Appendix A

Environmental Scoping Document

Environmental Scoping Document

for the 2030 Climate Action Plan

Project Website:

https://sbco.mysocialpinpoint.com/2030cap/

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1.0 Purpose

This environmental scoping document describes the proposed 2030 Climate Action Plan (2030 CAP) Update ("Proposed Plan") and provides a preliminary review of the Proposed Plan's potential environmental impacts in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.). This scoping document, along with comments received in response to the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the Proposed Plan, will assist the County of Santa Barbara, as the lead agency for the preparation of the EIR for the Proposed Plan, in identifying environmental impacts that must be evaluated in the EIR.

2.0 Background

CEQA requires the preparation of an EIR to inform the public and decision-makers of the potential environmental effects of the proposed regulations. According to CEQA Guidelines Section 15151, an EIR should include a "sufficient degree of analysis, or scope, to provide decision-makers with information that enables them to make a decision which intelligently takes account of environmental consequences."

The EIR for the Proposed Plan will evaluate the environmental impacts of anticipated activities resulting from implementing the 2030 CAP. The environmental analysis will be based on the project description and, if potentially significant environmental effects are identified, will set forth mitigation measures to be implemented as requirements in the 2030 CAP approval process, in order to avoid or reduce significant impacts identified in the environmental analysis.

3.0 Project Description

This section describes the Proposed Plan, including the applicant/lead agency, project location, Proposed Plan summary, and Proposed Plan adoption and implementation actions.

3.1 Project Applicant/Lead Agency

The County of Santa Barbara is both the project applicant/proponent and the lead agency for the Proposed Plan.

3.2 Project Location

The Proposed Plan would update the County's 2015 Energy & Climate Action Plan which is implemented across unincorporated Santa Barbara County, excluding lands under the jurisdiction of incorporated cities, the federal government (Los Padres National Forest and Vandenberg Space Force Base), and the University of California. Santa Barbara County is shown in Figure 1 below.

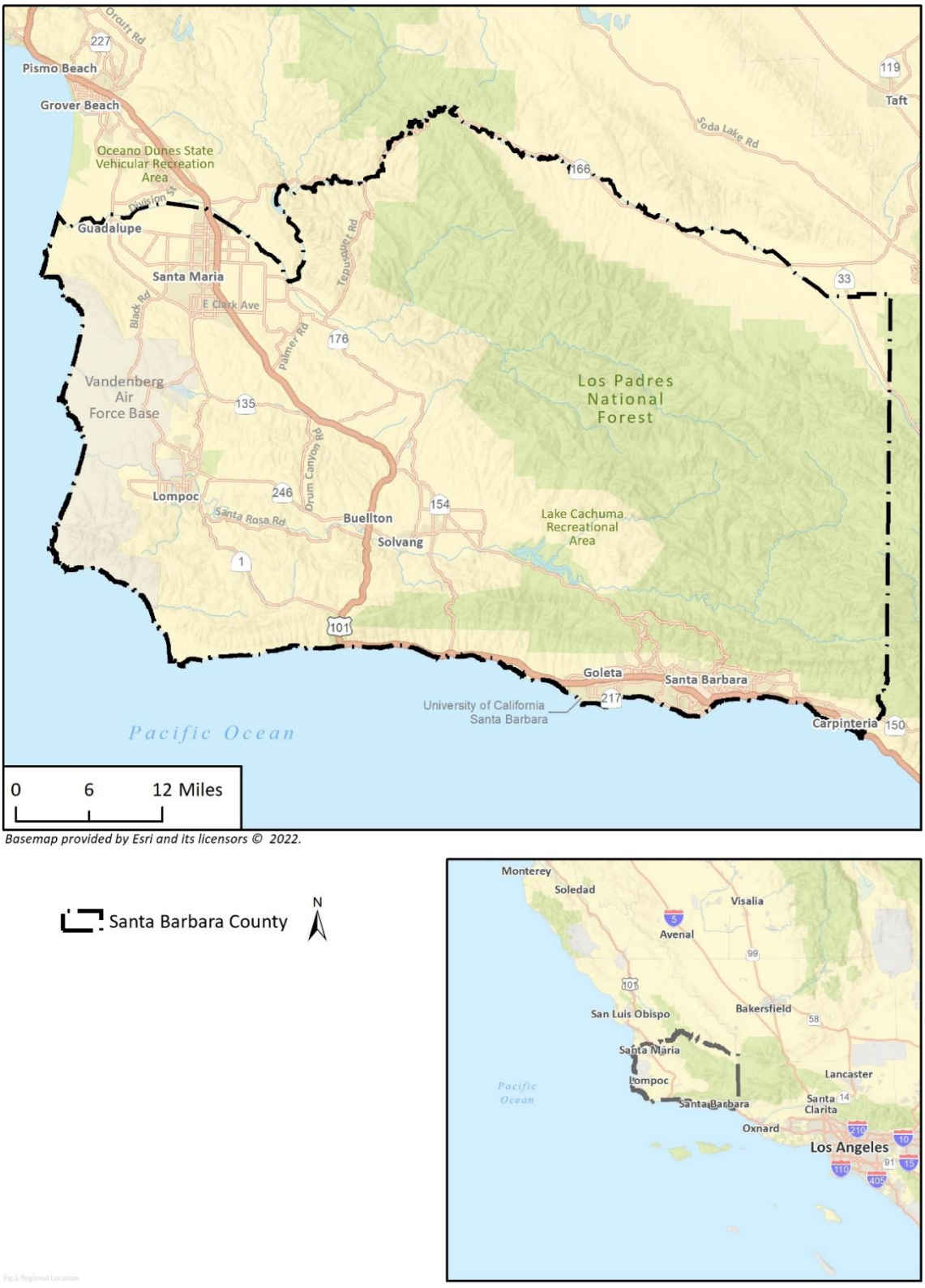


Figure 1: Regional Location

3.3 Project Overview

In 2018, the County of Santa Barbara adopted a goal of 50 percent net reduction from 2018 emissions levels by 2030, and carbon neutrality by 2045. To reach this goal, the County is proposing to update the 2015 Energy and Climate Action Plan (i.e., the Proposed Plan; 2030 CAP). The 2030 CAP would include a community-wide greenhouse gas (GHG) emissions inventory and create climate action strategies to address issues related to improving building efficiency; decreasing transportation emissions; decreasing emissions related to water, wastewater, and solid waste; increasing carbon sequestration, creating food system improvements; and encouraging a low carbon economy. Climate action strategies within the 2030 CAP would be fulfilled through implementation of 2030 CAP Measures and Actions. A Measure is a long-range policy developed to achieve specific GHG reductions. An Action is a specific program or step that supports GHG reduction Measures. Adoption of the 2030 CAP would require accompanying amendments to the Energy Element and amendments to other components of the Santa Barbara County Comprehensive Plan as needed for consistency with 2030 CAP Measures and Actions.

3.4 Potential Development That May Result from the Proposed Plan

The 2030 CAP does not identify individual site-specific projects that may result from implementing actions included in the 2030 CAP. However, the types of supportive programs, policies, financial pathways, and other commitments identified in the Actions included in the 2030 CAP are considered during review of the Proposed Plan. Such programs, policies, or potential new development would be aligned with the 2030 CAP Measures, included in **Table 1**.

Each of the 2030 CAP Measures are fulfilled through 2030 CAP Actions. 2030 CAP Actions identify the supportive programs, policies, financial pathways, and other commitments that assist in accomplishing these Measures. The types of infrastructure, improvements, and other new development facilitated by the 2030 CAP Actions includes, but is not limited to, the installation of electric vehicle charging stations; new bicycle or pedestrian facilities; upgrading existing infrastructure including electrical panels and branch circuits; the increase of sustainable agricultural practices such as expanding solar development on agricultural lands, increasing the use of compost, mulching, cover crops, and hedgerow planting; the restoration of natural habitats and ecosystems; and the development of new building policies to increase wildfire resilience. The 2030 CAP Actions promote programs or developments aligned with the 2030 CAP Measures which could introduce physical changes associated with construction and could alter pedestrian and vehicular traffic patterns. A full list of 2030 CAP Actions can be found in the Implementation Table within the 2030 CAP document.

Each of these example actions in 2030 CAP would either involve the initial development of programs to implement these actions and/or result in collaboration with other entities to promote an existing program. Therefore, future plans or projects requiring discretionary approval would be subject to environmental review under the California Environmental Quality Act (CEQA), and individual impact analyses will identify required plan- or project-specific mitigation measures where applicable.

Table 1 Santa Barbara County 2030 CAP GHG Emissions Reduction Measures List

Measure #	Measures
Resilient Clean Energy Measures: Building Energy - BE; Municipal Operations - MO	
BE-1	Increase clean energy use and energy resilience in new and existing buildings
MO-1	Increase sustainability and resilience of County-operated facilities
Connected Communities Measures: Transportation - TR	
TR-1	Increase the use of zero-emission vehicles
TR-2	Enhance transportation policy infrastructure planning
TR-3	Increase affordable housing and reduce number of commuter car trips
TR-4	Increase reliability and accessibility of transit services
TR-5	Reduce the need for commuting by encouraging work at home, walk to work and locating jobs near transit
TR-6	Decarbonize Offroad Emissions
Sustainable Economies Measures: Waste - W; Water & Wastewater - WW; Food System - FS, Low Carbon Economy - LCE	
W-1	Reduce food waste and increase use of organic recycled materials
W-2	Reduce use of non-recyclable and non-compostable single use items
WW-1	Increase energy efficiency and reduce greenhouse gas emissions of public water system operations
FS-1	Increase community food access equity and resilience
FS-2	Reduce energy- and carbon-intensity of the food system
LCE-1	Limit the increase of fossil fuel extraction emissions and develop a sunset strategy
LCE-2	Support local business in becoming more sustainable
Nature-Based Solutions (Land Stewardship & Carbon Farming - LCSF)	
LSCF-1	Promote and support land management practices that sequester carbon
LSCF-2	Facilitate mechanisms to value and fund carbon sequestration projects
LSCF-3	Reduce carbon emissions from agricultural operations

3.5 Adoption and Implementation

The County Planning Commission will consider and advise the Board of Supervisors (Board) regarding the adoption of the 2030 CAP. In order to implement the Proposed Plan, the Board will need to adopt environmental findings, certify the EIR, and, if necessary, adopt a Statement of

Overriding Considerations for any unavoidable, significant environmental impacts resulting from the Project. The Board will need to adopt any CAP-related Comprehensive Plan amendments (e.g., amendments to the Energy Element) to be consistent with, and ensure the successful implementation of, certain features of the CAP. In addition to the actions set forth above, the Coastal Commission must certify any amendments to the Local Coastal Program (LCP) – including Article II, as the implementing ordinance of the LCP.

4.0 Scope of the Environmental Review

4.1 Overview

CEQA requires the preparation of an EIR to inform the public and decision-makers of the project's potential environmental effects. This includes any potential environmental effects resulting from the allowance of the supplemental uses described in the project description. According to CEQA Guidelines Section 15151, "[a]n EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences."

4.2 Program EIR Requirements and Benefits

The EIR for the Proposed Plan is planned to fulfill the requirements for a Program EIR. Although the legally required contents of a Program EIR are the same as those of a Project EIR, Program EIRs are by necessity more conceptual and may contain a more general discussion of impacts, alternatives, and mitigation measures than a Project EIR. As provided in Section 15168 of the CEQA Guidelines, a Program EIR may be prepared on a series of actions that may be characterized as one large project. Use of a Program EIR provides the County of Santa Barbara (as the Lead Agency) with the opportunity to consider broad policy alternatives and program-wide mitigation measures and provides the County with greater flexibility to address environmental issues and/or cumulative impacts on a comprehensive basis. Agencies generally prepare Program EIRs for programs or a series of related actions that are linked geographically, are logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program, or are individual activities carried out under the same authority and having generally similar environmental effects that can be mitigated in similar ways. A Program EIR considers the broad effects associated with implementing a program (such as a General Plan or Specific Plan, or in the case of the Proposed Plan, a Climate Action Plan) and does not, and is not intended to, examine the specific environmental effects associated with specific projects that may be accommodated by the provisions of a program.

Once a Program EIR has been prepared, subsequent activities within the program must be evaluated to determine what, if any, additional CEQA documentation needs to be prepared. If the Program EIR addresses the program's effects as specifically and comprehensively as possible, many subsequent activities could be found to be within the Program EIR scope and additional environmental documentation may not be required (CEQA Guidelines Section 15168[c]). When a lead agency relies on a Program EIR for a subsequent activity, it must incorporate applicable mitigation measures and alternatives developed in the Program EIR into the subsequent activities (CEQA Guidelines Section 15168[c][3]). If a subsequent activity would have effects not contemplated or not within the scope of the Program EIR, the lead agency must prepare a new

Initial Study leading to a Negative Declaration, Mitigated Negative Declaration, or a project-level EIR.

As a wide-ranging environmental document, the Program EIR uses expansive thresholds as compared to the project-level thresholds that might be used for an EIR on a specific development project. It should not be assumed that impacts determined to be insignificant at a program level would be insignificant at a project level. In other words, determination that implementation of the Proposed Plan as a program would not have a significant environmental effect does not necessarily mean that an individual project would not have significant effects based on project-level CEQA thresholds, even if the project is consistent with the proposed 2030 CAP.

4.1 Environmental Topics to be Analyzed in the EIR

CEQA Guidelines Section 15060(d) states that an initial study is not required in cases where preparation of an EIR is determined to be clearly required by the lead agency. Accordingly, an initial study for the project is not provided herein. However, preliminary review of the Proposed Plan identified the following issue areas for evaluation in the EIR. Additional environmental topics beyond what is set forth below might be added to the EIR, based on comments received in response to the NOP for the EIR and Draft EIR that will be prepared for the project.

4.2.1 Air Quality and Greenhouse Gas Emissions

The EIR will describe existing conditions within the South Central Coast Air Basin and in the Proposed Plan vicinity, including attainment status for criteria pollutants, climatic conditions, local emissions sources, and sensitive receptors, such as schools, elder care facilities, park visitors and adjacent neighborhoods. This section of the EIR will evaluate any potential conflicts the Proposed Plan may create with applicable Santa Barbara County Air Pollution Control District thresholds of significance (Santa Barbara County Air Pollution Control District 2022), including consistency with adopted federal, state, and local air quality plans for Santa Barbara County (ex. SBCAPCD 2019 Ozone Plan). The Proposed Plan's potential to create objectionable odors will also be analyzed in this section of the EIR. This section of the EIR will identify the need for mitigation, as necessary, to reduce significant impacts to the maximum extent feasible.

4.2.2 Energy

Potential new development that may result from actions included in the 2030 CAP includes modifications to the existing built environment, including building retrofits and installation of pedestrian facilities. Such development would result in the consumption of energy resources during construction and/or operation. The EIR will describe the existing energy setting, including energy supply and energy consumption and sources, including the use of electricity, natural gas, and alternative energy sources. This section of the EIR will evaluate if the Proposed Plan would result in the wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation. In addition, this section of the EIR would evaluate any potential conflicts the Proposed Plan may create with State or local plans for renewable energy or energy efficiency (e.g., California Building Structure Code, Title 21, Santa Barbara County Comprehensive Plan, and SBCAPCD 2019 Ozone Plan). This section of the EIR will identify the need for mitigation, as necessary, to reduce significant impacts to the maximum extent feasible.

4.2.3 Transportation

Transportation impacts associated with the Proposed Plan may result from possible safety hazards associated with increased pedestrian or bicycle use, and potential temporary disruptions or permanent alterations in traffic patterns due to construction and the implementation of active transportation improvements, respectively. The EIR will evaluate existing County traffic volume data, vehicle miles traveled (VMT) impacts, geometric hazards, accident data, and safety issues including evacuation/emergency access; identify potential construction-related traffic impacts; assess the project's long-term operational impacts associated with the expansion of active transportation facilities; and identify feasible mitigation measures to address significant impacts.

4.2.4 Cumulative Impacts

CEQA Guidelines Section 15355 defines "cumulative impacts" as follows:

> *"Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.*
>
> *(a) The individual effects may be changes resulting from a single project or a number of separate projects.*
>
> *(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

The EIR will assess the significant cumulative impacts to which the project may make a "cumulatively considerable" contribution (CEQA Guidelines Section 15130).

4.2 Alternatives Analysis

The EIR will describe a reasonable range of alternatives to the project that would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, as required by CEQA Guidelines Section 15126.6. The alternatives discussion in the EIR will include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the project. The EIR will programmatically describe the major characteristics and significant environmental effects of each alternative. The EIR analysis will also include a brief discussion of each alternative considered but rejected from further analysis in the EIR (CEQA Guidelines Section 15126.6).

4.3 Other CEQA Required Discussions

The EIR will include a section that addresses other issues for which CEQA Guidelines Section 15126 requires analysis beyond the environmental topical areas described above. In this section, the EIR will analyze the project's additional possible impacts, including growth inducement and significant irreversible environmental changes.

4.4 Environmental Topics that will not be Analyzed in Further Detail in the EIR

4.2.1 Aesthetics/Visual Resources

Thresholds of Significance

a. Would the project result in the obstruction of any scenic vista or view open to the public or the creation of aesthetically offensive site open to public view?
b. Would the project result in a change to the visual character of an area?
c. Would the project result in glare or night lighting which may affect adjoining areas?
d. Would the project result in visually incompatible structures?

The County's Visual Aesthetics Impact Guidelines classify coastal and mountainous areas, the urban fringe, and travel corridors as "especially important" visual resources. A project may have the potential to create a significantly adverse aesthetic impact if (among other potential effects) it would impact important visual resources, obstruct public views, remove significant amounts of vegetation, substantially alter the natural character of the landscape, or involve extensive grading visible from public areas. The guidelines address public, not private views (County of Santa Barbara 2021).

Setting

Santa Barbara County is defined by a multitude of scenic resources, including hillsides, mountains, coastline, beaches, historic buildings, and trees. Significant visual resources, as defined in the County's Open Space Element of the Comprehensive Plan, include scenic highway corridors; parks and recreational areas; views of coastal bluffs, streams, lakes, estuaries, rivers, watersheds, mountains, and cultural resources sites; and scenic areas. Scenic vistas are often available from publicly accessible roadways, including designated and eligible State Scenic Highways such as U.S. Route 101, State Route 166, State Route 154, and State Route 1 (California Department of Transportation [Caltrans] 2022).

Impact Analysis

Threshold of Significance: a

As a policy document the 2030 CAP would not result in the obstruction of scenic vistas or views open to the public or create an aesthetically offensive site open to public view. However, implementation of some 2030 CAP Actions may promote infrastructure development and other physical changes through policies and programs designed to achieve the County's GHG emissions reductions goals. 2030 CAP Action BE-1.8 promotes increasing solar and battery storage requirements in buildings. Action TR-5.5 promotes prioritizing bicycle and pedestrian programmed projects implemented in the Connected 2050 Regional Transportation Plan/Sustainable Community Strategies. Action BE-1.10 promotes implementation of best practices and upgrade energy systems to streamline permitting for projects associated with renewable energy and energy storage systems, building retrofits, and electrical infrastructure upgrades.

Although implementation of 2030 CAP includes actions that may result in future development that could change the visual environment of the County, infrastructure development, redevelopment, renewable energy, and other potential future development projects would be subject to County regulations and policies intended to ensure new development would be complimentary to existing development and land uses. Santa Barbara County Code (County Code) Section 21-28 requires preservation of natural features including, but not limited to, large trees; natural groves; watercourses; scenic points; and historic spots, and Section 25-22, which requires grading activities to keep aesthetic disfigurement to a minimum (County of Santa Barbara 2022a). Division

8 of the County Code includes provisions for Special Treatment Areas defined by the County, which requires the retention of trees and preservation of natural topographical features in order to avoid the destruction of natural scenic beauty and unsightly developments (County of Santa Barbara 2022a). The County's Coastal Land Use Plan (CLUP) contains specific policies to protect scenic and visual qualities within the Coastal Zone (County of Santa Barbara 2019). Specifically, Policy 4-6 requires that posted signs do not detract from scenic areas or views from public roads or other viewing points, Policy 4-7 requires utilities to be placed underground in new developments (except where cost of undergrounding would be so high as to deny service), and Policy 4-9 requires structures to be sited and designed to preserve unobstructed broad views of the ocean from U.S. Route 101, and to be clustered to the maximum extent feasible (County of Santa Barbara 2019), minimizing potential aesthetic impacts.

As a result of required compliance with County regulations and policies, the 2030 CAP would not obstruct a scenic vista or view open to the public or create an aesthetically offensive site open to public view. Therefore, the 2030 CAP would result in insignificant impacts related to scenic vistas.

Thresholds of Significance: b, d

The visual character of the County is defined by a mix of urban land, agriculture, and open space, as designated by the County's zoning ordinance (County of Santa Barbara 2019). The 2030 CAP does not include land use or zoning changes that would have the potential to alter the visual character of the County. As a policy document, the 2030 CAP would be used to implement actions designed to achieve the County's GHG emissions reductions goals.

Implementation of some actions in the 2030 CAP may promote infrastructure improvements that could alter visual character, such as solar panels on existing and new buildings, bicycle facilities, and electric vehicle charging stations. Future CAP-related improvements would be designed and located to be complementary to existing land uses and would be required to be developed in conformance with applicable County regulations, including Land Use Element policies, which require submittal of a landscaping plan for all planned development; require new structures to have compatible height, scale, and design with existing development in areas designated as rural by the County; and require new structures in existing communities designated as urban land to be in conformance with the scale and character of such communities (County of Santa Barbara 2016). Pursuant to County Code Section 2-33.12, projects in the County promoted through 2030 CAP Actions would be subject to the standards of the appropriate Board of Architectural Review[1] (BAR) which reviews changes or additions to the exterior architecture of buildings, structures, and signs (County of Santa Barbara 2022a). As described in County Code Section 2-33.14, BARs throughout the County review projects to maintain compliance with design standards including height, bulk, and area of building and structures; colors and types of building materials and applications; site layout, orientation, and relationship with open areas and topography, location

[1]Santa Barbara County has established separate Boards of Architectural Review for the geographic regions of North County, Central County, South County, and Montecito. Each Board of Architectural Review has the same regulatory authority over their respective jurisdiction.

and type of landscaping; and appropriateness of sign design and exterior lighting (County of Santa Barbara 2019).

Installation of new solar panels, development of battery storage projects and electric vehicle (EV) charging stations, and introduction of active transportation and public transit infrastructure may slightly change the scenic character of the County. Future CAP-related renewable energy and electrification improvements would be required to adhere to Santa Barbara County Comprehensive Plan policies and County zoning and development regulations, and as a result, would be designed complementary to existing land uses. Such regulations include Section 35.82.070(F)(1) of the County's Land Use and Development Code which requires projects to have a harmony of color, composition, and material; have a harmonious relationship with existing and proposed adjoining development; design a project site in relationship to environmental qualities, open spaces, and topography; and be consistent with additional design standards expressly adopted for a specific local area, community, or zone (County of Santa Barbara 2020). In addition, future CAP-related improvements would be required to be reviewed by the County Planning and Development Department for consistency with the Santa Barbara County Comprehensive Plan policies described above and other applicable regulatory land use actions prior to approval. Therefore, the 2030 CAP would not significantly impact the visual character of the area or introduce visually compatible structures.

Threshold of Significance: c

The 2030 CAP would not involve land use or zoning changes. Rather, the 2030 CAP would promote sustainable infrastructure development and redevelopment that is complimentary to existing development and land uses. As a policy document, the 2030 CAP would not directly result in impacts related to light and glare. However, the 2030 CAP would implement actions that would support the introduction of solar panels and EV charging stations. Solar panels have the potential to result in new sources of glare within the County if not thoughtfully designed and located. The design and location of proposed solar infrastructure would be complimentary to existing development in the County, such as the addition of small-scale rooftop solar panels, in order to reduce potential glare impacts. Pursuant to County Code Section 21-32A, implementation of development within an urban area, inner-rural area, existing developed rural neighborhood, or land zoned industrial that is located in a rural area, as designated by the Santa Barbara County Comprehensive Plan, would be required to implement a Lighting Plan. The Lighting Plan illustrates proposed lighting and would be required to reduce/shield light generating sources in agricultural buffers through project design. Lighting Plans are required to be submitted to the Director of the Planning and Development Department for approval (County of Santa Barbara 2019). Furthermore, installation of new solar panels and EV charging stations would be subject to the solar energy system review process provided within County Code Chapter 10, Article XVI and Chapter 10, Article XVII, respectively (County of Santa Barbara 2019). As such, all new solar and EV charging stations would be reviewed by the County for consistency with applicable requirements prior to project approval. Compliance with these and other County Code standards would ensure that implementation of 2030 CAP Actions would not result in glare or night lighting which may affect adjoining areas. Therefore, the 2030 CAP would result in an insignificant impact related to light and glare.

4.2.2 Agricultural Resources

Thresholds of Significance

a. Would the project convert prime agricultural land to non-agricultural use, impair agricultural land productivity (whether prime or non-prime) or conflict with agricultural preserve programs?
b. Would the project result in an effect upon any unique or other farmland of State or Local Importance?

The County's Agricultural Resources Guidelines (approved by the Board of Supervisors, August 1993) provides examples of types of projects that are considered to have a potentially significant impact. These projects include a division of land which is currently considered viable agricultural land; a Development Plan, Conditional Use Permit, or other discretionary act which would result in the conversion of agricultural land to nonagricultural land; and discretionary projects which may result in substantial disruption of surrounding agricultural operations. As a general guideline, the Agricultural Resources Guidelines notes an agricultural parcel of land should be considered viable if it is of sufficient size and capability to support an agricultural enterprise (County of Santa Barbara 2021).

Setting

The County is characterized by both urban and agricultural land. According to the California Department of Conservation's (DOC's) Farmland Mapping and Monitoring Program, the County is comprised of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, and Urban and Built-Up Land (DOC 2016). There are lands under Williamson Act contract throughout the County (County of Santa Barbara 2017a).

Impact Analysis

Thresholds of Significance: a-b

The 2030 CAP does not include land use or zoning changes that would have the potential to convert agricultural land to non-agricultural use. As a policy document, the majority of the 2030 CAP's proposed actions focus on promoting sustainable infrastructure and redevelopment of existing land uses. Actions in the 2030 CAP related to agriculture promote incentives and partnerships to increase sustainable agricultural practices in the County, rather than encourage development. Action FS-1.1 directs County departments to procure food and supplies from local vendors, giving preference to vendors who use regenerative agricultural practices. Action FS-1.3 requires the County to lead or support efforts in obtaining funding to increase local food cultivation. These actions would not convert agricultural land to nonagricultural use or impair agriculture land productivity. 2030 CAP actions also protect existing viable agricultural land from potential conversion to non-agricultural use. Action LSCF-1.5 reinforces the County's support of the Williamson Act Program and requires the County to explore the expansion of tax incentives to conserve agricultural land. Action LSCF-1.6 requires the County to develop a Regional Agricultural Plan to identify agricultural areas at risk of development and identify policies, programs, and projects to reduce urban sprawl and avoid land conversion. These actions are designed to support the viability and longevity of existing agricultural lands and operations in the County.

Action FS-2.3 would direct the County Planning and Development Department to update and adopt a utility-scale solar ordinance to expand opportunities for solar development on agricultural lands. The provisions of the updated utility-scale solar ordinance would be developed by the County Planning and Development Department in accordance with existing County regulations regarding the protection of agricultural land. These County regulations include Agricultural Element Policy IA, which prohibits the integrity of agricultural operations to be violated by recreational or other non-compatible uses, and Policy II.D, which discourages conversion of highly productive agricultural lands, whether urban or rural (County of Santa Barbara 2009a). Conformity with these Comprehensive Plan Policies would ensure the updated utility-scale solar ordinance would not result in development that would substantially reduce agricultural productivity. Other 2030 CAP actions, such as Action LSCF-1.5 and Action LSCF-1.7 would substantially minimize introduction of new development on agricultural preserves such that substantial agricultural land would be converted to non-agricultural use. As a result, solar development on agricultural lands would not result in a loss of agricultural land, Important Farmland, or impairment of agricultural productivity.

Future development within or near rural areas of the County would be subject to the provisions of County Code Section 21-32A which requires a 100-foot minimum buffer between agricultural and other commercial, industrial, or residential development. Any development promoted as a result of implementation of 2030 CAP Actions which occur on commercial, industrial, or residential development in an urban area, inner-rural area, existing developed rural neighborhood, or land zoned industrial that is located in a rural area would adhere to established agricultural buffers. Therefore, the 2030 CAP would not convert prime agricultural land to non-agricultural use, impair agricultural land productivity, conflict with agricultural preserve programs, or have an effect upon unique or other farmland of State or Local importance.

4.2.3 Biological Resources

Thresholds of Significance

Flora

a. Would the project result in a loss or disturbance to a unique, rare or threatened plant community?
b. Would the project result in a reduction in the numbers or restriction in the range of any unique, rare or threatened species of plants?
c. Would the project result in a reduction in the extent, diversity, or quality of native vegetation (including brush removal for fire prevention and flood control improvements)?
d. Would the project result in an impact on non-native vegetation whether naturalized or horticultural if of habitat value?
e. Would the project result in the loss of healthy native specimen trees?
f. Would the project result in introduction of herbicides, pesticides, animal life, human habitation, non-native plants or other factors that would change or hamper the existing habitat?

Fauna

g. Would the project result in a reduction in the numbers, a restriction in the range, or an impact to the critical habitat of any unique, rare, threatened or endangered species of animals?

h. Would the project result in a reduction in the diversity or numbers of animals onsite (including mammals, birds, reptiles, amphibians, fish or invertebrates?

i. Would the project result in a deterioration of existing fish or wildlife habitat (for foraging, breeding, roosting, nesting, etc.)?

j. Would the project result in introduction of barriers to movement of any resident or migratory fish or wildlife species?

k. Would the project result in introduction of any factors (light, fencing, noise, human presence and/or domestic animals) which could hinder the normal activities of wildlife?

The County's Environmental Threshold and Guidelines Manual includes guidelines for the assessment of biological resource impacts. The Manual addresses types of impacts to biological resources and provides habitat-specific impact assessment guidelines for project-specific development (County of Santa Barbara 2019).

Setting

The County contains natural areas that provide habitat supporting a wide variety of plants and animals. The County Code and CLUP incorporate policies to protect biological resources such as plants, trees, wildlife habitats, vegetation communities, wetlands, coastal resources, and species throughout the County (County of Santa Barbara 2019; County of Santa Barbara 2022a). Species including, but not limited to, the federally-listed California Red-legged frog (*Rana draytonii*), the federally and State listed San Joaquin Kit Fox (*Vulpes macrotis mutica*) and the federally and State listed Least Bell's Vireo (*Vireo bellii pusillus*), have the potential to be present within the County's open space (United States Fish and Wildlife Service [USFWS] 2022).

Impact Analysis

Thresholds of Significance: a-b, g-j.

The 2030 CAP would not involve land use or zoning changes, rather it would promote actions that encourage sustainable infrastructure development and redevelopment. Furthermore, the 2030 CAP would introduce actions that would supplement existing Santa Barbara County Comprehensive Plan policies to protect and improve natural areas in the County, such as the restoration of riparian, native grassland, oak woodland, and wetland areas. Implementation of some 2030 CAP Actions may promote infrastructure development that would result in impacts to protected species through construction activities. For example, the promotion of installation of electric vehicle charging stations, solar infrastructure, and electrification retrofits could indirectly result in the disturbance of nesting habitat for bird and raptor species protected under Sections 3503, 3503.5, and 3513 of the California Fish and Game Code (CFGC) and under the Migratory Bird Treaty Act (MBTA). However, construction activities for future projects promoted by 2030 CAP Actions would be required to comply with the requirements of the MBTA and Sections 3503, 3503.5, and 3513 of the CFGC which include obtaining prior authorization by the USFWS before the take of a protected migratory bird species occurs, subject to USFWS requirements, and prohibiting the take, possession, or destruction of nests or eggs. In addition, new development that may result from 2030 CAP Actions would be required to be reviewed for consistency with applicable federal and State policies related to protected species and habitat, including, but not limited to, the federal

Endangered Species Act and California Endangered Species Act. In addition, 2030 CAP Action LSCF-1.9 would result in the planting of 3,000 new trees within the County by 2030. The planting of trees and reforestation of County parks and public rights-of-way could promote additional foraging, breeding, roosting, and/or nesting habitat within the County.

The majority of 2030 CAP Actions promote projects in urbanized areas of the County; however, it is possible 2030 CAP Actions could promote projects near County-designated Environmentally Sensitive Habitat Areas (ESHAs). Any new development that may be facilitated by 2030 CAP Actions near County-designated ESHAs would be subject to applicable CLUP policies that address the protection of special status flora and fauna species and associated habitat. Policy 9-1 requires projects within a Habitat Overlay designation to show the precise location of habitats potentially affected on all development plans and requires site inspection by a qualified biologist. Policy 9-14 requires projects within proximity to a wetland to not result in a reduction of biological productivity or water quality due to runoff, noise, thermal pollution, or other disturbances. Policy 9-36 requires projects to be sited, designed, and constructed to preserve native vegetation, and prohibits grading and paving activities from adversely affecting root zone aeration and stability of native trees in native plant communities (County of Santa Barbara 2019). The CLUP contains similar policies for 13 distinct ESHAs which any project within the vicinity of an ESHA would be required to follow. Similarly, the County's Land Use and Development Code Section 35.28.100 applies an ESHA Overlay Zone within the Eastern Goleta Valley Community Plan, the Gaviota Coast Plan, the Goleta Community Plan, the Mission Canyon Community Plan, and the Toro Canyon Plan areas (County of Santa Barbara 2020). Development within these areas is subject to a CLUP issued by the County after the determination is made that the development shall protect the ESHA to the fullest extent feasible and is compliant with the biological resource policies and development standards within the applicable community plan (County of Santa Barbara 2020). Although Action FS-2.3 would direct the County Planning and Development Department to update and adopt a utility-scale solar ordinance to expand opportunities for solar development on agricultural lands, the ordinance would be updated consistent existing County regulations including the provisions of Section 35.28.100. This would minimize the potential for future solar development to substantially impact ESHAs. Overall, a 2030 CAP strategy which would promote a project near an ESHA would not result in substantial impacts to these critical habitats as existing County regulations would minimize such impacts.

Implementation of 2030 CAP Actions would not significantly impact areas of the County considered critical habitat which serves unique, rare, threatened, and endangered species. Furthermore, the 2030 CAP would introduce actions to protect and improve natural areas in the County, such as the planting of 3,000 new trees. The 2030 CAP would promote the improvement of habitat quality for plant and animal species and existing County regulations would minimize the potential for 2030 CAP Actions to result in a reduction of unique, rare, threatened or endangered species of plants or animals; deterioration of existing habitat used for foraging, breeding, roosting, or nesting; or introduction of barriers to wildlife movement. Therefore, the 2030 CAP would not have a substantial adverse effect on a plant species, animal species, or habitat, including habitat which serves as a migratory corridor.

Thresholds of Significance: c-e

The 2030 CAP would not involve land use or zoning changes but would promote sustainable infrastructure development and redevelopment primarily within urbanized portions of the County. Although Action FS-2.3 would direct the County Planning and Development Department to update and adopt a utility-scale solar ordinance to expand opportunities for solar development on agricultural lands, the development and implementation of an updated utility-scale solar ordinance would not directly result in solar development on rural or agricultural lands where native and/or non-native horticultural vegetation could be present. Further, the utility-scale solar ordinance would be updated by the County Planning and Development Department in compliance with existing County regulations concerning the protection of rural lands. As stated in Section 4.2.2, *Agricultural Resources*, CAP Actions CS-1.5 and CS-1.7 promote the protection of rural lands through policies and incentives which would deter substantial urban sprawl or development on rural lands. Therefore, the extent to which native and non-native vegetation (including native specimen trees) in rural lands would be impacted is limited, as new development would occur in compliance with existing County regulations and 2030 CAP Actions would protect rural land where such vegetation may be present.

Future 2030 CAP-related projects would be required to adhere to County development regulations and Santa Barbara County Comprehensive Plan policies intended to protect and preserve native vegetation and non-native vegetation of habitat value. County Code Section 35-911 requires implementation of an oak tree management plan and oak tree replacement should any deciduous oak tree removal occur. County standards for an oak tree replacement ratio is 15:1 (County of Santa Barbara 2022a). County Code Chapter 28 Article II prohibits the removal, cutting, mutilation, or injury of street trees except upon the approval of the County Road Commissioner or Director of Parks. Section 28-63 requires the issuance of a permit by the County Department of Transportation to remove or cut trees within a road right-of-way. These County Code policies would minimize potential impacts to trees, particularly in an urbanized environment where 2030 CAP Actions promote infrastructure development and redevelopment. County Code Section 14-9 requires erosion control permits for projects which must include details on revegetation practices and that would be implemented if vegetation would be disturbed. This permit is subject to approval by the County Building Official (County of Santa Barbara 2022a). CLUP Policy 9-36 prohibits grading and paving activities from adversely affecting root zone aeration and stability of native trees in native plant communities (County of Santa Barbara 2019). These policies would minimize adverse impacts to vegetation. In addition, the location and details of future CAP projects would be reviewed for consistency with applicable local, regional, and State regulations related to sensitive habitat prior to approval.

The purpose and intended effect of 2030 CAP is to reduce GHG emissions generated in Santa Barbara to help reduce the effects of climate change, including the restoration of native grassland and oak woodland areas, and development of vegetation management programs. As a result, the 2030 CAP would serve as a benefit to vegetation, and trees in the County and would not have a substantial adverse effect on native vegetation or non-native vegetation of habitat value. In addition, the 2030 CAP would not conflict with or obstruct implementation of the applicable policies for preserving biological resources and would not affect the County's ability to attain goals and policies that protect biological resources. Therefore, the 2030 CAP would result in insignificant impacts associated with the reduction of native vegetation, impact non-native vegetation of habitat value, or result in a loss of healthy native specimen trees.

Thresholds of Significance: f, k

As a policy document, the 2030 CAP would not directly introduce light, fencing, noise, human presence, domestic animals, herbicides, or non-native plants. 2030 CAP Actions would generally apply to the urbanized areas of the County with existing human presence. However, Action FS-2.3 would direct the County Planning and Development Department to update and adopt a utility-scale solar ordinance which could apply to areas of the County with a lack of human presence. Action FS-2.3 would not directly result in new solar development in rural areas. Solar development is not conducive to the introduction of domestic animals, fencing, herbicides, non-native plants, or lighting. As discussed in Subsection 4.2.9, *Noise*, construction activities would be required to comply with County Code Chapter 40 which limits construction noise to prohibited hours. Therefore, existing County regulations would require development in rural areas to minimize disturbance associated with human presence. Consequently, the introduction of human disturbance brought about by 2030 CAP Actions would be incremental.

The 2030 CAP would not result in land use or zoning changes which could increase human or domestic animal presence or result in the introduction of herbicides or pesticides in parks, open spaces area, or undeveloped portions of the County. As discussed in Subsection 4.2.1, *Aesthetics/Visual Resources*, glare and light introduced through development promoted by 2030 CAP Actions would be limited through adherence to the County Code Section 21-32A, which requires implementation of a Lighting Plan for projects in rural areas, subject to the approval of the Director of the Planning and Development Department. Projects promoted through 2030 CAP Actions, such as installation of solar and EV charging stations, would be subject to review and approval by the County pursuant to County Code Chapter 10, Article XVI and Chapter 10, Article XVII (County of Santa Barbara 2019) which would minimize impacts concerning light and glare. Projects promoted through 2030 CAP Actions would be reviewed for consistency with the Santa Barbara County Comprehensive Plan, including the CLUP, and other applicable regulatory standards prior to approval. Therefore, the 2030 CAP would result in insignificant impacts associated with the introduction of herbicides, pesticides, animal life, human habitation, non-native plants, light, fencing, or noise, which would change or hamper existing habitat or hinder normal wildlife activities.

4.2.4 Cultural Resources

Thresholds of Significance

a. Would the project cause a substantial adverse change in the significance of any object, building, structure, area, place, record, or manuscript that qualifies as a historical resource as defined in CEQA Section 15064.5?

b. Would the project cause a substantial adverse change in the significance of a prehistoric or historic archaeological resource pursuant to CEQA Section 15064.5?

c. Would the project disturb any human remains, including those located outside of formal cemeteries?

d. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in the Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the

landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Chapter 8 of the County's Environmental Thresholds and Guidelines Manual contains guidelines for the identification, significance evaluation, and mitigation of impacts to cultural resources, including archaeological, historic, and tribal cultural resources. In accordance with the requirements of CEQA, these guidelines specify that if a resource cannot be avoided, it must be evaluated for importance under specific CEQA criteria (County of Santa Barbara 2021).

Setting

The County contains numerous historical resources, including El Presidio de Santa Barbara, Mission Santa Barbara, and various buildings that display Spanish-style architecture, among other resources (County of Santa Barbara 2010). According to the County's Conservation Element, there are several areas throughout the County which contain numerous archaeological resources. The South Coast region of the County is considered one of the most important archaeological regions in California due to Chumash occupation at the time of Spanish contact (County of Santa Barbara 2010).

Impact Analysis

Threshold of Significance: a

The 2030 CAP would not involve land use or zoning changes but would promote actions to redevelop infrastructure complementary to existing development. 2030 CAP Actions would promote minor alterations to existing development which would not substantially adversely change existing development within the County. New development resulting from implementation of 2030 CAP Actions would be required to comply with County policies related to the preservation of historic resources, including County Code Section 18A-5 which imposes conditions on historical landmarks, that are approved by the Historical Landmarks Advisory Commission. Such conditions include, but are not limited to, prohibition of demolition, removal or destruction; prohibition of alterations, repairs, additions, or changes unless approved by the Historical Landmarks Advisory Commission; and prohibition of placement, alteration, or removal buildings or structures exposed to public view within a specified distance (County of Santa Barbara 2022a). In compliance with California Public Resources Code 5024.5(f), if a project would potentially interfere with a historical resource, measures to eliminate or mitigate adverse effects would be adopted, pursuant to recommendations from the State Historic Preservation Officer. 2030 CAP-related projects would be reviewed for compliance with applicable local, regional, and State regulations regarding cultural resources and in addition to compliance with the Santa Barbara County Comprehensive Plan to avoid adverse impacts related to historic resources. Therefore, the 2030 CAP would not

cause a substantial adverse change in the significance of any object, building, structure, area, place, record, or manuscript that qualifies as a historical resource, and would result in an insignificant impact related to historical resources.

Thresholds of Significance: b, d

2030 CAP Actions would promote minor alterations to existing development which would not substantially adversely affect known archaeologically sensitive locations. New development that could result from 2030 CAP Actions, such as installation of EV charging stations and bicycle paths, would involve small-scale construction that may expose previously undiscovered archaeological resources which could be of Native American origin during ground disturbing activities. Chapter 8 of the County's Environmental Thresholds and Guidelines Manual requires the likelihood of buried archaeological deposits be considered, and Phase I and Phase II archaeological studies are performed, if necessary. As part of standard County condition of approval CulRes-09, all future development resulting from implementation of 2030 CAP Actions would require construction workers to stop or redirect work immediately in the event archaeological resources are encountered during grading, construction, or other construction related activities. Construction contractors are required to immediately contact the County and retain a County-qualified archaeologist and Native American representative to evaluate the significance of the find in compliance with the County's Standard Conditions CulRes-01, -05, -07, -08, -09, and/or -10 of the County Archaeological Guidelines, as necessary. If a discovery proves to be potentially significant and avoidance of the resource is not feasible, the resource would be subject to a Phase III mitigation program consistent with the County Archaeological Guidelines. The mitigation program may include, but shall not be limited to, data recovery and curation of non-burial related artifacts within a qualified institution within Santa Barbara County (such as the University of California, Santa Barbara's Department of Anthropology). Consistent with these requirements, archeological resources would be protected prior to and/or upon discovery and, thus, potential impacts would be reduced to a minimal level. With implementation of the County's Standard Conditions typical for a construction project, future development associated with 2030 CAP Actions would not result in a significant impact to archaeological and tribal cultural resources.

Threshold of Significance: c

There is a possibility of encountering unknown buried human remains/burial sites where new development that could result from 2030 CAP Actions would require ground disturbing activities, particularly in native soils/previously undisturbed areas. CAP-related projects would be reviewed for compliance with applicable local, regional, and State regulations regarding cultural resources and human remains to avoid impacts related to unknown human interments. In addition, CAP projects would be required to comply with State coroner requirements related to burial findings, including assessment and mitigation incorporation once project details and locations are known. Pursuant to California Health and Safety Code Section 7050.5, if human remains are encountered, the County Coroner must be notified immediately, and no further disturbance would occur until the County Coroner determines their origin and disposition pursuant to California Public Resource Code Section 5097.98. If the human remains are determined to be of Native American origin, the County Coroner would notify the NAHC, which would determine and notify a most likely descendant (MLD). The MLD has 48 hours from being granted site access to make

recommendations for the disposition of the remains. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in a location that would not be affected by future ground-disturbing activities. Projects promoted by 2030 CAP Actions would comply with the provisions set forth pursuant to California Health and Safety Code Section 7050.5. Although it is possible ground-disturbing activities from future development associated with 2030 CAP Actions could disturb human remains, adherence to California Health and Safety Code Section 7050.5 would ensure human remains, including those located outside of formal cemeteries, are not disturbed. Therefore, the CAP would result in an insignificant impact related to human remains.

4.2.5 Fire Protection

Thresholds of Significance

a. Would the project result in introduction of development into an existing high fire hazard area or exposure of people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?
b. Would the project result in project-caused high fire hazard?
c. Would the project result in introduction of development into an area without adequate water pressure, fire hydrants or adequate access for fire fighting?
d. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
e. Would the project result in introduction of development that will substantially impair an adopted emergency response plan, emergency evacuation plan, or fire prevention techniques such as controlled burns or backfiring in high fire hazard areas?
f. Would the project result in development of structures beyond safe Fire Dept. response time?

Setting

According to the California Department of Forestry and Fire Protection (CAL FIRE), the County contains lands designated as moderate, high, and very high fire hazard severity zones in both State Responsibility Areas and Local Responsibility Areas. These fire hazard severity zones occur primarily in central Santa Barbara, extending east to west from the Los Padres National Forest to the coastline (CAL FIRE 2022).

Impact Analysis

Thresholds of Significance: a-c

Although portions of Santa Barbara Country are at risk of wildfires, the 2030 CAP is a policy-level document that does not propose new residential, commercial, or industrial development that would be at substantial risk from wildfire, nor would the 2030 CAP grant entitlements for development that would have the potential to directly cause wildfire. Development such as EV charging stations, bicycle and pedestrian facilities, installation of condensate drains, and existing building retrofits would occur in urbanized areas that already provide existing infrastructure, such as water pressure and fire hydrants, to allow for use for firefighting. CAP Action FS-2.3 requires the County to update and adopt the utility-scale solar ordinance to expand opportunities for solar development on agricultural lands. Implementation of Action FS-2.3 would not directly result in

utility-scale solar development. Potential utility-scale solar projects would be subject to Seismic Safety & Safety Element Implementation Measure 8 which enforces development standards set forth by the Santa Barbara County Fire Department, Carpinteria-Summerland Fire Protection District, and Montecito Fire Protection District, each of which services rural and urbanized areas within and/or surrounded by land designated as a fire hazard severity zone (CAL FIRE 2022; County of Santa Barbara 2015). Development standards are designed to reduce the risk of wildfire in rural and urbanized areas, including areas designated as fire hazard severity zones. Development standards include implementation of defensible space for new structures subject to the approval of the respective Fire Marshal, implementation of a vegetation management plan, required installation of fire alarm and sprinkler systems subject the approval of the respective Fire Marshal, and implementation and approval of stored water systems for fire protection (Carpinteria-Summerland Fire Protection District 2018; Montecito Fire Protection District 2019; Santa Barbara County Fire Department 2022). These development standards minimize the risk of wildfire by limiting the potential for vegetation to ignite nearby structures and implementing safeguards for structures in the event a fire occurs.

Fire risk for potential new CAP-related development would also be minimized through compliance with County Code Chapter 15 which adopts the 2019 California Fire Code (County of Santa Barbara 2022a). The 2019 California Fire Code establishes minimum requirements to safeguard public health, safety, and general welfare from fire hazards. Pursuant to the County's Seismic Safety & Safety Element, development would be required to adhere to the California Fire Code's standards for water quantity, automatic detection, and early warning devices (County of Santa Barbara 2015).Therefore, the 2030 CAP would not expose people or structures to significant risk of loss, injury or death involving wildland fires, cause a high fire hazard, or introduce development into an area without adequate firefighting equipment and access.

Threshold of Significance: d

The 2030 CAP is a policy document containing actions that are consistent with the Santa Barbara County Comprehensive Plan. The 2030 CAP does not include land use or zoning changes; therefore, no new habitable development would occur that would be subject to wildfire risk, nor does it grant entitlements for development with the potential to directly cause wildfire. Implementation of 2030 CAP Actions would not directly result in increases in population. Similarly, the 2030 CAP would not directly result in an increase in employment, and any new employment opportunities that may result indirectly from implementation of 2030 CAP Actions would target existing residents and not induce population growth. As such, the CAP would not require the construction of new or physically altered governmental facilities to serve additional population, the construction of which could cause significant environmental impacts.

Implementation of 2030 CAP Actions may result in electrification retrofits, the construction of which could temporarily increase fire risk. However, new construction in the County would be subject to the California Fire Code, which includes safety measures to minimize risk of fire, including Section 603 which requires electrical equipment and wiring to be installed, used, and maintained in accordance with the National Electrical Code. Title 14 of the California Code of Regulations sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply, which help prevent loss of structures or life by reducing wildfire hazards. California Public Resources Code Section 4291 requires maintenance

of a minimum 100 feet of vegetation management around all buildings. Pursuant to County Code Chapter 15, combustible materials are required to be kept greater than 10 feet from ground-mounted solar panel systems, and up to 30 feet if the ground-mounted solar system is greater than 1,500 square feet (County of Santa Barbara 2022a). A minimum defensible space of 30 feet is required around communication towers, non-fire-resistive water tanks, water supply pumps, pump houses, and generators (County of Santa Barbara 2022a). Installation and maintenance of infrastructure promoted by 2030 CAP Actions would be implemented in accordance with these standards which would minimize fire risk. Therefore, the 2030 CAP would not result in a significant impact related to the installation or maintenance of infrastructure that may exacerbate fire risk or may result in temporary or ongoing impacts to the environment.

Thresholds of Significance: e-f

The 2030 CAP is a policy document which would not increase population or density in a manner that would impair an adopted emergency plan or impact a Fire Department's ability to adequately respond to emergencies associated with developed structures. While the implementation of some 2030 CAP Actions may cause intermittent and temporary traffic interference due to construction, existing emergency access and other applicable County requirements would minimize impacts to emergency response. Temporary construction barricades or other obstructions that could impede emergency access on State highway systems/routes would be subject to the standards set forth in the California Manual of Uniform Traffic Control Devices (Manual) (Caltrans 2021). The Manual requires the creation and approval of temporary traffic control plans to be used for facilitating road users through a work zone (Caltrans 2021). Per the County's Land Use and Development Code, utility-scale-solar photovoltaic facilities would be required to implement a project-specific traffic control plan which would include traffic control measures to avoid impacts to vehicles and pedestrians (County of Santa Barbara 2020). Pursuant to County Code Section 28-31 and Section 28-33 construction activities which have been granted a permit occurring on County roads would be required to maintain safe crossing for two lanes of vehicle traffic at all road intersections and is required to take measures to maintain traffic conditions, subject to the County Road Commissioner (County of Santa Barbara 2022a).

Implementation of the 2030 CAP would not interfere with the County's Multi-Jurisdictional Hazard Mitigation Plan which provide direction for traffic control and management in emergency situations as the 2030 CAP would not promote actions which would result in increased population density or land use designation changes which could change traffic patterns (County of Santa Barbara 2017b). As part of standard procedures, plans for projects promoted by 2030 CAP Actions would be submitted to the County for review and approval to ensure that all new development has adequate emergency access and escape routes in compliance with existing County and Santa Barbara County Fire Department regulations (Santa Barbara County Fire Department 2022). Implementation of the 2030 CAP would not introduce actions which would preclude implementation of or alter established emergency response and evacuation policies or procedures. In addition, 2030 CAP Measures and Actions would help to increase community resiliency and reduce vulnerability to the impacts of climate change in Santa Barbara County, thereby reducing the burden on local public services related to such climate impacts and disasters. For example, 2030 CAP Action BE-1.8 promotes the development and adoption of building and land use standards that encourages solar and battery storage, reduces heat island effects, and enhances wildfire resilience. Therefore, the 2030 CAP would not introduce development that would

substantially impair adopted emergency response plans or structures beyond safe Fire Department response time. The 2030 CAP would not conflict with the County's adopted thresholds of significance and impacts would be insignificant.

4.2.6 Geologic Processes

Thresholds of Significance

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving exposure to or production of unstable earth conditions such as landslides, earthquakes, liquefaction, soil creep, mudslides, ground failure (including expansive, compressible, collapsible soils), or similar hazards?
b. Would the project result in disruption, displacement, compaction or overcovering of the soil by cuts, fills or extensive grading?
c. Would the project result in exposure to or production of permanent changes in topography, such as bluff retreat or sea level rise?
d. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
e. Would the project result in any increase in wind or water erosion of soils, either on or off the site?
f. Would the project result in changes in deposition or erosion of beach sands or dunes, or changes in siltation, deposition or erosion which may modify the channel of a river, or stream, or the bed of the ocean, or any bay, inlet or lake?
g. Would the project result in the placement of septic disposal systems in impermeable soils with severe constraints to disposal of liquid effluent?
h. Would the project result in extraction of mineral or ore?
i. Would the project result in excessive grading on slopes of over 20%?
j. Would the project result in sand or gravel removal or loss of topsoil?
k. Would the project result in vibrations, from short-term construction or long-term operation, which may affect adjoining areas?
l. Would the project result in excessive spoils, tailings or over-burden?

Setting

The County of Santa Barbara is susceptible to seismic activity. Alquist-Priolo earthquake fault zones are regulatory zones compiled by the California Geological Survey which designate the surface traces of active faults in California (DOC 2019). Under the Alquist-Priolo Earthquake Fault Zoning Act, an active fault is defined as a fault that has ruptured in the past 11,000 years (DOC 2019). There is one Alquist-Priolo earthquake fault zone, the Los Alamos Fault, within the County, located adjacent to U.S. Route 101 approximately 5.25 miles northwest of Los Olivos, extending approximately 2.85 miles northwest and ending at the intersection of Alisos Canyon Road and U.S. Route 101 (DOC 2021)

According to the County's Seismic Safety & Safety Element, low to moderate liquefaction potential exists throughout the County (County of Santa Barbara 2015). The areas considered to be most susceptible to liquefaction include low coastal areas with high groundwater near

Carpinteria, the valleys along the Santa Ynez River, and along the Santa Maria River near Santa Maria and Guadalupe (County of Santa Barbara 2015). In addition, the County's mountainous and hilly topography creates concern for landslides and slope stability (County of Santa Barbara 2015).

Impact Analysis

Threshold of Significance: a

Earthquake faults, such the Los Alamos Fault, have the potential to produce strong seismic groundshaking. The 2030 CAP is a policy document containing climate actions and supporting actions to reduce GHG emissions and is consistent with the Santa Barbara County Comprehensive Plan and other regional regulations. The 2030 CAP does not include land use or zoning changes, and new development that may be facilitated by 2030 CAP Actions would not exacerbate fault rupture or seismic groundshaking conditions beyond what is already present within the region.

The County has adopted the California Building Code (CBC), which includes measures such as requiring site-specific geotechnical investigations and incorporating site specific recommendations regarding suitability and foundation design for new development projects (County Code Section 10-8.1). New development that may be facilitated by 2030 CAP Actions would be required to comply with CBC standards regulating procedures for soil preparation, including, but not limited to: excavation, grading and earthwork, fills and embankments, expansive soils, foundation investigations, liquefaction potential, and soil strength loss. Compliance with CBC requirements would ensure current engineering practices and standards are followed, reducing the potential to directly or indirectly cause the risk, loss, injury, or death involving exposure to or production of unstable earth conditions. Incorporation of required CBC soil treatment programs (replacement, grouting, compaction, drainage control, etc.) in future grading and construction plans would ensure site-specific soil conditions achieve accepted safety standards relative to soil stability. In addition, the 2030 CAP would not result in the construction of new habitable development that could expose people to substantial adverse geologic effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure including liquefaction, or landslides. Therefore, 2030 CAP would not directly or indirectly cause significant risk of loss, injury, or death involving exposure to, or production of, unstable earth conditions.

Thresholds of Significance: b, e-f, i-j.

The 2030 CAP would not involve land use or zoning changes but would promote sustainable actions designed to redevelop infrastructure which generally would not require excessive grading on slopes greater than 20 percent grade. 2030 CAP Actions would not result in the alteration of beach sands or dunes. As a policy document, the 2030 CAP would not directly require ground disturbing activities. However, implementation of 2030 CAP Actions may result in construction activities that could cause soil erosion.

2030 CAP-related projects and actions would be required to be reviewed for consistency with Santa Barbara County Comprehensive Plan policies and other local and State geology and soils regulations prior to final siting and construction. Construction activities that disturb one or more acres of land are subject to the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, which requires the development of a Storm Water Pollution Prevention Plan (SWPPP) developed by a certified Qualified SWPPP Developer. The SWPPP

includes project-specific Best Management Practices (BMPs) to control erosion, sediment release, and otherwise reduce the potential for discharge of pollutants from construction into stormwater. Additionally, pursuant to County Code Chapter 14, a grading plan is required to be prepared by or under the direction of a registered civil engineer, licensed architect, licensed surveyor, registered designer or landscape architect, unless waived by the County Building Official. The grading plan would detail drainage, erosion, and sediment control measures that would be implemented as required by County Code Section 14-29 (County of Santa Barbara 2022a). Construction activities, including those disturbing under an acre of land, would also be required to comply with California Building Code Chapter 70 standards, which are designed to ensure implementation of appropriate measures during grading and construction to control erosion and storm water pollution. Consequently, the 2030 CAP would not result in the disruption, displacement, compaction or overcovering of soil by cuts, fills or extensive grading; would not increase wind or water erosion of soils; would not change the deposition or erosion of beach sands or dunes; would not result in significant excessive grading on slopes over 20 percent; and would not significantly remove sand, gravel, or topsoil.

Threshold of Significance: c

The 2030 CAP is a policy document that includes actions developed to achieve the County's GHG emissions reductions goals. Actions in the 2030 CAP are designed to combat climate change and its effects, including sea level rise. Future development that may be facilitated by 2030 CAP Actions located near a bluff that could be affected by sea level rise would be subject to CLUP Policies 3-4 through 3-8, which require setbacks from bluff edges for a minimum of a 75-year sea level rise projection, maintenance of drought-tolerant vegetation for erosion control, project design that would not contribute to erosion of a bluff face or stability of a bluff, and prohibition of development on the bluff face (County of Santa Barbara 2019). Therefore, consistency with existing regulatory requirements would ensure future development that may be facilitated by 2030 CAP Actions would not result in exposure to, or production of, permanent changes in topography such as bluff retreat or sea level rise.

Threshold of Significance: d

The 2030 CAP would not involve land use or zoning changes that would encourage new development but would instead include Actions designed to redevelop infrastructure in a manner that would reduce GHG emissions and impacts related to climate change. As a policy document, the 2030 CAP would not directly result in impacts related to paleontological resources or unique geologic features. New development facilitated by 2030 CAP Actions which would involve construction activities, such as building energy-efficiency, renewable energy retrofits, active transportation and public transit infrastructure, and EV charging infrastructure, would primarily involve work within previously developed and disturbed areas where the likelihood of encountering intact and previously undiscovered paleontological resources would be minimal. Nonetheless, there is a possibility that small-scale construction projects may expose paleontological resources during ground disturbing activities. To reduce such risks, 2030 CAP-related project would be reviewed for consistency with State geotechnical and paleontological regulations prior to final siting and construction. New development facilitated by 2030 CAP Actions would be located and designed to reduce ground disturbance to the maximum extent possible, consistent with County Code Section 14-25 which limits excessive excavations and cut

slopes greater than a slope of 1.5 units horizontal to one unit vertical and CLUP Policy 3-13 which requires development plans minimize cut and fill operations and states plans requiring excessive cut and fill may be denied if it is determined development could be carried out with less alteration of natural terrain (County of Santa Barbara 2022a; County of Santa Barbara 2019). Therefore, the 2030 CAP would not result in a significant impact directly or indirectly to paleontological resources, sites, or unique geologic features.

Thresholds of Significance: g-h, l

The 2030 CAP does not include actions which would result in development of new habitable structures or septic disposal systems, or mining activities that would result in the extraction of mineral ore or lead to excessive spoils, tailings, or over-burden. Therefore, the project would not result in the placement of septic disposal systems in impermeable soils, extraction of mineral or ore, or excessive spoils, tailings, or over-burden. The 2030 CAP would not conflict with the County's adopted thresholds of significance and there would be no impact.

Threshold of Significance: k

While people have varying sensitivities to vibrations at different frequencies, in general, they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise (Caltrans 2020). Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

The 2030 CAP is a policy document containing actions which assist the County in meeting its GHG emission reduction targets which is consistent with the Santa Barbara County Comprehensive Plan. Some 2030 CAP Actions would support small scale construction projects, such as EV charging stations and building energy efficiency retrofits that may result in a temporary and intermittent increase in groundborne vibration during construction activities. However, projects involving new construction would be reviewed by the County Planning and Development Department for consistency with the County Land Use and Development Code which prohibits the creation of objectionable vibration (County of Santa Barbara 2020). To reduce construction noise and vibration, the County of Santa Barbara Environmental Thresholds and Guidelines Manual indicates construction within 1,600 feet of sensitive receptors shall be limited to weekdays between the hours of 8:00am and 5:00pm (County of Santa Barbara 2021). As discussed in Section 4.2.9, *Noise*, construction activities would be required to comply with County Code Chapter 40, which limits the hours of construction. Vibrations occurring from any future construction work that would affect adjoining areas would be short-term and would occur during permitted hours. Furthermore, 2030 CAP-related project would not include operational sources of groundborne vibration. Therefore, the 2030 CAP would not result in vibrations which may affect adjoining areas or otherwise result in significant impacts associated with groundborne vibration.

4.2.7 Hazardous Materials/Risk of Upset

Thresholds of Significance

a. In the known history of this project, have there been any past uses, storage or discharge of hazardous materials (e.g., fuel or oil stored in underground tanks, pesticides, solvents or other chemicals)?
b. Would the project result in the use, storage or distribution of hazardous or toxic materials?
c. Would the project result in a risk of an explosion or the release of hazardous substances (e.g., oil, gas, biocides, bacteria, pesticides, chemicals or radiation) in the event of an accident or upset conditions?
d. Would the project result in possible interference with an emergency response plan or an emergency evacuation plan?
e. Would the project result the creation of a potential public health hazard?
f. Would the project result in public safety hazards (e.g., due to development near chemical or industrial activity, producing oil wells, toxic disposal sites, etc.)?
g. Would the project result in exposure to hazards from oil or gas pipelines or oil well facilities?
h. Would the project result in the contamination of a public water supply?

Setting

The County contains numerous site-specific hazardous materials sites, which are generally commercial and industrial land uses (State Water Resources Control Board [SWRCB] 2022). Additionally, oil and gas wells and hazardous/flammable material pipelines span portions the County (California Geologic Energy Management Division [CalGEM] 2022; Southern California Gas Company 2022).

Impact Analysis

Threshold of Significance: a

The 2030 CAP is a policy document containing actions consistent with the Santa Barbara County Comprehensive Plan that are designed to reduce GHG emissions. The 2030 CAP does not include site-specific proposals and development, however, 2030 CAP Actions could result in implementation of projects that could be located on a hazardous materials site. However, 2030 CAP-related projects would be required to comply with Santa Barbara County Comprehensive Plan policies and other local, State and federal regulations related to hazardous materials sites. In Santa Barbara County, hazardous materials sites are monitored by the County's Site Mitigation Unit which provides regulatory oversight and corrective actions at properties where hazardous substance releases have occurred. The Site Mitigation Unit oversees cases including the releases of crude oil, toxic heavy metals, oilfield restoration, properties contaminated by former industrial/commercial uses, and sites with historically contaminated fill. Leaking Underground Fuel/Storage Tanks are regulated and remediated by the County's Environmental Health and Safety department (County of Santa Barbara 2022b). 2030 CAP-related projects that would occur on a hazardous materials site would be subject to the regulations and remedial actions set forth by the County's Site Mitigation Unit and Environmental Health and Safety department. Furthermore, the 2030 CAP would not directly result in increases in population. Similarly, the 2030 CAP would not directly result in an increase in employment, and any new employment opportunities that may result indirectly from implementation of 2030 CAP Actions would target existing residents and not induce new residences or new commercial properties that have the potential to expose persons

or workers to hazardous materials due to their respective siting. Therefore, the 2030 CAP would not result in significant impacts due to being located on a site with past uses, storage, or discharge of hazardous materials.

Thresholds of Significance: b-c, e

The 2030 CAP is a policy document containing actions designed to achieve the County's GHG emissions reductions goals. The 2030 CAP does not involve identified site-specific development and, for the most part, CAP 2030 Actions would not promote development that would involve the routine use of hazardous materials. Implementation of some 2030 CAP Actions, such as energy efficiency retrofits, installation of EV charging stations, and implementation of active transportation projects, would require construction activities. Construction would involve the temporary use of hazardous materials such as vehicle fuels and fluids that could be released should an accidental leak or spill occur. However, these types of materials are not considered acutely hazardous, and storage, handling, and disposal of these materials are required to comply with applicable regulations from the California Department of Toxic Substances Control, United States Environmental Protection Agency, and Occupational Safety & Health Administration. In addition, standard construction BMPs for the use and handling of such materials would avoid or reduce the potential for such conditions to occur. Any transport, use, or disposal of hazardous materials during construction would be carried out in accordance with applicable local, State, and federal regulations regarding the handling of potentially hazardous materials. These regulations include Title 49 of the Code of Federal Regulations, the Hazardous Material Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Materials Management Act, and California Code of Regulations Title 22, Division 4.5. Risk of spills would cease after construction is completed. Therefore, construction activities associated with 2030 CAP-related projects would not be anticipated to create upset and accident conditions involving the release of hazardous materials, and operation of the majority of 2030 CAP-related projects would not involve the routine transport, use, or disposal of hazardous materials during operation.

2030 CAP Actions BE-1.8, BE-1.9, BE-1.10, FS-2.3, WW-1.3, and MO-1.4 emphasize increasing local renewable energy production and use, and battery energy storage within the County by encouraging the deployment of renewable energy systems such as local solar and battery storage systems. Hazardous materials used in a solar panel and battery energy storage systems would generally consist of lithium-ion batteries. Lithium-ion technology is a common battery storage medium and is considered one of the safest and most efficient methods of energy storage on the market. Lithium-ion batteries do not represent a risk to off-site receptors, and safety standards applicable to energy storage systems and safety certifications tests established by independent bodies, such as the National Fire Protection Association, would prevent any reasonably possibility of a substantial adverse environmental effect related to hazardous material exposure from batteries. However, in the unlikely event of a fire, there is a risk of the accidental release of hazardous materials associated with solar panels and battery energy storage systems. Any future proposed battery energy storage facilities or solar development would be subject to the development standards within the County's Hazardous Waste Element, including creation of a risk management and prevention plan which details risk reduction measures for the construction of a facility (County of Santa Barbara 2009b). The County would review the plan for appropriate locations, safety measures, and consistency with the Santa Barbara County Comprehensive Plan, County Code, and applicable local, State, and federal regulations. As such, the 2030 CAP would not result in a

significant impact due to the use, storage, or distribution of hazardous materials; risk of explosion; or creation of a potential public health hazard.

Threshold of Significance: d

The 2030 CAP is a policy document intended to reduce GHG emissions. The 2030 CAP does not involve site-specific development, nor would 2030 CAP Actions interfere with adopted emergency plans. Implementation of some 2030 CAP Actions, such as TR-2.6 which would implement Connected 2050 Regional Transportation Plan/Sustainable Community Strategies projects, could involve construction within the local right-of-way. Construction activities associated with such projects have the potential to impact traffic due to lane closures and vehicle speeds on affected roadways. However, as discussed in Subsection 4.2.5, *Fire Protection*, these impacts would be temporary and access to roadways would be maintained throughout project construction in accordance with applicable regulations such as the Caltrans Manual and County Code Section 28-31 and Section 28-33 which require the implementation of traffic control plans on State highways and maintenance of traffic conditions subject to the County Road Commissioner, respectively (Caltrans 2021; County of Santa Barbara 2022a). Implementation of the 2030 CAP would not interfere with the County's Multi-Jurisdictional Hazard Mitigation Plan which provide direction for traffic control and management in emergency situations as the 2030 CAP would not promote actions which would result in increased population density or land use designation changes which could change traffic patterns (County of Santa Barbara 2017b). As part of standard procedures, plans for 2030 CAP-related projects would be submitted to the County for review and approval to ensure that all new development has adequate emergency access and escape routes in compliance with existing County and Santa Barbara County Fire Department regulations (Santa Barbara County Fire Department 2022). Therefore, the 2030 CAP would not result in a significant impact due to interference with an emergency response or an emergency evacuation plan.

Thresholds of Significance: f-g

The 2030 CAP is a policy-level document that does not propose new residential, commercial, or industrial development that would expose people to hazards from oil or gas pipelines or oil well facilities. The 2030 CAP contains actions consistent with the Santa Barbara County Comprehensive Plan that are designed to reduce GHG emissions. 2030 CAP Actions would not promote projects which would be associated with the use of oil and gas. Potential 2030 CAP-related projects, such as installation of EV charging stations and building retrofits, would not introduce any adverse conditions which could increase the chance of exposure to hazards associated with oil and gas pipelines or well facilities. If a 2030 CAP-related project would be located near petroleum facilities, existing regulatory standards would minimize the potential to create a public safety hazard. County Code Chapter 25 requires petroleum facilities and operations not to exceed set limits for hazardous vapor release. Drilling, well servicing, and piping are required to be maintained in accordance with applicable laws and regulations. Storage of materials associated with well facilities are required to prevent the escape of fluid and be of sufficient size to contain 1.5 times the capacity of the largest tank (County of Santa Barbara 2022a). Petroleum facilities are regulated such that hazardous material release would be minimized. Therefore, the 2030 CAP would result in insignificant impacts related to the creation of public safety hazards or exposure to hazards from oil or gas pipelines or oil well facilities.

Threshold of Significance: h

2030 CAP-related projects could result in the minor use of hazardous materials, primarily due to fuel use during construction. Any use of hazardous materials would be carried out in compliance with applicable federal, State, and local regulations. As discussed in Subsection 4.2.6, *Geologic Processes*, project-specific BMPs would be implemented into future construction to ensure erosion is minimized, which would minimize the risk of contaminated soil entering a water supply. Furthermore, projects located on hazardous sites would be developed in compliance with the County's Site Mitigation Unit and/or Environmental Health and Safety protocols. With adherence to applicable regulatory standards, the 2030 CAP would result in an insignificant impact to the contamination of a public water supply.

4.2.8 Land Use

Thresholds of Significance

a. Would the project result in structures and/or land use incompatible with existing land use?
b. Would the project cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?
c. Would the project result in the induction of substantial unplanned population growth or concentration of population?
d. Would the project result in the extension of sewer trunk lines or access roads with capacity to serve new development beyond this proposed project?
e. Would the project result in loss of existing affordable dwellings through demolition, conversion or removal?
f. Would the project result in displacement of substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?
g. Would the project result in displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere?
h. Would the project result in the loss of a substantial amount of open space?
i. Would the project result in an economic or social effect that would result in a physical change? (i.e. Closure of a freeway ramp results in isolation of an area, businesses located in the vicinity close, neighborhood degenerates, and buildings deteriorate. Or, if construction of new freeway divides an existing community, the construction would be the physical change, but the economic/social effect on the community would be the basis for determining that the physical change would be significant.)
j. Would the project result in conflicts with adopted airport safety zones?

Setting

The County is comprised of both urban and rural land uses. Rural land uses, such as rangeland, agricultural land, and open space, are generally located outlying of associated City limits. The 2022 population of Santa Barbara County is estimated to be approximately 445,164, with approximately 139,956 persons living in unincorporated areas (California Department of Finance [DOF] 2022).

Impact Analysis

Thresholds of Significance: a-j

The 2030 CAP is a policy document containing actions consistent with the Santa Barbara County Comprehensive Plan that are designed to reduce GHG emissions. The 2030 CAP would not involve land use or zoning changes that would divide an established community but would promote actions designed to promote Comprehensive Plan policies. 2030 CAP Measure TR-5.5 promotes prioritizing bicycle and pedestrian programmed projects implemented in the Connected 2050 Regional Transportation Plan/Sustainable Community Strategies. Such Measures would be consistent with the County's Circulation Element goal to develop programs and encourage the use of alternative modes of transportation (County of Santa Barbara 2014). Furthermore, the increase of alternative transportation would increase connectivity within the County.

Action BE-1.1 includes the adoption and enforcement of new building and major remodel electrification ordinance to require all-electric commercial and residential buildings. Action BE-1.4 proposes the development and adoption of an ordinance that establishes building performance standards for existing large buildings and facilities to reduce their carbon emissions over time. Action TR-3.2 includes development of an ordinance to phase out light duty gasoline and diesel-powered off road equipment by 2025, leading to a ban in 2035. Action WW-1.1 would consider an ordinance for installation of greywater systems for new construction of commercial and multifamily buildings. In order to implement these Actions, the County Code, Santa Barbara County Comprehensive Plan, and other applicable documents may need to be amended to reflect new or modified requirements. However, where modifications of existing policies are needed, such as updates to policies related to energy, solid waste, and transportation, the 2030 CAP would result in greater avoidance or reduction of environmental effects.

Implementation of 2030 CAP Actions would not directly result in increases in population. Similarly, the 2030 CAP would not directly result in an increase in employment, and new employment opportunities that may result indirectly from implementation of 2030 CAP Actions would target existing residents and not induce population growth. 2030 CAP Actions do not include residential or commercial development. Implementation of the 2030 CAP would not displace people or housing, but rather encourage GHG reduction actions in existing and future development. Implementation of 2030 CAP Actions would generally apply to the urbanized areas of the County; however, it is possible 2030 CAP Actions could promote solar development in rural areas. Implementation of future solar development promoted by the 2030 CAP in rural areas would occur in compliance with existing County regulations regarding the preservation of open space. As a result, the 2030 CAP would not result in the loss of substantial open space. New development that may be facilitated by 2030 CAP Actions that would occur within an adopted airport safety zone would adhere to the provisions of the airport safety zone provided in the applicable Airport Land Use Compatibility Plan. Specific projects that may affect navigable airspace would be subject to Federal Aviation Administration review, pursuant to the Code of Federal Regulations, Parts 77.5, 77.7, and 77.9, ensuring incompatible uses or structures would not be constructed. The 2030 CAP would not introduce incompatible structures, conflict with applicable land use plans, introduce substantial population, extend sewer trunk lines or access roads with capacity to serve new development, result in the loss of existing affordable housing, displace people or housing, result in the loss of substantial open space, result in an economic change or social effect that would result in a physical change, or conflict with adopted airport safety zones. These impacts would be insignificant.

4.2.9 Noise

Thresholds of Significance

a. Would the project result in long-term exposure of people to noise levels exceeding County thresholds (e.g. locating noise sensitive uses next to an airport.)?

b. Would the project result in short-term exposure of people to noise levels exceeding County thresholds?

c. Would the project result in project-generated substantial increase in the ambient noise levels for adjoining areas (either day or night)?

The County's *Environmental Thresholds and Guidelines Manual* establishes an interior noise level of 45 decibels (dB) using the A-weighted sound pressure level (dBA) for all residential uses, consistent with State noise insulation standards (California Code of Regulations Title 24 Part 11). The manual also establishes a 65 dBA threshold of significance for exterior noise levels. In addition, the manual states that noise from grading and construction activity proposed within 1,600 feet of sensitive receptors would generally result in a potentially significant impact, and to mitigate this impact, construction within 1,600 feet of sensitive receptors shall be limited to weekdays between the hours of 8 AM to 5 PM only.

Setting

Noise is unwanted sound that disturbs human activity. Environmental noise levels typically fluctuate over time, and different types of noise descriptors are used to account for this variability. Noise level measurements include intensity, frequency, and duration, as well as time of occurrence. Noise level (or volume) is generally measured in decibels using the A-weighted sound pressure level. Because of the way the human ear works, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically attenuate (or drop off) at a rate of 6 dBA per doubling of distance from point sources (such as construction equipment). Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance, while noise from a point source typically attenuates at about 6 dBA per doubling of distance. Noise levels may also be reduced by the introduction of intervening structures. For example, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm that breaks the line-of-sight reduces noise levels by 5 to 10 dBA.

The County's Noise Element identifies transportation facilities as the dominant source of noise within the County (County of Santa Barbara 2009c). In addition, airport operations and railroad operations contribute to noise within the County; however, these sources of noise are predictable and intermittent (County of Santa Barbara 2009c).

Impact Analysis

Thresholds of Significance: a, c

The 2030 CAP is a policy document containing actions consistent with the Santa Barbara County Comprehensive Plan that are designed to reduce GHG emissions. Some 2030 CAP Actions would support small scale construction projects that could result in temporary noise. These include, but are not limited to, Action MO-1.4 which expands the use of renewable energy at County facilities, Action TR-2.2 which implements Connected 2050 Regional Transportation Plan/Sustainable Community Strategies projects, Action TR-2.7 which would convert County parking facilities to support commuter parking and electric bike sharing, and Action BE-1.8 which would develop building standards that would increase solar and battery storage requirements. However, 2030 CAP-related projects would be reviewed for consistency with the Santa Barbara County Comprehensive Plan, and construction activities would be required to comply with the provisions in County Code Chapter 40 which limits hours of construction. Furthermore, 2030 CAP Actions would not promote projects that would result in substantial operational noise. Rather, the 2030 CAP provides GHG-reduction opportunities that affect the transportation sector and sources of associated transportation related noise. For example, 2030 CAP Actions TR-1.3 – TR-1.7 would encourage the adoption of EVs, which are quieter than gas-powered alternatives. TR-1.2 and TR-2.9 and promote shared alternative transportation and TR-2.3 prioritizes bike and pedestrian improvements to increase active transportation and transit ridership. These Actions would result in a decrease of VMT and traffic-related noise. Therefore, the 2030 CAP would not result in significant impacts due to long-term exposure of people to noise levels exceeding County thresholds or project-generated substantial increase in ambient noise levels.

Threshold of Significance: b

The 2030 CAP is a policy document containing actions consistent with the Santa Barbara County Comprehensive Plan that are designed to reduce GHG emissions. 2030 CAP Actions would support small scale construction projects that could result in temporary and intermittent noise. Construction activities would be required to comply with the provisions of County Code Section 28-48 which requires measures are implemented to reduce noise to the fullest extent practicable. In addition, pursuant to County Code Chapter 40, construction noise would not be permitted to occur between the hours of 10:00 P.M. and 7:00 A.M. Sunday through Thursday or between the hours of 12:00 A.M. and 7:00 A.M. Friday through Saturday (County of Santa Barbara 2022a). County Code 14-22 limits grading work between the hours of 7:00AM and 7:00PM (County of Santa Barbara 2022a). Pursuant to the County's Environmental Thresholds and Guidelines Manual, construction within 1,600 feet of a sensitive receptor would be limited to weekdays between 8:00 A.M. and 5:00 P.M. Construction would be conducted in compliance with project-specific measures to reduce noise to the fullest extent practicable. Therefore, construction activities associated with new development that may be facilitated 2030 CAP Actions would result in insignificant impacts regarding short-term exposure to noise levels.

4.2.10 Public Facilities

Thresholds of Significance

a. Would the project require or result in a need for new or altered police protection and/or health care services?

b. Would the project require or result in student generation exceeding school capacity?

c. Would the project require or result in significant amounts of solid waste or breach any federal, state, or local standards or thresholds relating to solid waste disposal and generation (including recycling facilities and existing landfill capacity)?

d. Would the project require or result in the relocation or construction of new or expanded wastewater treatment facilities (sewer lines, lift-stations, etc.) the construction or relocation of which could cause significant environmental effects?

e. Would the project require or result in the relocation or construction of new or expanded storm water drainage or water quality control facilities, the construction of which could cause significant environmental effects?

Setting

The County operates one active Class III landfill, the Tajiguas Landfill, located in Goleta. The landfill also serves as a composting and transfer/processing facility. The Tajiguas landfill can accept a max throughput of 1,500 tons per day and has a remaining capacity of approximately 4,336,335 cubic yards (California Department of Resources, Recycling, and Recovery [CalRecycle] 2019).

Impact Analysis

Thresholds of Significance: a-b, d

The 2030 CAP is a policy document containing actions consistent with the Santa Barbara County Comprehensive Plan that are designed to reduce GHG emissions. Implementation of 2030 CAP Actions would not directly result in increases in population. Similarly, the 2030 CAP would not directly result in an increase in employment, and any new employment opportunities that may result indirectly from implementation of 2030 CAP Actions would target existing residents and not induce population growth. Therefore, no increased demand from public facilities providers including police protection, health care services, or schools would occur. As such, the 2030 CAP would not require the construction of new or physically altered police protection, health care, or schools. Further, the 2030 CAP would not result in new land uses that would generate sanitary wastewater or otherwise contribute to an increase in wastewater treatment requirements. Therefore, the 2030 CAP would not cause the relocation or construction of new or expanded sewer system facilities. 2030 CAP Measures and Actions would help to increase community resiliency and reduce vulnerability to the impacts of climate change within Santa Barbara, thereby reducing the burden on local public services related to such climate impacts and disasters. Furthermore, future 2030 CAP-related projects would be reviewed for consistency with the Santa Barbara County Comprehensive Plan, County Code, and other applicable local and State regulations related to public facilities. Therefore, no impact would occur related to the need for police protection facilities, health care facilities, schools, or sewer system facilities.

Threshold of Significance: c

The 2030 CAP is a policy document containing actions consistent with the Santa Barbara County Comprehensive Plan that are designed to reduce GHG emissions and does not include land use or other policy changes which would result in increased residential, commercial, or other development that would increase solid waste generation in the County. 2030 CAP-related small-scale construction projects would generate minimal solid waste. In compliance with AB 939, at

least 50 percent of solid waste generated from the 2030 CAP would be diverted from landfills. Pursuant to County Code Section 17-23, at least 65 percent of construction waste would be required to be recycled, pursuant to the California Green Building Standards Code (County of Santa Barbara 2022a). 2030 CAP-related projects would adhere to these regulatory standards which would minimize solid waste generation. As described above, Tajiguas Landfill has sufficient capacity to accept construction waste generated by new development that may be facilitated by 2030 CAP Actions. Furthermore, implementation of 2030 CAP Actions W-1.1 through W-1.4 and W-2.1 through W-2.3 would reduce organic waste and the use of non-recyclable and non-compostable single-use items, thereby reducing overall waste generated in Santa Barbara. The 2030 CAP would not create significant amounts of solid waste or breach any federal, State, or local standards or thresholds related to solid waste disposal. Therefore, this impact would be insignificant.

Threshold of Significance: e

2030 CAP-related projects may include infrastructure development and redevelopment involving small-scale construction. Construction could result in soil erosion and a minimal increase in impervious surfaces. However, as discussed under Subsection 4.2.6, *Geologic Processes*, development that would disturb one or more acres would be subject to the NPDES Construction General Permit, including the implementation of a SWPPP and BMPs to control drainage patterns and erosion. In addition, and for projects under an acre, a grading plan would be required to be implemented, pursuant to County Code Section 14-29 (County of Santa Barbara 2022a). These projects would also comply with California Building Code Chapter 70 standards, which are designed to ensure implementation of appropriate measures during grading and construction to control erosion and storm water pollution. Regulatory compliance would minimize stormwater runoff, erosion, and potential impacts to a stormwater drainage system generated by 2030 CAP-related projects. The 2030 CAP would not necessitate the construction of new or the expansion of existing stormwater drainage or water quality control facilities, the construction of which could cause significant environmental effects. Therefore, this impact would be insignificant.

4.2.11 Recreation

Thresholds of Significance

a. Would the project conflict with established recreational uses of the area?
b. Would the project conflict with biking, equestrian and hiking trails?
c. Would the project result in a substantial impact on the quality or quantity of existing recreational opportunities (e.g., overuse of an area with constraints on numbers of people, vehicles, animals, etc. which might safely use the area)?

Setting

The County contains regional parks, beaches, biking trails, equestrian trails, hiking trails, golf courses, and recreational facilities (County of Santa Barbara 2009d). The County has established a minimum standard ratio of 4.7 acres of recreation and/or open space per 1,000 persons to meet the needs of the community (County of Santa Barbara 2016).

Impact Analysis

Thresholds of Significance: a-c

The 2030 CAP is a policy document containing programs that are consistent with the Santa Barbara County Comprehensive Plan. The 2030 CAP would not result in substantial new population growth or direct land use changes. As such, implementation of the 2030 CAP would not have a substantial impact on the quality of existing recreational opportunities including deterioration of parks or other recreational facilities. Implementation of 2030 CAP Actions would not promote development where biking, equestrian, and hiking trails are present. Furthermore, some 2030 CAP Actions, such as TR-4.5 which would convert County parking facilities to support commuter park and electric bike share, would result in an increase of access to recreational opportunities for residents in the County. The 2030 CAP would not conflict with established recreational uses; conflict with biking, equestrian, or hiking trails; or substantially impact the quality or quantity of existing recreational opportunities. Therefore, impacts would be insignificant.

4.2.12 Water Resources/Flooding

Thresholds of Significance

a. Would the project result in changes in currents, or the course or direction of water movements, in either marine or fresh waters?
b. Would the project result in changes in percolation rates, drainage patterns or the rate and amount of surface water runoff?
c. Would the project change in the amount of surface water in any water body?
d. Would the project result in discharge, directly or through a storm drain system, into surface waters (including but not limited to wetlands, riparian areas, ponds, springs, creeks, streams, rivers, lakes, estuaries, tidal areas, bays, ocean, etc) or alteration of surface water quality, including but not limited to temperature, dissolved oxygen, turbidity, or thermal water pollution?
e. Would the project result in alterations to the course or flow of flood water or need for private or public flood control projects?
f. Would the project result in exposure of people or property to water related hazards such as flooding (placement of project in 100 year flood plain), accelerated runoff or tsunamis, sea level rise, or seawater intrusion?
g. Would the project result in alteration of the direction or rate of flow of groundwater?
h. Would the project result in a change in the quantity of groundwater, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or recharge interference?
i. Would the project result in overdraft or over-commitment of any groundwater basin? Or, a significant increase in the existing overdraft or over-commitment of any groundwater basin?
j. Would the project result in the substantial degradation of groundwater quality including saltwater intrusion?
k. Would the project result in substantial reduction in the amount of water otherwise available for public water supplies?
l. Would the project result in introduction of storm water pollutants (e.g., oil, grease, pesticides, nutrients, sediments, pathogens, etc.) into groundwater or surface water?

As detailed in the County's *Environmental Thresholds and Guidelines Manual*, a project is determined to have a significant effect on water resources if it would exceed established threshold values which have been set for each overdrafted groundwater basin. These values were determined based on an estimation of a basin's remaining life of available water storage. If the project's net new consumptive water use [total consumptive demand adjusted for recharge less discontinued historic use] exceeds the threshold adopted for the basin, the project's impacts on water resources are considered significant. A project is also deemed to have a significant effect on water resources if a net increase in pumpage from a well would substantially affect production or quality from a nearby well (County of Santa Barbara 2021).

Setting

The County contains streams, channels, tributaries, and groundwater basins that contribute to the availability of surface water and groundwater supplies (County of Santa Barbara 2010). Approximately 85 percent of total water used is derived from groundwater resources (County of Santa Barbara 2009e). The County identifies 16 groundwater basins within Santa Barbara (County of Santa Barbara 2009e). Of these basins, three are designated by the California Department of Water Resources as high priority and two are designated as medium priority, meaning they are subject to management by local Groundwater Sustainability Agencies (GSA) pursuant to the Sustainable Groundwater Management Act (SGMA). These high and medium priority basins are the Carpinteria basin, the Montecito basin, the Cuyama Valley basin, the Santa Ynez River Valley basin, and the San Antonio Creek Valley basin, respectively (California Department of Water Resources 2022). Based on County Code Chapter 15A, there are areas of the County within a 100-year flood hazard zone, as defined by the Federal Emergency Management Agency (County of Santa Barbara 2022a).

Impact Analysis

Thresholds of Significance: a-d, l

The 2030 CAP is a policy document containing actions designed to achieve the County's GHG reduction goals. New development that may be facilitated by 2030 CAP Actions, such TR-4.5 which would convert County parking facilities to support commuter park and electric bike share and TR-1.9 which would spearhead the installation of 225 publicly accessible EV chargers, may result in small scale construction activities which could result in water quality impacts due to ground disturbance and soil erosion. In addition, 2030 CAP Action CS-1.6 would result in the planting of 2,800 net new trees in the public right-of-way which would result in ground disturbing activities.

2030 CAP-related projects would be reviewed for consistency with applicable regulations, including the NPDES permitting program, which requires implementation of SWPPPs and County Code Chapter 14, *Grading Code* (County of Santa Barbara 2022a). These regulations require the implementation of BMPs during construction to minimize potential impacts to surface and groundwater quality. Typical BMPs include, but are not limited to, installation of silt fences, erosion control blankets, and anti-tracking pads at site exists to prevent off-site transport of soil materials. Adherence to State and local regulatory requirements would minimize the potential to alter surface water quality or introduce stormwater pollutants.

2030 CAP Actions would generally apply to the urbanized areas of the County where impervious surfaces are largely present. However, it is possible the 2030 CAP could indirectly promote solar development areas with little impervious surfaces. While 2030 CAP Action FS-2.3 would require the update and adoption of the utility-scale solar ordinance to expand opportunities for solar development on agricultural lands, this Action would not directly result in solar development, and any individual developments would be reviewed for consistency with applicable County regulations related to stormwater prior to project approval. Primarily, 2030 CAP-related projects would result in marginal increases to impervious surfaces in the already urbanized environment. If a 2030 CAP-related project would occur near a watercourse the project would be subjected to the requirements of County Code Section 15B-5 which requires any development within 50 feet from the top of the bank of a watercourse, or within 200 feet from the top of the riverbank to not significantly reduce the capacity of the existing watercourse, not realign streambeds, or otherwise not affect other properties by altering velocity, depth, or flows such that an erosion hazard would exist. Projects would be reviewed and approved by the Building Official for consistency with local regulations prior to implementation. Therefore, County regulatory requirements would minimize impacts to changes in currents, drainage patterns, and surface water. The 2030 CAP would not result in changes in currents, drainage patterns, amount of surface water in a water body, alternation of flood flows, or introduction of stormwater pollutants. Therefore, impacts would be insignificant.

Thresholds of Significance: e-f

The 2030 CAP is a policy document containing programs that are consistent with the Santa Barbara County Comprehensive Plan. The 2030 CAP would not result in direct land use changes. However, implementation of 2030 CAP Actions may promote infrastructure development and small-scale construction activities within the County. Providing new active and public transportation infrastructure and battery storage facilities may marginally change the City's existing drainage pattern and amount of impervious surface. Construction of 2030 CAP-related projects could also result in erosion, as discussed in Section 4.2.6, *Geologic Processes*. However, impacts to drainage patterns and alterations of water courses would be minimized through implementation BMPs as required by the NPDES Construction General Permit program and County Code. In addition, 2030 CAP Action CS-1.9 would result in the planting of over 3,000 trees which would reduce the potential for erosion. 2030 CAP-related projects occurring in a flood hazard zone would be subject to the requirements of County Code Chapter 15A, *Floodplain Management.* Section 15A-16 sets standards of construction in flood hazard zones, including anchoring, construction materials, and elevation and floodproofing. Section 15A-22 requires all new development within a coastal high hazard area to be adequately leveled and elevated, and prohibits the use of fill for structural support, among other requirements (County of Santa Barbara 2022a). 2030 CAP-related projects would be required to present proof to a floodplain administrator which shows all standards within County Code Chapter 15A have been met. In addition, the 2030 CAP would not promote new residential, commercial, or industrial development that have the potential to expose people or structures to water related hazards, including tsunamis, sea level rise, or seawater intrusion. The 2030 CAP would not alter the course or flow of flood water or expose people to water related hazards. Therefore, impacts would be insignificant.

Thresholds of Significance: g-j

The CAP is a policy document containing programs that are consistent with the Santa Barbara County Comprehensive Plan. Implementation of 2030 CAP Actions related to infrastructure development and redevelopment, such as electrifying existing buildings, improving active transportation and public transit facilities, and implementing EV charging stations, would not substantially interfere with groundwater recharge as impervious surfaces would only marginally increase. Small scale construction would require minimal amounts of water for routine construction activities, such as suppressing fugitive dust in compliance with the Santa Barbara County Air Pollution Control District's Rule 345 (Santa Barbara County Air Pollution Control District 2010). Although the minimal amount of water supplied for these construction activities may consist of groundwater, water purveyors who supply this groundwater would be subject to management requirements and pumping limitations implemented by a GSA for a specific basin. Therefore, the potential minimal use of groundwater supplies for CAP-related construction activities that occur within the boundaries of medium and high priority basins would not result in the overdraft of a groundwater basin in conflict with a GSA. Implementation of the 2030 CAP would not require groundwater use that would change the quantity of groundwater; overdraft, substantially overcommit, or significantly increase existing overdraft of a groundwater basin; or degrade water quality. Therefore, no impact would occur.

Threshold of Significance: k

The CAP is a policy document containing programs that are consistent with the Santa Barbara County Comprehensive Plan. Implementation of 2030 CAP Actions would result in small scale construction activities. These small-scale projects would require minimal amounts of water for routine construction activities, such as fugitive dust control. Small, temporary, and intermittent uses of water for construction activities would not substantially reduce the amount of water available for public water supplies. Therefore, implementation of the 2030 CAP would result in an insignificant impact to reduction of public water supplies.

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Appendix B

NOP and NOP Comment Letter

Notice of Preparation

To: State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814
(Address)

From: Community Services Department, Sustainability Division
123 E. Anapamu Street
Santa Barbara, California 93101
(Address)

Subject: Notice of Preparation of a Draft Environmental Impact Report

The County of Santa Barbara will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (☐ is ▣ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Garrett Wong, Climate Program Manager at the address shown above. We will need the name for a contact person in your agency.

Project Title: 2030 Climate Action Plan

Project Applicant, if any:

Date October 22, 2020

Signature

Title Climate Program Manager

Telephone (805) 568-3543

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

COUNTY OF SB; CSD
6 DEC 2022 PM2:53

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November 21, 2022

Garrett Wong
County of Santa Barbara, Community Services Department, Sustainability Division
123 E. Anapamu Street
Santa Barbara, CA 93101

Re: 2022110453, 2030 Climate Action Plan Project, Santa Barbara County

Dear Mr. Wong:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Cody.Campagne@nahc.ca.gov.

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

cc: State Clearinghouse

Appendix C

GHG Emissions Reductions Technical Evidence



County of Santa Barbara CAP Update

GHG Emissions Reductions Technical Evidence

prepared by

Santa Barbara County
Community Services Department
123 East Anapamu Street
Santa Barbara, California 93101
Contact: Garrett Wong, Climate Program Manager

prepared with the assistance of

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449 15th Street, Suite 303
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May 2023

RINCON CONSULTANTS, INC.
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1 Introduction

This report presents the technical quantification and evidence supporting the greenhouse gas (GHG) emissions reduction potential of the County of Santa Barbara's Climate Action Plan (CAP) Update. Section 15183.5(b)(1) of the California Environmental Quality Act (CEQA) guidelines establishes several criteria which a CAP must meet to be considered a "qualified GHG reduction plan" and allow for programmatic CEQA streamlining of project GHG emissions. This document provides the evidence substantiating the GHG emissions reductions associated with the CAP Update measures pursuant to Subsection (D) which states, "measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level." Based on the substantial evidence contained in this report, the GHG emissions reductions associated with the measures in the CAP Update are sufficient to meet and exceed the County of Santa Barbara's fair share of GHG emissions consistent with the reduction target established in 2022 by Assembly Bill (AB) 1279 of 40% below 1990 levels by 2030 and make substantial progress towards the County's 2045 target, which is in line with California's carbon neutrality target established by AB 1279.

The quantification in this report is specifically intended to illustrate a viable path to achieving the state climate action target. As required in CEQA Guidelines Section 15183.5(b)(e), mechanisms to monitor the CAP's progress toward achieving the GHG emission reductions provided in this report have been established through the CAP development process. If, based on the tracking of community GHG emissions, the County is not on track to reach the 2030 GHG reduction specified here and exceed the target established by AB 1279, the CAP as a whole or specific measures and actions will be amended and a new CAP update will be prepared that includes altered or additional measures and actions, with evidence that their implementation can achieve the County's climate action targets.

1.1 Climate Action Targets

The County of Santa Barbara's climate action targets are more aggressive than California's goals to reduce GHG emissions 40% below 1990 levels by 2030 (AB 1279) and 85% below 1990 levels or net zero[1] by 2045 (AB 1279). The County of Santa Barbara's targets align with state legislation.

1.2 Measures and Actions Organization

As part of the CAP Update process, the County of Santa Barbara has developed a comprehensive set of measures reducing community wide GHG emissions in all sectors to achieve the County's climate action targets. Each measure is supported by a set of actions that provide measurable GHG emissions reduction that is supported by substantial evidence. The County has also developed a set of measures and actions for offsetting GHG emissions through carbon sequestration on natural and working lands, however, these are not quantified because they are exploratory at this stage and the

[1] Net-zero refers to a state of carbon neutrality GHG emissions (in units of carbon dioxide equivalent, or CO_2e), where a community's GHG emissions have been reduced as much as possible, and any remaining GHG emissions arising from community-level activities are offset by GHG emissions sequestration activities and technologies, such as tree planting, compost application, or industrial practices that take GHG emissions out of the atmosphere and sequester them in solid or liquid form.

County has limited control over them. Measures and actions are organized according to the following hierarchy:

1. **Sectors:** Sectors define the GHG emissions category in which the GHG reductions will take place and include Clean Energy, Transportation, Waste, and Water and Wastewater.[2]
2. **Measures:** Measures are developed under each sector pursuant to the GHG Inventory and Forecast and in line with the Community Protocol and the California Air Resources Board (CARB) 2022 Climate Change Scoping Plan:
   - Clean Energy
   - Transportation
   - Waste, Water, and Wastewater
   - Nature-Based Solutions

   Additional measures developed for the Santa Barbra County Climate Action Plan not quantified in emissions reductions include:

   - Low Carbon Economy
   - Municipal Operations

   These measures are not quantified in this report because they are outside of the scoping plan and the County has limited control over these sources.
3. **GHG Reduction Metrics:** Metrics identify specific goals (i.e., activity data targets by 2030 and 2045) to address GHG emissions in each sector. A single metric generally addresses a subsector or represents an incremental step towards impacting an overall sector; for example, three metrics may be established under transportation measures to address active transportation, shared transportation, and single-passenger vehicles.
4. **Actions:** Actions identify the programs, policies, funding pathways, and other specific commitments that the County of Santa Barbara will implement. Each measure contains a suite of actions, which together have been designed to accomplish the measure goal and metrics.
   a. **Key Pillars:** The actions supporting each measure have been designed around a set of key pillars. Each pillar emphasizes specific criteria that have been proven to play an essential role in the implementation of the measure. Because community-focused climate action often requires community-level behavioral changes and buy-in to be implementable and successful, the County must design a suite of actions that support these changes by emphasizing specific needs of the community. The key pillars are: Structural Change, Education, Equity, Funding, Partnerships, and Feasibility Studies. In general, the actions under a single measure should collectively address all the key pillars.[3] Identification of the pillars and their inclusion into the CAP helps plan for implementation. More information on the pillars can be found in the CAP.

[2] Note that the County's municipal measures as established in the CAP Update are not discussed in this document. While the municipal measures are important for reducing the GHG emissions of County operations and establishing the County's operations as demonstrations of climate action leadership, they contribute only minorly to community-level GHG emissions reductions and are a subset of the community GHG emissions. For this reason, the GHG emissions reductions expected from municipal measures were conservatively excluded from the analysis in this document and were not quantified as part of the CAP Update preparation process.

[3] The exception is for measures and actions in the municipal sector because the County has much more leverage to enact changes at a municipal level and may not need to consider each pillar to ensure success during implementation.

Measures and actions can be either quantitative or supportive, defined as follows:

- **Quantitative:** Quantitative measures and actions result in quantifiable GHG emissions reductions when implemented. GHG emissions reductions from these measures and actions are supported by case studies, scientific articles, calculations, or other third-party substantial evidence. Quantitative measures/actions can be summed to quantify how the County of Santa Barbara will meets its 2030 climate action target and demonstrate progress towards the 2045 target. GHG emissions reductions were calculated using published evidence provided through adequately controlled investigations, studies, and articles carried out by qualified experts that establish the effectiveness for the reduction measures and actions. The estimates and underlying calculations provided in this report include the substantial evidence and a transparent approach to achieving the County's GHG emissions reduction targets.
- **Supportive:** Supportive measures and actions may also be quantifiable and have substantial evidence to support their overall contribution to GHG reduction. However, due to one of several factors – including a low GHG reduction benefit, indirect GHG reduction benefit, or potential for double-counting– they have not been quantified and do not contribute directly to the expected GHG reduction target and consistency with the state goals. Despite not being quantified, supportive measures/actions are nevertheless critical to the overall success of the CAP and provide support so that the quantitative measures and actions will be successfully implemented.

1.3 GHG Reduction Metrics Quantification

The GHG reductions for the County of Santa Barbara CAP are achieved through implementation of specific actions which drives quantifiable changes in activity data and emissions factors. Each quantifiable measure is given respective metric(s) that are articulated in the actions and used for the purposes of quantifying emissions reductions over time. Achieving the listed metrics is how the County will quantify successful reductions through future GHG inventories. This document is structured around metric-oriented evidence of emissions reductions.

1.4 GHG Emissions Reductions

The GHG emissions reduction associated with the quantifiable CAP measures and actions have been calculated and presented in this report in terms of mass emissions (in units of MT CO_2e). Measures and actions that are not quantifiable, specifically Low-Carbon Economy and Municipal Operations, are not included. Population projections are shown in Table 1 and give context to how emissions scale over time.[4] Population growth well beyond these projections may require additional GHG reductions to achieve the County's goals.

Table 1 Population Projections for County of Santa Barbara

Year	2018	2030	2045
Population	137,524	160,390	154,885

[4] Population projections were obtained from the United States Census Bureau (US Census) ACS 5-Year Estimates website; accessed at: https://data.census.gov/cedsci/table?g=0400000US06_1600000US0682072&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2019.DP05, the State pf California Department of Finance E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2022 accessed at: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2022/, and adjusted using the6th Cycle Regional Housing Needs Allocation Plan through SBCAG accessed at: http://www.sbcag.org/uploads/2/4/5/4/24540302/item_5_attach_a_-_rhna_plan.pdf

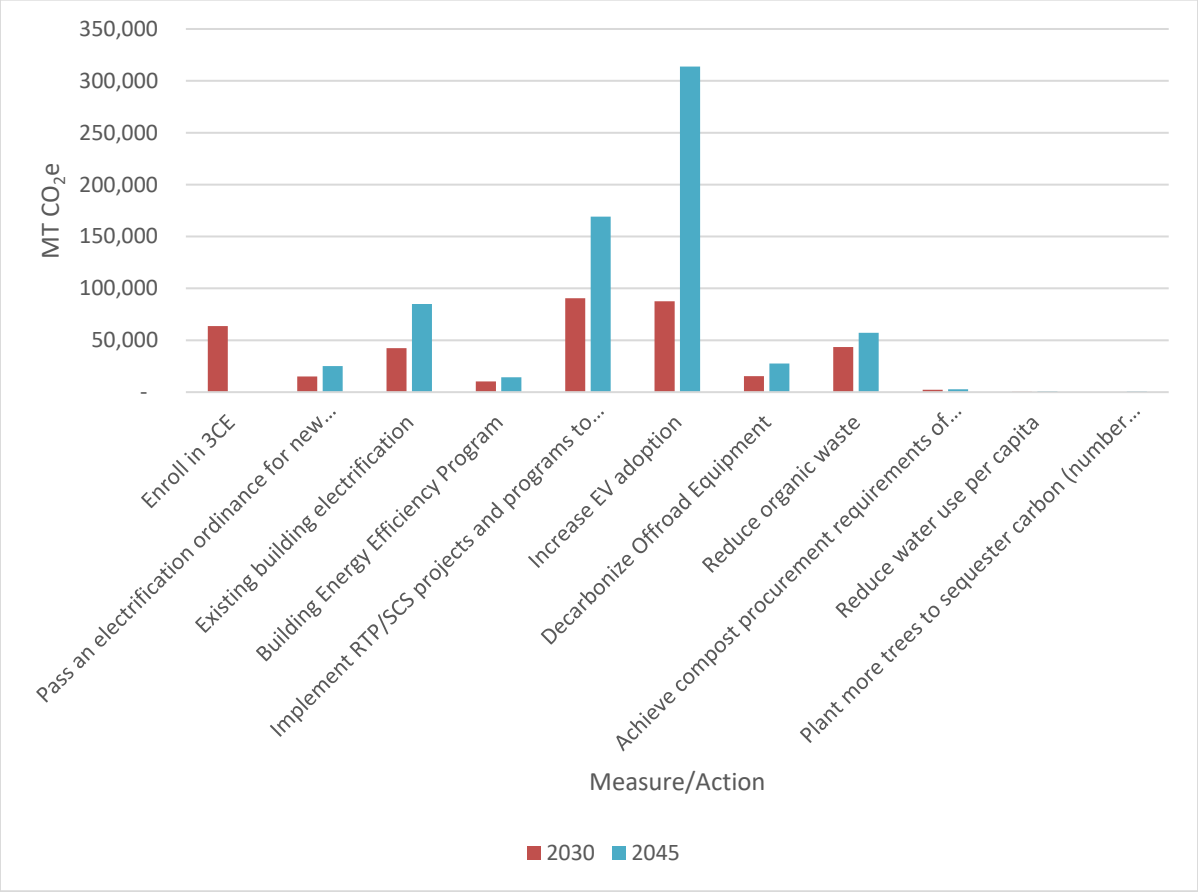
A breakdown of the GHG emissions reductions calculated for each measure/metric is included in Table 2 and Figure 1.

Table 2 Estimated GHG Emissions Reductions by Measure

Measure #	GHG Emissions Reduction Measures and Metrics	Anticipated Reduction/Sequestration (MT CO_2e)
Clean Energy		
CE-1	**Increase energy resilience in new and existing buildings.**	2030: 131,582 2045: 140,411
CE-1 Metrics	CE-1.a Electrify 100% of new residential and new commercial construction by 2023 CE-1.b Electrify 14% of existing residential buildings by 2030 and 90% by 2045 CE-1.c Electrify 14% of existing commercial buildings by 2030 and 75% by 2045 CE-1.d Achieve 100% renewable electricity for all residential and commercial customers into by 2030 CE-1.e Implement residential and commercial building energy efficiency programs in 4% of buildings by 2030 and 7% of buildings by 2045	
Transportation		
TR-1	**Increase the use of zero emission vehicles.**	2030: 87,607 2045: 313,728
TR-1 Metrics	TR-1.a Increase passenger EV car ownership to 25% by 2030 and 90% by 2045 TR-1.b Increase commercial EV car use to 15% by 2030 and 75% by 2045 TR-1.c Install at least 375 publicly available EV chargers by 2030	
TR-2	**Increase affordable housing and mobility options.**	
TR-2 Metric	TR-2.a Decrease vehicles miles travelled by 14% by 2030 and 28% by 2045 by increasing public transit mode share, increasing bike mode share, and implementing land use/development strategies consistent with the Connected 2050 RTP/SCS.	2030: 90,473 2045: 169,106
TR-3	**Decarbonize off-road equipment.**	2030: 15,396 2045: 27,619
TR-3 Metric	TR-3.a Decarbonize 21% of off-road equipment by 2030 and 38% by 2045	

Measure #	GHG Emissions Reduction Measures and Metrics	Anticipated Reduction/Sequestration (MT CO_2e)
Waste, Water, and Wastewater		
W-1	**Reduce food waste and increase use of organic recycled materials.**	2030: 45,763 2045: 59,963
W-1 Metric	W-1.a Reduce landfilled organics 80% by 2030 and 100% by 2045, compared to 2014 levels W-1.b Meet SB 1383 compost procurement requirements for the unincorporated County of 0.08 tons per capita	
W-2	**Reduce use of non-recyclable and non-compostable single use items.**	Supportive
W-2 Metric	W-2.a Reduce landfilled inorganic waste 35% by 2030 and 90% by 2045	
W-3	**Increase energy- and carbon-efficiency of water production treatment conveyance and use.**	2030: 393 2045: 964
W-3 Metric	W-3.a Establish a baseline and set a regional target to reduce emissions as well as improve water and energy efficiency essential for water system operations, including water treatment, pumping, and conveyance by 2024	
Nature-Based Solutions		
NBS-1	**Promote and support land management practices that sequester carbon.**	2030: 159
NBS-1 Metric	NBS-1.a Plant 3,000 trees by 2030	

Figure 1 Estimated GHG Emissions Reductions Associated with CAP Update



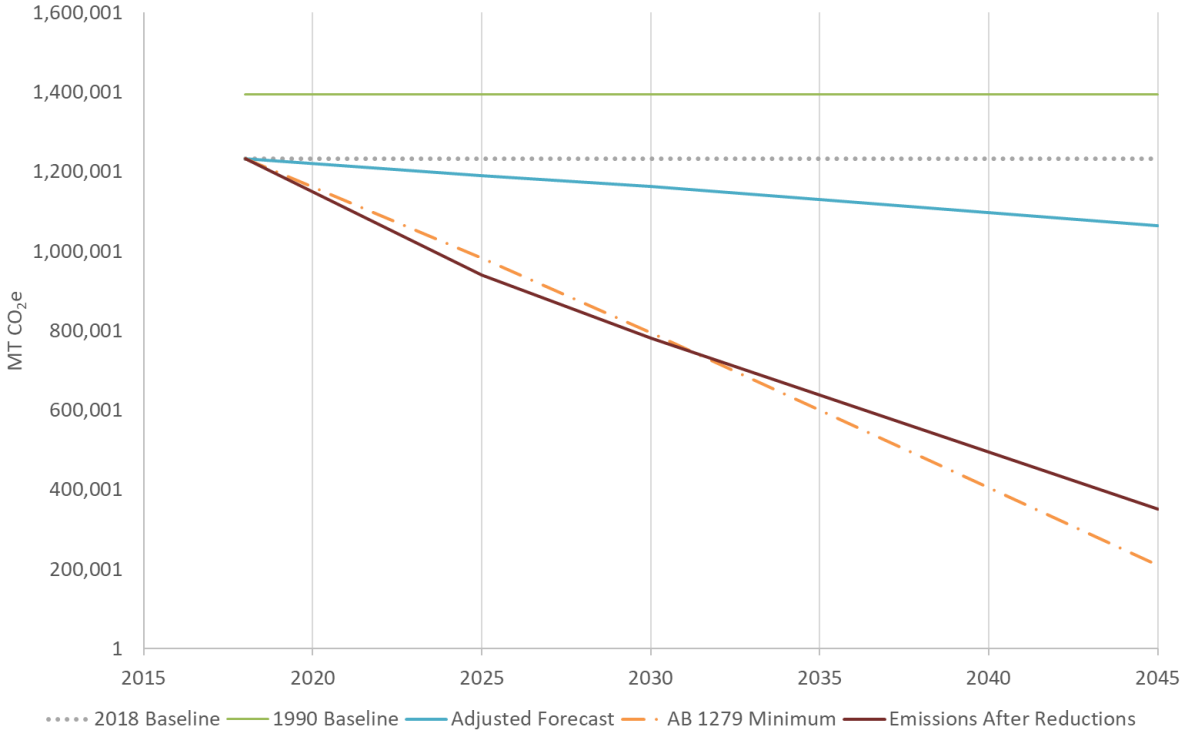
Together, the measures and actions in the CAP provide the County of Santa Barbara with the GHG reductions necessary to make substantial progress to the County's 2030 climate action target (Table 3). However, the 2045 GHG emissions reductions quantified in this report are not yet enough to meet the County's long-term climate action target of carbon neutrality by 2045. Achieving carbon neutrality will require significant changes to the technology and systems currently in place. The CAP aims to establish new systems that are resilient and equitable and allow for a transition to carbon neutrality in the future. This includes electrification of building and transportation systems, support for land use policies and growth policies that reduce vehicle miles traveled, increased usage of carbon neutral electricity, increased water use efficiency, and waste reduction and diversion. As these measures and actions are implemented, the County will gain more information, new technologies will emerge, and current pilot projects and programs will scale to the size needed to reach carbon neutrality. Furthermore, the state is expected to update state-level regulations and provide additional support for meeting carbon neutrality in the future. Future CAP updates past 2030 will also outline new measures and actions that the County of Santa Barbara will implement to close the remaining gap to achieve the carbon neutrality target.

Table 3 Targets Versus GHG Emissions Reductions

Target/Forecast	2030 GHG Emissions (MT CO_2e)	2045 GHG Emissions (MT CO_2e)
Business-as-usual Forecast	1,371,849	1,504,582
Adjusted Forecast	1,163,184	1,063,770
GHG Emissions Reductions from Full Implementation of Measures	381,887	712,782
GHG Emissions after Measure Reductions (Adjusted Forecast – GHG Emissions Reductions)	781,296	351,287
AB 1279 Minimum Target to be Met?	Yes	No; substantial progress demonstrated

Figure 2 shows the climate action targets in relation to the County's GHG emissions after measure implementation. A complete description of each measure and its contributing actions is included in the remainder of the report.

Figure 2 Targets Versus GHG Emissions Reductions



2 Clean Energy Measure

The clean energy measure is focused on leveraging the renewable energy portfolio offered by Central Coast Community Energy (3CE) by incentivizing customers to opt in to 3CE's 100% renewable energy plan (3Cprime)[5] of Santa Barbara County's new and existing building stock. All-electric buildings are powered 100% by electricity and when coupled with renewable electricity generation, their operational energy footprint becomes GHG emissions-free. Based on this strategy, the CAP Update's energy measure consists of the following:

Measure:

- CE-1: Increase clean energy use and energy resilience in new and existing buildings

Metrics:

- CE-1.a Electrify 100% of new residential and new commercial construction by 2023
- CE-1.b Electrify 14% of existing residential buildings by 2030 and 90% by 2045
- CE-1.c Electrify 14% of existing commercial buildings by 2030 and 75% by 2045
- CE-1.d Achieve 100% renewable electricity for all residential and commercial customers into by 2030
- CE-1.e Implement residential and commercial building energy efficiency programs in 4% of buildings by 2030 and 7% of buildings by 2045

Measures CE-1 provides frameworks of updated regulations, programs, funding mechanisms, education, and advocacy to drive electrification of both new and existing residential and commercial buildings. 3CE procures low-carbon renewable energy for the community through wind and solar. Using electricity from 3CE instead of natural gas, propane, or other electricity sources to power buildings reduces the GHG emissions associated with building operations to zero or near-zero. Measure CE-1 directs the County to work with 3CE to increase participation in 3CE usage, which increases the GHG reduction potential for 3CE's renewable electricity. Santa Barbara County's building stock currently relies heavily on natural gas. GHG emissions from the County's existing buildings must also be reduced to achieve the County's climate action targets.

[5] Building electrification consists of converting building appliances, such as space heaters, boilers, stoves, clothes dryers, and hot water heaters, that are currently powered by natural gas or propane to electricity as the primary energy source. This most often consists of retrofitting a building to support more electric capacity and replacing natural gas or propane appliances with electric-powered alternatives.

Measure CE-1: Increase energy resilience in new and existing buildings

	Metric/Action #	Metric/action	Anticipated Reduction by Year (MT CO_2e)
Metrics	CE-1.a	Electrify 100% of new residential and new commercial construction by 2023	2030: 15,157 2045: 25,185
	CE-1.b	Electrify 14% of existing residential buildings by 2030 and 90% by 2045	2030: 42,350 2045: 100,918
	CE-1.c	Electrify 14% of existing commercial buildings by 2030 and 75% by 2045	
	CE-1.d	Achieve 100% renewable electricity for all residential and commercial customers into by 2030	2030: 63,697 2045: 0
	CE-1.e	Implement residential and commercial building energy efficiency programs in 4% of buildings by 2030 and 7% of buildings by 2045	2030: 10,377 2045: 14,307
Actions	CE-1.1	Restrict natural gas infrastructure for new development and major remodels, including municipal projects. Work with partner agencies, like 3C-REN and Central Coast Community Energy, to provide incentives, programs and support services to provide no- or low-cost retrofits, utility bill relief, and no-net increase in bill payments for low-income customers.	Supportive
	CE-1.2	By 2024, complete an existing building electrification plan to identify the policies and programs needed to achieve the goal to electrify 14% of existing buildings. Focus on ensuring inclusive engagement of under resourced populations, maintaining affordability, and equitable distribution of resources	Supportive
	CE-1.3	Develop an ordinance to require 'replacement upon burnout' requirement for residential natural gas appliances by 2025.	Supportive
	CE-1.4	By 2024, develop and adopt an ordinance that establishes a building performance standard for existing large buildings and facilities that requires the reduction of GHG emissions over time. Implement and promote programs, incentives, and technical support to facilitate and reduce the cost of retrofits.	Supportive
	CE-1.5	Achieve 100% renewable electricity for all residential and commercial customers by 2030 through Central Coast Community Energy.	Supportive
	CE-1.6	Support the creation of resilience hubs that utilize renewable energy and backup energy systems, prioritizing frontline communities.	Supportive
	CE-1.7	Develop and adopt the Energy Assurance Plan and provide support for agencies to install renewable energy and backup power systems at critical facilities.	Supportive
	CE-1.8	Leverage relationship with 3C-REN, Promotores, and Climate Resilient SBC to promote incentives and resources for electrifying buildings and increasing energy efficiency, particularly for low-income populations, agricultural operations, and businesses.	Supportive
	CE-1.9	Implement best practices and streamline permitting for projects associated with renewable energy and energy storage systems, whole building retrofits, and electrical infrastructure upgrades necessary to support electrification and resilience projects.	Supportive

Metric/Action #	Metric/action	Anticipated Reduction by Year (MT CO_2e)
CE-1.10	Update and adopt the utility-scale solar ordinance to expand opportunities for solar development on agricultural, commercial, and industrial lands.	Supportive
CE-1.11	Promote incentives and grants to improve water, energy, and fuel efficiency from agricultural operations.	Supportive

Metric CE-1.a New Building Electrification

Metric CE-1.a as initiated by Action CE-1.2, directs the County to adopt a reach code in 2023 to require all new construction to be all-electric. This metric is supported by several actions with the focal point being Action CE-1.1 which requires the County to adopt an electrification ordinance for all new construction. Additionally, the County must actively study and re-adopt or modify the new construction electrification ordinance with each tri-annual code cycle. The ordinance consists of local amendments to the State Energy Code and the State Green Building Code. Other supporting action CE-1.8 ensures partnerships to provide community resources and education on electrification to further strengthen the implementation of the new building electrification ordinance.

The methods and assumptions used to calculate the GHG emissions reductions associated with this metric are explained further here and shown in the Table 4 below. The GHG emissions reduction benefits associated with building electrification of new construction were quantified by estimating the increase in gas use from 2023 to 2030 and 2045, based on the adjusted forecast. These emissions are expected to be replaced with carbon-free electricity. Metric CE-1.a and supporting actions provide no exemptions for new residential and commercial buildings.

Table 4 GHG Emissions Reductions from Metric CE-1.a

Inputs and Assumptions		
Implementation year for residential development		2023
Implementation year for commercial development		2023
Natural gas emission factor (MT CO_2e/therm)[6]		0.00531
Natural gas fugitive emissions factor (MT CO_2e/therm)[7]		0.0525
Convert kWh to therms (kWh/therm)		29.3001
Average increased efficiency of electric appliances over natural gas appliances (%)[8]		300%
GHG Emissions Reductions Calculations		
Year	**2030**	**2045**
Residential Reductions		
Forecasted Residential NG usage (therms)	22,597,695	23,050,580
NG usage in implementation year (therms)	20,819,573	20,819,573
NG usage avoided (therms)	1,778,121	2,231,007

[6] Appendix A.

[7] Appendix A

[8] Pacific Gas & Electric. 2021. Electrification for your home or building. Accessed at: https://www.pge.com/en_US/residential/customer-service/home-services/renovating-and-building/benefits-of-electric-homes-and-buildings/benefits-of-electric-homes-and-buildings.page?

NG usage after implementation (therms)	20,819,573	20,819,573
Emissions from NG usage avoided (MT CO_2e)	9,444	11,850
Electricity usage from converting to electric (kWh)	17,366,376	21,789,577
Weighted electricity EF (MT CO_2e/kWh)	0.0000046	-
Emissions from converted electricity usage (MT CO_2e)	80	-
Methane Leakage Avoided (therms)	49,787	62,468
Emissions from Methane Leaked (MT CO_2e)	2,615	3,281
Residential emission reductions (MT CO_2e)	**11,979**	**15,131**
Commercial Reductions		
Commercial NG usage (therms)	23,882,7914	24,893,574
NG usage in implementation year (therms)	23,411,092	23,411,092
NG usage avoided (therms)	134,771	1,482,482
NG usage after implementation (therms)	23,411,092	23,411,092
Emissions from NG usage avoided (MT CO_2e)	2,505	7,874
Electricity usage from converting to electric (kWh)	4,606,942	14,478,962
Weighted electricity EF (MT CO_2e/kWh)	0.0000046	-
Emissions from converted electricity usage (MT CO_2e)	21	-
Methane Leakage Avoided (therms)	13,208	41,510
Emissions from Methane Leaked (MT CO_2e)	694	2,180
Commercial emission reductions (MT CO_2e)	**3,178**	**10,054**
Totals		
Total Reductions (MT CO_2e)	**15,157**	**25,185**

Metric CE-1.b Existing Residential Building Electrification

Metric CE-1.b as supported by actions CE-1.2, CE-1.3, CE-1.4, CE-1.7, CE-1.8, and CE-1.9 tracks the progress made by the County in developing an existing building residential building electrification plan as a first step towards implementing a residential building electrification ordinance. Because of the comparably higher cost of electrification in existing buildings, developing solutions for potential equity impacts is key to successful implementation (Action CE-1.2).[9] The residential building electrification plan is designed to give special consideration to the potential equity impacts of an electrification ordinance by investigating up-front and on-bill costs of electrification to residents, potential impacts to renters, potential impacts to electrical grid resiliency, and by specifically targeting equity groups for feedback on a residential building electrification strategy development.

Common community concerns include the potential for electrification to increase demands on and lower the resiliency of the electrical grid, especially given the potential for service disruptions for public safety power shutoffs (PSPS) multiple times a year. Peak grid demand, and therefore PSPS, usually occurs in the summer on the hottest days when most buildings are running air conditioning. Hot water heaters, while used throughout the year, can use electricity during off-peak times by heating water and storing it for use at a later time, avoiding significant contribution to peak demand in the summer. Electrifying a heat pump or other space heating appliance has the added benefit of

[9] Greenlining Institute. 2019. Equitable Building Electrification: A Framework for Powering Resilient Communities. Accessed at: https://greenlining.org/wp-content/uploads/2019/10/Greenlining_EquitableElectrification_Report_2019_WEB.pdf

being highly efficient, and widespread electrification of temperature control appliances would likely reduce electricity demand throughout the year.[10] The electrical grid is therefore well-suited to absorbing increased electrical demands from electrification, which even under full electrification scenarios would not exceed current peak summer electricity demands.[11]

Action CE-1.3 commits the County to planning for an electrification ordinance for existing residential buildings by 2025, to be enforced through a comprehensive and equitable permitting compliance program. Natural gas usage from residential buildings accounted for about 8% of GHG emissions in Santa Barbara County in 2018. To address these GHG emissions, the electrification ordinance bans natural gas line expansion and installation of natural gas heating, ventilation, and air conditioning (HVAC) systems, hot water heaters, and other appliances starting in 2025. HVAC system and hot water heaters are targeted in the ordinance due to their large contribution to residential natural gas end-uses and the cost-effectiveness associated with their replacement on burnout.[12]

The County recognizes that successful ordinance implementation will require effective permit compliance. Permits are required for many energy efficiency improvements, including hot water heaters, insulation, HVAC systems, duct replacement, and others. However, permit evasion remains an issue in many jurisdictions, with permitted HVAC systems only accounting for 8-29% of total installations.[13, 14] Strategies that have proven effective at improving permit compliance in various states and local jurisdictions include streamlining the compliance process, improving third-party enforcement, and advanced training for enforcement staff.[15] Action CE-1.9 aims to re-work existing systems and implement these best practices in streamlining permitting to achieve better permit compliance and therefore improved ordinance implementation success. Per Action CE-1.9, the County will work to streamline permitting for electrification and other energy projects at a county level, to reduce the workforce education needed for project implementation on the ground.

In general, electrification has been found to reduce costs for homeowners over the lifetime of appliances when compared to propane or natural gas-fueled equipment, especially when retrofits are bundled and completed when appliances are already planned for replacement, or when coupled with rooftop solar installation.[16] However, the County anticipates that the residential building electrification ordinance will result in up-front retrofit costs for residents that may be difficult for the community, particularly low-income residents, to bear. The largest barrier to existing building electrification is higher up-front capital costs compared to natural gas.[17] On-bill or financed incentives to offset these costs for the end-user are therefore among the most promising

[10] Pacific Gas & Electric. 2021. Electrification for your home or building. Accessed at: https://www.pge.com/en_US/residential/customer-service/home-services/renovating-and-building/benefits-of-electric-homes-and-buildings/benefits-of-electric-homes-and-buildings.page?

[11] Reem Rayef. National Resources Defense Council. April 2020. California's Grid is Ready for All-Electric Buildings. Accessed at: https://www.nrdc.org/experts/merrian-borgeson/californias-grid-ready-all-electric-buildings

[12] Energy and Environmental Economics (E3). April 2019. Residential Building Electrification in California: Consumer economics, greenhouse gases and grid impacts. Accessed at: https://www.ethree.com/wp-content/uploads/2019/04/E3_Residential_Building_Electrification_in_California_April_2019.pdf

[13] Emily Alvarez and Bruce Mast. BayREN Codes & Standards Program. October 2021. Local Government Policy Calculator for Existing Single-Family Buildings – User Guide. Accessed at: https://www.bayrencodes.org/wp-content/uploads/2021/11/BayREN-Policy-Calculator-User-Guide_10.29.2021.pdf

[14] California Public Utilities Commission (CPUC). September 2017. Final Report: 2014-16 HVAC Permit and Code Compliance Market Assessment (Work Order 6) Volume I – Report. Accessed at: http://www.calmac.org/publications/HVAC_WO6_FINAL_REPORT_VolumeI_22Sept2017.pdf

[15] Ryan Meres et al. American Council for an Energy-Efficient Economy (ACEEE). 2012. Successful Strategies for Improving Compliance with Building Energy Codes. Accessed at: https://www.aceee.org/files/proceedings/2012/data/papers/0193-000112.pdf

[16] Rocky Mountain Institute (RMI). 2018. The Economics of Electrifying Buildings: How Electric Space and Water Heating Supports Decarbonization of Residential Buildings. Accessed at: https://rmi.org/insight/the-economics-of-electrifying-buildings/

[17] California Center for Sustainable Energy. 2009. Solar Water Heating Pilot Program: Interim Evaluation Report.

opportunities for electrification.[18] Action CE-1.8 builds the support and funding pathway to make existing building electrification possible, particularly for low-income residents of the County. Once up-front costs are financed, long term savings can be used to achieve cash flow positive retrofits and/or acceptable return on investment. Demonstrating cost-effective pathways for existing building electrification will be a key step before mandatory requirements can be set (Action CE-1.3). Action CE-1.8 commits the County to partnering and broadening implementation efforts with equity and affordability considerations, two prominent barriers to electrification.

The methods and assumptions used to calculate the GHG emissions reductions associated with these actions are shown in the table below. The electrification of existing buildings contributes the largest proportion of projected emissions reductions for the clean energy measure. The County will start with voluntary actions and move towards a replace-on-burnout ordinance[19] by 2025 depending on progress made towards 2030 and 2045 targets. To estimate the GHG reductions associated with a replace on burnout ordinance beginning in 2025, the expected life span of each appliance (HVAC, water heater, stove) and the estimated contribution to total natural gas consumption was modeled. References for appliance life span and contribution to overall natural gas usage are included in Table 5. While the replace on burnout ordinance does achieve the 2030 target, it does not get the County to its goal of 90% residential building electrification by 2045. Alone, the actions outlined under Measure CE-1 reach a 39% target by 2045. Future CAP updates past 2030 will need to outline new actions to close the remaining gap to 90% existing residential building electrification. The growing efficiency of Santa Barbara County's energy portfolio working towards carbon-free electricity supports these reductions and is also quantified in the calculations. The calculation also assumes that 96% of all appliances being replaced would adhere to the ordinance. Measure CE-1 includes a permit compliance program which would allow the County to achieve this relatively high rate of compliance.

[18] Synapse Energy Economics, Inc. October 2018. Decarbonization of Heating Energy Use in California Buildings. https://www.synapse-energy.com/sites/default/files/Decarbonization-Heating-CA-Buildings-17-092-1.pdf

[19] A replace on burnout ordinance is the terminology used for an ordinance that requires a replacement at the time of failure of the previous appliance.

Table 5 GHG Emissions Reductions from Metric CE-1.b

Inputs and Assumptions		
Ordinance implementation year		2025
Natural gas emissions factor (MT CO_2e/therm)[20]		0.00531
Methane Leakage (% of NG delivered)[21]		2.8%
Methane Leakage EF (MT CO_2e/therm)		0.0525
Conversion Factor (kWh/therm)		29.3001
Average increased efficiency of electric appliances over natural gas appliances (%)[22]		300%
Natural gas usage that comes from water heater[23]		38%
Natural gas usage that comes from space heating/cooling[24]		39%
Natural gas usage that comes from cooking[25]		9%
Average natural gas water heater lifespan[26]		13
Average natural gas HVAC lifespan[27]		21.5
Average natural gas stove lifespan[28]		12
Assumed noncompliance[29]		85%
GHG Emissions Reductions Calculations		
Year	**2030**	**2045**
Residential NG usage after new building electrification ordinance is implemented (therms)	20,819,573	20,819,573
Percentage of homes with replaced water heaters, assuming some non-compliance	33%	85%
NG reduction from water heater replacement (%)	12%	32%
Percentage of homes with replaced HVAC, assuming some non-compliance	3%	14%

[20] Appendix A.

[21] Appendix A.

[22] Pacific Gas & Electric. 2021. Electrification for your home or building. Accessed at: https://www.pge.com/en_US/residential/customer-service/home-services/renovating-and-building/benefits-of-electric-homes-and-buildings/benefits-of-electric-homes-and-buildings.page?

[23] Decarbonization of Heating Energy Use in California Buildings (figure 2, page 8) https://www.synapse-energy.com/sites/default/files/Decarbonization-Heating-CA-Buildings-17-092-1.pdf

[24] Decarbonization of Heating Energy Use in California Buildings (figure 2, page 8) https://www.synapse-energy.com/sites/default/files/Decarbonization-Heating-CA-Buildings-17-092-1.pdf

[25] https://treehozz.com/how-many-ccf-of-natural-gas-does-a-home-use

[26] EIA. 2018. Updated Buildings Sector Appliance and Equipment Cost and Efficiencies. Appendix C. Accessed at: https://www.eia.gov/analysis/studies/buildings/equipcosts/pdf/full.pdf

[27] EIA. 2018. Updated Buildings Sector Appliance and Equipment Cost and Efficiencies. Appendix C. Accessed at: https://www.eia.gov/analysis/studies/buildings/equipcosts/pdf/full.pdf.

[28] EIA. 2018. Updated Buildings Sector Appliance and Equipment Cost and Efficiencies. Appendix C. Accessed at: https://www.eia.gov/analysis/studies/buildings/equipcosts/pdf/full.pdf.

[29] Based off the percent of energy efficiency requirements for HVAC unit being met or exceeded - this gives indication of likely hood that a piece of equipment will be upgraded with a more efficiency version. In most cases an electric alternative is the more efficient version. See CPUC's Final Report: 2014-16 HVAC Permit and Code Compliance Market Assessment (Work Order 6) Volume I – Report, accessed at: http://www.calmac.org/publications/HVAC_WO6_FINAL_REPORT_VolumeI_22Sept2017.pdf

NG reduction from HVAC replacement (%)	1%	5%
Percentage of homes with replaced stoves, assuming some non-compliance	6%	15%
NG reduction from stove replacement (%)	1%	1%
Total percent reduction of NG (%)	14%	39%
Total NG saved (therms)	2,953,206.66	8,052,091
Emissions from total NG saved (MT CO_2e)	15,685.81	42,768
Methane Leakage Avoided (therms)	82,689.79	225,459
Emissions from Methane Leaked (MT CO_2e)	4,342.86	11,841
Electricity usage from converting to electric (kWh)	28,843,083.50	78,642,357
Weighted electricity EF (MT CO_2e/kWh)	4.59286E-06	0
Emissions from converted electricity usage (MT CO_2e)	132.4722476	0
Total Residential Reductions (MT CO_2e)	**19,896**	**54,609**

Metric CE-1.c Existing Commercial Building Electrification

Metric CE-1.C as supported by actions CE-1.2, CE-1.3, CE-1.4, CE-1.7, CE-1.8, and CE-1.9 commit the County to developing an existing commercial building electrification plan as a first step towards implementing a commercial building electrification ordinance. Existing building electrification in the commercial sector is less well-researched than in the residential sector. While some commercial natural gas end uses may be ripe for electrification (about 27% of commercial floor space heated with fossil fuel systems can be electrified today with a simple payback period of less than 10 years) other end uses may not.[30] However, the commercial sector accounts for a large portion of the County's total natural gas usage (about 9%), and therefore provides significant opportunity for decarbonization. To close the knowledge gap about commercial building electrification in Santa Barbara, Actions CE-1.4 and 1.8 commits the County to engaging with the commercial sector and business community to understand barriers, equity/cost impacts, and opportunities associated with electrification of commercial natural gas end uses.

Action CE-1.2 commits the County to adopting an existing electrification plan to be enforced through the same process as outlined under Metric CE-1.b. Natural gas usage from commercial buildings accounted for about 9% of GHG emissions in Santa Barbara in 2018. The ordinance recognizes that current technology may limit the extent to which commercial natural gas end uses in Santa Barbara County can be electrified;[31] for this reason, some limited exemptions are included in the ordinance.

Technologies that currently exist for electrifying HVAC systems and water heaters in the commercial sector range from cost-effective to prohibitively expensive, usually depending on the complexity of

[30] Steven Nadel and Chris Perry. American Council for an Energy-Efficient Economy (ACEEE). October 2020. Electrifying Space Heating in Existing Commercial Buildings: Opportunities and Challenges. Accessed at: https://www.aceee.org/press-release/2020/10/report-electrifying-heating-existing-commercial-buildings-could-cut-their

[31] kW Engineering. March 2021. Important Considerations for Electrification of Commercial Buildings. Accessed at: https://www.kw-engineering.com/electrification-commercial-buildings-important-considerations/

the system.[32] Additionally, while all-electric HVAC systems and water heaters can be cost-effective over their lifetimes, up-front costs may be substantially higher with payback periods longer than 10 years.[33] Financial incentives are needed to make conversion of about 73% of commercial floor space cost effective, not to mention other end uses that are less well studied.[34] To meet this need, CE-1.4commits the County to developing and expanding financial incentive programs targeted to the commercial sector, including rebates and grant programs.

While electrification is not expected to result in additional strain on the electrical grid,[35] commercial-scale energy assurance projects present an opportunity to improve the resilience of the electrical grid and provide cost savings over the lifetime of the equipment through battery storage.[36] 2022 California Building Energy Code requires new commercial construction over 5,000 square feet to install PV and storage to meet 60% of the building's energy load and reduce exports to 10%.[37] Action CE-1.7 commits the County to exploring opportunities to support commercial battery storage installations beyond these requirements.

The methods and assumptions used to calculate the GHG emissions reductions associated with these actions are shown in the table below. The reductions gained from commercial building electrification follow a similar process to residential buildings with the replace on burnout starting in 2025 intended to help reach a 14% reduction in overall natural gas usage by 2030. The growing efficiency of Santa Barbara County's energy portfolio working towards carbon-free electricity further supports these reductions and is also quantified in the calculations. Based on assumptions of the average lifespan of hot water heaters, HVAC systems, and natural gas stoves at 10, 23, and 12 years, respectively, emissions reductions to be claimed from time of replacement and the supportive actions above amount to 14% existing commercial building electrification by 2030 and 29% by 2045.[38] While this strategy does support the County in achieving the 2030 GHG reduction target, the County-set goal of 75% existing commercial building electrification by 2045 is not attainable through the actions in this CAP alone. Future CAP updates past 2030 will need to outline new actions focused on streamlined compliance that the County of Santa Barbara will implement to close the remaining gap to reach the goal of 75% electrification of existing commercial buildings by 2045. The replace-on-burnout must be coupled with additional ordinances or other strategies to fully reach the County target however, the replace on burnout ordinance supported by additional actions in measure CE-1 can reach 29% existing commercial building electrification by 2045. References for these timelines are included in Table 6.

[32] Steven Nadel and Chris Perry. American Council for an Energy-Efficient Economy (ACEEE). October 2020. Electrifying Space Heating in Existing Commercial Buildings: Opportunities and Challenges. Accessed at: https://www.aceee.org/press-release/2020/10/report-electrifying-heating-existing-commercial-buildings-could-cut-their

[33] Steven Nadel and Chris Perry. American Council for an Energy-Efficient Economy (ACEEE). October 2020. Electrifying Space Heating in Existing Commercial Buildings: Opportunities and Challenges. Accessed at: https://www.aceee.org/press-release/2020/10/report-electrifying-heating-existing-commercial-buildings-could-cut-their.

[34] Steven Nadel and Chris Perry. American Council for an Energy-Efficient Economy (ACEEE). October 2020. Electrifying Space Heating in Existing Commercial Buildings: Opportunities and Challenges. Accessed at: https://www.aceee.org/press-release/2020/10/report-electrifying-heating-existing-commercial-buildings-could-cut-their

[35] Reem Rayef. National Resources Defense Council. April 2020. California's Grid is Ready for All-Electric Buildings. Accessed at: https://www.nrdc.org/experts/merrian-borgeson/californias-grid-ready-all-electric-buildings

[36] National Renewable Energy Laboratory (NREL). June 2021. Battery Storage for Resilience. Accessed at: https://www.nrel.gov/docs/fy21osti/79850.pdf

[37] Kelsey Misbrener. Solar Power World. August 2021. California Energy Commission mandates solar + storage on new commercial buildings. Accessed at: https://www.solarpowerworldonline.com/2021/08/california-energy-commission-mandates-solar-storage-new-commercial-buildings/

[38] EIA. 2018. Updated Buildings Sector Appliance and Equipment Cost and Efficiencies. Appendix C. Accessed at: https://www.eia.gov/analysis/studies/buildings/equipcosts/pdf/full.pdf

Table 6 GHG Emissions Reductions from Metric CE-1.c

Inputs and Assumptions		
Ordinance implementation year	2025	
Natural gas emissions factor (MT CO_2e/therm)[39]	0.00531	
Methane Leakage (% of NG delivered)[40]	2.8%	
Methane Leakage EF (MT CO_2e/therm)	0.0525	
Conversion Factor (kWh/therm)	29.3001	
Natural gas usage that comes from water heater[41]	28%	
Natural gas usage that comes from space heating/cooling[42]	42%	
Average natural gas water heater lifespan[43]	10	
Average natural gas HVAC lifespan[44]	23	
Average natural gas stove lifespan[45]	12	
Assumed noncompliance[46]	90%	
GHG Emissions Reductions Calculations		
Year	**2030**	**2045**
Commercial NG usage after new building electrification ordinance is implemented (therms)	23,411,092	23,411,092
Percentage of buildings with replaced water heaters, assuming some non-compliance	45%	90%
NG reduction from water heater replacement (%)	13%	25%
Percentage of commercial buildings with replaced HVAC, assuming some non-compliance	4%	10%
NG reduction from HVAC replacement (%)	2%	4%
Total percent reduction of NG (%)	14%	29%
Total NG saved (therms)	3,332,829	6,828,235
Emissions from total NG saved (MT CO_2e)	17,702	36,267.83

[39] Appendix A.

[40] Appendix A.

[41] Decarbonization of Heating Energy Use in California Buildings (figure 2, page 8) https://www.synapse-energy.com/sites/default/files/Decarbonization-Heating-CA-Buildings-17-092-1.pdf

[42] Decarbonization of Heating Energy Use in California Buildings (figure 2, page 8) https://www.synapse-energy.com/sites/default/files/Decarbonization-Heating-CA-Buildings-17-092-1.pdf

[43] EIA. 2018. Updated Buildings Sector Appliance and Equipment Cost and Efficiencies. Appendix C. Accessed at: https://www.eia.gov/analysis/studies/buildings/equipcosts/pdf/full.pdf

[44] EIA. 2018. Updated Buildings Sector Appliance and Equipment Cost and Efficiencies. Appendix C. Accessed at: https://www.eia.gov/analysis/studies/buildings/equipcosts/pdf/full.pdf

[45] EIA. 2018. Updated Buildings Sector Appliance and Equipment Cost and Efficiencies. Appendix C. Accessed at: https://www.eia.gov/analysis/studies/buildings/equipcosts/pdf/full.pdf

[46] Based off the percent of energy efficiency requirements for HVAC unit being met or exceeded - this gives indication of likely hood that a piece of equipment will be upgraded with a more efficiency version. In most cases an electric alternative is the more efficient version. See CPUC's Final Report: 2014-16 HVAC Permit and Code Compliance Market Assessment (Work Order 6) Volume I – Report, accessed at: http://www.calmac.org/publications/HVAC_WO6_FINAL_REPORT_VolumeI_22Sept2017.pdf

Methane Leakage Avoided (therms)	93,319	191,191
Emissions from Methane Leaked (MT CO_2e)	4,901	10,041
Electricity usage from converting to electric (kWh)	32,550,741	66,689,323.94
Weighted electricity EF (MT CO_2e/kWh)	4.59286E-06	-
Emissions from converted electricity usage (MT CO_2e)	149.5010019	-
Total Commercial emission reductions (MT CO_2e)[47]	**22,454**	**46,309**

Metric CE-1.d. 3Cprime Opt-in

Electricity in the County is currently supplied by Pacific Gas & Electric (PG&E), Southern California Edison (SCE),and Central Coast Community Energy (3CE), a Community Choice Aggregation (CCA). CCAs are public, non-profit agencies that procure electricity for a region or community in place of the incumbent utility provider, in this case PG&E or SCE. While 3CE determines how electricity will be procured to meet customer demand, PG&E and SCE are still responsible for delivering that electricity to 3CE customers via the existing electrical grid. 3CE offers two carbon-free electricity options with lower GHG emissions rates than PG&E and SCE: 3Cchoice, made up of 31% renewables, and 3Cprime, made up of 100% renewable electricity from solar and wind.[48] Customers in Santa Barbara County are automatically enrolled in 3CE 3Cchoice, but have the option to opt-up to 3Cprime, to opt-out to receive electricity directly from PG&E or SCE, or to procure electricity wholesale directly from electricity generators (i.e., through direct access).

Typical California CCA opt-out rates are 0% for municipal accounts, 5% for residential accounts, and 15% for commercial and industrial accounts.[49] Switching more customers, particularly direct access customers[50], to 3CE reduces electricity emissions in the short term and increases the GHG reduction impact of Measure CE-1, when natural gas end-uses are converted to electricity. Measure CE-1 and its actions aim to reduce opt-out rates to 4% for both residential and commercial customers.

The methods and assumptions used to calculate the GHG emissions reductions associated with this metric are shown in the table below. To support these lower opt-out rates, the County will start by working with 3CE to identify barriers to 3CE opt-in. Assuming a implementation year of 2024, GHG emissions reductions were calculated by subtracting GHG emissions attributed to electricity usage after reducing the opt-out rate from GHG emissions attributed to electricity usage under the current

[47] See Calculations for Measure CE-1

[48] Central Coast Community Energy (CCCE). 2021. Opt-up. Accessed at: https://3cenergy.org/opt-up/

[49] County of Butte. July 2018. Community Choice Aggregation Initial Feasibility Study. Page 18. Accessed at: http://buttecounty.granicus.com/MetaViewer.php?view_id=2&clip_id=512&meta_id=87147

[50] Direct Access is electricity bought from an electric service provider instead of a utility company. https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/learn-more-about-costs-and-rates

opt-out rate. GHG emissions for 3Cprime were calculated by multiplying the community's total residential/commercial electricity usage by the weighted average residential/commercial electricity emissions factor. Weighted average electricity emissions factors were calculated per the equation below:

$$EF_{scenario\ x} = 3CE\ EF * (1 - non\ 3CE\ usage\ rate_{scenario\ x}) + non\ 3CE\ EF * non\ 3CE\ usage\ rate_{scenario\ x}$$

Table 7 GHG Emissions Reductions from Metric CE-1.d

Inputs and Assumptions		
Electricity Energy Package	3CE Prime	
Year of Implementation	2024	
% Opt-out rate[51]	4%	
GHG Emissions Reductions Calculations		
Year	**2030**	**2045**[52]
Forecasted Electricity Purchased + T&D (kWh)	577,865,722.39	588,590,027.78
Weighted Emission factor (MT CO_2e/kWh)	0.00	-
Emissions in Current Program (MT CO_2e)	66,351.41	-
Emissions with Measure Implementation (MT CO_2e)	2,654.06	-
Emissions Reduced (MT CO_2e)	**63,697.35**	**-**

Metric CE-1.e Building Energy Efficiency Program

Action CE-1.7 commits the County to establishing a building performance standard ordinance. building energy efficiency programs can have the effect of improving building performance for participating entities as shown in the City of Portland wherein a 93% compliance rate with the building energy efficiency program has led to 3.6% improved energy use efficiency within residential buildings and 5% in commercial buildings.[53] Building efficiency is qualified by programs promoting weatherization, insulation, double-pane windows, HVAC sealing, and general improvements to a building envelope. A highly efficient building envelope reduces the heating and cooling load and subsequent GHG emissions associated with building operations.[54] The actions under this metric can achieve a significant GHG emissions reductions for the County.

The methods and assumptions used to calculate the GHG emissions reductions associated with these actions are shown in the table below. The County expects significant reductions from these actions based on several reasonable assumptions. The reductions accounted for are a product of natural gas and electricity reductions from avoided leakage and use respectively. The 2023

[51] The assumption here is that a reasonbable conservative estimate leaves a 4% opt out rate. Based rate comparison of SCE base rate and CPA rates, generally there is ~0% difference between CPA Clean power and SCE base rate (https://www.sce.com/sites/default/files/inline-files/SCE%20and%20CPA%20Joint%20Rate%20Comparison%20Effective%20June%201%202020.pdf). Therefore, assumed that opt-out will be low. 96% of 1 million CPA customers across LA and VTA Counties remain in the default rate product they were enrolled in. Claremont (next to Montclair) saw only a 2% opt-out rate.

[52] Already accounts for Title 24 Reductions. 2040 emissions reduced equate to 21,494.99 MT CO2e

[53] City of Portland. November 2019. 2018 Building Energy Performance Reporting Results. Accessed at: https://www.portland.gov/sites/default/files/2019-11/pepr_2018buildingperformancereport_final_0.pdf

[54] *Energy-Efficient Building Envelope* Advanced energy efficient building envelope design is essential to reducing building energy consumption. https://www.sciencedirect.com/topics/engineering/energy-efficient-building-envelope#:~:text=Building%20envelopes%20of%20energy%2Defficient,consumption%20(Aksamija%2C%202015).

residential and commercial implementation year for the building efficiency program as well as an assumed 0.6% annual efficiency gain (for electricity and natural gas use) based on a report around building efficiency programs published by the EPA, are the basis of this calculation.[55] To avoid double counting of reductions the gained efficiencies from this program were calculated using forecasted totals of electricity and natural gas use with an assumed successful implementation of electrification programs (Metrics CE-1.a, CE-1.b, and CE-1.c). Under these assumptions the potential reductions amount to 10,377 MT CO2e in 2030 and 14,307 MT CO2e in 2045 for residential and commercial buildings.

Table 8 GHG Emissions Reductions from Metric CE-1.e

Inputs and Assumptions		
NG EF (MT CO_2e/therm)	0.005311	
Methane Leakage (% of NG delivered)	2.8%	
Methane Leakage EF (MT CO_2e/therm)	0.0525	
Electricity T&D Losses (% of total delivered)	5%	
Total Annual Energy Savings Achievable	0.6%[56]	
Residential Implementation Year	2023	
Commercial Implementation Year	2023	
GHG Emissions Reductions Calculations		
Year	**2030**	**2045**
Residential Reductions		
Natural Gas Reductions		
Residential NG usage after new building electrification ordinance is implemented (therms)	20,819,573	20,819,573
Residential NG avoidance with existing building electrification reach code (therms)	3,332,829	6,828,235
Residential NG usage after existing electrification and new building electrification (therms)	17,486,744	13,991,338
Avoided NG from Energy Efficiency Program (therms)	703,841	965,402
Emissions from NG saved (MT CO_2e)	3,738	5,128
Methane Leakage Avoided (therms)	19,708	27,031
Emissions from Methane Leaked (MT CO_2e)	1,035	1,420
Electricity Reductions		
Forecasted residential electricity usage (kWh)	290,188,223	292,615,075
Electricity Usage from electrification measures (kWh)	46,209,460	100,431,934
T&D from new electricity usage from electrification measures (kWh)	16,147,089	18,866,256

[55] Consistently funded, well-designed efficiency programs are cutting electricity and natural gas load—providing annual savings for a given program year of 0.15 to 1 percent of energy sales. These savings typically will accrue at this level for 10 to 15 years. These programs are helping to offset 20 to 50 percent of expected energy growth in some regions without compromising end-user activity or economic wellbeing. https://www.epa.gov/sites/default/files/2015-08/documents/napee_chap6.pdf

[56] Consistently funded, well-designed efficiency programs are cutting electricity and natural gas load—providing annual savings for a given program year of 0.15 to 1 percent of energy sales. These savings typically will accrue at this level for 10 to 15 years. These programs are helping to offset 20 to 50 percent of expected energy growth in some regions without compromising end-user activity or economic wellbeing. https://www.epa.gov/sites/default/files/2015-08/documents/napee_chap6.pdf

Total residential electricity usage + T&D Losses (kWh)	352,544,771	411,913,266
Avoided electricity from Energy Efficiency Program (kWh)	14,189,927	28,422,015
Electricity Emission Factor (MT CO_2e/kWh)	0.0000046	-
Emissions from avoided electricity use (MT CO_2e)	65	-
Residential Sub-Total		
Total Residential Reductions (MT CO_2e)	4,839	6,547
Commercial Reductions		
Commercial NG usage after new building electrification ordinance is implemented (therms)	23,411,092	23,411,092
Commercial NG avoidance with existing building electrification reach code (therms)	3,332,829	6,828,235
Commercial NG usage after existing electrification and new building electrification (therms)	20,078,263	16,582,857
Avoided NG from Energy Efficiency Program (therms)	808,150	1,144,217
Emissions from NG saved (MT CO_2e)	4,292	6,077
Methane Leakage Avoided (therms)	22,628	32,038
Emissions from Methane Leaked (MT CO_2e)	1,188	1,683
Forecasted commercial electricity usage (kWh)	260,969,399	268,773,508
Electricity Usage from electrification measures (kWh)	37,157,684	81,168,286
T&D from new electricity usage from electrification measures (kWh)	14,310,100	16,797,206
Total residential electricity usage + T&D Losses (kWh)	312,437,182	366,739,000
Avoided electricity from Energy Efficiency Program (kWh)	12,575,597	25,304,991
Electricity Emission Factor (MT CO_2e/kWh)	0.0000046	-
Emissions from avoided electricity use (MT CO_2e)	58	-
Total Commercial Reductions (MT CO_2e)	5,539	7,760
Totals		
Total Reductions Residential and Commercial (MT CO_2e)	**10,377**	**14,307**

3 Transportation Measures

Reducing transportation emissions and becoming a carbon neutral county means reducing the number of miles driven by fossil fuel-powered vehicles, particularly passenger vehicles, which account for 37% of GHG emissions in the County of Santa Barbara in 2018. The County's transportation strategy consists of a multi-pronged approach for incentivizing alternatives to fossil fuel-powered vehicle trips, including shifting transportation mode share[57] to active transportation and public transit options; electrifying passenger and commercial vehicle trips, enhancing transportation policy infrastructure planning, and decarbonizing off-road equipment. This CAP prioritizes reducing vehicle miles travelled (VMT) by improving active and public transportation mode share, achieving land use changes that reduce VMT, and shifting remaining VMT to electric vehicles. While, in theory, 100% electrification of all vehicles in the County of Santa Barbara could achieve zero-emissions in the transportation sector without reducing VMT, the County recognizes that cars and roadways carry huge amounts of embodied emissions (emissions associated with the construction of cars and roads)[58] not accounted for in the inventory, over which the County has little control.[59] Reducing VMT carries additional benefits outside of GHG emissions reductions as well, including reduced congestion, reduced space needed for roadways and parking, local economic revitalization, and lifestyle improvements.[60] Based on this strategy, the CAP's transportation measures consist of the following:

Measures:

- TR-1: Increase the use of zero emission vehicles
- TR-2: Increase affordable housing and mobility options
- TR-3: Decarbonize off-road equipment

Metrics:

- TR-1.a Increase passenger EV car ownership to 25% by 2030 and 90% by 2045
- TR-1.b Increase commercial EV car use to 15% by 2030 and 75% by 2045
- TR-1.c Install at least 375 publicly available EV chargers by 2030
- TR-2.a Increase public transit mode share by 20% by 2030 and 50% by 2045
- TR-2.b Increase bike-mode share 1% by 2030 and 5% by 2045
- TR-6.a Decarbonize 21% of off-road equipment by 2030 and 38% by 2045

To achieve a 25% passenger Electric Vehicle (EV) and 15% commercial EV car ownership by 2030, and 90% passenger EV and 75% commercial EV car ownership by 2045 (Measure TR-1), the County

[57] Mode share in this context is used to refer to percentage of passenger trips that can be attributed to one transportation mode or another. For example, 5% active transit mode share means that 5% of all passenger trips are taken using active transit modes (walking, biking, scootering, etc.). Importantly, mode share does not refer to percentage of passenger VMT that can be attributed to a specific transportation mode, since not all trips are the same length. To convert from mode share to percent of VMT, some assumption about the length of trip in each type of mode must be applied.

[58] Embodied emissions are associated with energy used in the extraction, processing, and transportation of materials.

[59] Mark Mills. August 2021. The tough calculus of emissions and the future of EVs. Accessed at: https://techcrunch.com/2021/08/22/the-tough-calculus-of-emissions-and-the-future-of-evs/

[60] Richard Campbell and Margaret Wittgens. March 2004. The Business Case for Active Transportation. Accessed at: http://thirdwavecycling.com/pdfs/at_business_case.pdf

plans to provide incentivized options and infrastructure for Zero Emission Vehicles (ZEV) including charging infrastructure.

While the County cannot require its residents or businesses to buy ZEVs, Measure TR-1 will ensure the infrastructure and incentives are present in the County to begin to remove present barriers to passenger and commercial ZEV adoption.

Measure TR-2 is quantified consistent with the calculations conducted for the Connected 2050 RTP/SCS projects to reduce VMT 14% by 2030 and 28% by 2045. Included activities and actions relevant to this plan are included throughout all transportation measures. Measure TR-2 also aims to increase key components of transit-oriented development through affordable housing increases around transit. This measure supports the others in achieving reduced commuter trips via single passenger vehicles.

To achieve a greater reliability in public transit, the County plans to improve public and shared transit programs and infrastructure. This measure prioritizes shared and public transit in the County, makes transit more convenient, and reduces the time it takes to reach a destination via transit—important determining factors for shared and public transit mode share.

Lastly, Measure TR-2 aims to achieve greater mode-shifts to active transportation as well as low-stress and convenient infrastructure. Infrastructure needs include bikeways, sidewalk improvements, and expansions of both kinds of infrastructure to all areas of the County. Once the infrastructure is available and stress/comfort is not an issue, heightened accessibility to alternatives suggests more people will choose active transportation.

Measure TR-3 directs County efforts and activity in decarbonizing off-road equipment.[61]

[61] Off road equipment includes vehicles and equipment that operates not on traditional roadways https://ww2.arb.ca.gov/sites/default/files/offroadzone/pdfs/offroad_booklet.pdf

Measure TR-1: Increase the use of zero emission vehicles

	Metric/Action #	Metric/action	Anticipated Reduction by Year (MT CO_2e)
Metrics	TR-1.a	Increase passenger Electric Vehicle car ownership to 25% by 2030 and 90% by 2045	2030: 76,709 2045: 289,491
	TR-1.b	Increase commercial Electric Vehicle car use to 15% by 2030 and 75% by 2045	2030: 10,898 2045: 24,237
	TR-1.c	Install at least 375 publicly available EV chargers by 2030	Supportive
Actions	TR-1.1	Support the development of the Central Coast Zero Emission Vehicle Strategy by SBCAG. Develop and adopt a County-specific ZEV plan to increase adoption and utilization of zero-emission vehicles and charging infrastructure in County operations.	Supportive
	TR-1.2	By 2024, develop and adopt an ordinance that increases EV charging readiness requirements (over Title 24) for new residential and commercial development.	Supportive
	TR-1.3	Promote and provide education and assistance to community members about the local and statewide incentives for buying electric vehicles, private and shared electric scooters and bikes through educational campaigns, outreach events and partnerships like Electric Drive 805 and the Central Coast Clean Cities Coalition.	Supportive
	TR-1.4	Partner with local agencies and businesses to develop an educational program for commercial fleet owners to assist them with the purchase and maintenance of zero emission vehicles and fueling and charging infrastructure.	Supportive
	TR-1.5	Lead or support efforts to obtain external funding to facilitate the procurement of electric vans and charging infrastructure for CalVans, a vanpool service provider. Evaluate the feasibility of installing charging stations for CalVans and other carpool vehicles at County facilities.	Supportive
	TR-1.6	Partner with community groups to obtain external funding for a pilot bike-share program in low-income communities and to connect low-income communities with the E-Bike Purchase Incentive Program through CalBike.	Supportive
	TR-1.7	Transition the County medium and heavy-duty fleet vehicles to zero emission vehicles by 2035.	Supportive
	TR-1.8	Expand County-owned and operated electric vehicle charging stations for fleet and public use to at least 150, focusing on increasing access to multifamily households and rural communities, by 2030.	Supportive
	TR-1.9	Maintain and advertise a streamlined electric vehicle infrastructure permitting process in accordance with SB 1236 and SB 970. Dedicate staff	Supportive

Metric/Action #	Metric/action	Anticipated Reduction by Year (MT CO_2e)
	time to ensure continuity of the process.	
TR-1.10	Leverage public-private partnerships and collaboration with local businesses to install 225 publicly accessible chargers needed throughout the County.	

Metrics TR-1.a and TR-1.b Increased Passenger and Commercial EV Ownership

Research from the Transportation Sustainability Research Center at the University of California – Berkeley shows that car share programs lower vehicle ownership and overall VMT.[62] While a majority of car share members use the program to add or replace vehicle trips (leading generally to small VMT increases), a minority of members (2-5%) use car share as a replacement for vehicle ownership (leading generally to larger VMT reductions). The net effect is an overall decrease in vehicle ownership, VMT, and GHG emissions. Approximately one car share vehicle replaces seven to eleven cars and VMT is reduced, on average, between 6% to 16% per car share household assuming one-way usage. A similar application was used for Action TR-1.3 and TR-1.6 in promoting shared electric scooters and bikes.

Community and stakeholder engagement around ZEV adoption will be critical in helping the County understand existing barriers to ZEV adoption, and in helping the community share in the benefits of ZEV adoption. Actions TR-1.1 and TR-1.3 commit the County to working with local community-based organizations to engage populations where ZEV ownership is low (such as among renters or low-income residents) and conducting education and outreach around the benefits of ZEV ownership and available incentives that can make ZEV ownership more affordable in the short-term.

Action TR-1.5 commits the County to providing education and incentives, for fleet vehicles and charging infrastructure through CalVans. Action TR-1.7 commits the County to adopting ZEV fleet vehicles by 2045. These actions help accelerate the County's ZEV adoption rates.

Metric TR-1.c EV Charging Infrastructure

Adding and supporting the addition of electric vehicle chargers within Santa Barbara County will be the main mechanism through which the County will encourage zero-emission vehicle (ZEV) adoption within the community. This metric of 375 additional public EV chargers by 2030 is an important component to meeting the emissions reductions possible through measure TR-1. The state has established a goal of putting 5 million ZEVs on the road by 2030. However, Governor Newsom's recent signing of executive order N-79-20 calls for 100% of passenger vehicle sales to be all-electric by 2035. This new executive order puts the total number of ZEVs on the road by 2035 at approximately 15 million.[63] Based on the current number of vehicles registered in California and a 2% growth rate per year, 15 million ZEVs accounts for 35% of total passenger vehicles in 2035. The

[62] Elliot Martin and Susan Shaheen. Transportation Sustainability Research Center at University of California, Berkeley. July 2016. Impacts of Car2Go on Vehicle Ownership, Modal Shift, Vehicle Miles Travelled, and Greenhouse Gas Emissions: An Analysis of Five North American Cities. Accessed at: http://innovativemobility.org/wp-content/uploads/2016/07/Impactsofcar2go_FiveCities_2016.pdf

[63] Susan Carpenter. Spectrum News 1. October 2020. What it will take to get 100% EV sales in California. Accessed at: https://spectrumnews1.com/ca/la-west/transportation/2020/10/05/what-it-will-take-to-sell-100--evs-in-california

County has established its own goal aiming to reach 25% passenger ZEV adoption by 2030, and 90% by 2045. As of 2020, approximately 1% of passenger vehicles in Santa Barbara County were ZEVs.[64]

While the County cannot require residents to buy and use ZEVs rather than gasoline or diesel-powered vehicles, the County will take actions to incentivize this behavior change and support this level of ZEV adoption. The County's primary target to achieve this measure is to provide 375 additional public electric vehicle chargers in line with the leading ZEV counties in California, such as Alameda, Santa Clara, and Marin counties and consistent with state legislation assessing the gap to needed ZEV charging infrastructure.[65]This number was reached through a proportional calculation of needed charging infrastructure given the County's population and it's relative proportion to the state. Actions TR-1.8 and TR-1.10 commits the County to surveying the existing network of publicly accessible electric vehicle chargers including stations in all of Santa Barbara County (the incorporated and unincorporated areas) to correspond with DMV data to determine priority locations for installation of new chargers.

The methods and assumptions used to calculate the GHG emissions reductions associated with metrics TR-1.a, 1.b, and 1.c are shown in the table below. The GHG emissions reduction benefits associated with increased use of ZEVs were quantified in line with SBCAG's Connected 2050 Regional Transportation Plan Sustainable Communities Strategy which includes targets based on Executive Order N-79-20.[66] The Connected 2050 projects scoped under the ZEV Readiness subsection align with state-mandated Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) reductions.[67] The quantification of reductions is based on an estimation of registered vehicles in Santa Barbara County as well as a per capita proportion of vehicles to scale emissions projections through 2045. Metric TR-1.c supports the transition to more ZEVs with scaled charging infrastructure to meet increased demand. Emissions reductions were estimated with the targeted percentage of electric vehicles for each horizon year and the associated electricity emissions compared to the adjusted forecast. Based on successful implementation of Metric CE-1.c (carbon-free electricity use in buildings) the County is projected to gain significant reductions from these metrics.

Table 9 GHG Emissions Reductions from Metrics TR-1.a, TR-1.b, and TR-1.c

Inputs and Assumptions	
Total registered vehicles in Santa Barbara County (2020)	359,492
Registered EVs in Santa Barbara County (2020)	16,239
2019 population	444,829
Cars per capita	0.81
Cars per public EV charger	34.19
EV chargers in Santa Barbara County	475[68]

[64] California Department of Motor Vehicles (DMV). January 2020. Fuel Type by County as of 11/2020. Accessed at: https://www.dmv.ca.gov/portal/uploads/2020/09/MotorVehicleFuelTypes_City_01012020.pdf

[65] AB 2127 directs the CEC to assess needed charging infrastructure from which the number of chargers in the County was inferred. Accessed here: https://www.energy.ca.gov/programs-and-topics/programs/electric-vehicle-charging-infrastructure-assessment-ab-2127

[66] Executive Order N-79-29 requiring 100% of new vehicles sold by 2035 to be ZEV's enforced through the State Air Resources Board. Accessed here: https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf

[67] SBCAG Connected 2050 ZEV Readiness (page 6-21 through 6-24). April 2021. Accessed here: http://www.sbcag.org/uploads/2/4/5/4/24540302/connected_2050_final.pdf

[68] Current EV chargers in Santa Barbara County Accessed here: https://www.plugshare.com/directory/us/california

Passenger GHG Emissions Reductions Calculations		
Year	**2030**	**2045**
Passenger ICE VMT after RTP/SCS VMT reductions (miles)	1,388,124,618	1,311,291,580
Passenger VMT EF (MT CO_2e/VMT)	0.00030583	0.00027542
EV adoption beyond baseline	18.2%[69]	80.2%
Emission Reduction from EV increased adoption (MT CO_2e)	77,136	289,491
EV electricity usage (kWh/mile)	0.368515183	0.369266995
EV electricity usage from increased EV adoption (kWh)	92,945,312	388,134,442
Weighted electricity EF (MT CO_2e/kWh)	0.000004593	0.000000000
Emissions from electricity usage for EVs	427	-
Total Reductions (MT CO_2e)	**76,709**	**289,491**
Commercial GHG Emissions Reductions Calculations		
Year	**2030**	**2045**
Commercial ICE VMT after RTP/SCS VMT reductions (miles)	111,578,191	67,328,608
Commercial VMT EF (MT CO_2e/VMT)	0.00113061	0.00109449
EV adoption	8.7%	32.9%
Emission Reduction from EV increased adoption (MT CO_2e)	10,944	24,237
EV electricity usage (kWh/mile)	1.032823455	1.019320272
EV electricity usage from increased EV adoption (kWh)	9,997,327	22,572,330
Weighted electricity EF (MT CO_2e/kWh)	0.000004593	0.000000000
Emissions from electricity usage for EV's	46	-
Total Reductions (MT CO_2e)	**10,898**	**24,237**
Electric Vehicle Charger Count Calculations		
Population[70]	143,866	151,793
Total registered vehicles	116,266	122,673
Registered ZEVs goal	29,067	110,406
Additional public EV chargers needed to support ZEV goal	**375**	**2,754**

[69] Total is 18.2% + 5%= 23.2%

[70] Appendix A

Measure TR-2: Increase affordable housing and mobility options

	Metric/Action #	Metric/Action	Anticipated Reduction by Year (MT CO_2e)
Metric	**TR-2.a**	Decrease vehicles miles travelled by 14% by 2030 and 28% by 2045 by increasing public transit mode share, increasing bike mode share, and implementing land use/development strategies consistent with the Connected 2050 RTP/SCS.	2030: 90,473 2045: 169,106
Actions	TR-2.1	Accelerate the production of affordable housing by updating and adopting the Housing Element and Zoning Code; by exploring alternative strategies to create and preserve affordable housing, such as co-ops, housing or land trusts and available County-owned land; and by streamlining project review with objective design standards.	Supportive
	TR-2.2	Prioritize and implement the programs and projects from the Active Transportation Plan with the highest VMT reduction potential. Identify areas for road diets and complete streets along roadways in urban areas and repurpose the additional lanes for active transportation infrastructure including sidewalks and bike lanes.	Supportive
	TR-2.3	Reduce trips and trip lengths of food distributors by supporting local businesses that enhance access, equity, and resilience in the regional food system, such as cooperative food kitchens. Reduce trips and trip lengths of food consumers by leading or supporting efforts to obtain external funding to increase local food cultivation and access through community gardens, food forests, home gardening, community farming, and more.	Supportive
	TR-2.4	Lead or support the establishment of a regional transportation VMT bank to identify and direct funding to unfunded transportation infrastructure and programs.	Supportive
	TR-2.5	Partner with SBCAG and cities to obtain an annual subscription for travel data analytics to inform traffic management, long-range planning, and emission reduction strategies.	Supportive
	TR-2.6	Partner with stakeholders to solicit shared use mobility services to facilitate connectivity and equitable access to mobility and transit services in the region, including personal mobility devices and shared-use mobility services.	Supportive
	TR-2.7	Partner with transit providers to increase transit service and provide subsidized or discounted transit passes for low-income commuters.	Supportive
	TR-2.8	Work with the LOSSAN Rail Corridor Agency to increase commuter rider services.	Supportive
	TR-2.9	Convert underutilized County parking facilities to support commuter park and-ride and electric bike share.	Supportive
	TR-2.10	Develop an ordinance that requires large employers, including the County, to meet vehicle trip and emission reduction goals, or pay non-compliance fees to expand transit and commuter services and resources. Partner with	Supportive

	SBCAG to work with large employers within the unincorporated County achieve a 50-80% telework participation rate by eligible employees able to work remotely consistent with Connected 2050 RTP/SCS.	
TR-2.11	Incentivize County employees to reduce the number of car trips by increasing rewards for carpooling, transit, and non-vehicular commuting. Conduct a feasibility study to implement employee parking fees. Partner with CalVans to promote use of the Vanpool Program to employers and employees, including the County. Consider offering incentives to increase rider participation for CalVans and transit.	Supportive
TR-2.12	Work with SBCAG to increase internet access and speed to support telecommuting and remote workforce participation, especially in rural areas of the County.	Supportive

Metric TR-2.a Decrease Vehicles Miles Travelled

Effective implementation of actions under Measure TR-2 is aligned with the RTP/SCS programs. The Connected 2050 plan is the County's guiding long range regional planning document when it comes to RTP/SCS implementation with listed projects focused on active transportation and mode share shifts.[71] Consistent with the RTP/SCS a majority of VMT reductions will come from changes to land use and growth policies. In order to achieve these reductions, the County will need to implement the county specific projects found in the RTP/SCS and work collaboratively with the cities to complete their projects as well. Many of the zoning and land use policies are implemented through the General Plan. The RTP/SCS modeling results provide additional evidence for the ability of the region to reduce VMT through improved land use and growth management.

Transit and Active Transportation Mode Shift Evidence

Calculations for these metrics align with the Connected 2050 plan and relevant projects to Santa Barbara County in other counties suggests that significant investment in public transit can increase public transit mode share. The City of San Francisco leads the state with 26% transit mode share in 2017 (pre-COVID).[72, 73] The City of Seattle has documented significant increases in public transit mode share to 48% in 2017 (pre-COVID).[74] Key strategies employed by these cities include significant expansions of transit service lines, designated streets or lanes for bus lines to decrease headways, implementation of taxes to support transit, reduced parking availability, and user taxes. Santa Barbara County will follow the lead of San Francisco and Seattle and implement all of these strategies in under Measure TR-2. Quantification estimates that given full implementation of the public transit improvement actions, the average of Seattle and San Francisco's public transit mode share (29%) is more aggressive for Santa Barbara County by 2030, given the barriers to public transit that Santa Barbara County currently faces. More realistic goal set forth by this measure is public transit mode share of 1% by 2030.

[71] For a full list of the projects please see the Connected 2050 plan. Accessed here: http://www.sbcag.org/uploads/2/4/5/4/24540302/connected_2050_final.pdf

[72] San Francisco Municipal Transportation Agency (SFMTA). December 2021. Sustainable Transportation Mode Share. Accessed at: https://www.sfmta.com/reports/sustainable-transportation-mode-share

[73] Pre-COVID numbers are referenced here with the understanding that public transit usage during the COVID pandemic were lower than normal and are likely to increase again assuming a return to pre-COVID conditions.

[74] Commute Seattle. December 2021. 2019 Mode Split Study Report. Accessed at: https://www.commuteseattle.com/resource/2019-mode-split-study/

In general, increases and improvements to public transportation systems reduce a jurisdiction's dependence on fossil fuels and reduce VMT. The best ways to improve a transit system and reduce driving is to expand its geographical reach and increase the frequency and reliability of transit service. Each new mile of transit usage reduces VMT on much more than a 1:1 basis. Approximately 1% increase in transit frequency saves 0.5% in VMT.[75] Further, improving transit access has the potential to shift trips from cars to transit, which may reduce vehicle trips, VMT, and greenhouse gas emissions, with time spent getting to a transit stop being the key indicator of transit access.[76]

Walking, bikes, e-bikes, scootering, and other active transportation modes can have a strong impact on cities' GHG emissions, with the potential to cut urban transportation emissions up to 11% in cities that make a strong commitment to promoting bicycle travel.[77] Nationally, 16.4% of vehicle trips were one mile or less in 2017, a distance easily travelled on foot or by bicycle.[78] The County's existing Connected 2050 Plan identifies a number of programs and projects, such as 50 added miles of bike lane buildout, sidewalk buildouts, intersection improvements, Safe Routes to School program expansion, and education programs, that will make the active transportation network in the County more connected, accessible, and safe.

Land Use and Growth Policy Evidence

The bulk of the emissions reductions that can be attributed to Connected 2050 projects are sourced to growth management and land use within the SCS.[79] A very small amount of VMT reduction within the RTP/SCS is attributable to alternative transportation or mode share shifts. The Connected 2050 plan forecasts a sprawl-type of development pattern to 2050, including in the unincorporated areas of the County. When the growth policies in the SCS are applied including more compact development in urban areas, more housing on the South Coast, more commercial development in the urban north county – VMT is drastically reduced, especially in the unincorporated area. The implementation of and evidence for these reductions is backed by Santa Barbara County General Plan commitments outlined in the Circulation and Land Use Elements.[80] The previous General Plan had no mention of the Connected 2050 RTP/SCS projects specifically as the RTP/SCS was released in 2021. The current General Plan is being updated to reflect the RTP/SCS strategies, including land use and zoning updates.

The methods and assumptions used to calculate the GHG emissions reductions associated with this metric are explained further here and shown in the table below. In order to estimate the mode shift potential associated metrics TR-2.a, quantification was done in line with the Connected 2050 calculations based on mode shift to active transportation, public transit, VMT reduction associated with land use development changes/growth policies. Due to these changes planned for in Connected 2050, SBCAG has calculated a 14% decrease in VMT by 2030 and a 28% VMT by 2045.

[75] Todd Litman. Victoria Transport Policy Institute. August 2021. Evaluating Public Transit Benefits and Costs Best Practices Guidebook. Accessed at: https://www.vtpi.org/tranben.pdf

[76] California Air Resources Board (CARB). August 2017. Methods to Assess Co-Benefits of California Climate Investments: Vehicle Miles Travelled. Accessed at: http://ww2.arb.ca.gov/sites/default/files/auction-proceeds/carb_vehicle_miles_traveled.pdf

[77] Jacob Mason et al. Institute for Transportation & Development Policy and the University of California, Davis. November 2015. A Global High Shift Cycling Scenario. Accessed at: https://itdpdotorg.wpengine.com/wp-content/uploads/2015/11/A-Global-High-Shift-Cycling-Scenario_Nov-2015.pdf

[78] National Household Travel Survey. December 2021. Population Vehicle Trips Statistics. Accessed at: https://nhts.ornl.gov/vehicle-trips

[79] Outlined in Appendix B and C of the Connected 2050 plan are the projects and projected emissions reductions along with methodologies. http://www.sbcag.org/uploads/2/4/5/4/24540302/connected_2050_appendices_final.pdf

[80] Per the Circulation Element: transportation planning shall be coordinated with the land use planning and policies of the region. Local regional transportation systems shall be designed to maintain and enhance the quality of life in the region. https://www.countyofsb.org/954/Comprehensive-Plan

Therefore, these percent reductions were made from the projected VMT for 2030 and 2045 to calculate the reductions in emissions. The implementation of RTP/SCS projects is essential to these emissions reductions and growth management and land use.

Table 10 GHG Emissions Reductions from Metric TR-2.a (RTP/SCS Projects)

Inputs and Assumptions		
2050 Connected Baseline Year	2015[81]	
RTP/SCS 2050 Reduction target	28%[82]	
GHG Emissions Reductions Calculations		
Year	**2030**	**2045**
RTP/SCS VMT Reduction Target[83]	14%	28%
Baseline VMT (miles)	1,870,933,739	2,165,431,149
Combined EF (MT CO2e/VMT) [84]	0.000345	0.000279
VMT reduced with RTP/SCS implementation (miles)	261,930,723	606,320,722
Total Reductions (MT CO2e)	**90,473.35**	**169,106.18**

Measure TR-3: Decarbonize off-road equipment

	Metric/Action #	Metric/Action	Anticipated Reduction by Year (MT CO_2e)
Metric	TR-3.a	Decarbonize 21% of off-road equipment by 2030 and 38% by 2045	2030: 15,396 2045: 27,619
Actions	TR-3.1	Conduct a study to determine the feasibility of reducing emissions from major off-road equipment fleet operators.	Supportive
	TR-3.2	Develop an ordinance to phase out light duty gasoline and diesel-powered off-road equipment, including the County's, at time of replacement where feasible.	Supportive
	TR-3.3	Support the expansion of programs such as the SBCAPCD Carl Moyer Program and CCCE's Agricultural Electrification Program to incentivize replacement of older, polluting equipment. Partner with Electric Drive 805, Central Coast Clean Cities Coalition, and other organizations to implement an outreach campaign to provide information to residents, businesses, and fleet operators about alternatives to fossil-fueled off-road equipment, public health and safety benefits of alternative equipment technology, and available funding opportunities.	Supportive

[81] Baseline Year. http://www.sbcag.org/uploads/2/4/5/4/24540302/connected_2050_final.pdf

[82] Target. http://www.sbcag.org/uploads/2/4/5/4/24540302/connected_2050_final.pdf

[83] Based on RTP/SCS Connected 2050 (Table 3-10) indicating that implementation of preferred scenario would result in 27.6% reduction from baseline scenario in 2050

[84] Adjusted emissions for passenger and commercial VMT divided by total passenger and commercial VMT therefore accounts for some VMT being EV

Metric TR-3.a Off-road Equipment Decarbonization

Off-road equipment in Santa Barbara County accounts for 5% of the community's GHG emissions. While only a small part of GHG emissions in the County, getting to carbon neutrality will involve decarbonizing most of the off-road equipment, which currently runs on gasoline, diesel, and natural gas. To support a gasoline and diesel phase-out ordinance for off-road equipment, Action TR-6.1 commits the County to conducting a study to determine the feasibility of reducing emission from major off-road equipment fleets in the County (Action TR-3.1). The study will help the County better understand what types of commercial off-road equipment exists, how old it is, and how much potential there is for electrification or decarbonization.

Action TR-3.2 commits the County to introducing a ban on the operation of gasoline and diesel-powered off-road equipment by 2035. The County expects that this action may be supported by future CARB regulations for off-road equipment that may ban their sale in the region by 2035.[85] While some off-road equipment does not have market-ready zero-emissions alternatives, lawn and garden equipment, light-duty off-road equipment, and portable off-road equipment can generally be electrified or use biodiesel today. Off-road emissions accounted for approximately 11% of the total transportation emissions in 2018. A majority of off-road emissions (63%) are associated with gasoline and diesel-powered agricultural equipment. Another 19% of off-road emissions come from gasoline and diesel emissions in the recreational, lawn and garden, light commercial, and pleasure craft sectors. By targeting these five sectors at a minimum, the county could impact over 80% of off-road emissions. Therefore, a 21% reduction in overall offroad emissions is feasible through the implementation of an off-road electrification ordinance that targets these sectors.

Actions TR-3.3 support Metric TR-3.a promoting more likely implementation through increased funding and equity considerations. These partnerships can ensure that vulnerable communities receive needed resources as well as funding to make the switch.

The methods and assumptions used to calculate the GHG emissions reductions associated with this metric are explained further here and shown in the table below. The GHG reductions were quantified by taking the off-road equipment emissions from diesel, gasoline and natural gas in 2018 and comparing the BAU forecast to decarbonized percentages of 21% by 2030 and 38% by 2045 to determine the total reductions. Off-road diesel, gasoline, and natural gas emissions were acquired through EMFAC fuel usage data and multiplied by respective emissions factors.[86]

Table 11 GHG Emissions Reductions from Metric TR-3.a

Inputs and Assumptions		
Off-Road Emissions from Diesel, Gasoline and Natural Gas 2018	73,314	
BAU Adjusted Offroad Emissions from Diesel, Gasoline and Natural Gas 2045	72,481	
GHG Emissions Reductions Calculations		
Year	**2030**	**2045**
Decarbonized Percentage	21%	38%
Off-Road - Diesel Emissions (MT CO_2e)	57,214	54,791
Off-Road - Gasoline Emissions (MT CO_2e)	14,061	15,665
Off-Road - LPG (MT CO_2e)	2,040	2,024

[85] See: https://ww2.arb.ca.gov/rulemaking/2021/sore2021

[86] See: https://arb.ca.gov/emfac/emissions-inventory/c58cfe3d0072dfc3ea8eae4234049042e52ed4df

Total Off-Road Emissions (MT CO_2e)	*73,314*	*72,481*
Total Reductions (MT CO_2e)	**15,396**	**27,619**

4 Waste, Water, and Wastewater Measures

The County of Santa Barbara's waste measures focus on reducing solid waste generation and increasing diversion from the landfill. Emphasis is placed on reduction of organic waste sent to landfills, as landfilled organic waste is the major source of waste-related greenhouse gas emissions. The measures in this section also support the County's overall goal of working toward zero wasted resources. The actions that address inorganic waste have relatively smaller impacts in meeting the County's communitywide greenhouse gas emissions reduction goals.

Working toward zero waste of resources requires that the County address two factors: 1) waste generation (reducing the amount of waste generated regardless of its destination—e.g., landfilling, recycling, composting); and 2) waste diversion (i.e., recycling the waste that is generated through available facilities). Measure W-1 focuses on both waste generation and diversion.

Actions for reducing organic waste are underpinned by SB 1383 requirements, which lay out specific programs, policies, and objectives for the County to support the state's goal of a 75% reduction in organics waste by 2025. Actions that address inorganic waste are not quantified in this analysis due to their very minimal impact on communitywide greenhouse gas emission reduction goals.

Water and wastewater account only for a small portion of a community's GHG emissions. Wastewater GHG emissions accounted for 4% of the community's GHG emissions in 2018 and GHG emissions from water accounted for 1% of the community's GHG emissions. While only a small part of the County's GHG emissions, water conservation and decarbonized wastewater treatment are important aspects of a community's overall sustainability and resilience.

The CAP's waste, water, and wastewater measures consist of the following:

Measures

- W-1: Reduce food waste and increase use of recycled organic materials
- W-2: Reduce use of non-recyclable and non-compostable single-use items
- W-3: Increase energy- and carbon-efficiency of the water systems

Metrics

- W-1.a Reduce landfilled organics 80% by 2030 and 100% by 2045[87]
- W-1.b Meet SB 1383 compost procurement requirements for the County of 0.08 tons per capita
- W-2.a Reduce landfilled inorganic waste 35% by 2030 and 90% by 2045 – Supportive
- W-3.a Establish a baseline and set a regional target to reduce emissions as well as improve water and energy efficiency essential for water system operations, including water treatment, pumping, and conveyance by 2024

[87] Compared to 2014 levels. SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025.

Measure W-1: Reduce food waste and increase use of recycled organic materials

	Metric/Action #	Metric/Action	Anticipated Reduction by Year (MT CO_2e)
Metric	W-1.a	Reduce landfilled organics 80% by 2030 and 100% by 2045[88]	2030: 43,513 2045: 57,171
	W-1.b	Meet SB 1383 compost procurement requirements for the County[89] of 0.08 tons per capita	2030: 2,250 2045: 2,793
Actions	W-1.1	Support the expansion of the Santa Barbara County Food Rescue Program through participation of all County facilities that provide food or food services.	Supportive
	W-1.2	Develop a program to support local residential and commercial composting by providing compost made from recycled organics at Tajiguas Landfill, in compliance under SB 1383.	Supportive

Metric W-1.a. Landfilled Organics Reductions

Emission reductions in the waste sector will be driven by Santa Barbara County's compliance with SB 1383, which sets a statewide target to reduce organic waste disposal 75 percent relative to 2014 levels and recover 20 percent of edible food by 2025. CalRecycle has provided a suite of activities that jurisdictions are required to complete to achieve this target, including the following:

- Provide organic waste collection services for all residents and businesses and monitor contamination.
- Implement an edible food recovery program for commercial edible food generators, with compliance beginning between 2022 and 2024.
- Procure organic waste to meet organic waste product procurement targets, as notified by CalRecycle by 2022.
- Conduct education and outreach to businesses, residents, and commercial edible food generators by 2022 and annually thereafter.
- Ensure there is adequate capacity and collection services to comply with SB 1383 requirements.
- Adopt enforceable ordinances prior to 2022 encompassing requirements for organics and edible food generators in the County.
- Monitor compliance beginning in 2022, conduct enforcement beginning in 2024, and maintain records of implementation.

Completing these activities is expected to provide the level of composting and food donation that will reduce Santa Barbara County's organic waste disposal by 75% by 2025, aligning with the SB 1383 state target. By 2030 Actions W-1.1 and W-1.2 can achieve and surpass the 80% reduction goal of landfilled organics. Landfilled organics are a large source of methane emissions and the majority of anerobic waste emissions which is why an 80% reduction equals and 80% reduction in

[88] Compared to 2014 levels

[89] Unincorporated County

emissions.[90] While Action W-1.1 will not lead to direct GHG emission reductions, it is an important component of the strategy behind SB 1383 implementation. For example, education around composting and food waste reduction can provide the information needed by residents to start a home compost pile and/or reduce their overall waste. Providing these materials in multiple languages in a culturally appropriate manner will further the impacts of this action. Action W-1.2 will directly support implementation of SB 1383. Action W-1.2 is included in the scope of SB 1383 and will support its emission reduction target by ensuring that there is adequate capacity for compost procurement. This action will also support inorganic waste diversion, but this is not as significant for reducing emissions.The County already has a food recovery program implemented per SB 1383 requirements. Compliance with this program was required locally starting January 1, 2022. Reductions associated with this measure with inputs and assumption are provided in Table 12.

The methods and assumptions used to calculate the GHG emissions reductions associated with metrics W-1.a and W-1.b are explained further here and shown in the table below. The GHG emissions reduction benefits associated with waste reductions were quantified through multiplying the target procurement standard as well as landfilled organic and inorganic reductions based on Santa Barbara County's population. The result was emissions avoided from mixed organics compost application as well as a reduction of solid waste emissions.

Table 12 GHG Emissions Reductions from Metric W-1.a and W-1.b

Inputs and Assumptions		
Unincorporated County procurement requirement in 2022 (tons)	10,668	
Unincorporated County population procurement requirement based on	133,351	
Procurement requirement per capita	0.0800	
Emissions avoided from mixed organics compost application (MT CO2e/ton)	0.23	
Calculations		
Year	**2030**	**2045**
Population	143,866	151,793
Waste Emissions	54,391	57,171
Organic Waste Target Achievement (%)	80%	100%
Reduce Organic Waste (MT CO2e)	43,513	2,744
Compost Procurement Target Achievement (%)	85%	100%
Achieve Compost procurement requirements of SB 1383 (MT CO2e)	2,250	2,793
Total Reductions (MT CO_2e)	**45,763**	**59,963**

[90] See: https://calrecycle.ca.gov/climate/organics/#:~:text=Anaerobic%20decomposition%20of%20organic%20materials,a%2020%2Dyear%20time%20period.

Measure W-3: Increase energy- and carbon-efficiency of the water systems

	Metric/Action #	Metric/Action	Anticipated Reductions by Year (MT CO_2e)
Metric	W-3.a	Reduce water use 15% by 2030 and 35% by 2045	2030: 393 2045: 964
Actions	W-3.1	Develop and adopt an ordinance requiring greywater systems in new construction of large commercial and multifamily buildings.	Supportive
	W-3.2	Partner with local water agencies to measure and track energy intensity of public water system operations and adopt long-term carbon reduction goals.	Supportive
	W-3.3	Conduct a feasibility study to assess options for the expansion of renewable energy at Laguna County Sanitary District water treatment plant.	Supportive

Metric W-3.a Water Efficiency

Action W-3.a commits the County to implementing a water efficiency ordinance to facilitate installation of more greywater systems throughout the community. Greywater systems filter wastewater from washing machines, bathtubs, and showers for garden irrigation. Homeowners that install greywater systems can save up to 40,000 gallons of water per year, resulting in much lower water bills.[91] Greywater systems have the added benefit of sending wastewater from homes to the ground, rather than through the sewage system, more closely mimicking the earth's natural water cycle and improving the local ecosystem.

Supporting this metric through engagement, and education, Action 3.2, commits the County to working with local water agencies to engage with the community, including low-income and fixed-income people, communities of color, elders, and disabled individuals with access needs, about the benefits and opportunities associated with more efficient water consumption. Engagement on these topics has been shown to improve the efficacy of structural changes to water systems and build community wide trust and stewardship.[92]

Actions W-3.1a provides commitment for integrating more of these systems into Santa Barbara County with Action W-3.3 focuses on wastewater treatment plant renewable energy.[93]

The methods and assumptions used to calculate the GHG emissions reductions associated with this metric are explained further here and shown in the table below. The GHG emissions reduction benefits associated with water efficiency were quantified through the energy intensity of water with a targeted 15% increase in efficiency by 2030 and 35% by 2045 supported by the W-3 actions. These efficiency gains are claimed through enhanced community outreach, home water efficiency,

[91] Water Wise Group. December 2021. Greywater System Benefits. Accessed at: https://waterwisegroup.com/greywater-education/greywater-benefits/

[92] Dean AJ, Fielding KS, Ross H and Newton F. (2016) Community Engagement in the Water Sector: An outcome-focused review of different engagement approaches. Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities. Accessed here: https://watersensitivecities.org.au/wp-content/uploads/2016/05/TMR_A2-3_CommunityEngagementWaterSector-1.pdf

[93] Fu, Xiaotian. March 2017. Wastewater: The Best Hidden Energy Source You've Never Heard Of Accessed here: https://www.wri.org/insights/wastewater-best-hidden-energy-source-youve-never-heard#:~:text=Since%20sewage%20treatment%20plants%20can,interrupted%20by%20surrounding%20power%20outages.

Infrastructure projects around water reuse, groundwater recharge, water quality, and water delivery. All of these actions have demonstrated success in reducing water consumption and water energy intensity in line with the County Targets.[94] The supportive actions in Measure W-3 work towards a total saved water use of 1,143 MG by 2030 and 2,804 MG by 2045 based on projected water use from 2018 to 2045. The saved water from normal use attributed to these actions is what drives emissions reductions through decreased electricity use to process water deliveries. Including the assumption of a decreasing electricity emissions factor in line with County targets of carbon-free electricity, the County expects a 393 MT CO2e reduction by 2030 and 964 MT CO2e reduction by 2045.

[94] Office of Energy Efficiency and Renewable Energy. Best Management Practices for Water Efficiency. Accessed here: https://www.energy.gov/eere/femp/best-management-practices-water-efficiency

Table 13 GHG Emissions Reductions from Metric W-3.a

Inputs and Assumptions		
2018 water consumption (MG)	7,310	
Service Population (2018)	200,968	
Water use per SP(MG/SP)	0.0364	
Average Energy Intensity of Water (kWh/MG)	5993.9503	
Calculations		
Year	**2030**	**2045**
Target % Reduction	15%	35%
Target per Capita Reduction	0.030919932	0.023644654
Forecasted Water Use (MG)	7,622	8,012
Targeted Water Use (MG)	6,479	5,207
Saved Water (MG)	1,143	2,804
Electricity Saved (kwh)	6,852,941	16,807,253
Baseline Electricity EF (MT CO2e/kwh)	0.0002119	0.0002119
Baseline Emissions from Electricity (MT CO2e)	1,452	3,562
Electricity EF with CCA (MT CO2e/kwh)	0.00015	0.00015
Electricity Emissions with Measure	1,059.02145	2,597.31420
Total Reductions (MT CO_2e)	***393***	***964***

5 Nature-Based Solutions Measure

Nature-based Solutions are actions to protect, sustainably manage, and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously benefiting people and nature. One considerable benefit of implementing nature-based solutions is the way sequester carbon. Carbon sequestration describes the process in which plants and water-based algae take carbon from the atmosphere and store it in their biomass via photosynthesis. Plants also release carbon, in the form of carbohydrates and other molecules (collectively called exudates), into the soil through their roots, where they increase soil organic carbon and support a diversity of soil microbes and fungi, which facilitate soil carbon sequestration. Natural lands act as a carbon sink by sequestering carbon from the atmosphere and storing it in vegetation and soils, which means they play an increasingly important role in pursuing state carbon neutrality goals. Maintaining healthy natural and working lands is key to human well-being as they are responsible for our water supply and quality, air quality, and biodiversity which in turn influences socioeconomics and social equity.

Measure NBS-1: Promote and support land management practices that sequester carbon

	Metric/Action #	Metric/Action	Anticipated Reductions by Year (MT CO_2e)
Metric	W-1.a	Plant 3,000 trees by 2030	2030: 159
Actions	NBS-1.1	Partner with the Cachuma Resource Conservation District, Santa Barbara County Farm Bureau, and other stakeholders to provide outreach and education to farmers and ranchers on conservation practices that contribute to climate mitigation and increase resilience, and incentives available to adopt these practices. Provide resources in both English and Spanish and focus outreach to socially disadvantaged farmers and ranchers.	Supportive
	NBS-1.2	Develop a restoration plan to implement natural land restoration projects including riparian, native grassland, oak woodland restoration, and wetland restoration.	Supportive
	NBS-1.3	Conduct a pilot project to study the application of food safe compost on rangeland and orchards for improved vegetation, soil health, and carbon storage.	Supportive
	NBS-1.4	Educate residents regarding the climate impact of their food choices, food waste, food storage methods, and correct disposal methods.	Supportive
	NBS-1.5	Continue to support the Williamson Act Program while exploring the expansion of tax incentives to conserve agricultural lands.	Supportive
	NBS-1.6	Address policy barriers that prohibit or discourage the voluntary creation or restoration of habitats and ecosystems by coordinating with local, State,	Supportive

	Metric/Action #	Metric/Action	Anticipated Reductions by Year (MT CO_2e)
Metric	W-1.a	Plant 3,000 trees by 2030	2030: 159
		and Federal agencies. Consider development of a Voluntary Local Program to provide a permitting solution for impacts to species listed under the California Endangered Species Act.	
	NBS-1.7	Lead or support efforts to obtain external funding, through programs like the Sustainable Land Initiative, to support land managers in implementing carbon farm plans and sustainable agricultural practices that reduce emissions and/or sequester carbon. Example practices include: cover crops, composting/compost application, mulching, hedgerow planting, and improved nitrogen fertilizer management.	Supportive
	NBS-1.8	Lead and support efforts to obtain external funding to support the transition away from fossil fuel-based pesticides.	Supportive
	NBS-1.9	Plant new drought tolerant trees at County facilities, parks, and in rights-of-way, focusing on areas that are at risk from extreme heat. Secure additional funding to maintain existing trees. Apply to Tree City USA to become a recognized jurisdiction expanding benefits of trees and committing to the four-step framework outlined by the Arbor Day Foundation.	Supportive
	NBS-1.10	Direct County departments to procure food and supplies from local producers and vendors, giving preference to regenerative agriculture and low-carbon foods.	Supportive

The County has many opportunities to enhance and protect its natural and working lands due to it's extensive landscape and effective agency, NGO, and other stakeholder partners. Carbon sequestration quantification and tracking, however, is a relatively newer field of study with extensive science to be done. Therefore, even though carbon sequestration will play large role in meeting state and the County's carbon neutrality goals, communities are beginning to take a conservative approach to carbon sequestration quantification as a starting point while the state develops more specific goals and guidance. Passed in 2022, AB 1757 directs the California Natural Resource Agency to determine carbon sequestration reduction targets by 2024 and develop a methodology to track them by 2025. Once that is completed, the County will integrate those goals and tracking methods within these measures and actions and update them as needed.

Emission reduction calculations associated with Metric NBS-1.a assumes that 3,000 trees will be planted by 2030 due to action NBS-1.9. The carbon sequestration potential for seedlings averaged over 40 years is about 0.058 MT CO_2e per tree per year. Emission reduction calculations are shown below in **Error! Reference source not found.**.

Table 14 GHG Emissions Reductions from Metric NBS-1.a

Calculation Factor	2030
Newly Planted Trees	3,000
Tree Sequestration Factor (MT CO_2e/tree/year)[1]	0.0354
Total GHG Emissions Reductions (MT CO_2e)	**159**

Notes: MT CO_2e = metric tons of carbon dioxide; kWh =-kilowatt-hour

Values may not add up due to rounding

[1] Default annual CO_2e sequestration per tree per year with a maximum lifespan of 20 years per tree is 0.0354 MT CO_2e/tree/year was obtained from CAPCOA. 2010. Quantifying Greenhouse Gas Mitigation Measures.