

## Attachment 5. List of Potential Greenhouse Gas (GHG) Mitigation Measures

Type and Location	Applicability	Feasibility	Source
<b>Energy – On Site</b>			
Require new single-family residential buildings to be designed to follow the energy efficiency performance standards set forth in Tier 2 of the 2016 California Green Building Standards Code (CALGreen), Section A4.203.1.2.2. These reductions can be achieved through energy efficient design features and/or solar photovoltaics.	Single-family residential projects	Statewide California Energy Codes & Standards Program cost-effectiveness studies for Pacific Gas & Electric (PG&E) and Southern California Edison (SCE)	California's 2017 Climate Change Scoping Plan (Scoping Plan)
Require new multi-family residential buildings to follow the energy efficiency performance standards set forth in Tier 1 of the 2016 CALGreen Code, Section A4.203.1.2.1. These reductions can be achieved through energy efficient design features and/or solar photovoltaics.	Multi-family residential projects	Statewide California Energy Codes & Standards Program cost-effectiveness studies for PG&E and SCE	2017 Scoping Plan
Require new non-residential buildings to meet Tier 1 of the 2016 CALGreen Code, Section A5.203.1.2.1. These reductions can be achieved through energy efficient design features and/or solar photovoltaics.	Non-residential projects	Statewide California Energy Codes & Standards Program cost-effectiveness studies for PG&E and SCE	2017 Scoping Plan
Require new buildings to include Cool Roofs in accordance with the requirements set forth in Tier 2 of the 2016 CALGreen Code, Sections A4.106.5 and A5.106.11.2. Incorporate "cool parking" that promotes cool surface treatment for new parking facilities as well as existing surface lots undergoing resurfacing <<Note: The first four measures set the standards in alignment with higher CALGreen tiers. If additional mitigation is required, these measures can be expanded to include zero-net energy requirements.>>	Residential and Non-residential projects	2016 CALGreen	2017 Scoping Plan
Require all new residential and non-residential developments to be all electric.	Residential and non-residential projects	Exceed Title 24 standards to achieve additional GHG emission reductions. Building electrification ordinances have been adopted in California (e.g. Berkeley, San Luis Obispo, etc.).	NA
Prohibit wood-burning fireplaces in new development and require replacement of wood-burning fireplaces for renovations exceeding XXX square feet in development.	Residential projects	New construction wood-burning fireplaces are prohibited within other air basins such as the South Coast Air Basin.	2017 Scoping Plan
Prohibit installation of natural gas fireplaces in residential uses	Residential projects	Electric fireplaces are available as an alternative	NA
Encourage residential and non-residential customers to opt into Monterey Bay Community Power (MBCP) MBprime service offering as a first preference, followed by MBchoice.	Residential and Non-residential projects	The County is a member jurisdiction of MBCP	NA
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	Residential projects	Electrical outlets are required by the National Electrical Code, NFPA 70 210.52(E)(1).	2017 Scoping Plan
Provide electric outlets to promote the use of electric landscape maintenance equipment to the extent feasible on parks and public/quasi-public lands.	All parks and public/quasi-public land projects	Similar to residential electrical units.	2017 Scoping Plan

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Require the installation of energy conserving appliances such as on-demand tank-less water heaters and whole-house fans.	Residential projects	The California Green Building Standards identifies tank-less water heater requirements which are determined as feasible standards by the County.	2017 Scoping Plan
Require the use of energy-efficient lighting (light-emitting diodes [LEDs] or higher efficiency) for all street, parking, and area lighting.	All road construction, multi-family residential, and non-residential projects	CALGreen specifies standards for nonresidential lighting systems which is determined as a feasible standard by the County.	2017 Scoping Plan
Require swimming pools to be designed and constructed to use solar water heating or other technologies with equivalent energy efficiency in place of natural gas for purposes of heating swimming pool waters.	All land use types with swimming pools	CEQA mitigation measure for the Newhall Ranch Specific Plan in Southern California. GHG reductions for the use of solar water heating in lieu of natural gas supported by technical study	Newhall Ranch Additional Environmental Analysis (AEA)
Require new outdoor parking lots for multi-family and non-residential buildings to include trees and/or solar canopies designed to result in 50 percent shading of parking lot surface areas.	Multi-family residential and non-residential projects	Supportive of urban forestry and on-site renewable energy measures.	2017 Scoping Plan

#### Transportation- On Site

Type and Location	Applicability	Feasibility	Source
Require each single-family dwelling unit to install at least one Level 2 or better electric vehicle (EV) charging station in garages	Single-family residential projects	EV charging capabilities are included as a CALGreen standard that is determined to be feasible in Santa Barbara.	CALGreen
Require multifamily residential buildings to design at least 20 percent of parking spaces to include Electric Vehicle Service Equipment (EVSE), or a minimum of 2 spaces to be installed with EVSE for buildings with 2–10 parking spaces.	Multi-family residential projects	EV charging capabilities are included as a CALGreen standard that is determined to be feasible in Santa Barbara.	CALGreen
Require non-residential buildings to design at least 10 percent of parking spaces to include Electric Vehicle Service Equipment (EVSE), or a minimum of 2 spaces to be installed with EVSE for buildings with 2–10 parking spaces.	Non-residential projects	EV charging capabilities are included as a CALGreen standard that is determined to be feasible in Santa Barbara.	CALGreen
Require non-residential land uses with 20 or more on-site parking spaces to 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.	All non-residential land uses with off-street parking, except places of worship and entertainment venues that patrons typically attend in groups (e.g., theaters, sports stadiums and arenas).	Preferential parking is included as a standard in CALGreen	2017 Scoping Plan

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Type and Location	Applicability	Feasibility	Source
Require provision of adequate, safe, convenient, and secure on-site bicycle parking and storage in all multi-family residential projects and all nonresidential projects located within 5 miles of bicycle infrastructure.	Multi-family residential and non-residential projects	Santa Barbara County Association of Governments (SBCAG) Regional Bicycle and Pedestrian Plan provides policy for bicycle parking.	2017 Scoping Plan
Require places of employment to include amenities for employees who commute by bicycle including a shower and changing room, as well as a secure bicycle parking area.	Non-residential projects	SBCAG Regional Bicycle and Pedestrian Plan provides policy for end of trip amenities.	2017 Scoping Plan
Develop a rideshare program targeting commuters to major employment centers.	Residential and non-residential projects	Various rideshare lots currently exist in the county.	2017 Scoping Plan
Provide on- and off-site safety improvements for bike, pedestrian, and transit connections, and/or implement relevant improvements identified in SBCAG's Regional Active Transportation Plan.	All non-highway roadway construction projects or fair share contribution for land use projects	SBCAG Regional Bicycle and Pedestrian Plan provides policy for bicycle and pedestrian safety.	2017 Scoping Plan
Require projects to design and provide bike lanes to connect to the regional bicycle network.	All non-highway roadway construction projects or fair share contribution for land use projects	SBCAG Regional Bicycle and Pedestrian Plan provides guidance on improvements to a regional bicycle network.	2017 Scoping Plan
Provide traffic calming measures and low-stress bicycle network improvements.	All non-highway roadway construction projects or fair share contribution for land use projects	California Air Pollution Control Officers Association (CAPCOA) recommended measure.	Transportation Analysis Updates in Santa Barbara County
Require projects that involve the construction of new local roadways or roadway extensions, either as the project itself or as off-site improvements, to also include the construction a Class I, II, III, or IV bikeway along the same route.	All non-highway roadway construction projects or fair share contribution for land use projects	SBCAG Regional Bicycle and Pedestrian Plan provides policy for bike lane development. Class I, II, or III bike lanes already exist in the County.	2017 Scoping Plan
Require a transportation management plan for specific or master plans which establishes a numeric target for non-single occupancy vehicle (SOV) travel and overall vehicle miles traveled (VMT).	Plan-level projects	The CAPCOA <i>Quantifying Greenhouse Gas Mitigation Measures</i> report provides feasible VMT reduction strategies.	2017 Scoping Plan
Require non-residential projects to develop transportation demand management plans that encourage telecommuting and alternative work schedules.	Non-residential projects	CAPCOA recommended measure.	Transportation Analysis Updates in Santa Barbara County
Require the design of bus stops/shelters/express lanes in new developments to promote the use of mass transit.	Residential and non-residential projects	An increase in safer transit opportunities and express lanes will incentivize carpooling, reducing trips from SOV and reduce vehicle emissions.	2017 Scoping Plan

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Allow new construction to install fewer on-site parking spaces than required by building code, if appropriate.	Residential and non-residential projects	Reducing on-site parking will encourage the use of lower carbon alternative modes of transportation.	2017 Scoping Plan; Transportation Analysis Updates in Santa Barbara County
Require nonresidential uses to provide on-site shared vehicle parking where complementary uses exist in the vicinity.	Non-residential projects	CAPCOA recommended measure.	2017 Scoping Plan
Require employers in locations with priced parking to offer employees a “cash out” equivalent to or greater than the local price of parking associated with employee commutes.	Non-residential projects	SBCAG Congestion Management Program	2017 Scoping Plan
Require property managers of multi-family residential buildings to unbundle the costs of parking from the cost of leasing a dwelling unit.	Multi-family residential projects	Opportunities for reduced living costs will discourage residents to own vehicles and adopt less carbon intensive alternative modes of transportation.	CAPCOA
Require property managers of office buildings located within 0.25 mile of a transit stop to unbundle the costs of parking from the cost of leasing office space.	Non-residential projects near transit	Parking costs are passed through to the vehicle owners/drivers utilizing parking spaces, thereby providing incentive for employers not to commute by car and instead choose more GHG-efficient modes of travel.	CAPCOA

Waste – On Site			
Type and Location	Applicability	Feasibility	Source
Require projects to achieve 75% waste diversion rate during operations	Residential and non-residential projects	State legislative goal under Assembly Bill (AB) 341	AB 341
Require separate collection of organic waste from residential and commercial uses.	All residential and non-residential projects.	Separating organic waste from the main waste stream will allow for anaerobic digestion of material to create renewable sources of energy.	2017 Scoping Plan
Divert and recycle construction and demolition waste and use locally sourced building materials with a high recycled material content to the greatest extent feasible.	Construction and demolition of infrastructure	Redirecting waste from landfills will avoid emissions from decomposition of materials.	2017 Scoping Plan

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Water – On Site			
Type and Location	Applicability	Feasibility	Source
Require residential and nonresidential buildings to utilize low flow water fixtures such as low flow toilets and faucets.	Residential and non-residential projects.	Low flow water fixtures are included as a CALGreen standard which are determined to be feasible in Santa Barbara.	2017 Scoping Plan
Require projects to reduce potable water use with the installation of greywater or rainwater catchment systems.	Residential projects	County is recognized as a national leader in grey water policies and innovation ( <a href="http://www.WaterWiseSB.org">www.WaterWiseSB.org</a> ).	NA

Agriculture - On Site			
Type and Location	Applicability	Feasibility	Source
<i>General</i>			
Where irrigation pumps are used, require use or conversion of stationary diesel or gas-powered irrigation pumps to electric pumps.	All agricultural projects	Adopted measure in Napa County Climate Action Plan (CAP). Recommend application to agricultural operations in Santa Barbara County.	Napa County CAP
Support transition of fossil-fuel powered agricultural equipment to electric or alternatively fueled equipment.	All agricultural projects subject to permitting.	Adopted measure in Napa County CAP. Recommend application to agricultural operations in Santa Barbara County.	Napa County CAP
Prohibit the burning of vegetation to be cleared for cultivation purposes.	All cultivation operations subject to permitting.	Adopted by Trinity County for Cannabis cultivation only. Recommend application to agricultural operations in Santa Barbara County.	Trinity County Cannabis Environmental Impact Report (EIR)
Support the use of off-road agricultural equipment to operate with the highest tier engines commercially available.	All agricultural projects subject to permitting.	Adopted measure in Napa County CAP. Recommend application to agricultural operations in Santa Barbara County.	Napa County CAP
Limit the use of off-road agricultural equipment that is powered by gasoline, diesel, or other fossil fuels where available.	All agricultural projects subject to permitting.	Adopted by Trinity County for Cannabis cultivation only. Recommend application to agricultural operations in Santa Barbara County.	Trinity County Cannabis EIR
Require reduced application of inorganic nitrogen fertilizer.	All cultivation operations subject to permitting.	Adopted measure in Napa County CAP. Recommend application to agricultural operations in Santa Barbara County.	Napa County CAP
Encourage and support the use of carbon farming and other sustainable agricultural practices in the County.	All cultivation operations subject to permitting.	County and Santa Barbara County Air Pollution Control District (APCD) are studying feasibility and interest in county.	Napa County CAP
Require a minimum of 3 square feet of shared community or private garden space to be established per unit in multi-family housing developments	All multi-family residential projects	Similar measure adopted in 1989 by the City of Pasadena in its "City of Gardens" ordinance.	NA
<i>Cannabis</i>			

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Type and Location	Applicability	Feasibility	Source
Require use of low emission diesel back-up generators at all commercial cannabis cultivation and noncultivation sites.	All cannabis operations	Adopted by Trinity County for Cannabis cultivation only. Recommend application to cannabis cultivation operations in Santa Barbara County.	Trinity County Cannabis EIR
Require electricity sources used for commercial cannabis cultivation, manufacturing, microbusinesses, non-storefront retail, testing, nurseries, and distribution to be from renewable sources.	All cannabis operations	Adopted by Trinity County for Cannabis cultivation only. Recommend application to cannabis cultivation operations in Santa Barbara County.	Trinity County Cannabis EIR
Require cannabis cultivation operations to only use LEDs or double-ended high-pressure sodium (HPS) fixtures. Require all non-cultivation operations to only use high efficacy lighting such as LEDs, HPS, pin-based and compact fluorescents with electronic ballasts, pulse-start metal halide lights, or hardwired high frequency generators and induction lamps.	All cannabis operations	Adopted by Trinity County for Cannabis cultivation only. Recommend application to cannabis cultivation operations in Santa Barbara County.	Trinity County Cannabis EIR
<i>Wineries</i>			
Require 15 percent of proposed parking spaces to install EV chargers for winery employees and visitors.	All winery operations	EV charging capabilities are included as a CALGreen standard that is determined to be feasible in the Santa Barbara region.	NA - supportive of Transportation category measures
Provide preferential parking for carpool and clean air vehicles.	All winery operations	Carpool designated parking is required as a CALGreen standard that is determined to be feasible in the Santa Barbara region.	NA - supportive of Transportation category measures
Require the installation of onsite renewable energy sources for winery operations.	All winery operations	Provides energy savings to facilities.	NA - supportive of Energy category measures
Require electrification of all buildings for winery tasting facilities, event space, and retail space.	All winery operations	Exceed Title 24 standards to achieve additional GHG emission reductions. Building electrification ordinances have been adopted in California (e.g. Berkeley, San Luis Obispo, etc.).	NA - supportive of Energy category measures

Construction – On Site			
Type and Location	Applicability	Feasibility	Source
Require all diesel-powered off-road equipment used in construction to meet EPA's Tier 4 emission standards as defined in 40 CFR 1039 and comply with the 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.	All construction activity	<a href="#">Santa Barbara County APCD Recommended Mitigation Measures</a>	2017 Scoping Plan
Require construction contractors to enforce an idling limit of no more than 5 minutes for on and off-road diesel equipment 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.	All construction activity	Title 13, CCR, §2449(d)(3) and §2485	2017 Scoping Plan

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Require use of existing grid power for electric energy rather than operating temporary gasoline/diesel powered generators.	All construction activity where connections to grid are available	PG&E and SCE provide guidance on temporary electrical connections.	2017 Scoping Plan
Require use of renewable diesel (RD) fuel in diesel-powered construction equipment. RD fuel must meet California's Low Carbon Fuel Standards.	All construction activity	RD is being used in all Santa Barbara Metropolitan Transit District buses. Enforceability of the measure and air pollution impacts should be considered when selecting this measure.	2017 Scoping Plan
Implement a program that incentivizes construction workers to carpool, use EVs, or use public transit to commute to and from the construction site.	All construction activity	<a href="#">Santa Barbara County APCD Recommended Mitigation Measures</a>	2017 Scoping Plan

Carbon Sequestration – On Site			
Type and Location	Applicability	Feasibility	Source
Minimize tree removal and mitigate indirect GHG emissions increases that occur due to vegetation removal, loss of sequestration, and soil disturbance.	All land changes.	Replacement of trees would not result in short-term solutions to carbon capture due to tree growth, however it would reduce long-term emissions.	2017 Scoping Plan
Expand urban forestry and green infrastructure in new land development.	All land changes.	The County's landscape design standard ordinance provides guidance on project vegetation.	2017 Scoping Plan
Encourage new and existing agricultural lands to apply "carbon beneficial" agricultural conservation practices, such as compost application, cover cropping, switching from conventional tillage to no tillage, and establishing hedgerows.	All existing and new agricultural projects subject to permitting.	Mendocino County conducted a two-year sustainable agricultural lands planning assessment under a grant from the California Department of Conservation to evaluate the carbon sequestration potential of these conservation practices.	2017 Mendocino County Sustainable Agricultural Lands Strategy
Establish a countywide conservation easement program to discourage natural and working lands from being developed, thereby preventing the loss of carbon sequestration potential on newly developed land.	All land changes.	Adopted by San Diego County,	San Diego County Purchase of Agricultural Conservation Easement (PACE) Program

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Offsets – Off Site			
Type and Location	Applicability	Feasibility	Source
After incorporation of all onsite measures and to mitigate residual GHG impacts, require projects to undertake or fund Direct Reduction Activities pursuant to a building retrofit program ("Retrofit Program"), to improve the energy efficiency of existing buildings. The project applicant or its designee shall retire GHG Mitigation Credits or Carbon Offsets issued by an Approved Registry based on such Direct Reduction Activities in a quantity equal to the gap to mitigate GHG emissions consistent with the County's GHG threshold. Building retrofits covered by the Retrofit Program can include, but are not limited to: cool roofs, solar panels, solar water heaters, smart meters, energy efficient lighting (including, but not limited to, light bulb replacement), energy efficient appliances, energy efficient windows, pool covers, insulation, and water conservation measures. The program shall be implemented in unincorporated Santa Barbara County.	For project emissions that cannot be mitigated on-site.	Implemented in Newhall Ranch Building Retrofit Program.	Newhall Ranch AEA
Require projects to enroll in a VMT Mitigation Exchange Program to select from a pre-approved list of mitigation projects located in the County.	Residential and non-residential projects	Measures derived from UC Berkeley's "Implementing SB 743, An Analysis of Vehicle Miles Traveled Banking and Exchange Frameworks"	Transportation Analysis Updates in Santa Barbara County
Require project to enroll in a mitigation bank to serve as an entity or organization that pools fees from development projects across multiple jurisdictions to spend on larger scale mitigation projects.	Residential and non-residential projects	Measures derived from UC Berkeley's "Implementing SB 743, An Analysis of Vehicle Miles Traveled Banking and Exchange Frameworks"	Transportation Analysis Updates in Santa Barbara County