

## **Appendix E**

# **Project-Level Best Management Practices for the Reduction of Greenhouse Gases in the Alpine Community Plan Area**



## **Project-Level Best Management Practices for the Reduction of Greenhouse Gases in Alpine Community Plan Area**

This section of the appendix is intended to show how the Best Management Practices (BMPs) provided in Section 2.6, *Greenhouse Gases*, of the Alpine Community Plan Update (Alpine CPU) Supplemental Environmental Impact Report (SEIR) are consistent with the greenhouse gas (GHG) reduction measures listed in Appendix B to the California Air Resources Board (CARB) 2017 Scoping Plan. The California Air Resources Board's (CARB's) *2017 Climate Change Scoping Plan* (2017 Scoping Plan) identifies 43 project-level GHG reduction measures as, “[e]xamples of potentially feasible mitigation measures that could be considered for individual projects under the California Environmental Quality Act (CEQA) when the local jurisdiction is the lead agency” (CARB 2017).

Included is a list of all 43 GHG reduction measures and if/how they are feasible to incorporate into one or more of the BMPs for the Alpine CPU. Feasibility was determined based on whether a measure has already been implemented by the County of San Diego or another regional agency (i.e., San Diego Association of Governments [SANDAG]), is required under state or federal regulations, or is identified as feasible in the region for state building codes (e.g., California Building Standards Code Title 24, Part 11 [CALGreen] voluntary standards). Rationale is also provided for infeasibility of certain GHG reduction measures for the Alpine CPU. The 43 project-level GHG reduction measures provided do not provide implementable actions for each measure at the project level. Rather, they provide guidelines that local agencies can build from to determine feasible and implementable measures within their jurisdiction. This section of the appendix provides a summary of how each project-level GHG reduction measure was adapted to be an implementable BMP in the Alpine Community Plan Area (CPA). Each of the identified BMPs were developed based on one or a combination of multiple project-level GHG reduction strategies. By establishing consistency between the Alpine CPU BMPs and the Scoping Plan Measures, the Alpine CPU would incorporate all feasible measures to help meet the State's 2030 GHG reduction targets and minimize any conflicts with the State's GHG reduction plan, i.e., the Scoping Plan.

### **Best Management Practices**

The California Air Resources Board (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).

As described in Chapter 2.6, *Greenhouse Gases*, the County has established consistency with the 2017 Scoping Plan as the threshold of significance for determining impacts related to GHGs. By establishing these Best Management Practices (BMPs) the County would require future projects proposed in Alpine and subject to the County's discretionary review process to implement these BMPs to demonstrate consistency with the 2017 Scoping Plan. These BMPs are measures that would minimize GHG emissions associated with a project. As part of its discussion about different viable thresholds for analyzing the GHG emissions associated with projects, the 2017 Scoping Plan states, “Absent conformity with an adequate geographically-specific GHG reduction plan, CARB recommends that projects incorporate design features and GHG reduction measures to the degree feasible, to minimize GHG emissions” (CARB 2017). Therefore, the County believes that 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.

This approach employs one of the three pathways to compliance presented in 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 for evaluating the cumulative significance of a proposed land use development. Specifically, it implements the court’s suggested pathway to examine compliance with regulatory programs designed to reduce GHG emissions from activities, especially regarding the statewide GHG target for 2020 established by AB 32 of 2006 and, by implication, the subsequently established statewide GHG target for 2030 mandated by SB 32 of 2016.

Each Scoping Plan Measure is presented below in Table 1. The feasibility for each is included and defines measures as feasible (could be implement by projects in Alpine CPA), infeasible (could not be implemented by projects in Alpine CPA), and potentially in/feasible (could be implemented with alterations).

**Table 1** *Scoping Plan Measure Feasibility for Inclusion as Best Management Practices*

<b>Measure</b>	<b>Description</b>	<b>Feasibility</b>	<b>Discussion</b>
<b>Construction Measures</b>			
1	Enforce idling time restrictions for construction vehicles.	Feasible	Stricter idling restrictions are considered as a typical construction phase mitigation measure by the County. California Code of Regulations (CCR), Title 13, Section 2485 already requires idling time restrictions for construction motor vehicles. This measure would be feasible within the Alpine CPA and is incorporated into BMP-1.
2	Require construction vehicles to operate with the highest tier engines commercially available.	Feasible	The requirement for construction activities to use only the highest tiered construction equipment engines is a typical construction phase mitigation measure in the county. This measure would be feasible within the Alpine CPA and is incorporated into BMP-2.
3	Divert and recycle construction and demolition waste, and use locally-sourced building materials with a high recycled material content to the greatest extent feasible.	Feasible	Sections 68.511 through 68.520 of the County Code of Regulatory Ordinances are intended to increase construction and demolition waste diversion from landfills. Additionally, construction waste requirements are included as a CALGreen

			standard that is determined to be feasible in the San Diego region. This measure would be feasible within the Alpine CPA and is incorporated into BMP-6.
4	Minimize tree removal and mitigate indirect GHG emissions increases that occur due to vegetation removal, loss of sequestration, and soil disturbance.	Potentially Infeasible	This measure was not incorporated into a BMP because it would be challenging for the County to determine whether it has been properly implemented. Additionally, tree removal alone does not necessarily affect the GHG balance of a project (e.g., replacing mature, slow growing trees with young, fast growing trees can be a net carbon positive). Because this measure would not necessarily result in GHG reductions and would require involved County monitoring and review, this measure would be potentially infeasible.
5	Utilize existing grid power for electric energy rather than operating temporary gasoline/diesel powered generators.	Potentially Infeasible	The inclusion of electric outlets on construction sites to encourage the use of electric equipment has been incorporated into development project conditions of approval within the county. This measure would be feasible and is incorporated into BMP-4; however, this may not be feasible for construction projects occurring on sites that are not currently and will not be connected to the electrical grid.
6	Increase use of electric and renewable fuel powered construction equipment and require renewable diesel fuel	Feasible	Electric and renewable fuel powered equipment is implemented as a typical mitigation or condition of approval on projects in the

	where commercially available.		county. This measure would be feasible within the Alpine CPA and is incorporated into BMP-3.
7	Require diesel equipment fleets to be lower emitting than any current emission standard.	Feasible	Lower emitting diesel equipment fleets are implemented as a typical mitigation or condition of approval on projects in the county. This measure would be feasible within the Alpine CPA and is incorporated into BMP-2.
<b>Transportation Measures</b>			
8	Comply with lead agency's standards for mitigating transportation impacts under SB 743.	Feasible	This measure would be implemented through the County's <i>Transportation Study Guide</i> updates, consistent with SB 743.
9	Require on-site EV charging capabilities for parking spaces serving the project to meet jurisdiction-wide EV proliferation goals.	Feasible	EV charging capabilities are included as a CALGreen standard that is determined to be feasible in the San Diego region. This measure would be feasible within the Alpine CPA and is incorporated into BMPs-16, -17, and -18.
10	Allow for new construction to install fewer on-site parking spaces than required by local municipal building code, if appropriate.	Feasible	Parking space reductions are required as a standard requirement under Ordinance No. 10251 of the County Zoning Ordinance. This measure would be feasible within the Alpine CPA and is incorporated into BMP-15.
11	Dedicate on-site parking for shared vehicles.	Feasible	Shared parking is already permitted by under Ordinance No. 10251 of the County Zoning Ordinance. This measure would be feasible within the Alpine CPA and is incorporated into BMP-19.
12	Provide adequate, safe, convenient, and secure on-site bicycle parking and storage in multi-family residential	Feasible	Bicycle parking is already permitted/required by Ordinance No. 10251 of the County Zoning Ordinance. This measure would be feasible

	projects and in non-residential projects.		within the Alpine CPA and is incorporated into BMP-20, -21, and -22.
13	Provide on- and off-site safety improvements for bike, pedestrian, and transit connections, and/or implement relevant improvements identified in an applicable bicycle and/or pedestrian master plan.	Feasible	The County identifies on- and off-site safety improvements in the <i>Bicycle Transportation Plan</i> that would be provided in new development in the county. These improvements are supported by the SANDAG Regional Bicycle Plan. This measure would be feasible within the Alpine CPA and is incorporated into BMP-23 and -24.
<b>Project Design Measures</b>			
14	Require on-site renewable energy generation.	Potentially Feasible	CALGreen requires on-site renewable energy which is determined as a feasible standard by the County. This measure would be feasible within the Alpine CPA and is incorporated into BMP-7.
15	Prohibit wood-burning fireplaces in new development and require replacement of wood-burning fireplaces for renovations over a certain size developments.	Feasible	New construction wood-burning fireplaces are prohibited within similar air basins such as the SCAB and is included as a typical mitigation measure for large single-family residential projects in the county. This measure would be feasible within the Alpine CPA and Incorporated into <b>MM-AQ-8</b> .
16	Require cool roofs and “cool parking” that promotes cool surface treatment for new parking facilities as well as existing surface lots undergoing resurfacing.	Feasible	Cool roofs are included as a Title 24 standard that is determined to be feasible in the San Diego region. Cool parking is a design requirement in the County’s <i>Parking Design Manual</i> , most recently updated in June 2012. This measure would be feasible within the Alpine CPA and is incorporated into BMP-10.

17	Require solar-ready roofs.	Feasible	The requirement to develop solar-ready roofs on new projects is currently required under the mandatory CALGreen standards. Because implementation of this measure would be required, it was not included as a BMP.
18	Require organic collection in new developments.	Potentially Infeasible	This measure would require coordination with the California Department of Resources Recycling and Recovery to regulate and local waste collection services to implement. Because these activities are out of the County’s regulatory purview, this measure is potentially infeasible.
19	Require low-water landscaping in new developments (see CALGreen Divisions 4.3 and 5.3 and the Model Water Efficient Landscape Ordinance [MWELo], which is referenced in CALGreen). Require water efficient landscape maintenance to conserve water and reduce landscape waste.	Feasible	Landscape water conservation requirements are already incorporated into Sections 86.701 through 86.732 (Water Conservation in Landscaping) of the County’s Code of Regulatory Ordinances. This measure would be feasible within the Alpine CPA and is incorporated into BMP-7.
20	Achieve ZNE performance building standards prior to dates required by the Energy Code.	Potentially Infeasible	This measure is incorporated into <b>MM-AQ-13</b> for County-operated buildings only. This measure would be potentially infeasible for privately initiated developed because cost-effectiveness for ZNE has not been feasibly demonstrated by CEC in the San Diego region.
21	Encourage new construction, including municipal building construction, to achieve	Potentially Feasible	The County’s Green Building Incentive Program encourages new construction that would qualify for third-party green

	third-party green building certifications, such as the GreenPoint Rated program, LEED rating system, or Living Building Challenge.		building certification. This measure would be feasible within the Alpine CPA and third-party green building certification requirements are incorporated into BMPs-7, -8, and -9.
22	Require the design of bike lanes to connect to the regional bicycle network.	Feasible	The County's <i>Bicycle Transportation Plan</i> guides the development and maintenance of a bicycle network and supporting facilities in the county. This identifies regional bicycle infrastructure projects that would be implemented in the county, and provide bicycle network connections to surrounding communities. These efforts are supported by SANDAG which provides guidance on creating a regional bicycle network within the Regional Bicycle Plan. This measure would be feasible within the Alpine CPA and is incorporated into BMP-23. This measure is primarily feasible at the community planning level.
23	Expand urban forestry and green infrastructure in new land development.	Feasible	Expansion of urban forestry and green infrastructure is supported through goals and policies in the Conservation and Open Space Element of the County's 2011 General Plan. This measure would be feasible within the Alpine CPA and is incorporated into BMP-14.
24	Require preferential parking spaces for park and ride to incentivize carpooling, vanpooling, commuter bus, electric vehicles, and rail service use.	Feasible	The CALGreen requires priority parking for carpooling and transit riders. This measure would be feasible within the Alpine CPA and is incorporated into BMP-19.

25	Require a transportation management plan for specific plans which establishes a numeric target for non-SOV travel and overall VMT.	Feasible	Trip reduction policies provided by the SANDAG Mobility Management Guidebook or CAPCOA's <i>Quantifying Greenhouse Gas Mitigation Measures</i> (CAPCOA 2010) provide feasible VMT reduction strategies. Further, large development projects within the county are typically required to, as a condition of approval, coordinate with SANDAG and participate in the iCommute program to identify ways to reduce project-generated vehicle trips. This measure would be feasible within the Alpine CPA and is incorporated into <b>MM-AQ-12</b> for all non-residential projects.
26	Develop a rideshare program targeting commuters to major employment centers.	Potentially Feasible	This measure is incentivized by BMP-19. Rideshare programs in the region are primarily organized by SANDAG and individual workplaces. Because this is currently managed by SANDAG, this measure was not incorporated directly into a BMP.
27	Require the design of bus stops/shelters/express lanes in new developments to promote the usage of mass-transit.	Potentially Feasible	This measure would be incorporated into Alpine CPU transportation policies and requires coordination with MTS.
28	Require gas outlets in residential backyards for use with outdoor cooking appliances such as gas barbeques if natural gas service is available.	Feasible	The inclusion of outdoor gas outlets in residential developments has been previously included as a project design feature for large single-family residential projects in the county. This measure would be feasible in the Alpine CPA and is incorporated into BMP-12.

29	Require the installation of electrical outlets on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment.	Feasible	Electrical outlets are already required by the National Electrical Code, NFPA 70 210.52(E)(1). This measure would be feasible within the Alpine CPA and is incorporated into BMP-13.
30	Require the design of the electric outlets and/or wiring in new residential unit garages to promote electric vehicle usage.	Feasible	EVSE parking spaces (including installation of raceway, associated overcurrent protective device, and EV charging equipment) are included as a CALGreen standard that is determined to be feasible in the San Diego region. This measure would be feasible within the Alpine CPA and is incorporated into BMP-16 and -17.
31	Require electric vehicle charging station (Conductive/inductive) and signage for non-residential developments.	Feasible	EVSE parking spaces are included as a CALGreen standard that is determined to be feasible in the county. This measure would be feasible within the Alpine CPA and is incorporated into BMP-18.
32	Provide electric outlets to promote the use of electric landscape maintenance equipment to the extent feasible on parks and public/quasi-public lands.	Feasible	Measure 32 is similar to measure 29. This measure would be feasible within the Alpine CPU and incorporated into BMP-13.
33	Require each residential unit to be “solar ready,” including installing the appropriate hardware and proper structural engineering.	Feasible	CALGreen requires solar-ready roofs which is determined as a feasible standard by the County. Because this measure is already required for new development in the county, it was not included within a BMP.
34	Require the installation of energy conserving appliances such as on-demand tank-less water	Potentially Feasible	CALGreen identifies energy efficiency performance standards that would be feasibly implemented in the county through space and

	heaters and whole-house fans.		water heating efficiencies. . While the prohibition of natural gas water heaters would not be feasible (due to federal preemption), the County could encourage new projects to install alternatively fueled (i.e., more efficient and GHG reducing) water heaters. Because of federal restrictions on water heater regulations, this measure would be potentially feasible within the Alpine CPA and is incorporated into BMP-7.
35	Require each residential and commercial building equip buildings with energy efficient AC units and heating systems with programmable thermostats/timers.	Feasible	CALGreen requires energy efficient heating and cooling systems which is determined as a feasible standard by the County. This measure would be feasible within the Alpine CPA and is incorporated into BMPs-7, -8, and -9.
36	Require large-scale residential developments and commercial buildings to report energy use, and set specific targets for per-capita energy use.	Infeasible	State regulations currently require energy use reporting for large scale residential and commercial buildings. Further, lead agencies are limited in their ability to stipulate how many people can live, work, or visit an individual land use development project, and have limited ability to enforce per-capita energy consumption. This measure would be infeasible to implement at the community plan or project level.
37	Require each residential and commercial building to utilize low flow water fixtures such as low flow toilets and faucets (see CALGreen Divisions 4.3 and 5.3 as well as Appendices A4.3 and A5.3).	Feasible	Low-flow water fixtures are included as a CALGreen standard which are determined to be feasible in the county. This measure would be feasible within the Alpine CPA and is incorporated into BMP-11.

38	Require the use of energy-efficient lighting for all street, parking, and area lighting.	Feasible	CALGreen requires nonresidential lighting systems which is determined as a feasible standard by the County. This measure would be feasible within the Alpine CPA and is incorporated into BMPs-7, -8, and -9.
39	Require the landscaping design for parking lots to utilize tree cover and compost/mulch.	Feasible	Parking lot tree cover is already a requirement in the County's <i>Parking Design Manual</i> (most recently updated in June 2012). This measure would be feasible within the Alpine CPA and is incorporated into BMP-14.
40	Incorporate water retention in the design of parking lots and landscaping, including using compost/mulch.	Feasible	Water retention through parking lot and landscape requirements are already incorporated into Sections 86.701 through 86.732 (Water Conservation in Landscaping) of the County's Code of Regulatory Ordinances. Because this measure is already required in the county, it was not incorporated into a BMP.
<b>Carbon Offset Measures</b>			
41	Require the development project to propose an off-site mitigation project which should generate carbon credits equivalent to the anticipated GHG emission reductions. This would be implemented via an approved protocol for carbon credits from California Air Pollution Control Officers Association (CAPCOA), the California Air Resources Board, or other similar entities	Infeasible	The quantity of offsets that would be needed for an individual project in the Alpine CPA is not known at this time. However, the feasibility and applicability of offsets would be determined for individual projects through the discretionary review process. This measure would be infeasible for implementation at the CPU level. Though the exact type, quantity, and pace of development in the Alpine CPA is unknown, as individual projects are proposed the application of carbon offsets

	determined acceptable by the local air district.		could be found feasible at the project level.
42	Require the project to purchase carbon credits from the CAPCOA GHG Reduction Exchange Program, American Carbon Registry (ACR), Climate Action Reserve (CAR) or other similar carbon credit registry determined to be acceptable by the local air district.	Infeasible	The quantity of offsets that would be needed for an individual project in the Alpine CPA is not known at this time. However, the feasibility and applicability of offsets would be determined for individual projects through the discretionary review process. This measure would be infeasible for implementation at the CPU level. Though the exact type, quantity, and pace of development in the Alpine CPA is unknown, as individual projects are proposed the application of carbon offsets could be found feasible at the project level.
43	Encourage the applicant to consider generating or purchasing local and California-only carbon credits as the preferred mechanism to implement its off-site mitigation measure for GHG emissions and that will facilitate the State's efforts in achieving the GHG emission reduction goal.	Infeasible	The quantity of offsets that would be needed for an individual project in the Alpine CPA is not known at this time. However, the feasibility and applicability of offsets would be determined for individual projects through the discretionary review process. This measure would be infeasible for implementation at the CPU level. Though the exact type, quantity, and pace of development in the Alpine CPA is unknown, as individual projects are proposed the application of carbon offsets could be found feasible at the project level.
<p>Notes: AC = air conditioning; CALGreen = California Green Building Standards; CAPCOA = California Air Pollution Control Officers Association; CEC = California Energy Commissions; County = County of San Diego; CPU = Community Plan Update; EV = electric vehicle; EVSE = electric vehicle service equipment; GHG = greenhouse gas; LEED = Leadership in Energy and Environmental Design; MTS = San Diego Metropolitan Transit System; PV = photovoltaic; SANDAG = San Diego Association of Governments; SB = senate bill; SCAB = South Coast Air Basin; Title 24 = California Building Energy Efficiency Standards; VMT = vehicle miles traveled; ZNE = zero net energy                  Source: CARB 2017, Ascent Environmental 2020</p>			

## **References**

California Air Pollution Control Officers Association. 2010 (August). *Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures*. Available: <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>.

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