, II, III, or IV bike routes within a half-mile of the site. The project applicant shall also post a map near the bike parking area that shows the locations of bike routes relative to the project site and the best route to reach them. If there are no bike routes within a half-mile of the site, then no signage or map is required.	All land use types except single-family residential.
BMP-24: Bike Routes	Projects that involve the construction of new local roadways or roadway extensions, either as the project itself or as off-site improvements, shall also include the construction a Class I, II, or IV bikeway along the same route. The bike routes must be constructed according to the design standards of the County.	All non-highway roadway construction projects.

Notes: BMP = Best Management Practice; CALGreen = California Green Building Code; CARB = California Air Resources Board; CFR = Code of Federal Regulations; CPA = community plan area; EPA = U.S. Environmental Protection Agency; EV = electric vehicle; EVSE = electric vehicle service equipment; RD = renewable diesel; SANDAG = San Diego Association of Governments.

All Scoping Plan measures not included within a BMP were determined to be infeasible in the Alpine CPA. The determination of Scoping Plan measure feasibility and infeasibility is included in Appendix E.

Source: CARB 2017; Analysis performed by Ascent Environmental in 2020.

It should be noted that the BMPs listed in Table 2.6-4 would represent actions in addition to current activities and programs that the County is implementing that would reduce GHG emissions from existing and future development. These include, but are not limited to:

- **Community Choice Energy:** The County is currently in the process of identifying a regional community choice energy (CCE) program in which to participate, which would allow for the County to purchase and/or generate renewable energy and provide cleaner power supplies to customers in the unincorporated County.
- **Permit Streamlining:** Through the discretionary review process, the County has provided streamlining benefits to projects that are consistent with the General Plan and implement sustainability measures specific to the proposed use that are identified in the CAP. In response to the Court's decision to uphold the ruling to set aside the CAP, the County has continued to encourage development projects to implement applicable GHG reducing activities in project design through the discretionary review process. These measures include encouraging the installation of tankless or electric water heaters and requiring low-flow water fixtures, and planting trees in residential developments, and transportation strategies to reduce single-occupancy vehicle trips in non-residential developments.
- **Agricultural Easements:** The County has an agricultural conservation plan known as the Purchase of Agricultural Easement (PACE) Program. The PACE Program allows willing agricultural property owners to receive compensation for placing a perpetual easement on their property that limits future uses to agriculture. This activity reduces the conversion of agricultural properties to residential or other uses, limiting the removal of carbon sequestering agricultural and suburban sprawl.
- **Strategic Plan to Reduce Waste:** The County's Strategic Plan to Reduce Waste includes the implementation of programs that target waste diversion in new developments by providing necessary waste receptacles to encourage recycling, and informational material to encourage composting and waste reduction.
- **Landscape Ordinance:** The County's Landscape Ordinance requires new development to demonstrate water efficient landscapes, consistent with the County's Water Efficient Design Manual, that reduce the amount of water consumed outdoors.

In demonstrating consistency with the 2017 Scoping Plan, future projects in the Alpine CPA would be required to implement all applicable BMPs listed in Table 2.6-4.

2.6.3.3 Impact Analysis

The BMPs mentioned above address each of these categories as well as construction activity. GHG emissions generated by the Alpine CPU and General Plan were estimated for informational purposes to provide context for the potential change in GHG emissions from the allowable uses under the Alpine CPU compared to the previously allowable General Plan land uses.

Existing operational emissions of GHGs were estimated for existing "on-the-ground" activities. The existing land uses were based on a 2012 baseline year, which is reflective of the best available land use data for the Alpine CPA and consistent with the base year VMT modeling from SANDAG's Series 13 estimates. This base year data represents the best available land use data for the Alpine CPA and is consistent with the base year VMT modeling from SANDAG's Series 13 estimates. This base year data is considered best available because it is calibrated by SANDAG based on actual conditions reflected by

existing land uses, travel surveys, and state of the transportation network. A summary of the existing operational GHG emissions for the Alpine CPA are shown in Table 2.6-5.

Table 2.6-5. GHG Emissions Generated under Existing Conditions in the Alpine CPA (MTCO_{2e} per year)

Source	GHG Emissions (MTCO _{2e} per year)
Area	10,021
Building Energy	22,376
Mobile (Vehicular)	142,661
Solid Waste	3,535
Water and Wastewater	3,590
Total	182,184

GHG = greenhouse gas; MTCO_{2e} = metric tons of carbon dioxide equivalent
 Source: Data modeled by Ascent Environmental in 2020. See Appendix D.

Short-term construction-generated GHG emissions were estimated using the CalEEMod, Version 2016.3.2. Because specific construction phasing and intensity are unknown for allowable future developments in the Alpine CPU, construction phasing, scheduling, and equipment modeled were based on default values generated for the allowable land uses. This analysis presents a potential scenario under which construction could occur, while acknowledging construction projects may vary in intensity and size, and full buildout of the allowable Alpine CPU may not occur within the anticipated timeline (i.e., by 2050). Total GHG emissions associated with construction were summed over the estimated construction schedule between 2020 and 2050. Construction emissions were amortized over 30 years, consistent with the potential project buildout in 2050, in accordance with SCAQMD guidance for estimating GHG emissions (SCAQMD 2008).

Operations-related emissions of GHGs were estimated for area sources (e.g., landscape maintenance equipment), energy use (i.e., electricity and natural gas consumption), water use, wastewater generation, solid waste generation, and mobile sources. The analysis was provided assuming two separate buildout scenarios. Full buildout of the Alpine CPU in 2030 was prepared to determine impacts consistent with the 2017 Scoping Plan, which identifies measures that would be implemented to meet the State's 2030 GHG reduction target. An additional scenario was analyzed consistent with the Alpine CPU planning horizon in 2050, for which the 2017 Scoping Plan does not provide measures to adequately reduce GHG emissions to meet the State's 2050 emission reduction goal. GHG emissions generated by buildout of the General Plan were prepared for both buildout scenarios in 2030 and 2050 to provide context for the potential change in emissions generated by the allowable Alpine CPU buildout.

Emissions from area and energy sources were estimated using land use data provided by the County and estimated in CalEEMod Version 2016.3.2. Data provided by the County includes estimates for allowable buildout of single- and multi-family residential units, and estimated non-residential acreage at buildout based on reasonable and foreseeable building size consistent with existing developments and proposed commercial acreage included in the Alpine CPU. Additional detail on the methodology and assumptions used to determine dwelling unit and acreage estimates at buildout are provided in Chapter 1, *Project Description*. As noted in Section 2.6.3.1, the non-residential acreage was converted to square footage for analysis in CalEEMod. Default values were used where Alpine CPU—specific information was not available (e.g., energy consumption or landscaping equipment usage). Adjustments were made in the model to reflect the following regulations that have become effective but are not accounted for in CalEEMod:

- Default building energy consumption rates were adjusted to account for energy efficiency improvements from the 2019 California Energy Code (CCR Title 24, Part 6), assuming a 53 percent reduction in residential energy consumption and a 30 percent reduction in non-residential energy consumption compared to the 2016 Title 24 regulations built into CalEEMod (CEC 2018).
- Utility provider electricity emissions factors for San Diego Gas and Electric (SDG&E) were adjusted to reflect legislative requirements (SB 100) to increase renewable electricity sources by 60 percent by 2030 and 100 percent by 2045.

Operations-related mobile-source GHG emissions were modeled based on the estimated level of VMT generated by residents and employees.

- VMT estimates were provided by the SANDAG Series 13 Activity Based Model forecasts for the General Plan and Alpine CPU buildouts in 2050. GHG emissions from mobile sources were estimated using emission factors for the San Diego Air Basin (SDAB) from CARB's 2017 Emissions Factors model (EMFAC2017). Adjustment factors provided by CARB were applied to EMFAC2017 to account for anticipated future changes in mobile emission factors as a result of the SAFE Rule.

As noted previously, GHG emissions generated from construction and operational activities were estimated for the allowable General Plan and the Alpine CPU for full buildout years in 2030 and 2050. While full buildout of the Alpine CPU is anticipated by 2050, emissions were also estimated for a buildout year of 2030 in accordance with the SB 32 target year. These emissions estimates incorporate relevant local and state requirements, including 2019 Title 24 Building Efficiency Standards for building operations with which all new projects would be compliant. GHG emissions from buildout of the General Plan within the Alpine CPA and Alpine CPU are summarized in Table 2.6-6, below by source.

As shown in Table 2.6-6, the Alpine CPU would result in an increase in GHG emissions under both an assumed 2030 or 2050 buildout. The Alpine CPU would generate an estimated 285,203 metric tons of carbon dioxide equivalent (MTCO_{2e}) in 2030 and 260,894 MTCO_{2e} in 2050. This would be an increase of 35,454 MTCO_{2e} in 2030 and 35,539 MTCO_{2e} in 2050 over General Plan buildout in the same years. Buildout of the Alpine CPU would also lead to an increase in GHG emissions over existing conditions of 103,019 MTCO_{2e} by 2030 and 78,711 MTCO_{2e} by 2050.

The threshold of significance for the Alpine CPU to determine impacts associated with the generation of GHG emissions is level of consistency with the 2017 Scoping Plan through implementation of all feasible BMPs. Through implementation of BMPs, development projects would demonstrate consistency with the 2017 Scoping Plan, and their associated GHG emissions would not be considered cumulatively considerable in 2030. For the purposes of this threshold, the application of all feasible BMPs to future projects in the Alpine CPU would result in project-level GHG emissions that would not be considered to have a significant impact on the environment in 2030. However, none of these BMPs are identified in Alpine CPU policies or requirements for development. Consistency with the 2017 Scoping Plan is an impact threshold specific to GHG-related impacts of the Alpine CPU. As such, the BMPs were not included as policies within the Alpine CPU because they are not required for the implementation of projects consistent with or proposing less growth than the General Plan, which are addressed by the 2011 General Plan EIR mitigation measures. Because the policies included in the Alpine CPU are intended to be applicable to the proposed project and all project alternatives (some of which would propose development less than or consistent with the allowable General Plan buildout), these BMPs were not included as policies. Thus, the operation and construction activities associated with the Alpine CPU buildout by 2030 would not be consistent with the 2017 Scoping Plan. In addition, the proposed project would lead to an increase in GHG emissions both with respect to

Table 2.6-6. GHG Emissions Associated with the General Plan and Alpine CPU (MTCO_{2e} per year)

Source	General Plan ¹	Alpine CPU	Net Change (Proposed Project – General Plan)	Net Change (Proposed Project – Existing Conditions)
2030 Buildout				
Area	16,227	19,300	+3,073	+9,279
Building Energy	38,561	40,915	+2,354	+18,538
Mobile (Vehicular)	178,489	206,921	+28,432	+64,260
Solid Waste	6,998	7,601	+602	+4,065
Water and Wastewater	7,849	8,414	+565	+4,824
Amortized Construction	1,625	2,053	+428	+2,053
Total	249,749	285,203	+35,454	+103,019
2050 Buildout				
Area	16,227	19,300	+3,073	+9,279
Building Energy	27,923	28,850	+927	+6,474
Mobile (Vehicular)	164,514	190,719	+26,205	+48,059
Solid Waste	6,998	7,601	+602	+4,065
Water and Wastewater	4,947	8,465	+3,519	+4,875
Amortized Construction	4,747	5,959	+1,212	+5,959
Total	225,355	260,894	+35,539	+78,711

Note: CPA = community plan area; CPU = Community Plan Update; GHG = greenhouse gas; MTCO_{2e} = metric tons of carbon dioxide equivalent

¹ Provides estimated GHG emissions associated with allowable General Plan buildout in the Alpine CPA only.

Totals may not add exactly due to rounding.

Source: Data modeled by Ascent Environmental in 2020. See Appendix D.

Notes: Emissions from industrial sources were modeled in separate CalEEMod files to show no increase in industrial uses beyond existing conditions. Details are shown in Appendix D.

existing conditions and General Plan buildout of the Alpine CPA. The BMPs developed from the Scoping Plan would reduce emissions from all emissions sources associated with proposed land uses in the Alpine CPU. In the future, an updated Climate Action Plan adopted by the County may incorporate Alpine CPU buildout in its covered activities, in which case the CAP may be used in the cumulative impacts analysis of those projects as provided in CEQA Guidelines section 15183(b)(2).

However, notwithstanding application of BMPs to CPU buildout, the proposed project would lead to an increase in VMT that is inconsistent with the County's VMT significance threshold of 15 percent below existing average VMT in the unincorporated County. This threshold was set consistent with OPR guidelines to support state VMT reduction targets and the urban regional targets for GHG emissions reductions established under SB 375. In its document *California Air Resources Board 2017 Scoping Plan-*

Identified VMT Reductions and Relationship to State Climate Goals, CARB assessed VMT reduction per capita consistent with its evidence-based modeling scenario that would achieve state climate goals of 40 percent GHG emissions reduction from 1990 levels by 2030 and 80 percent GHG emissions reduction levels from 1990 by 2050. Applying California Department of Finance population forecasts, CARB found that per-capita light-duty vehicle travel would need to be approximately 16.8 percent lower than existing, and overall, per-capita vehicle travel would need to be approximately 14.3 percent lower than existing levels under that scenario. Below these levels, a project could be considered low VMT and would, on that metric, be consistent with 2017 Scoping Plan Update assumptions that achieve state climate goals. Because the proposed project would not achieve reduced VMT consistent with state goals and does not include BMPs consistent with the 2017 Scoping Plan, this impact would be **potentially significant**.

The County recognizes that the ability of a project to meet GHG targets beyond 2030 is unknown and cannot be known because these targets have not been adopted by the State legislature; CARB's 2017 Scoping Plan does not explicitly outline how any post-2030 targets would be met; and, further, attainment would at least be partially reliant on potential new regulations and/or potential new technologies that would be adopted and implemented in the future. It is unlikely that a project could meet long-term GHG efficiency aspirations, such as the target in EOs S-3-05 and B-30-15 of 80 percent below 1990 GHG levels by 2050 without substantial statewide regulations, such as those that may result in more EVs in the vehicle fleet mix, more stringent energy efficiency standards for buildings, and an increase in the generation of renewable electricity. Even with the application of all feasible Scoping Plan measures, the Alpine CPU would still result in project-level emissions that could conflict with California's ability to meet 2050 GHG emissions reduction goals. In order to comply with this reduction goal, the Alpine CPU would need to implement GHG reduction measures that are not currently feasible or known at this time. Thus, the operation and construction activities associated with the Alpine CPU buildout by 2050, regardless of the application of Scoping Plan measures and BMPs, would potentially conflict with the statewide reduction goals by 2050. This impact would be potentially significant.

Federal, State, and Local Regulations and Existing Regulatory Processes

Federal and state regulations exist to reduce GHG emissions throughout the unincorporated County. There are no federal regulations that set GHG emissions targets applicable to the Alpine CPA; however, the proposed project is required to comply with state regulations that support GHG emission reduction targets to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050. Development consistent with the land uses proposed under the Alpine CPU would be required to comply with Title 24, Part 6 energy efficiency standards. In addition to complying with the required energy efficiency standards for new developments, development under the Alpine CPU would be required to comply with Title 24, Part 11 *California Green Building Standards* (CALGreen), which includes mandatory and voluntary standards for new developments.

All projects within the Alpine CPA are required to comply with local SDAPCD rules and regulations. While these regulations are generally aimed at reducing emissions of criteria air pollutants, many would also result in complementary reductions in GHG emissions from new developments. These rules include Rule 67.0.1, which reduces volatile organic compounds (VOC) emissions from architectural coating application, Rule 50, which regulates visible emissions (some of which are considered GHGs) from construction activities and agricultural operations, and the County's Landscape Ordinance, which reduces outdoor water use.

Summary

Table 2.6-6 summarizes the net change in GHG emissions generated by the Alpine CPU buildout in 2030 and 2050 compared to the General Plan. The Alpine CPU would result in an approximate net increase of 35,454 MTCO_{2e} in 2030 and 35,539 MTCO_{2e} in 2050 beyond the General Plan buildout. Consistency with the 2017 Scoping Plan is used as the threshold to determine if emissions associated with the proposed project would be significant. The Alpine CPU does not include policies consistent with the BMPs shown in Table 2.6-4 and would not require the implementation of these project-level BMPs consistent with the 2017 Scoping Plan. These BMPs were not included as policies within the Alpine CPU because they would not have been required for the implementation of projects consistent with or proposing less growth than the General Plan. In addition, the proposed project would not achieve VMT reductions consistent with state climate goals. The proposed project would result in a **potentially significant** impact in 2030 from emissions of GHGs because the proposed project would not be consistent with the 2017 Scoping Plan (**Impact-GHG-1**). The proposed project would result in a **potentially significant** impact in 2050 from emissions of GHGs because the State has identified that existing feasible and available reduction measures and technologies would not be adequate to meet the 2050 GHG reduction goal (**Impact-GHG-2**).

2.6.3.4 Issue 2: Conflict with an Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs

Guidelines for the Determination of Significance Analysis

Impacts related to consistency with an applicable plan, policy, or regulation were determined following the same guidelines for the determination of significance described above in Section 2.6.3.2. Impacts from the proposed project on GHG emissions would be less than significant if the Alpine CPU is found to be consistent with CARB's 2017 Climate Change Scoping Plan and the applicable BMPs.

Impact Analysis

The 2017 Scoping Plan lays out the framework for achieving the 2030 statewide GHG reduction target of 40 percent below 1990 levels and progress toward additional reductions. Appendix B, *Local Action*, of the 2017 Scoping Plan includes detailed GHG reduction measures and local actions that land use development projects can implement to support the statewide goal. For CEQA analyses, the 2017 Scoping Plan states that projects should implement feasible mitigation, preferably measures that can be implemented on-site. While the proposed project would incorporate GHG reduction features, including increased development density in the Village core and improved pedestrian and bicycle networks, not all feasible measures identified in Appendix B of this SEIR would be implemented under the Alpine CPU. This impact would be potentially significant for the 2030 buildout year because the proposed project would not be consistent with the 2017 Scoping Plan. This impact would be potentially significant for the 2050 buildout year because the State has identified that existing feasible and available reduction measures and technologies would not be adequate to meet the 2050 GHG reduction goal.

Federal, State, and Local Regulations and Existing Regulatory Processes

Federal, state, and local regulations and existing regulatory processes discussed under Issue 1 would be applicable to Issue 2. In addition to regulations and processes discussed under Issue 1, another relevant plan for the purposes of reducing emissions of GHG from which plan consistency can be assessed is the RTP/SCS. Projects that would increase regional VMT to a level that was not anticipated in the RTP/SCS or

would result in changes in the regional travel network that were not previously known would be inconsistent with the RTP/SCS. Projects that are determined as inconsistent would be required to implement mitigation measures that would reduce total project VMT. These impacts are analyzed and mitigation measures are disclosed in Section 2.13, *Traffic*.

Summary

Consistency with the 2017 Scoping Plan can be used to determine if the emissions associated with a project would be significant. The Alpine CPU would be compliant with statewide laws and regulations implemented for the purposes of reducing statewide GHGs (e.g., Renewables Portfolio Standard, or Low Carbon Fuel Standard). However, the Alpine CPU does not include project-level policies consistent with the 2017 Scoping Plan. Implementation of the applicable BMPs shown in Table 2.6-4 would be required to demonstrate project-level consistency with the 2017 Scoping Plan; however, the Alpine CPU does not include such policies and would not require the implementation of these project-level BMPs for future development as proposed. These BMPs were not included as policies within the Alpine CPU because they would not have been required for the implementation of projects consistent with or proposing less growth than the General Plan. In addition, the proposed project would not achieve VMT reductions consistent with state climate goals. The proposed project would result in a **potentially significant** impact for the 2030 buildout year because it would not be consistent with the 2017 Scoping Plan (**Impact-GHG-3**). This impact would be **potentially significant** for the 2050 buildout year because the State has identified that existing feasible and available reduction measures and technologies would not be adequate to meet the 2050 GHG reduction goal (**Impact-GHG-4**).

2.6.4 Cumulative Impacts Analysis

2.6.4.1 Issue 1: Result in Cumulatively Considerable GHG Emissions That May Have a Significant Impact on the Environment

Global climate change is inherently cumulative; thus, impacts associated with the Alpine CPU discussed above in Section 2.6.3 also serve as the proposed project's cumulative impact (**Impact-C-GHG-1** and **Impact-C-GHG-2**).

2.6.4.2 Issue 2: Result in a Cumulatively Considerable Conflict with an Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs

Global climate change is inherently cumulative because the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Therefore, impacts associated with the Alpine CPU discussed above in Section 2.6.3 also serve as the proposed project's cumulative impact (**Impact-C-GHG-3** and **Impact-C-GHG4**).

2.6.5 Significance of Impacts Prior to Mitigation

The proposed project would result in potential significant direct and cumulative impacts related to emissions of GHGs and consistency with applicable plans. The following summarizes the potential significant impacts that would result from implementation of the proposed project prior to mitigation.

Impact-GHG-1 and Impact-C-GHG-1: Result in Cumulatively Considerable GHG Emissions That May Have a Significant Impact on the Environment in 2030. The proposed project would result in emissions of GHGs as a result of construction and operation of development in the Alpine CPA. The Alpine CPU does not include policies that would require developments to comply with project-level GHG reduction measures that would be consistent with the 2017 Scoping Plan to achieve the State's 2030 GHG emissions reduction target. In addition, the proposed project would not achieve VMT reductions consistent with State climate goals. This would be considered a significant impact and would be cumulatively considerable.

Impact-GHG-2 and Impact-C-GHG-2: Result in Cumulatively Considerable GHG Emissions That May Have a Significant Impact on the Environment in 2050. The proposed project would result in emissions of GHGs as a result of construction and operation of development in the Alpine CPA. The Alpine CPU does not include policies that would require developments to comply with project-level GHG reduction measures that would be consistent with the 2017 Scoping Plan. Further, the 2017 Scoping Plan identifies that existing technologies and feasible measures would not be adequate to achieve the State's 2050 GHG reduction goal. In addition, the proposed project would not achieve VMT reductions consistent with state climate goals. This would be considered a significant impact and would be cumulatively considerable.

Impact-GHG-3 and Impact-C-GHG-3: Result in a Cumulatively Considerable Conflict with an Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing Emissions of GHGs by 2030. The Alpine CPU does not include policies that would require developments to comply with project-level GHG reduction measures that would be consistent with the 2017 Scoping Plan, which identifies measures to achieve the State's 2030 GHG reduction target. In addition, the proposed project would not achieve VMT reductions consistent with state climate goals. This would be considered a significant impact and would be cumulatively considerable.

Impact-GHG-4 and Impact-C-GHG-4: Result in a Cumulatively Considerable Conflict with an Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing Emissions of GHGs by 2050. The Alpine CPU does not include policies that would require developments to comply with project-level GHG reduction measures that would be consistent with the 2017 Scoping Plan, which identifies measures to achieve the State's 2030 GHG reduction target. The 2017 Scoping Plan identifies that existing technologies and feasible measures would not be adequate to achieve the State's 2050 GHG reduction goal. In addition, the proposed project would not achieve VMT reductions consistent with state climate goals. This would be considered a significant impact and would be cumulatively considerable.

2.6.6 Mitigation

2.6.6.1 *Issue 1: Generate GHG Emissions That May Have a Significant Impact on the Environment*

As discretionary projects are submitted, CEQA review would be completed, which may require a formal study that would analyze impacts and identify project-specific mitigation measures to reduce impacts. In addition, discretionary projects would implement the following 2011 General Plan EIR mitigation measures and mitigation measures specific to the Alpine CPU that would reduce the project's direct and cumulative impacts related to GHG emissions. Through implementation of these mitigation measures, the project would demonstrate consistency with the BMPs but would not achieve VMT reductions consistent

with state climate goals (**Impact-GHG-1** and **Impact-C-GHG-1**). While implementation of mitigation measures specific to the Alpine CPU would reduce emissions demonstrating progress toward the State's 2050 GHG reduction goal, there are no existing, feasible mitigation measures that could be applied that would reduce the proposed project's impact to a less than significant level for the 2050 buildout year (**Impact-GHG-2** and **Impact-C-GHG-2**).

2011 General Plan EIR Mitigation Measures

Implementation of the 2011 General Plan EIR mitigation measures (see Appendix B of this SEIR) would reduce the Alpine CPU's impacts related to significant emissions of GHGs. This includes mitigation measures CC-1.1, and CC-1.3 through CC-1.19, which identify County-initiated measures to update ordinances and codes to require more efficient land use development and building efficiencies; and coordination with regional agencies to implement regionwide transportation, water, solid waste, and air quality measures that reduce GHGs; and reduce VMT.

Alpine Community Plan Update Mitigation Measures

MM-GHG-1: Require all development in the Alpine CPA to demonstrate consistency with the 2017 Scoping Plan through the implementation of all applicable BMPs. All development subject to the discretionary review process will identify which BMPs are applicable to the project and provide supporting evidence through CEQA review. This determination shall be provided through a BMP Consistency Review Checklist, developed by the County, to determine whether an individual project would be consistent with required measures.

2.6.6.2 Issue 2: Conflict with an Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs

As discretionary projects are submitted, CEQA review would be completed, which may require a formal study that would analyze impacts and identify project-specific mitigation measures to reduce impacts. In addition, discretionary projects would implement the following 2011 General Plan EIR mitigation measures and mitigation measures specific to the Alpine CPU that would reduce the project's direct and cumulative impacts related to GHG emissions. Implementation of these mitigation measures would demonstrate consistency with the BMPs but would not achieve VMT reductions consistent with State climate goals (**Impact-GHG-3** and **Impact-C-GHG-3**). While implementation of mitigation measures specific to the Alpine CPU would reduce emissions demonstrating progress toward the State's 2050 GHG reduction goal, there are no existing, feasible mitigation measures that could be applied that would reduce the proposed project's impact to a less than significant level for the 2050 buildout year. (**Impact-GHG-4** and **Impact-C-GHG-4**).

Adopted 2011 General Plan EIR Mitigation Measures

Implementation of the 2011 General Plan EIR mitigation measures (see Appendix B of this SEIR) would reduce the Alpine CPU's impacts related to consistency with an applicable plan for the purpose of reducing GHG emissions. This includes mitigation measures CC-1.1, and CC-1.3 through CC-1.19, which identify County-initiated measures to update ordinances and codes to require more efficient land use development and building efficiencies; and coordination with regional agencies to implement regionwide transportation, water, solid waste, and air quality measures that reduce GHGs and reduce VMT.

Alpine Community Plan Update Mitigation Measures

Implementation of **MM-GHG-1** would reduce the Alpine CPU's impacts related to consistency with an applicable plan for the purpose of reducing GHG emissions.

2.6.7 Conclusion

2.6.7.1 Issue 1: Generate GHG Emissions That May Have a Significant Impact on the Environment

Implementation of the Alpine CPU would result in increased emissions of GHGs from construction and operational activities. Currently, there are no thresholds for determining significance of GHG emissions at the local level. In the absence of adequate geographically-specific GHG reduction plans, the CARB 2017 Scoping Plan recommends that projects incorporate design features and GHG reduction measures to the degree feasible, to minimize GHG emissions. The 2017 Scoping Plan includes 43 project-specific example GHG reduction measures in Appendix B, *Local Action*, that could be applied at the project level to determine consistency with the 2017 Scoping Plan. Within this analysis, Scoping Plan measures applicable to the Alpine CPA were refined to develop BMPs that could be implemented locally to demonstrate consistency with the 2017 Scoping Plan. The Alpine CPU does not include any policies that are consistent with the BMPs and would not be consistent with the 2017 Scoping Plan. These BMPs were not included as policies within the Alpine CPU because they would not have been required for the implementation of projects consistent with or proposing less growth than the General Plan.

In addition, the proposed project would not achieve VMT reductions consistent with state climate goals. This would result in a potentially significant impact regarding the generation of GHG emissions (**Impact-GHG-1** and **Impact-C-GHG-1**). Implementation of the 2011 General Plan EIR mitigation measures and policies, along with Alpine CPU Mitigation Measure **MM-GHG-1** would require future development in the Alpine CPA to be consistent with the 2017 Scoping Plan and reducing GHG emissions from future development to a level that would not have a significant impact on the environment for the 2030 buildout year. However, even with the implementation of this mitigation measure, the proposed project would still not achieve VMT reductions consistent with state climate goals. This impact would not be reduced and would be **significant and unavoidable**. While implementation of mitigation measures specific to the Alpine CPU would reduce emissions demonstrating progress toward the State's 2050 GHG reduction goal, there are no existing, feasible mitigation measures that could be applied that would reduce the proposed project's impact to a less than significant level for the 2050 buildout year (**Impact-GHG-2** and **Impact-C-GHG-2**). Because there are no feasible mitigation measures that could be applied in the Alpine CPU, this impact would be **significant and unavoidable**.

2.6.7.2 Issue 2: Conflict with an Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs

Implementation of the Alpine CPU would result in development that would not be consistent with the CARB 2017 Scoping Plan. The 2017 Scoping Plan recommends that projects incorporate design features and GHG reduction measures to the degree feasible, to minimize GHG emissions. The 2017 Scoping Plan includes 43 project-specific example GHG reduction measures in Appendix B, *Local Action*, that could be applied at the project-level to determine consistency with the 2017 Scoping Plan. Within this analysis, Scoping Plan measures applicable to the Alpine CPA were refined to develop BMPs that could be

implemented locally to demonstrate consistency with the 2017 Scoping Plan. The Alpine CPU does not include any policies that are consistent with the BMPs and would not be consistent with the 2017 Scoping Plan. These BMPs were not included as policies within the Alpine CPU because they would not have been required for the implementation of projects consistent with or proposing less growth than the General Plan. In addition, the proposed project would not achieve VMT reductions consistent with state climate goals. This would result in a potentially significant impact (**Impact-GHG-3** and **Impact-C-GHG-3**). Implementation of the 2011 General Plan EIR mitigation measures and policies, along with Alpine CPU Mitigation Measure **MM-GHG-1** would require future development in the Alpine CPA to be consistent with the 2017 Scoping Plan. However, even with the implementation of this mitigation measure, the proposed project would still not achieve VMT reductions consistent with state climate goals. This impact would not be reduced and would be **significant and unavoidable**. While implementation of **MM-GHG-1** would reduce emissions demonstrating progress toward the State's 2050 GHG reduction goal, there are no existing, feasible mitigation measures that could be applied that would reduce the proposed project's impact to a less than significant level for the 2050 buildout year (**Impact-GHG-4** and **Impact-C-GHG-4**). Because there are no feasible mitigation measures that could be applied in the Alpine CPU, this impact would be **significant and unavoidable**.