



City of Santa Barbara California

PLANNING COMMISSION STAFF REPORT

REPORT DATE: May 6, 2024
AGENDA DATE: May 16, 2024
PROJECT: 2024 Climate Action Plan
TO: Planning Commission
FROM: Energy and Climate Division
 Sustainability and Resilience Department
 Jefferson Litten, Energy and Climate Manager
 Melissa Hetrick, Resilience Program Supervisor

I. SUMMARY

The Draft 2024 Climate Action Plan (2024 CAP) provides a roadmap of specific actions to reduce greenhouse gas (GHG) emissions citywide to meet the emission targets set by the state and put the City on the path to meeting Council's adopted aspirational goal of reaching carbon neutrality by 2035. The 2024 CAP (Exhibit A) and associated draft Master Environmental Assessment for Greenhouse Gas Analysis (Guidelines; Exhibit E) also serve to programmatically analyze the City's GHG impacts for the purpose of meeting the requirements of the California Environmental Quality Act (CEQA), thereby streamlining CEQA review for development projects in the City. A Draft Initial Study and Negative Declaration (ND; Exhibit F) was prepared that identifies no significant impacts to the physical environment from the 2024 CAP or Guidelines. Following Planning Commission review and recommendation, the 2024 CAP, Guidelines, and ND will be forwarded to City Council for adoption.

II. RECOMMENDATION

That the Planning Commission recommend City Council:

- A. Make the following findings to adopt the Final Negative Declaration:
1. The Council has considered the proposed Final Negative Declaration, dated May 6, 2024 for the Climate Action Plan Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emission Analysis and comments received during the public review process prior to making a recommendation on the project.
 2. The Final Negative Declaration has been prepared in compliance with California Environmental Quality Act requirements and constitutes adequate environmental analysis of the project.

3. In the Council's independent judgment and analysis based on the whole record (including the initial study and comments received), there is no substantial evidence that the Project will have a significant effect on the environment.
 4. The Final Negative Declaration, dated May 6, is hereby adopted.
 5. No mitigation measures have been identified in the Final ND as all impacts were identified to be less than significant. As such, no Mitigation Monitoring Reporting Program has been prepared or needs to be adopted.
 6. The location and custodian of documents or other material which constitute the record of proceedings upon which this decision is based is the City of Santa Barbara Sustainability and Resilience Department, 801 Garden Street, Santa Barbara, CA 93101.
 7. The Final ND is hereby adopted.
- B. Adopt the 2024 Climate Action Plan; and
- C. Adopt the Master Environmental Assessment Guidelines for Greenhouse Gas Emission Analysis.

III. 2024 CLIMATE ACTION PLAN

In 2012, the City became one of the first communities in California to adopt a Climate Action Plan (CAP). Since that time much has changed in both the field of climate science and regulatory requirements related to greenhouse gas (GHG) emissions. In 2020, Council adopted the aspirational climate goal of reaching carbon neutrality by 2035. Since 2020, City staff, along with Rincon Consultants (Rincon), have been working to develop a new CAP that provides a roadmap of specific actions to reduce GHG emissions and achieve our emission targets. The CAP is also necessary to comprehensively analyze the City's GHG impacts for the purpose of meeting the requirements of the CEQA. The CAP provides a programmatic means of addressing GHG emissions and effectively streamlines environmental review for future development in the City.

The 2024 CAP quantifies existing and projected GHG emissions within the City of Santa Barbara, compares them against both state and local mandated emissions targets, analyzes the effectiveness and feasibility of actions to reduce GHG emissions, and quantifies emissions reductions from the actions.

The 2024 CAP expands on a 2019 GHG inventory as the baseline from which emissions scenarios were calculated, targets were set, and projected emission reductions in the 2024 CAP were calculated. In 2019, the City of Santa Barbara's emissions were calculated at 622,110 metric tons of carbon dioxide equivalent (MT CO_{2e}). The 2024 CAP sets a goal of reducing municipal and communitywide GHG emissions by 378,507 MT CO_{2e} by 2030 (consistent with California Senate Bill 32 target for 2030). Additionally, the City of Santa Barbara has aspirational goals of carbon neutrality (0 MT CO_{2e}) by 2035, which is significantly more aggressive than the state's emissions reduction targets of 40% below 1990 levels by 2030 (SB 32) and 85% below 1990 levels or net zero by 2045 (AB 1279). The 2024 CAP lays out a strategy to achieve the City's goals through emission reductions in five sectors: building energy; transportation; water, solid waste and wastewater; carbon sequestration; and community climate potential.

The 2024 CAP is organized into one main document, *Together to Zero* and several appendices. *Together to Zero* is an accessible and action-oriented summary of GHG inventory data, high-impact measures, and implementation framework across the five sectors. *Together to Zero* summarizes the major emissions sectors quantified during the 2019 GHG Inventory; outlines the City's goals and strategies for reducing emissions in each sector; and shares the City's plan for ensuring equity while implementing this plan. The 2024 CAP includes these appendices (refer to Exhibits B-E):

- APPENDIX A - City of SB CAP Complete Measures and Actions – A comprehensive list of all measures and actions included in the CAP.
- APPENDIX B - GHG Emissions Reductions Technical Evidence – A CEQA required document which documents the emissions reduction potential of the City's CAP and analyzes consistency with State reduction targets and City goals.
- APPENDIX C - Analysis of Costs and Benefits of Select Measures – This document is a high-level analysis of the potential costs and benefits for implementing five selected CAP Measures.
- APPENDIX D - Master Environmental Assessment Guidelines for Greenhouse Gas Emission Analysis – These documents provide a streamlined and programmatic framework for development projects to achieve compliance with CEQA required GHG impact analysis. See description below.

Achieving The City's Emission Targets

Since the 2019 GHG Inventory, the City has taken two significant steps towards the City's emission targets: (1) the 2021 Launch of Santa Barbara Clean Energy (SBCE), the City's community choice aggregator which by default provides all Santa Barbara homes and businesses with 100% carbon-free electricity, and (2) the 2021 opening of the ReSource Center, a state-of-the-art waste management facility, which increases diversion rates and reduces methane emissions at the landfill. These two actions alone are projected to reduce the City's emissions by slightly more than 120,000 MT CO₂e through 2030, which achieves the City's 2030 SB 32 compliance target.

Appendix A outlines the comprehensive list of measures and actions to reduce emissions across the community and municipal operations. These measures include increasing energy efficiency and moving towards electrification of homes, businesses, and city buildings; shifting transportation modes to zero-emission vehicles and reducing vehicle miles travelled; increasing solar and storage (batteries) at all City facilities and across the community; reducing the use of single-use items; and increasing the City's ability to capture carbon from the atmosphere through compost application and tree plantings. The 2024 CAP lists a number of tools for achieving the City's targets including: incentives from SBCE; new policies and ordinances; leveraging public-private partnerships; and partnering with UCSB and SBCC around innovation hubs.

The 2024 CAP is ambitious and comprehensive. However, successfully implementing all the measures and actions in the 2024 CAP does not achieve the City's aspirational goal of carbon neutrality by 2035. Therefore, the Energy and Climate Division commits to reviewing the plan

annually and adapting the priorities and timeline to current developments and best practices. Additionally, the Division commits to taking inventory of our local greenhouse gas emissions at least every five years and incorporating the results into renewed commitments and strategies.

IV. MASTER ENVIRONMENTAL ASSESSEMENT GUIDELINES FOR GREENHOUSE GAS EMISSION ANALYSIS

The California Environmental Quality Act (CEQA) requires discretionary plans and projects to undergo an environmental review process, which includes an evaluation of project-related contribution of GHG emissions. Section 15183.5 of the CEQA Guidelines establishes a framework for developing a qualified GHG emissions reduction plan to cumulatively reduce GHG emissions and allow CEQA lead agencies to analyze and mitigate the effects of plan- and project-level GHG emissions. The 2024 Climate Action Plan has been designed to be consistent with CEQA Guidelines Section 15183.5 and meets CEQA requirements for being a qualified GHG emissions reduction plan.

The Master Environmental Assessment Guidelines for Greenhouse Gas Emission Analysis (Guidelines) outlines a methodology for development projects to achieve compliance with CEQA. The Guidelines include a screening checklist that contains measures that ensure future development is consistent with key aspects of the 2024 CAP that are needed to reach specified emission targets for the City. If a project does not meet the measures and parameters contained in the simplified checklist, then project specific analysis of GHG emissions is required, including quantification of GHG emissions compared to a City GHG CEQA emissions threshold. The Guidelines provide the basis for the City specific GHG CEQA threshold, which is an efficiency threshold, meaning that the threshold is expressed as a per-person metric.

The City's approach to mitigating GHG emissions is to do so programmatically and ensure any requirements for development needed to lower GHG emissions are codified over time. To that end, the CEQA checklist is short and efficient. Projects that are exempt from CEQA do not need to conduct the checklist. Only projects requiring initial studies, negative declarations, and environmental impact reports need to conduct the checklist. The 2024 CAP was designed to mitigate impacts of GHG emission based on existing general plan and zoning land use designations. Projects requiring general plan or zoning amendments will need to do additional analysis consistent with the methodology outlined in the Guidelines to ensure no significant GHG impacts will result.

V. PUBLIC REVIEW AND ADOPTION PROCESS

The City launched the development of the 2024 CAP with a robust bilingual public outreach campaign that included an informational video, a climate action survey, climate brainstorming sessions, climate chats with City staff, neighborhood listening sessions, stakeholder interviews, and public workshops. After initial outreach, staff and Rincon developed a new GHG emissions inventory and forecast, and a draft list of GHG reduction measures which were presented to the Sustainability Committee in April 2023.

Since last April's presentation to the Sustainability Committee, staff worked with Rincon and staff from key City Departments to hone the list of GHG reduction measures and analyze the effectiveness, impacts and benefits, costs and resources needed, and potential equity concerns

associated with each measure. The result of this work is captured in the documents that are before the Planning Commission today. These documents were presented to the Sustainability Committee on January 23, 2024, who unanimously voted to recommend Council adoption.

The public comment period on the Draft 2024 CAP, associated appendices, and negative declaration was between March 22 and April 24, 2024, and was promoted via press release, featured in the City's News In Brief, and promoted on the Sustainability & Resilience Department website. During the comment period, staff received 24 public comments on the 2024 CAP. The nature of these comments was supportive overall, with a few community members opposed to the plan. Staff received letters of support and suggestions from several local stakeholder groups (Exhibit G), including Community Environmental Council (CEC) and Santa Barbara Channelkeeper (SBCK). Many of the suggestions by stakeholders fall within the purview of measures that already exist in the 2024 CAP. In response to public comments, some minor edits have been made to the 2024 CAP and Guidelines.

Should the Planning Commission approve staff's recommendation, the 2024 CAP is scheduled to be before City Council on July 2, 2024 for adoption. Following adoption, staff will begin implementing the 2024 CAP. Over time, minor updates to the CAP and Guidelines will be approved by the Sustainability Resilience Director. Any major updates will return to Sustainability Committee, Planning Commission, and City Council for review.

VI. ENVIRONMENTAL REVIEW AND TRIBAL CONSULTATION

Environmental review of the proposed project has been conducted pursuant to the California Environmental Quality Act (CEQA) and related Guidelines. A Draft Initial Study and Negative Declaration (ND) were prepared to evaluate the project's potential impacts on the physical environment. The analysis did not identify any potentially significant environmental impacts. The Draft ND was available for public review from March 22 to April 24, 2024. No comments were specifically received on the Draft ND (see above for comments on the CAP). No new information or edits to the 2024 CAP have led to substantial revisions that would require recirculation of the ND pursuant to CEQA Guidelines Section 15073.5 or indicate a new potentially significant effect not previously examined in the Draft ND. The Final ND concludes that no significant environmental impacts would result from the project.

On May 10, 2023, the City requested from the Native American Heritage Commission (NAHC) an updated Local Government Tribal Consultation List. On May 11, 2023, that list was provided by the NAHC. On May 23, 2023, the City notified the listed tribes pursuant to SB 52 and SB 18 informing them about the City's intent to develop a Climate Action Plan and CEQA negative declaration and inquiring if they wished to enter into a consultation process. On May 24, 2023, the Santa Ynez Band of Chumash Indians responded that they would like to have a formal consultation. City staff met with representatives of the tribe on June 22, 2023, and while the representatives didn't have any particular concern with the CAP at that time, they requested to be kept informed with the draft CAP and ND was released. On June 27, 2023, the Northern Chumash Tribal Council requested to engage in consultation. On September 26, 2023, City staff met with a representative of the Northern Chumash Tribal Council who asked several questions about the project and asked to be kept on the notification list for the Draft 2024 CAP and ND.

Tribal representatives were sent the Draft 2024 CAP and related documents and Draft ND. No comments from any tribal representatives have been received on the draft documents.

Exhibits:

- A. *Together to Zero* 2024 Climate Action Plan
- B. CAP Appendix A: Complete List of Measures and Actions
- C. CAP Appendix B: GHG Emissions Reductions Technical Evidence
- D. CAP Appendix C: City of Santa Barbara CAP – Costs and Benefits of Selected Actions
- E. CAP Appendix D: Master Environmental Assessment Guidelines for Greenhouse Gas Emission Analysis
- F. Negative Declaration
- G. Public Comments Received on CAP (May 22 – April 24, 2024)

TOGETHER



TO ZERO

REACHING CARBON NEUTRALITY
IN THE CITY OF SANTA BARBARA



TOGETHER TO ZERO
Santa Barbara
JUNTOS A CERO



City of Santa Barbara
**SUSTAINABILITY
& RESILIENCE
DEPARTMENT**

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A Letter to the Community

from the Santa Barbara City Council

Dear Santa Barbara,

As members of the Santa Barbara City Council, we are committed to creating a sustainable and resilient community for all. Our goal of reaching carbon neutrality by 2035 is a critical step towards achieving that vision. We know that the road ahead will not be easy, but we are up for the challenge. We believe that together, we can build a future that is equitable, prosperous, and sustainable.

By working towards carbon neutrality, we are not only reducing our impact on the environment, but also investing in a better future for generations to come. We are creating new opportunities for innovation, job creation, and resilience that will strengthen our local economy by promoting renewable energy and sustainable practices. We are pursuing a resilient and healthy community for all residents.

The task before us is not just about reducing emissions. It is about setting the cornerstones for a resilient, prosperous, and sustainable community that is rooted in social, economic, and environmental justice. It is about creating a community that can evolve with and adapt to our changing climate.

We are excited about the opportunities that lie ahead, and we hope that you will join us in this critical work. We encourage you to get involved, to share your ideas, and to help us build a more sustainable and resilient Santa Barbara.

Together, we can create a future that we can all be proud of.

Sincerely,



Definitions

Building Performance Standard – Policies that require commercial or multi-family buildings to meet certain performance levels for energy use or GHG emissions.

Carbon Neutrality – Any CO₂ released into the atmosphere from an entity (building, City, company) is balanced by an equivalent amount being removed.

Carbon Sequestration – The capturing, removal, and storage of carbon dioxide (CO₂) from the earth's atmosphere through either biological, chemical, or mechanical processes.

Circular Economy – A model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing, and recycling existing materials and products as long as possible.

Climate Adaptation – Taking action to prepare for and adjust to the current and projected impacts of climate change, such as sea level rise and increased storm intensity, in order to avoid or moderate harm.

Community Choice Aggregator (CCA) – Also known as municipal aggregation, CCAs allow local governments to procure power on behalf of their residents and businesses, providing more local control over electricity sources, more green power than offered by the default utility, and/or lower electricity prices.

Decarbonization (Decarbonize) – Reduction of carbon dioxide emissions through either the use of low- or no-carbon power sources (e.g. solar, hydroelectric power, wind) or by completely forgoing consumption (e.g. riding a bike).

Demand Response – Programs that ask consumers to reduce or shift their energy usage during periods of peak demand, either voluntarily or in exchange for compensation.

Direct Installation – Programs that offer the installation of energy efficiency measures to reduce energy use for no or little up-front cost. Costs are recouped by installation service either through on-bill financing or demand response.

Distributed Energy Resources – Small scale energy sources, usually situated near the site where electricity is used (e.g. rooftop solar panels).

Electrification – Converting appliances and transportation modes to all-electric versions.

Energy Assurance – Assessing risk and planning for natural disasters or disruptions to the energy grid in order to ensure reliable power supply.

Feed-In-Tariff – Policy designed to support the development of renewable energy sources by providing a guaranteed, above-market price for producers.

Greenhouse Gas – A gas that contributes to the greenhouse effect by absorbing infrared radiation and trapping heat in the atmosphere (e.g., carbon dioxide, methane, and chlorofluorocarbons).

Definitions

Greenhouse Gas Emissions (GHG) – Emissions of carbon dioxide, methane, nitrous oxide, or chlorofluorocarbons.

Library of Things – A collection of items you might not expect to find at a library, like museum passes, induction cooktops, microscopes, guitars, and more. Most of these items check out for three weeks, although some check out for only one week. Available at Santa Barbara’s Central Library.

Micro Transit – Shared transportation service that typically operates with smaller vehicles, such as vans or mini-buses, and offers flexible routes and schedules. Usually on-demand or shorter, fixed routes.

Microgrid – Small-scale power grid coupled with generation sources (e.g. solar) that can operate independently or collaboratively with the larger power grid.

Mode Shift – To change from one form of transportation to another, usually from a vehicle trip to a more sustainable mode such as e-bike or bus.

MTe – Metric tons equivalent for carbon dioxide (or other GHG). Generally used as unit of measurement to quantify the global warming potential of one unit of carbon dioxide, CO₂.

Off-Road Equipment – Construction and landscaping equipment and off-road vehicles (e.g. leaf blowers, lawn mowers, ATVs).

Resilience Hub – Community-serving facility designed to support residents and coordinate resource distribution and services before, during, or after a natural hazard event.

ReSource Center – The County-run facility that takes, sorts, and harvests resources from the commercial and residential waste streams and ultimately stores remaining waste.

Santa Barbara Clean Energy (SBCE) – The City of Santa Barbara’s locally controlled electricity provider. SBCE is a community choice aggregator.

Under Resourced Community – Low-income area, typically with a higher population density and poverty level. Under resourced communities often have limited access to community amenities such as high-quality schools, grocery stores, parks, health care facilities, or public transportation. (Defined in California as community identified pursuant to Section 39711 of the Health and Safety Code, subdivision (d) of Section 39713 of the Health and Safety Code, or subdivision (g) of Section 75005).

Zero Emission Vehicle – An electric vehicle or hydrogen fuel cell vehicle that does not emit tailpipe emissions.

Zero Emission Vehicle Acquisition Policy – An internal policy prioritizing zero emission vehicle purchases for all City fleet vehicle replacements or purchases.



TOGETHER TO ZERO

Santa Barbara

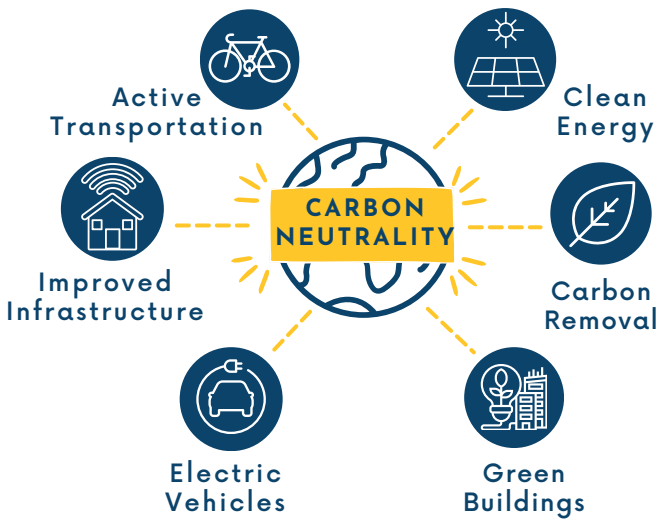
JUNTOS A CERO

Welcome to the Together to Zero initiative, a community-wide effort to achieve carbon neutrality by 2035.

Together to Zero is a call to action for all members of our community to take steps towards reducing our carbon footprint and protecting our environment. We are all part of the solution. With your help, Santa Barbara will continue its legacy of environmental and climate leadership and provide replicable examples for others to follow.

The City is aiming to be Carbon Neutral by 2035!

Here's what it will take:

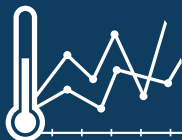


We hope that all individuals, businesses, and organizations commit to reducing their carbon emissions and support initiatives that promote sustainable practices. This might include investment in renewable energy sources like solar power, choosing sustainable transportation options like electric vehicles, transitioning to energy efficient and all-electric buildings and public transit, and increased conservation of water and other resources.

We believe that achieving carbon neutrality is not just about reducing our impact on the environment. It's also about creating a more equitable and just community for all residents, and building resilient communities through programs and infrastructure to overcome the challenges of climate change.

What is Climate Change?

Greenhouse gases (GHG) trap radiation from leaving Earth's atmosphere. Burning fossil fuels and other human activities release GHG, causing Earth's temperature to warm. This results in rising sea levels, changes in weather patterns, and climate conditions that can make life as we know it more difficult.



Climate Change impacts your family's health and future.

Climate Change increases the severity and frequency of natural disasters and extreme weather events.



Drought



Flooding and debris flows



Wildfires



Sea level rise

Building on a Strong Foundation

The City of Santa Barbara is not starting from scratch on its quest for carbon neutrality. Many policies, programs, and projects have been implemented that have set the Santa Barbara community up for success. Below are just a few examples of recent efforts that this plan uses as catalysts for real, transformative change. Many of these efforts are found in our full list of strategies under the "Foundational" classification in the Technical Appendix.



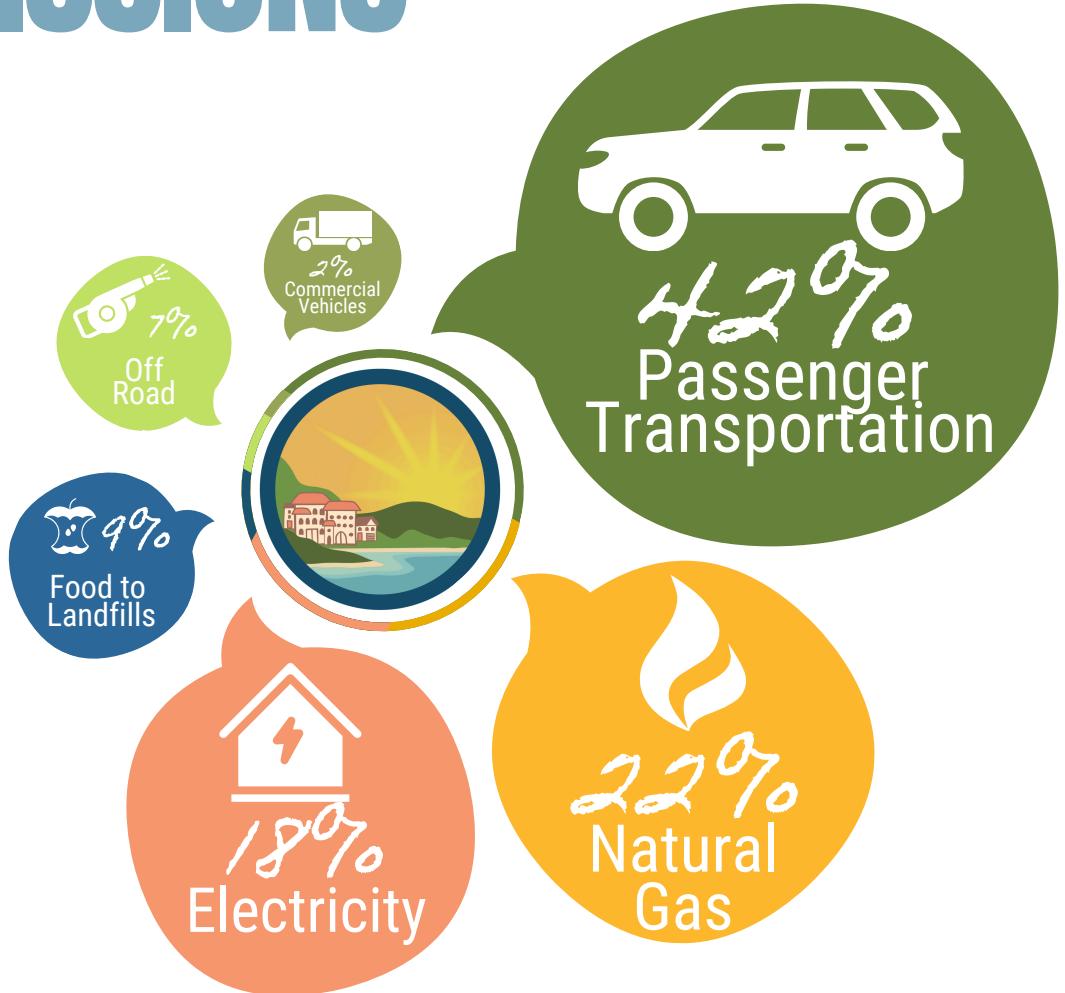
WHERE DO SANTA BARBARA'S GHG EMISSIONS COME FROM?

This data covers Santa Barbara's emissions from 2019 (the year of the most recent inventory data). Emissions from the electricity sector have mostly been eliminated due to the launch of Santa Barbara Clean Energy in 2021.

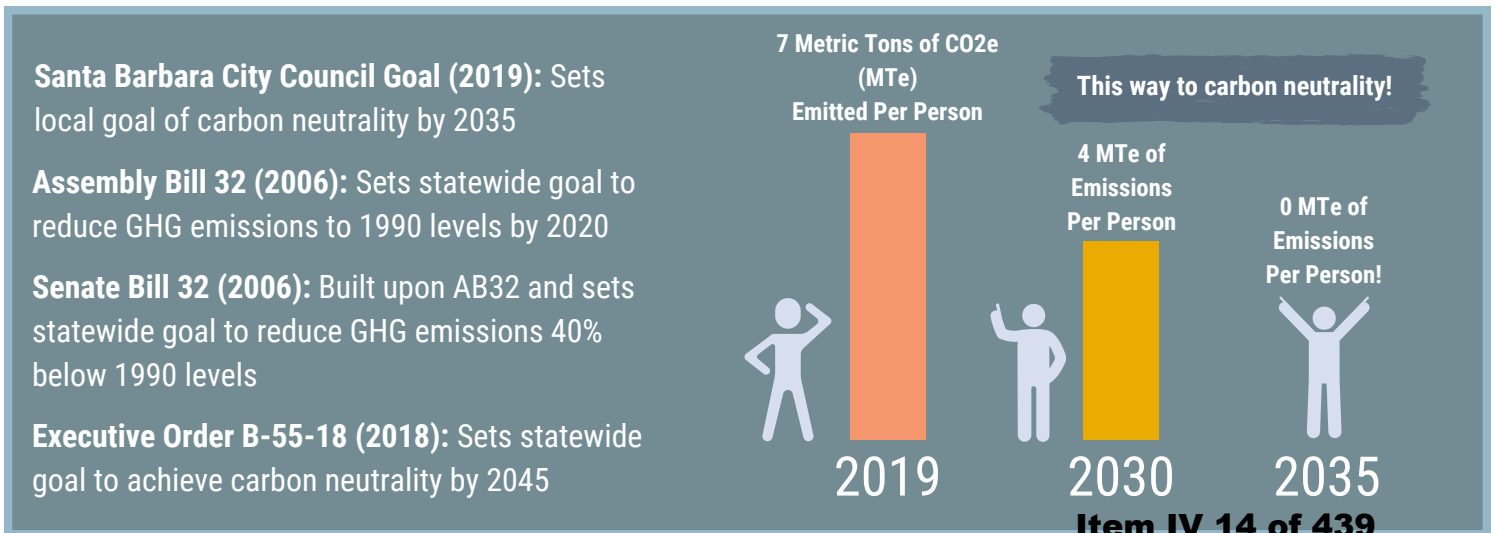
A Greenhouse gas (GHG) emissions inventory is the way that we understand and account for the sources and quantities of GHG emissions within our City.

Inventories like this are an important tool for understanding the sources and drivers of climate change so that we can develop effective strategies to reduce emissions and mitigate the impacts of climate change.

By tracking emissions over time, it is possible to identify trends and areas for improvement, set emissions reduction targets, and evaluate the success of climate policies and measures.



STATE AND LOCAL TARGETS: Santa Barbara isn't in this alone. The State has also set ambitious targets that will help propel Santa Barbara toward carbon neutrality. The most significant are highlighted below:





TOGETHER TO ZERO

Strategies

FOR GREENHOUSE GAS EMISSIONS REDUCTION

GETTING TO ZERO

THIS PLAN IS JUST THE START

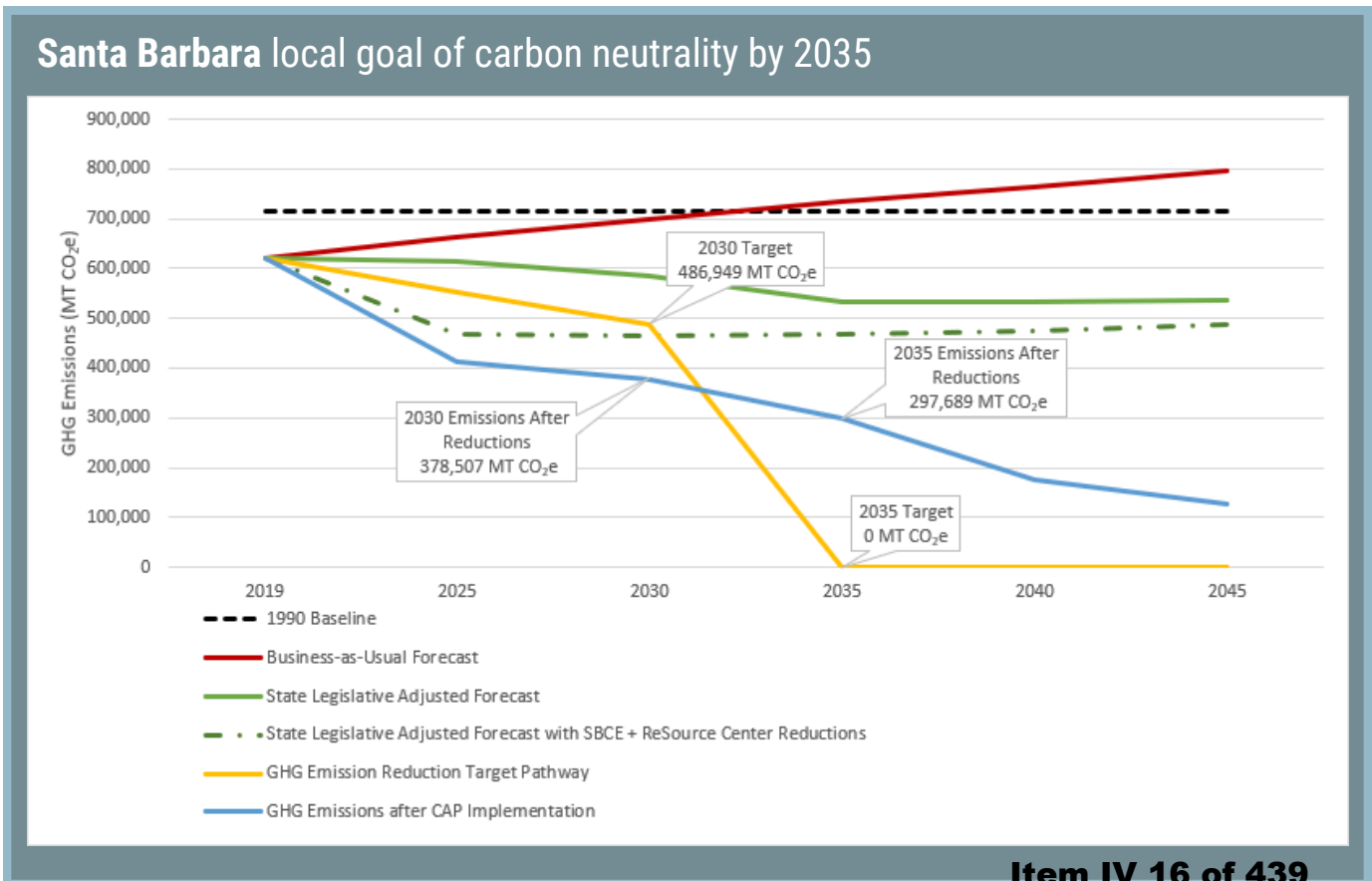
In order to get to zero we must continually measure our progress toward carbon neutrality and remain nimble in our ability to leverage new opportunities, legislative changes, and technologies as they emerge. The graph below shows the substantial jump start in reducing GHG emissions we have already achieved by launching Santa Barbara Clean Energy, which provides our community with 100% carbon free electricity, and by partnering with Santa Barbara County on the ReSource Center, which converts waste to valuable resources. Another factor is how effective broad statewide legislative actions have been and can continue to be on emissions reductions.

You can see in the graph below that while the measures in this Climate Adaptation Plan (CAP) do not get us all the way to carbon neutrality by 2035, they represent a huge start and the most ambitious and significant GHG reductions in the history of the City. This plan creates the inflection point on our journey to zero and lays the groundwork for future GHG reductions.

As we move together to zero, achieving carbon neutrality will be a complex and multifaceted challenge that involves transforming various aspects of energy generation, infrastructure, transportation, AND behavior, while also relying on the State and Federal governments to remain bold and ambitious.

“Go as far as you can see, and when you get there, you’ll be able to see further.” -Thomas Carlyle

In the pages ahead you will see we’ve broken the plan into a “10-year plan” outlining the strategies we intend undertake over the next decade given the best information we have today, and the “next two years” detailing the strategies either in process or quickly planned, for which funding and capacity currently exists. Over the next decade, these plans will evolve and adapt as we progress together to zero.



THE TEN-YEAR PLAN: HOW TO READ THIS SECTION



The stars indicate an action that will be pursued by the City in the next two years

BUILDING ENERGY USE HIGH IMPACT ACTIONS		These actions represent the most critical community climate potential strategies to implement in this plan in order to achieve our goals. Additional supportive actions are found in Appendix A.		
Measure / Action	IMPACT	READINESS	COST	
Decarbonize 50% of Municipal Buildings by 2030: 100% by 2035				
★ BE 1.1 Develop a plan to decarbonize municipal buildings, including an inventory of fossil fuel-powered equipment, replacement technologies, and short and long-term schedule for construction.	20%	30	5	
★ BE 1.3 Implement the municipal building decarbonization plan to decarbonize 100% of municipal buildings by 2035.	100%	30	100	
Increase solar generation & energy storage capabilities around the City				
★ BE 1.2 Develop ordinance requiring the installation of solar and/or energy storage backup power instead of diesel generators, where feasible, by 2031.	20%	30	5	
★ BE 2.1 Implement all feasible microgrid projects at municipal facilities as identified by the 2017 Zero Net Energy study and reevaluate viability of additional facilities.	5	30	10	
BE 2.2 Identify barriers to installation of distributed energy resources at municipal facilities. Establish a funding plan and direct municipal efforts to source space for energy storage and microgrids.	5	30	10	
BE 7.3 Develop targeted electrical rate structures and incentives for customers, including demand response.	5	30	5	
BE 5.17 Create innovative pilots through SBCE and local partnerships to address technical, low-income, market, and policy barriers limiting progress toward the City's climate goals.	5	30	10	
BE 5.18 / 6.10 Implement direct installation and/or incentive programs that facilitate the installation of combined solar and battery energy storage system installations on buildings. Target 120 residential and 35 commercial installations by 2035.	20%	30	10	
Offer incentives, programs, and incubators to innovate, reduce costs, and remove barriers				
BE 6.12 Create a residential building electrification accelerator program to increase building electrification through economic, technical, and educational support. Mechanics such as incentives, time of sale rebates, construction support, permit streamlining, and special rate design should be used. Special focus to be placed on underserved residents	5	30	100	
BE 6.11 Pilot an emergency hot water appliance loaner program to provide a free loaner natural gas hot water heaters within 24 hours of a request, with an agreement that the borrower will replace the gas powered hot water heater within 6 months with an electric heat pump water heater.	20%	>	10	



Climate Action Plan strategy

High Impact Strategy Section

Design new ordinances and programs to electrify existing buildings
Complete a low-income and affordable housing electrification pilot project to provide proof of concept of all-electric buildings. Pilot will ensure no increase in energy bills due to project for participants.

Proposed action to be taken to make strategy happen

Estimated level of impact on GHG reductions

How quickly we can get to implementation

Level of investment needed to implement

Evaluating Actions

The following pages provide a brief overview of the action, estimated cost to implement, and how soon we can get started.

Climate Impact



High-Impact

Actions that result in the highest amount of GHG reductions and get the City the furthest along on the road to carbon neutrality



Medium-Impact

Provides less GHG reductions per dollar than high impact actions, but are still necessary to achieve the City's carbon neutrality goal



Low-Impact

Actions expected to result in relatively low emissions reductions, but provide co-benefits significant enough for inclusion in the plan



Supporting Action

Doesn't provide a direct reduction in GHG emissions, but is critical to implementing other actions in the plan

Readiness



Short-Term

Actions that are ready to be implemented today



Medium-Term

Actions that require more planning, study, funding, staff capacity, or other resources in order to begin



Long-Term

Actions requiring long lead times, not currently programmed in the City's workplans, or lower priority due to evaluative criteria



Ongoing

Actions that will require continuous iterations throughout the journey to carbon neutrality

Cost



No Cost

Actions that are expected to have no cost to the City or to the community



Low Cost

Actions that require relatively low upfront cost or staff time



Moderate Cost

Moderate level of costs such as for consultants, moderate infrastructure changes, retrofitting existing infrastructure, or certain low-cost programs



High Cost

Actions requiring significant investments or budget such as major infrastructure, large-scale incentive programs, or significant investment in technology

GETTING TO WORK: THE NEXT TWO YEARS

HOW TO READ THIS SECTION

BUILDING ENERGY USE Priority Strategy: BE 1.1

Develop A plan to decarbonize municipal buildings, including an inventory of fossil fuel-powered equipment, replacement technologies, and short and long-term schedule for construction.

Co-Benefits

Electrify Today to Empower Tomorrow

Building energy use accounts for 40% of emissions in Santa Barbara. The City will lead by example by creating this plan to remove energy-related greenhouse gas emissions from its buildings. The plan will provide information on project scope, cost and timeline.

Next Steps

- Conduct an equipment inventory
- Assess equipment replacement costs
- Work with City Facilities to prioritize projects
- Establish retrofit budget

Centering Equity

By undergoing the planning process, the City will identify real-world barriers to electrification, determine opportunities for overcoming those barriers and to inform future Electrification Accelerator programs.

What Can You Do?

- Swap out your gas water heater and space heater with heat pump equivalents
- Fully electrify your home
- Implement energy efficient upgrades
- Read the City's plans to be powered by renewable and reliable energy here: <https://sustainability.santabarbara.gov/energy-planning/>

Partners/ Resources

- **Lead:** City's Sustainability & Resilience Department, Energy & Climate Division
- **City Departments:**
 - Community Development
 - Public Works
- Santa Barbara Clean Energy
- Tri-County Regional Energy Network
- Inflation Reduction Act

Supportive Actions (from Appendix A)
DE 1.5; DE 4.1; DE 5.1; DE 5.2; DE 5.7; DE 5.8; DE 5.15; DE 6.1; DE 6.2; DE 6.4; DE 6.5; DE 6.6; DE 6.8; DE 6.12

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Co-benefits refer to additional positive outcomes gained as a result of implementing the strategy.

These are the immediate next steps the City will take to implement that action.

Everyone is part of the solution. These are a few suggestions of things you can do at home or work to reduce emissions.

Equity is absolutely central to this plan. These are the ways in which we are protecting and prioritizing our under resourced community members.

We aren't in this alone. The City will work with its robust network of partners and look to leverage resources on the state and national scale in order to achieve its goals.

This lists the other strategies in the full plan (see Appendix A) that relate to this particular effort.

Co-Benefits



Resilience

Protects against current and future impacts of climate change, such as sea level rise, energy assurance, wildfires, and food insecurity.



Public Health

Creates a cleaner and healthier community by improving air and water quality, wellness, and/or protecting against extreme heat and weather events.



Conserving Resources

Conserves finite natural resources such as water, raw materials, and fossil fuels.



Community Connectivity

Promotes a strong sense of community by connecting residents to each other and the City, connecting historically underserved communities with resources, and by creating neighborhoods that are accessible by multiple modes of travel.



Protecting Biodiversity and Natural Lands

Protects biodiversity and natural ecosystems by restoring natural spaces and protecting air and water quality.



Green Economy

Creating local job opportunities in green technology sectors such as solar installation and battery storage installation.



Cost Savings

May result in a cost savings to the consumer in the immediate term or over the life cycle of the measure.



Innovation (Moonshots)

The City is an innovator in creating new approaches to fighting climate change, creating resilience, and engaging the community.

Building Energy Use Emissions



THE GOAL

CENTERING EQUITY

CITY LEADERSHIP

THE STRATEGY

Eliminate emissions from the building sector by increasing energy efficiency and converting new and existing buildings to all-electric systems. Add new local renewable energy sources to increase resilience and meet local demand.

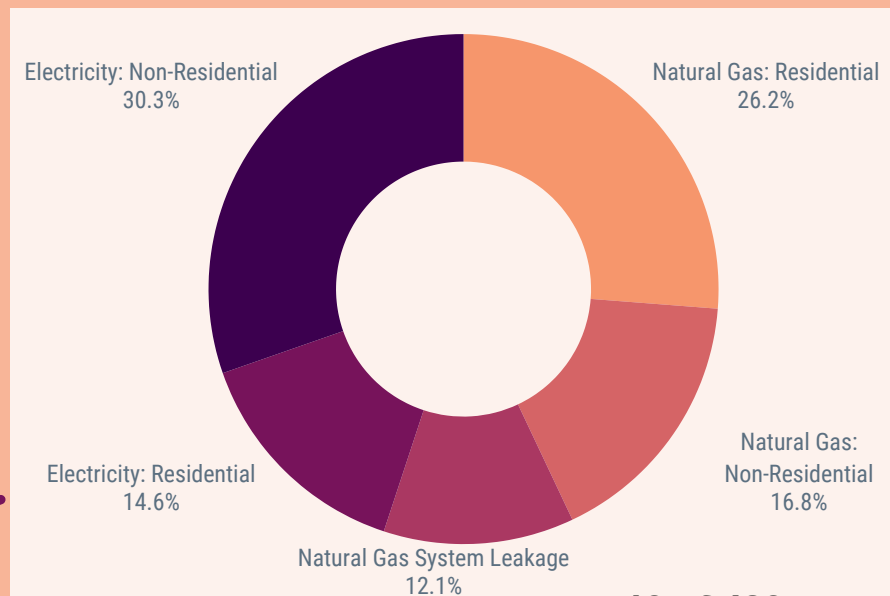
The City is developing programs and incentives to electrify multi-family buildings, thus reducing energy costs for renters while simultaneously enhancing indoor air quality and health.

The City has adopted a Green Building Policy. All new City facilities will be highly efficient, zero-net-energy buildings capable of producing enough electricity on-site to run the building.

The City has set a goal to convert all its facilities to all-electric by 2035.

Offer a suite of tools, education, and incentives, coupled with thoughtful regulation, to accelerate conversion to all-electric buildings.

The 2019 breakdown of building energy use emissions by source type:



IMPLEMENTING THIS PLAN WILL

REDUCE

BUILDING ENERGY USE EMISSIONS

BY

54%! ↓

BUILDING ENERGY USE







HIGH IMPACT ACTIONS

These actions represent the most critical community climate potential strategies to implement in this plan in order to achieve our goals. Additional supportive actions are found in **Appendix A**.




Measure / Action

IMPACT · READINESS · COST







Decarbonize 50% of Municipal Buildings by 2030; 100% by 2035

- ★ BE 1.1 Develop a plan to decarbonize municipal buildings, including an inventory of fossil fuel-powered equipment, replacement technologies, and short- and long-term schedule for construction.   
- ★ BE 1.3 Implement the municipal building decarbonization plan to decarbonize 100% of municipal buildings by 2035.   

Increase solar generation & energy storage capabilities around the City

- ★ BE 1.2 Develop ordinance requiring the installation of solar and/or energy storage backup power instead of diesel generators, where feasible, by 2031.   
- ★ BE 3.1 Implement all feasible microgrid projects at municipal facilities as identified by the 2017 Zero Net Energy Study and re-evaluate viability of additional facilities.   
- BE 3.2 Identify barriers to installation of distributed energy resources at municipal facilities. Establish a funding plan and direct municipal efforts to source space for energy storage and microgrids.   
- BE 7.3 Develop targeted electrical rate structures and incentives for customers, including demand response.   
- BE 5.17 Create innovative pilots through SBCE and local partnerships to address technical, low-income, market, and policy barriers limiting progress toward the City's climate goals.   
- BE 5.18 /6.10 Implement direct installation and/or incentive programs that facilitate the installation of combined solar and battery energy storage system installations on buildings. Target 120 residential and 35 commercial installations by 2035.   

Offer incentives, programs, and incubators to innovate, reduce costs, and remove barriers

- ★ BE 6.12 Create a residential building electrification accelerator program to increase building electrification through economic, technical, and educational support. Mechanics such as incentives, time of sale rebates, construction support, permit streamlining, and special rate design should be used. Special focus to be placed on underserved residents.   
- BE 6.11 Pilot an emergency hot water appliance loaner program to provide free loaner natural gas hot water heaters within 24 hours of a request, with an agreement that the borrower will replace the gas powered hot water heater with an electric heat pump water heater within 6 months.   

BUILDING ENERGY USE

HIGH IMPACT ACTIONS CONT.

Measure / Action

IMPACT · READINESS · COST

Design new ordinances and programs to reduce natural gas consumption in existing buildings

★ BE 5.2	Conduct a study on lifecycle costs of existing building electrification. Results will inform future ordinances and the building electrification accelerator. Include extensive community input and equity analysis to ensure all have affordable access to the health, comfort, economic, and resilience benefits of building electrification.			
BE 5.5	Develop and implement a low-income and affordable housing electrification pilot project to demonstrate proof of concept of all-electric buildings. Pilot will ensure no increase in energy bills for participants due to project.			
BE 5.14	Develop and implement a multi-family residential property regulation by 2028 to promote phased building energy efficiency and decarbonization. Requires periodic energy evaluations and compliance with a prescriptive energy point system.			
BE 6.1 /6.4	Update building ordinances every three years to align with building code cycles, industry technologies, and to maximize GHG reductions.			
BE 6.1	Develop and adopt a commercial building ordinance that requires the replacement of fossil fuel building systems with electric technologies at time of renovation.			
BE 6.2	Develop and implement a commercial and mixed-use building benchmarking program for commercial and multi-family buildings over 20,000 square feet by 2025, effective 2026.			
BE 6.3	Develop and implement a building performance standard by 2028. A building performance standard is a policy that requires commercial or multi-family buildings to meet certain performance levels for energy use or GHG emissions.			

BUILDING ENERGY USE

Priority Strategy: BE 1.1

Develop a plan to decarbonize municipal buildings, including an inventory of fossil fuel-powered equipment, replacement technologies, and short- and long-term schedule for construction.



Co-Benefits

Electrify Today to Empower Tomorrow

Building energy use accounts for 40% of emissions in Santa Barbara. The City will lead by example by creating this plan to remove energy-related greenhouse gas emissions from its buildings. The plan will provide information on project scope, cost, and timeline.



Next Steps

- Conduct an equipment inventory
- Assess equipment replacement costs
- Work with City Facilities to prioritize project
- Establish retrofit budget



Centering Equity

The planning process will focus on overcoming real-world barriers to electrification, particularly for under resourced members of the community. This analysis will inform future Electrification Accelerator programs.



What Can You Do?

- Swap out your natural gas water and space heaters with heat pumps
- Fully electrify your home
- Implement energy efficient upgrades
- Read the City's plans to be powered by renewable and reliable energy here: Sustainability.SantaBarbaraCA.gov/Energy-Planning



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Energy & Climate Division**
- City Departments:
 - Community Development
 - Public Works
- Santa Barbara Clean Energy
- Tri-County Regional Energy Network
- Inflation Reduction Act

Supportive Actions (from Appendix A)

BE 1.5; BE 4.1; BE 5.1; BE 5.2; BE 5.7; BE 5.8; BE 5.15; BE 6.1; BE 6.2; BE 6.4; BE 6.5; BE 6.6; BE 6.7; BE 6.12

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BUILDING ENERGY USE

Priority Strategy: BE 1.3

Implement the municipal building decarbonization plan developed under BE-1.1 to decarbonize 100% of municipal buildings by 2035.



Co-Benefits

Building a Brighter Future

Building energy use accounts for 40% of emissions in Santa Barbara. The City will lead by example by creating this plan to remove energy-related greenhouse gas emissions from its buildings. The plan will provide information on project scope, cost, and timeline.



Next Steps

- Install make-ready infrastructure such as upgraded electrical panels
- Apply for grant funds
- Implement projects per established budget
- Share successes and lessons learned



Centering Equity

The planning process will focus on overcoming real-world barriers to electrification, particularly for under resourced members of the community. This analysis will inform future Electrification Accelerator programs.



What Can You Do?

- Swap out your natural gas water and space heaters with heat pumps
- Fully electrify your home
- Implement energy efficient upgrades
- Read the City's plans to be powered by renewable and reliable energy here: Sustainability.SantaBarbaraCA.gov/Energy-Planning



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Energy & Climate Division**
- City Departments:
 - Community Development
 - Public Works
- Santa Barbara Clean Energy
- Tri-County Regional Energy Network
- Inflation Reduction Act

Supportive Actions (from Appendix A)

BE 1.1; BE 1.5; BE 1.6; BE 4.1; BE 5.1; BE 5.2; BE 5.7; BE 5.8; BE 5.15; BE 6.1; BE 6.2; BE 6.4; BE 6.5; BE 6.6; BE 6.8; BE 6.11; BE 6.12

BUILDING ENERGY USE

Priority Strategy: BE 3.1

Implement all feasible microgrid projects at municipal facilities as identified by the 2017 Zero Net Energy study and re-evaluate viability of additional facilities.



Co-Benefits

Reliable Energy, Resilient Community

Adding batteries and solar to municipal facilities is a key first step in creating resilient clean energy communities.



Next Steps

- Apply for grant funds
- Pursue Power Purchase Agreements
- Implement projects per established budget



Centering Equity

The City's Zero Net Energy Study evaluated City facilities across ALL neighborhoods in Santa Barbara, including meeting facilities, community gathering places, and critical facilities. This initial analysis positions us to implement projects that will benefit all geographic communities in the City.



What Can You Do?

- Learn more about available renewable energy incentives at SBCleanEnergy.com
- Explore solar and battery system installation at your home
- Track completed and ongoing projects



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Energy & Climate Division**
- City Departments:
 - Public Works/Parks and Recreation/ Fire/Airport/Waterfront
- SoCal Regional Energy Network
- Tri-County Regional Energy Network

BUILDING ENERGY USE

Priority Strategy: BE 3.2

Identify barriers to installation of distributed energy resources at municipal facilities. Establish a funding plan and direct municipal efforts to source space for energy storage and microgrids.



Co-Benefits

Energy Security for Everyone

Adding batteries and solar to municipal facilities is a key first step in creating resilient clean energy communities.



Next Steps

- Assess best practices from other cities
- Work with Community Development Department on administrative opportunities
- Pursue funding opportunities
- Assess building feasibility
- Work with Southern California Edison on service upgrade needs



Centering Equity

The City is pursuing grant funding to bring distributed energy resources specifically to under resourced Justice40 communities



What Can You Do?

- Learn more about available renewable energy incentives at [SBCleanEnergy.com](https://www.sbcleanenergy.com)
- Explore solar and battery system installation at your home
- Track completed and ongoing projects



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Energy & Climate Division**
- City Departments:
 - Community Development
- Santa Barbara Clean Energy
- Southern California Edison
- California Energy Commission
- 3C-REN

BUILDING ENERGY USE

Priority Strategy: BE 5.2

Conduct a study on lifecycle costs of existing building electrification. Results will inform future ordinances and the building electrification accelerator. Include extensive community input and equity analysis to ensure all have affordable access to the health, comfort, economic, and resilience benefits of building electrification.



Co-Benefits

Bridging the Energy Divide

Ensuring that ALL households in Santa Barbara gain the benefits of switching to clean all-electric homes, including improved air quality, stable energy bills, and improved public health.



Next Steps

- Issue RFP for study
- Develop data needs
- Determine deliverables



Centering Equity

Switching to electric appliances can lower household utility bills, however upfront cost can create a significant barrier.

This study will indicate what criteria need to be met in order to make electrification cost effective for all.



What Can You Do?

- Swap out your gas water and space heaters with electric heat pumps
- Fully electrify your home
- Implement energy efficient upgrades



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Energy & Climate Division**
- Southern California Edison
- California Energy Commission
- 3C-REN, SoCal REN
- Consultant assistance

BUILDING ENERGY USE

Priority Strategy: BE 6.12

Create a residential building electrification accelerator program to increase building electrification through economic, technical, and educational support. Mechanics such as incentives, time of sale rebates, construction support, permit streamlining, and special rate design should be used. Special focus to be placed on underserved residents.



Co-Benefits

Accelerating the Change

Ensuring progress and equity in the transition to all-electric buildings will require a menu of resources to meet people where they are in terms of knowledge, capacity, and ability to move forward. This program will look to address all potential gaps in the electrification journey



Next Steps

- Turn results of life cycle cost study into action items
- Allocate budget for incentives, direct install, and technical assistance needs
- Work with local workforce and contractors to educate and prepare for increase in electrification measures
- Allocate staff to support the program



Centering Equity

Switching to electric appliances can lower household utility bills, however upfront cost can create a significant barrier.

This study will indicate what criteria need to be met in order to make electrification cost effective for all.



What Can You Do?

- Swap out your gas water and space heaters with electric heat pumps
- Fully electrify your home
- Implement energy efficient upgrades



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Energy & Climate Division**
- Southern California Edison
- California Energy Commission
- 3C-REN, SoCal REN
- Consultant assistance

Transportation Emissions



THE GOAL

CENTERING EQUITY

CITY LEADERSHIP

THE STRATEGY

Promote use of safe, equitable, zero emission transportation options to reduce pollution and urban congestion today and for future generations.

Provide incentives, programs, pathways, and infrastructure to promote adoption of sustainable transportation options for ALL members of our community.

The City adopted a "Zero Emission Vehicle First" purchasing policy for City fleet vehicles.

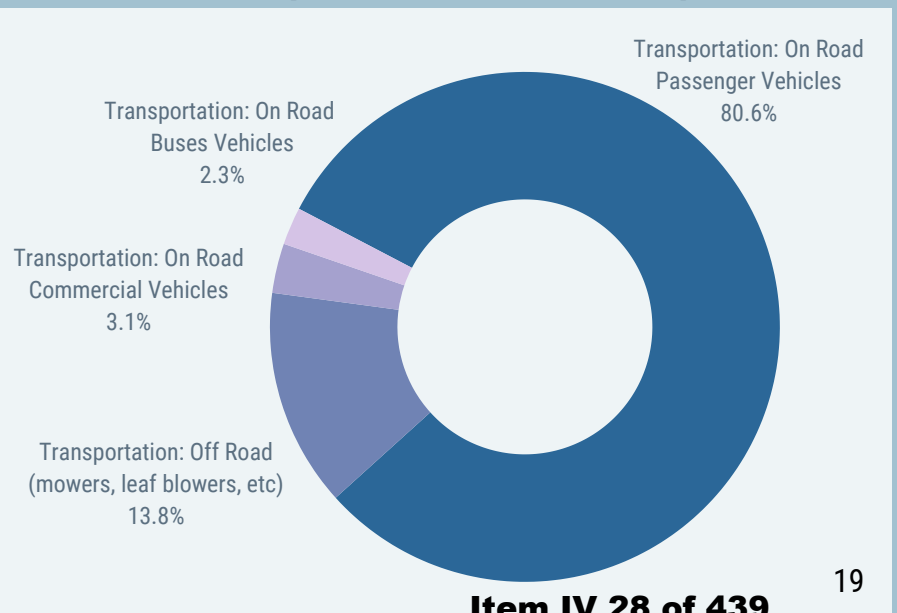
The City manages an electric bike share program (BCycle).

The City employee WorkTRIP Program encourages carpooling, mass-transit, and active modes of commuting.

Innovate and collaborate with residents, businesses, workforce, and stakeholders to build a more climate-centric transportation system. Improve infrastructure for active transportation modes such as biking and walking, strengthen electric vehicle charging network, and promote conversion to zero emission vehicles.

IMPLEMENTING THIS PLAN WILL
REDUCE
 TRANSPORTATION EMISSIONS
 BY
40%!

The breakdown of transportation emissions by source type:












TRANSPORTATION HIGH IMPACT ACTIONS










These actions represent the most critical community climate potential strategies to implement in this plan in order to achieve our goals. Additional supportive actions are found in **Appendix A**.

Measure / Action IMPACT · READINESS · COST










Electrify (or otherwise decarbonize) the City's Municipal Fleet by 2035

★ T 2.1	Implement the City's Zero Emission Vehicle Acquisition Policy, transitioning fossil fuel municipal vehicles to zero emission alternatives by 2035. Prepare a short- and long-term schedule and explore regional bulk procurement.			
★ T 2.4	Adopt an emissions-free equipment purchasing policy for smaller equipment (e.g., landscaping equipment) for all City departments.			
T 2.2	Install additional electric vehicle chargers in municipal parking lots for fleet and employee use.			

Increase active transportation mode share to 6% by 2030 and to 10% by 2035

★ T 3.1	Implement the City's Bicycle Master Plan and Pedestrian Master Plan goals and policies to create bike and pedestrian infrastructure that is safer, easier to use, and widely accessible for all community members.			
T 3.6	Build new infrastructure to ensure there is equitable access to safe bike and pedestrian routes in all areas of the City. Focus on under resourced communities.			
T 3.8	Implement the recommended bike facilities outlined in the Santa Barbara Bicycle Master Plan to add 30 miles of bikeways to the City by 2030.			

Develop programs to reduce vehicle miles traveled (VMTs)



















T 3.10	Leverage technology to track mode shifts to active transportation. Conduct an annual review of implementation progress, data quality, and potential barriers to implementation. Once an effective tracking method is developed, the City shall aim to achieve 6% increase in active transportation mode share by 2030 and 10% by 2035.			
T 3.12	Accelerate the production and availability of affordable housing near urban centers by updating and adopting the Housing Element and Zoning Code to reduce VMTs; explore alternative housing options and streamline processes.			
T 4.1	Facilitate alternative forms of public transit, such as micro transit and electric shuttle routes, in areas with higher congestion and population densities. Micro transit is shared transportation in smaller vehicles with flexible routes and schedules.			

TRANSPORTATION

HIGH IMPACT ACTIONS CONT.

Measure / Action **IMPACT · READINESS · COST**

Increase adoption of Zero Emission Vehicles, Equipment, and Charging Network

★ T 6.1	Amend municipal code to require an increased number of EV chargers at new construction and major remodels.			
T 6.2	Revisit commercial and multi-family building ordinances to be updated and require large commercial and large multi-family building owners that provide parking to install EV chargers in 20% of parking spaces when undergoing major remodeling.			
T 6.3	Add new publicly accessible EV charging stations through the City and City-owned facilities.			
T 6.4	Support private development of EV charger installations by streamlining City processes such as expediting permitting, easing onerous regulations, develop a permitting design guide.			
★ T 8.1	Align or exceed state legislation (AB 1346) and expand enforcement of the ordinance that bans the sale of gas powered small off-road engines by 2024. Provide incentives or buyback programs for burdened residents.			
T 8.4	Partner with Santa Barbara County Air Pollution Control District to expand rebate and incentive programs for upgrading off-road equipment to hybrids, biofuels, or fully electric.			

TRANSPORTATION

Priority Strategy: T 2.1

Implement the City's Zero Emission Vehicle Acquisition Policy, transitioning fossil fuel municipal vehicles to zero emission alternatives by 2035. Prepare a short and long-term schedule for completion and explore regional bulk procurement.



Co-Benefits

Charged with Purpose

The City will lead by example in creating a plan to convert its entire fleet to zero emission vehicles.



Next Steps

- Create procurement plan for zero emission vehicles
- Enhance EV Charging network
- Adjust budgets as needed



Centering Equity

The City will identify real-world barriers to vehicle electrification and determine opportunities for overcoming those barriers to inform future Electrification Accelerator programs.



What Can You Do?

- Choose an electric car
- Reduce single occupancy vehicle trips
- Explore alternative modes of travel
- Take the train or bus, or use BCycle, our electric bicycle share program



Partners/Resources

- **Lead: City's Public Works Fleet Division**
- Santa Barbara County Air Pollution Control District
- California Energy Commission
- California Air Resources Board
- Southern California Edison

TRANSPORTATION

Priority Strategy: T 2.4

Adopt an emissions-free equipment purchasing policy for smaller equipment (e.g., landscaping equipment) for all City departments.



Co-Benefits

Sustain the Beauty, Trim the Emissions

The City will lead by example by converting all landscaping equipment to electric.



Next Steps

- Conduct equipment inventory
- Assess equipment replacement costs
- Work with City Facilities and the Parks and Recreation Department to create budget and identify incentives



Centering Equity

Eliminating emissions from landscape equipment improves air quality and public health in City Parks and Recreation Facilities and other public spaces.



What Can You Do?

- Switch to electric equipment such as mowers and leaf blowers
- Check out rarely used tools and equipment from the City's Library of Things



Partners/Resources

- **Lead: City's Parks and Recreation Department**
- City Departments:
 - Sustainability and Resilience
 - Public Works Facilities
- Santa Barbara County Air Pollution Control District
- California Air Resources Board

TRANSPORTATION

Priority Strategy: T 3.1

Implement the City's Bicycle Master Plan and Pedestrian Master Plan goals and policies to create bike and pedestrian infrastructure that is safer, easier to use, and widely accessible for all community members.



Co-Benefits

Move Freely, Live Actively

The City has secured over \$100 million in grant funding for bike and pedestrian infrastructure. This measure further solidifies the City's commitment to alternative transportation.



Next Steps

- Continue the City's successful track record of securing state funding for new active transportation infrastructure
- Conduct community outreach to develop priorities and design
- Maintain existing infrastructure



Centering Equity

Improving bicycle and pedestrian infrastructure increases safe and healthy transportation options for all SB communities. The City prioritizes historically underserved communities.



What Can You Do?

- Explore the City's bike paths
- Take advantage of bikeshare
- Explore alternative transportation incentives from Santa Barbara Clean Energy
- Attend public meetings on new proposed projects



Partners/Resources

- **Lead: Public Works Transportation Planning**
- Santa Barbara County Air Pollution Control District
- California Air Resources Board
- SB County Associated Governments
- Move SBC

Supportive Actions (from Appendix A)

T 1.1; T 1.3; T 1.4; T 1.5; T 3.2; T 3.3; T 3.4; T 3.5; T3.6; T 3.7; T 3.8; T 3.9; T 3.10; T 3.11; T 5.7 **Item IV 33 of 439**

TRANSPORTATION

Priority Strategy: T 6.1

Amend municipal code to require an increased number of EV chargers for new construction and major remodels.



Co-Benefits

Fueling Future Mobility

Through amendments to City codes, the City is preparing for the state-led transition away from internal combustion engine vehicles.



Next Steps

- Conduct stakeholder meetings
- Survey similar codes from other cities
- Adopt the new code



Centering Equity

Requiring EV chargers during new construction or remodel accelerates the transition to emission free vehicles, improving air quality and public health.



What Can You Do?

- Size your electrical panel for an EV charger
- Design your home to be EV Ready
- Choose to drive electric



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Energy & Climate Division**
- City Departments:
 - Community Development, Building and Safety Division
- Tri-County Regional Energy Network
- Central Coast Clean Cities Coalition

TRANSPORTATION

Priority Strategy: T 8.1

Align with or exceed state legislation (AB 1346) and expand enforcement of the ordinance that bans gas powered small off-road engines by 2024. Provide incentives or buyback programs for local small businesses.



Co-Benefits

Cultivating a Gas-Free Landscape

By offering incentive and buyback programs through this measure, the City will help residents comply with state regulations and improve air quality across the City.



Next Steps

- Work with California Air Resources Board and SB County Air Pollution Control District to identify and develop incentives and programs
- Conduct robust stakeholder outreach



Centering Equity

Transitioning away from gas powered landscape equipment improves air quality and public health.



What Can You Do?

- Choose electric tools such as mowers or leaf blowers
- Reduce natural gas and propane use
- Check out lesser used items from the City's Library of Things



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Energy & Climate Division**
- Santa Barbara County Air Pollution Control District
- California Air Resources Board

Water, Wastewater, Solid Waste Emissions



THE GOAL

Reduce organics in the solid waste stream and reduce or reuse other resources. Reduce use of landfill space, the demand for water, and consumption of single use plastics and other materials that have multiple environmental impacts.

CENTERING EQUITY

Provide multi-lingual and industry specific education for all residents, and ensure there are cost effective and accessible means for residents to participate in initiatives.

CITY LEADERSHIP

The City partners with the County on the ReSource Center to convert commercial and residential waste into resources by recovering recyclable materials, transforming organics into landscape nutrients, and generating renewable energy.

The City has instituted an aggressive water conservation program and implements the Water Conservation Strategic Plan.

THE STRATEGY

Reduce the use of packaging, single use items, and other materials; produce and distribute compost; and ensure efficiency in the City's recycling and waste processes. Implement the City's Water Conservation Strategic Plan and increase drought tolerant landscaping.

IMPLEMENTING THIS PLAN WILL

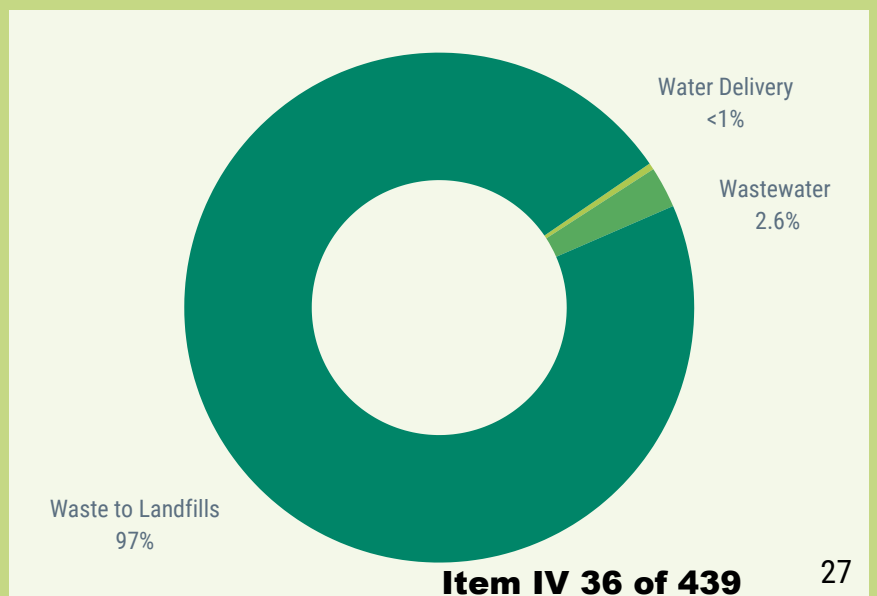
REDUCE

WASTE/WATER/WASTEWATER EMISSIONS

BY

54%! ↓

The breakdown of waste, water, and wastewater emissions by source type:



WATER, WASTEWATER & SOLID WASTE HIGH IMPACT ACTIONS




These actions represent the most critical community climate potential strategies to implement in this plan in order to achieve our goals. Additional supportive actions are found in **Appendix A**.

Measure / Action IMPACT · READINESS · COST




Reduce per capita potable water consumption 1.05% by 2030 and 1.58% by 2035




★ **W 3.1** Implement all cost-effective measures identified in the Water Conservation Strategic Plan.   




Create rebate programs related to green landscaping




W 3.5 Utilize available enhanced water consumption data from the City's Automated Metering Infrastructure, along with the WaterSmart customer portal, to educate water customers about water use patterns and leak detection.   

Facilitate the reduction of single use items and promote practicing circular economics




W 4.5 Conduct waste characterization studies every 4-5 years to inform programs and policies. Leverage studies to understand the waste stream and create a plan to increase diversion and reduce contamination.   

W 4.10 Partner with the Harbor, Airport and other major Santa Barbara facilities to expedite no single use plastic practices.   

★ **W 4.12** Ban items without means of recycling or recycling markets, such as polystyrene, produce bags, plastic packaging, straws, plastics #4-7, and mixed materials.   

W 4.16 Partner with UCSB, ICLEI and other organizations to cost effectively evaluate and develop resources around consumption-based emissions. Based on the results, create a plan to achieve zero growth of waste generation.   

W 4.13 Implement pilot projects for reusable dining to-go containers.   

★ **W 4.15** Partner with libraries and other existing facilities to expand programs to reduce single use items and promote reuse and repair. Leverage Library of Things program and develop "fix it" resources for the community.   

WATER, WASTEWATER & SOLID WASTE

HIGH IMPACT ACTIONS CONT.

Measure / Action

IMPACT · READINESS · COST

Reduce organic waste 80% below 2014 levels by 2030 and 85% by 2035

W 1.3	Investigate and expand opportunities for procuring recovered organic waste products within municipal facilities.			
W 4.1.a	Pilot and evaluate emerging technologies such as source organic waste digestion to reduce organic waste by restaurants and other major food waste producers.			
W 4.1.b	Implement enforcement and a fee for incorrectly sorted materials with sensitivity to shared collection.			
W 4.6	Collaborate with the County and Resource Conservation District to develop a regional compost trading program to provide farmers with compost to meet organic procurement target set by SB 1383.			
W 4.16	Initiate a study partnering with local academic institutions and the ReSource Center to identify and research ways to create a circular economy around organic waste edible food rescue.			

WATER, WASTEWATER, SOLID WASTE Priority Strategy: W 3.1

Implement all cost-effective measures identified in the Water Conservation Strategic Plan.



Co-Benefits

Nurturing our Lifeline Drop by Drop

This measure will help improve local water supply reliability using water efficiently, and reduce the GHG impacts of delivering and treating water.



Next Steps

- Calculate costs of measures
- Create prioritized plan of conservation measures
- Increase community adoption of WaterSmart monitoring



Centering Equity

Conservation decreases utility bills. The City continues to explore income-based tiered incentives.



What Can You Do?

- Switch to drip irrigation
- Enroll in the City's WaterSmart Portal to monitor your water use and help identify priority conservation measures



Partners/Resources

- **Lead: Public Works Department, Water Resources Division**
- WaterSmart
- Landscape Contractors

WATER, WASTEWATER, SOLID WASTE Priority Strategy: W 4.12

Ban non-recyclable items such as polystyrene, produce bags, plastic packaging, straws, plastics #4-7, and mixed materials.



Co-Benefits

Recycle or Rethink

This measure builds on the City's Single-Use Carryout Bag Ordinance and reduces emissions associated with waste streams and plastic material production.



Next Steps

- Meet with neighboring jurisdictions with similar bans
- Develop policy, take to Council for adoption, and conduct additional outreach



Centering Equity

City will develop reusable bag program for SNAP customers. Clean Community will also expand offers of free reusable silverware.



What Can You Do?

- Reduce single-use items
- Avoid buying items made of polystyrene (Styrofoam)
- Carry your own reusable silverware and water bottles



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Clean Community Division**
- Community Environmental Council
- City of Goleta
- Explore Ecology
- Santa Barbara Channelkeeper
- Local area stores

WATER, WASTEWATER, SOLID WASTE Priority Strategy: W 4.15

Partner with libraries and other existing facilities to expand programs to reduce single use items and promote reuse and repair. Leverage Library of Things program and develop "fix it" resources for the community.



Co-Benefits

Zero Waste, Infinite Solutions

Reduce, REUSE, Recycle. By expanding the Clean Community Division's Library of Things, the City will reduce waste and associated emissions.



Next Steps

- Expand the Library of Things
- Develop "Fix It" resources
- Co-promote program with SB Libraries



Centering Equity

The Library of Things is designed to reduce household expenses by offering free resources, tools, and housewares available to borrow.



What Can You Do?

- Try fixing broken items through a fix it fair
- Donate items you no longer use
- Consider sharing items you don't need often
- Borrow items from the Library of Things



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Clean Community Division and the Santa Barbara Public Library**

Carbon Sequestration



THE GOAL

Increase the City's ability to remove carbon from the atmosphere.

CENTERING EQUITY

Prioritize low-income areas in the City with less existing tree canopy for new shade tree plantings. When there are localized co-benefits for sequestration projects, focus development benefits to historically adversely impacted, under resourced communities.

CITY LEADERSHIP

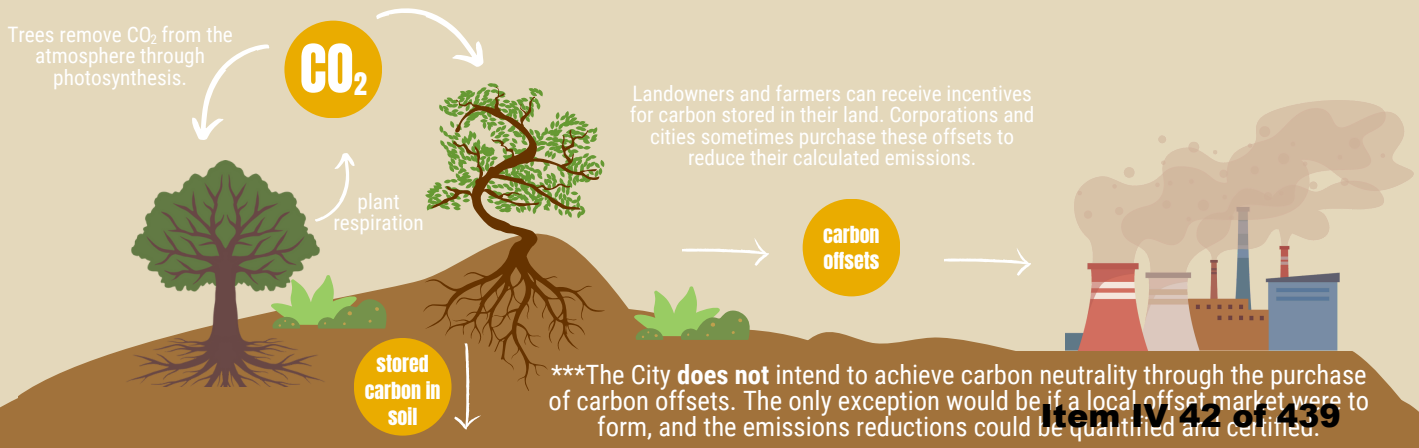
The City manages a Creek Tree Program, Urban Forestry Program, and compost application program.

A City and County partnership with the ReSource Center provides compost for residents and businesses, and maximizes organic food waste diversion from the landfill.

THE STRATEGY

Bolster the City's planting programs and vegetation management to ensure landscaping and habitats provide the most resilience and GHG reduction potential. Partner with resilience initiatives for co-benefits. Look at programs and measures that will accomplish multiple benefits like increasing resilience and shade for heat events, and making sure that our plantings are appropriate for extreme heat and drought events. Increase the use of compost and increase drought tolerant and shade creating landscapes.

How do carbon sequestration and carbon offsets work?



CARBON SEQUESTRATION HIGH IMPACT ACTIONS










These actions represent the most critical community climate potential strategies to implement in this plan in order to achieve our goals. Additional supportive actions are found in **Appendix A**.

Measure / Action IMPACT · READINESS · COST

Maintain natural lands and increase the urban tree canopy

CS 1.1	Implement and expand the Urban Forest Management Plan to include enhancing resiliency, increasing environmental and co-benefits, and public engagement in street tree health. Increase tree plantings to meet the goal of 4,500 new trees in the community by 2030.			
★ CS 1.5	Implement the City's Creek Tree Program to assist private creekside landowners with improving wildlife habitat along creeks. Prioritize low-income areas for implementation of the program.			
CS 1.6	Update tree canopy coverage data within the City to measure the change in coverage over time as it relates to sequestration as part of the next Urban Forest Management Plan update.			
★ CS 3.2	Parcels identified for rezoning to a park or open space should: provide flexible solutions for urban parks in infill areas; aim to achieve the greatest carbon sequestration; and aim for underserved communities.			

Increase carbon sequestration capacity of landscapes through compost application

CS 4.4	Work with the ReSource Center to provide residents, businesses, and developers with educational material on where compost can be acquired and how it can be used (i.e., landscaping).			
CS 4.5	Collaborate with local higher academic institutions, local schools, and City departments to identify opportunities to apply compost to landscaping.			
★ CS 4.2	Identify additional locations within the City to apply compost and provide incentives for small-scale implementation.			

CARBON SEQUESTRATION

HIGH IMPACT ACTIONS CONT.

Measure / Action

IMPACT · READINESS · COST

Explore new carbon sequestration and carbon capture projects

★ CS 1.3	Implement the City's Community Wildfire Protection Plan to reduce fire risk and carbon loss due to wildfires by conducting vegetation management throughout the City.			
CS 1.2 /1.5	Develop a Citywide restoration plan to achieve target net increases in restored land area and waterways. Prioritize implementation of restoration projects in under-resourced communities.			
CS 2.1	Create an organizational body to lead program development and research for facilitating emergent carbon sequestration and carbon capture plans relevant to the City.			
CS 1.4/ CS 2.4	Develop a Citywide, or participate in a regional, carbon sequestration analysis, and plan to explore opportunities to increase sequestration in the City.			
CS 5	Pilot and promote carbon sequestering construction materials like low-carbon concrete and mass timber.			
CS 5.1	Conduct a feasibility study on carbon capture technologies to locally produce calcium carbonate (low carbon concrete), creating sequestration via construction materials. Determine viability within the City.			
CS 5.2	Partner with UCSB to pilot a building specific embodied carbon reduction project for planned construction.			
CS 5.3	Develop a strategic construction and procurement plan to facilitate use of alternative materials to reduce embodied carbon in municipal construction projects. Include scoring criteria in City requests for proposals for construction projects that identify resilience features such as water and energy efficiency, reduced urban heat, and decrease the embodied carbon in line with AB 2446.			

CARBON SEQUESTRATION

Priority Strategy: CS 1.3

Implement the City's Community Wildfire Protection Plan to reduce fire risk and carbon loss due to wildfires by conducting vegetation management throughout the City.



Co-Benefits

Nurturing Nature, Managing Risks

Sound planning and vegetation management reduces fire risk and protects Santa Barbara's homes and businesses.



Next Steps

- Identify priority measures from City's Community Wildfire Protection Plan
- Partner with SB County Fire Safe Council for outreach and trainings



Centering Equity

Extreme weather events and natural disasters disproportionately affect low-income communities and people of color. Increasing resilience planning and preparation is essential to protecting these communities. Working with Fire Safe Council and the Fire Department, the City will increase access to free resources and Spanish translation.



What Can You Do?

- Maintain defensible space around your home
- Download the 'Home Hardening Guide'
- Sign-up for a free wildfire preparedness evaluation from SBFireSafeCouncil.org



Partners/Resources

- **Lead: Santa Barbara Fire Department**
- City Departments:
 - Parks and Recreation
 - Sustainability & Resilience
- SB County Fire Safe Council

CARBON SEQUESTRATION

Priority Strategy: CS 1.5

Implement the City's Creek Tree Program to assist private creekside landowners with improving wildlife habitat along creeks. Prioritize low-income areas for implementation of the Creek Tree Program.



Co-Benefits

Rooted in Resilience

By working with the Creek Tree Program, residents will both improve wildlife habitat and stabilize and fortify streambanks adjacent to their homes.



Next Steps

- Identify and prioritize restoration areas
- Coordinate with City arborist for approved species and best practices
- Conduct outreach to raise awareness of the program



Centering Equity

In addition to healthy wildlife habitat, stable stream banks offer greater flood control protection to vulnerable neighborhoods.



What Can You Do?

- Explore the City's creek restoration projects
- Plant native trees along creeks for bank stability
- Clean up litter on our beaches
- Dispose of dog waste and cigarette butts responsibly



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Creeks Division**
- City Departments:
 - Parks and Recreation
- Local Residents
- South Coast Habitat Restoration

Supportive Actions (from Appendix A)

CS 1.1; CS 1.2; CS 1.4; CS 1.6; CS 1.8; CS 2.1; CS 2.4; CS 2.6; CS 2.9; CS 2.10; CS 3.1; CS 3.2; CS 3.4; CS 3.5; CS 3.6; CS 3.7; CS 3.8; CS 3.9; CS 3.10; CS 3.11; CS 3.12; CS 3.13; CS 3.14; CS 3.15; CS 3.16; CS 3.17; CS 3.18; CS 3.19; CS 3.20; CS 3.21; CS 3.22; CS 3.23; CS 3.24; CS 3.25; CS 3.26; CS 3.27; CS 3.28; CS 3.29; CS 3.30; CS 3.31; CS 3.32; CS 3.33; CS 3.34; CS 3.35; CS 3.36; CS 3.37; CS 3.38; CS 3.39; CS 3.40; CS 3.41; CS 3.42; CS 3.43; CS 3.44; CS 3.45; CS 3.46; CS 3.47; CS 3.48; CS 3.49; CS 3.50; CS 3.51; CS 3.52; CS 3.53; CS 3.54; CS 3.55; CS 3.56; CS 3.57; CS 3.58; CS 3.59; CS 3.60; CS 3.61; CS 3.62; CS 3.63; CS 3.64; CS 3.65; CS 3.66; CS 3.67; CS 3.68; CS 3.69; CS 3.70; CS 3.71; CS 3.72; CS 3.73; CS 3.74; CS 3.75; CS 3.76; CS 3.77; CS 3.78; CS 3.79; CS 3.80; CS 3.81; CS 3.82; CS 3.83; CS 3.84; CS 3.85; CS 3.86; CS 3.87; CS 3.88; CS 3.89; CS 3.90; CS 3.91; CS 3.92; CS 3.93; CS 3.94; CS 3.95; CS 3.96; CS 3.97; CS 3.98; CS 3.99; CS 4.00

CARBON SEQUESTRATION

Priority Strategy: CS 3.2

Parcels identified for rezoning to a park or open space should: provide flexible solutions for urban parks in infill areas; aim to achieve the greatest carbon sequestration; and aim for underserved communities.



Co-Benefits

Zoned for Nature

Increasing parks and open space offers the co-benefit of greater carbon sequestration.



Next Steps

- Identify opportunities to rezone
- Conduct outreach for rezones and community priorities
- Identify and implement carbon sequestration solutions



Centering Equity

Underserved communities will be prioritized for park and open space rezones.



What Can You Do?

- Explore the City's creek restoration projects
- Plant native trees along creeks for bank stability
- Clean up litter on our beaches
- Dispose of dog waste and cigarette butts responsibly



Partners/Resources

- **Lead: City's Sustainability & Resilience Department**
- City Departments:
 - Parks and Recreation
 - Community Development
- Local Residents
- Santa Barbara Land Trust
- South Coast Habitat Restoration

Supportive Actions (from Appendix A)

CS 1.1; CS 1.2; CS 1.3; CS 1.4; CS 1.5 CS 1.6; CS 1.8; CS 2.1; CS 2.4; CS 2.6; CS 2.9; CS 2.10; CS 3.1; CS 3.2; CS 3.3; CS 3.4; CS 3.5; CS 3.6

CARBON SEQUESTRATION

Priority Strategy: CS 4.2

Identify additional locations within the City to apply compost and provide incentives for small-scale implementation.



Co-Benefits

Nourishing the Soil, Harvesting the Rewards

Applying compost strategically can increase carbon uptake.



Next Steps

- Partner with ReSource Center for compost supply
- Develop incentives
- Identify target areas for application
- Create bilingual educational campaign



Centering Equity

Incentives will be designed to make compost application highly accessible and easy.



What Can You Do?

- Apply mulch and compost to your yard to reduce water use and increase carbon absorption
- Spread the word!



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Clean Community Division**
- City Departments:
 - Parks and Recreation
- County ReSource Center

Community Potential



THE GOAL

Establish Santa Barbara as a national leader in green technology innovation and economic development.

CENTERING EQUITY

Develop grant and scholarship programs to encourage local students to get involved in green technology and innovation projects.

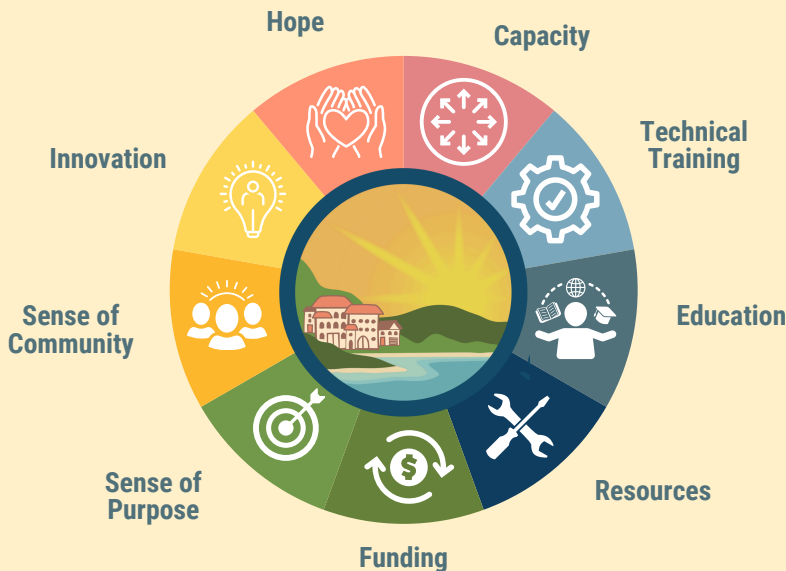
CITY LEADERSHIP

The City created a comprehensive Sustainability & Resilience Department which is developing innovative programs, solutions, and strategies around clean energy, green building, watershed management, and waste reduction.

THE STRATEGY

Develop partnerships with local schools and institutions of higher learning to spur climate innovation and workforce development.

The building blocks of community potential



Building community potential refers to building the collective capacity, capabilities, and resources within our community to combat climate change.

It encompasses skills, talents, knowledge, and social capital of community members, as well as physical and economic resources.










The concept emphasizes the idea that communities like ours have inherent strengths and assets that, when leveraged, can contribute to their overall resilience, sustainability, and quality of life.

COMMUNITY POTENTIAL HIGH IMPACT ACTIONS










These actions represent the most critical community climate potential strategies to implement in this plan in order to achieve our goals. Additional supportive actions are found in **Appendix A**.

Measure / Action IMPACT · READINESS · COST







Empower the local green economy through investment in a green technology workforce

CP 1.1	Create a green technology incubator in partnership with UCSB to determine technological advancement research into clean power, built environment advancement, and carbon sequestration.			
CP 1.3 /1.4	Facilitate workforce training by partnering with local academic institutions to offer scholarships for students pursuing climate trades, and develop a clean energy technology certificate program.			
★ CP 1.6	Create a climate innovation competition for local area students where the prize is a scholarship or grant.			

Facilitate Climate Action Planning updates and supportive programming

★ A 1.1	Maintain the Climate Action Plan as a dynamic document. Update based on significant new information, regulation, technology, and best available science to reflect changes at least every five years.			
A 1.2	Explore adding life cycle emissions into the City’s decision-making process as data becomes available.			
★ A 1.3	Develop an equity program to monitor implementation of the Climate Action Plan to avoid potential inequitable impacts or benefits resulting from implementation. Adjust as necessary to avoid identified inequities.			

Increase climate literacy through robust education and outreach programs

A 1.5	Create a climate ambassador program to provide on the ground knowledge sharing of climate programs, initiatives, resources, and best practices.			
★ A 1.6	Create and expand public engagement campaigns to educate the community and promote rebates and resources available to community members to facilitate participation in climate action.			

COMMUNITY POTENTIAL

HIGH IMPACT ACTIONS CONT.

Measure / Action IMPACT · READINESS · COST

Ensure adequate staff capacity to fully implement actions

BE 5	Increase staff time or create at least one new position for increased building inspections, permitting, and new ordinance procedures from the work outlined in the updated Climate Action Plan. (See Strategies: BE)			
All Sectors	Create at least one grant writer and grant manager position to advance the Climate Action Plan Update/Together to Zero implementation plan through funding opportunities. (See Strategies: BE-1.5, BE-6.6, T-3.2, T-3.6, T-5.3, T-8.5, W-3.2, W-3.6, CS-2.9, CS-3.5, CP-1.2, CP-1.5)			
★ A 2.4	Create an SBCE Program Manager position to design, develop, implement, and manage SB Clean Energy customer programs.			
CS 1	Create at least two positions and purchase a new truck for the Parks and Recreation department to increase the number of trees planted per year for carbon sequestration goals. (See Strategies: CS-1)			
T	Increase staff time or create at least one new position for transportation-related initiatives outlined in the updated Climate Action Plan. (See Strategies T: Transportation)			

COMMUNITY POTENTIAL

Priority Strategy: CP 1.6

Create a climate innovation competition for local area students where the prize is a scholarship or grant.



Co-Benefits

Youth for Climate: Sparking Innovation

Innovation competition will offer local students the opportunity to share their ideas for the Together to Zero Pathway.



Next Steps

- Partner with local schools in development of competition
- Identify funding sources
- Create selection committee
- Implement winning ideas



Centering Equity

Encouraging and supporting proposals for innovative decarbonization pilots allows ALL to participate in Together to Zero, and offers incentives to participate.



What Can You Do?

- Share your ideas for Together to Zero innovation
- Talk to the kids in your life, get them involved!



Partners/Resources

- **Lead: Sustainability & Resilience Department, Energy & Climate Division**
- Santa Barbara City College
- Santa Barbara Unified School District
- University of California, Santa Barbara

COMMUNITY POTENTIAL

Priority Strategy: A 1.6

Create and expand public engagement campaigns to educate the community and promote rebates and resources available to community members to facilitate participation in climate action.



Co-Benefits

Knowledge is Power

Robust education and outreach efforts will be necessary in order to make sure the community is equipped to participate in the transition to carbon neutrality. Throughout the process, significant investment in community knowledge and understanding will be vital.



Next Steps

- Create a public-facing dashboard to track progress of CAP implementation
- Ensure sufficient web presence so that the community can access information as needed
- Create social media campaigns to engage the community and drive action



Centering Equity

All outreach efforts should be bilingual so that all community members can be part of the process. Additionally, extra effort should be placed in underserved areas to ensure maximum exposure to communication and outreach.



What Can You Do?

- Follow us on social media!
- Sign up to receive our newsletters
- Participate in community meetings



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Community Engagement Division**
- Central Coast Climate Justice Network
- Tri-County Regional Energy Network
- Community Environmental Council

COMMUNITY POTENTIAL

Priority Strategy: A 1.3

Develop an equity program to monitor implementation of the plan to avoid potential inequitable impacts or benefits resulting from implementation. Adjust as necessary to avoid identified inequities.



Co-Benefits

Leave No One Behind

Ensure that Together to Zero implementation avoids inequitable impacts and brings the entire community along.



Next Steps

- Conduct targeted outreach assessing benefits and impacts of implementation measures
- Partner with community benefit organizations
- Evaluate and iterate implementation measures based on equity lens



Centering Equity

All outreach efforts should be bilingual so that all community members can be part of the process. Additionally, extra effort should be placed in underserved areas to ensure maximum exposure to communication and outreach.



What Can You Do?

- Talk to your neighbors, make sure they're up to speed
- Attend a public meeting
- Communicate with the City on what is working and what is not.



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Community Engagement Division**
- Central Coast Climate Justice Network
- Community Environmental Council

COMMUNITY POTENTIAL

Priority Strategy: A 2.4

Create an SBCE Programs Manager position to design, develop, implement, and manage SB Clean Energy customer programs.



Co-Benefits

Accountability to Act

Many of the strategies in this plan rely on innovative and effective customer programs in order to spur change. The City will need to increase its capacity to deliver and manage these programs in order for them to be effective.



Next Steps

- Develop job scope
- Recruit
- Prioritize program areas
- Develop and launch new programs



Centering Equity

It is imperative that our lower income and underserved community members aren't left behind or disproportionately impacted during our transition to carbon neutrality. Thoughtful programs that offer equitable access to resources will help ensure that we are taking care of everyone in our community.



What Can You Do?

- Keep an eye out on [SBCleanEnergy.com](https://www.sbcleanenergy.com) for new customer programs!
- Take advantage of incentives, rebates, and technical assistance to make climate smart changes at your home, business, and for your commute



Partners/Resources

- **Lead: City's Sustainability & Resilience Department, Energy & Climate Division**
- Tri-County Regional Energy Network
- SoCal Regional Energy Network
- Central Coast Community Energy

Moonshots



Achieving carbon neutrality will require bold, unprecedented actions

Moonshot initiatives are exceptionally ambitious and transformative projects or programs that the City could undertake to combat climate change. These initiatives set forth audacious goals that go beyond conventional sustainability measures, focusing on innovative and impactful strategies tailored to our City's unique context. Such initiatives are likely to require significant political will, robust outreach to achieve community support, and advancements in technologies.

The essence of moonshot initiatives, should the City choose to undertake them, is rooted in our City's commitment to spearheading innovative efforts that significantly reduce the community's carbon footprint, enhance resilience to climate impacts, and inspire other municipalities to pursue similarly bold actions. The list below contains moonshot initiatives that the City will explore for potential implementation in order to meet its ambitious climate goals.

Innovative Funding Pathways

Carbon Reduction Fund: Develop a financial mechanism that is dedicated to funding projects and programs that reduce carbon emissions. Funded by placing a price on carbon emissions associated with a certain action. Potential funding sources include (but are not limited to):

Carbon Fuel Tax: Assign pricing to the combustion of fossil fuels, encourages a reduction in single use vehicles

Carbon Fee for Cruise Ships / Airport Users / Tourists: Assign pricing to increase in local resource use due to tourism and tourist activities

Green Bank / Green Bond Program: Establishes a public-private partnership with a mission to facilitate and accelerate investment in local climate projects

Infrastructure Changes

Green Microgrid Communities: integrate renewable energy sources, energy storage systems, and smart grid technologies to create energy independent neighborhoods

Natural Gas System Elimination: Adopt a natural gas end flow date

Carshare or Fixed Route Microtransit: Build on the success of the BCycle program and re-introduce a carshare program, or develop a new fixed route micro transit program, particularly in the downtown corridor

Climate Positive Transportation Corridor: A transportation corridor designed as a model for climate-smart transit, incorporating things like electric buses, pedestrian & bike-friendly infrastructure, and smart traffic management systems

Carbon Sequestration Strategies

Local Carbon Offset Market: Facilitates buying and selling of carbon offsets generated by locally situated and validated projects

Urban Carbon Farming Network: A collaborative framework established to coordinate carbon farming activities such as community gardens, green roofs/walls, tree planting programs, etc.

Carbon Farming Innovation Hub: A hub established to research and implement cutting-edge carbon farming techniques

Community Engagement

Interactive Outdoor Climate Learning Lab: Interactive living laboratory that will serve as an educational resource, using nature-based approaches and immersive experiences to educate the community about the City's various climate initiatives and opportunities

Mobility For All Wallet: Provide a monthly mobility stipend to income-qualified users and a digital platform that allows participants to plan, book, and pay for multiple modes of travel in a single application

Green Technology Certificate/Training Program: Work with higher education and professional associations to develop a workforce training program for climate-friendly technologies and offer job placement services



TOGETHER **TO ZERO**

Next Steps

INTO THE FUTURE



SUMMARY OF THE NEXT 2 YEARS



Measure / Action		START / END
BE 1.1	Develop a plan to decarbonize municipal buildings, including an inventory of fossil fuel-powered equipment, replacement technologies, and short- and long-term schedule for construction.	FY25 / FY25
BE 1.3	Implement the municipal building decarbonization plan to decarbonize 100% of municipal buildings by 2035.	FY25 / Ongoing
BE 3.1	Implement all feasible microgrid projects at municipal facilities as identified by the 2017 Zero Net Energy Study and re-evaluate viability of additional facilities.	Started / Ongoing
BE 5.2	Conduct a study on lifecycle costs of existing building electrification.	FY25 / FY25
BE 6.12	Create a residential building electrification accelerator program to increase building electrification through economic, technical, and educational support.	FY 25 / Ongoing
T 2.1	Implement the City's Zero Emission Vehicle Acquisition Policy, transitioning fossil fuel municipal vehicles to zero emission alternatives by 2035. Prepare a short- and long-term schedule and explore regional bulk procurement.	Started / Ongoing
T 2.4	Adopt an emissions-free equipment purchasing policy for smaller equipment (e.g., landscaping equipment) for all City departments.	FY25 / FY25
T 3.1	Implement the City's Bicycle Master Plan and Pedestrian Master Plan goals and policies to create bike and pedestrian infrastructure that is safer, easier to use, and widely accessible for all community members.	Started / Ongoing
T 6.1	Amend municipal code to require an increased number of EV chargers at new construction and major remodels.	FY25 / FY25
T 8.1	Align or exceed state legislation (AB 1346) and expand enforcement of the ordinance that bans the sale of gas powered small off-road engines by 2024. Provide incentives or buyback programs for burdened residents.	FY25 / FY25
W 4.12	Ban items without means of recycling or recycling markets, such as polystyrene, produce bags, plastic packaging, straws, plastics #4-7, and mixed materials.	FY25 / FY25
W 4.15	Partner with libraries and other existing facilities to expand programs to reduce single use items and promote reuse and repair. Leverage Library of Things program and develop "fix it" resources for the community.	FY25 / Ongoing
CS 1.5	Implement the City's Creek Tree Program to assist private creekside landowners with improving wildlife habitat along creeks. Prioritize low-income areas for implementation of the program.	Started / Ongoing
CS 1.3	Implement the City's Community Wildfire Protection Plan to reduce fire risk and carbon loss due to wildfires by conducting vegetation management throughout the City.	Started / Ongoing
CS 3.2	Parcels identified for rezoning to a park or open space should: provide flexible solutions for urban parks in infill areas; aim to achieve the greatest carbon sequestration; and aim for underserved communities.	FY25 / Ongoing
CS 4.2	Identify additional locations within the City to apply compost and provide incentives for small-scale implementation.	FY25 / Ongoing
CP 1.6	Create a climate innovation competition for local area students where the prize is a scholarship or grant.	FY25 / Ongoing
A 1.3	Develop an equity program to monitor implementation of the Climate Action Plan to avoid potential inequitable impacts or benefits resulting from implementation. Adjust as necessary to avoid identified inequities.	FY25 / Ongoing
A 1.6	Create and expand public engagement campaigns to educate the community and promote rebates and resources available to community members to facilitate participation in climate action.	FY25 / Ongoing
A 2.4	Create an SBCE Program Manager position to design, develop, implement, and manage SB Clean Energy customer programs.	FY25 / Ongoing

Resource Needs

The new Climate Action Plan requires an all hands on deck approach to meet our ambitious goal of carbon neutrality by 2035. In order to undertake the actions identified in this plan we will need to increase staff capacity. Below is a staffing plan that begins to address the initial capacity needs to implement the plan.

Great care was taken to ensure that proposed positions would provide community benefit and value beyond the plan, leveraging these new bodies to continue to adapt to the climate action landscape as it evolves.

Proposed Increase in Staffing Plan Below is a table of additional staffing needs required to implement the Climate Action Plan.

Position	Timing	Cost	Funding Source	Description/Strategy Area
SBCE Programs Manager	FY25	\$200k	SBCE	Responsible for the strategic planning, development, and implementation of building and vehicle electrification programs. Housed in S&R
Grant Writer	FY25	\$160k	SBCE	Responsible for tracking and applying for grants, and to provide administrative oversight of awards. Housed in S&R
2x Energy & Climate Specialists	FY26	\$320k	SBCE/ grants	Support organization-wide implementation of the plan (including Energy and Climate, Public Works (Water, Facilities, Fleet and Engineering) and Com. Dev. Housed in S&R
Com. Dev. Environmental Rvw	FY26	\$160k	S&R	Perform CEQA and environmental review to ensure compliance with CAP and provide organization-wide insight. Housed in Community Development
Downtown Parking	FY26	\$300k	Downtown Parking Fund	Provide enforcement and community engagement for the on-street parking program. Housed in PW Downtown Parking
Facilities & Fleet Electrification Spec.	FY27	\$160k	SBCE	Coordinates electrification assets and systems. Housed in PW Operations
Building & Safety Specialist	FY27	\$160k	SBCE/ grants	Partners in the development of ordinance strategies and ongoing implementation and enforcement. Housed in CD Building & Safety
2x Tree Care Specialist	FY28	\$300k	Grants?	Plant and maintain 4,500 new trees in the urban forest. Housed in Parks & Recreation
2x Water Resources Specialist	FY28	\$300k	Water Fund/SBCE	Implements Water Conservation Strategic Plan and partners on capital projects. Housed in PW Water Resources

Next two years

Future estimated needs

Resource Needs

The new Climate Action Plan requires an all hands on deck approach to meet our ambitious goal of carbon neutrality by 2035. In order to undertake the actions identified in this plan we will need to increase staff capacity. Below is a staffing plan that begins to address the initial capacity needs to implement the plan.

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Position	Timing	Cost	Funding Source	Description/Strategy Area
SBCE Programs Manager	FY25	\$200k	SBCE	Responsible for the strategic planning, development, and implementation of building and vehicle electrification programs.
Grant Writer	FY25	\$160k	SBCE	Responsible for tracking and applying for grants, and to provide administrative oversight of awards.
Building and Vehicle Electrification Specialist (two positions)	FY27	\$320k	SBCE/ grants	Support the Energy and Climate Manager, the SBCE Programs Manager, Public Works (Water, Facilities, Fleet and Engineering) in implementing decarbonization projects and programs.
Tree Care Specialist and/or Tree Trimmer II (Two positions in Parks and Recreation)	FY28	\$300k	Grants?	Plant and maintain 4,500 new trees in the urban forest.

Next Steps



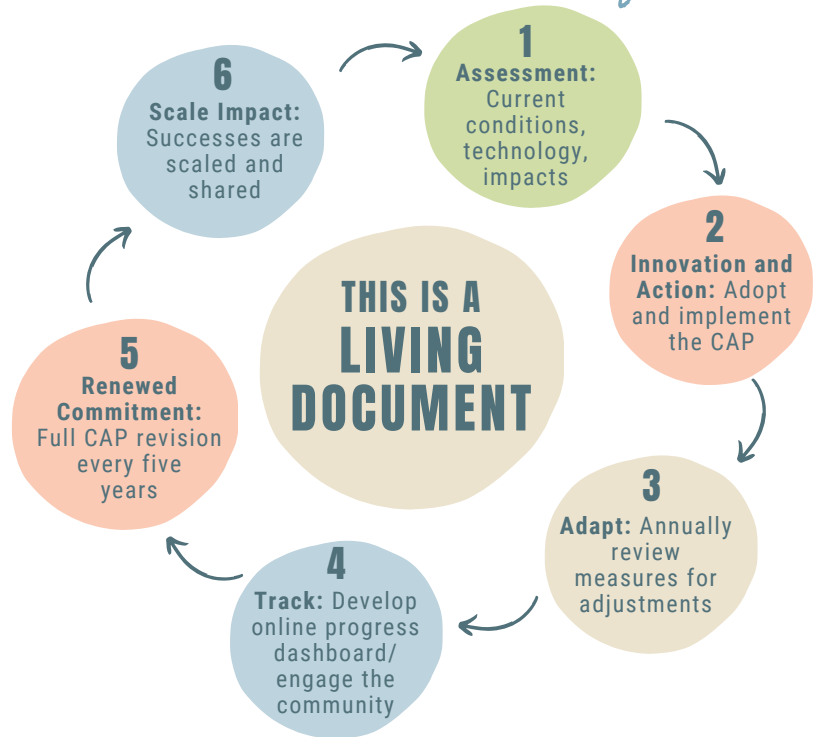
The fight against climate change is not a once-fought battle; it is an iterative process of innovation, adaptation, and collective resilience. Each step forward propels us closer to a sustainable, carbon-neutral future.

Achieving carbon neutrality will require state and federal legislation, funding, advancements in technology, and continued community education and empowerment.

Because of this, the Climate Action Plan must be a dynamic, living document, assessed and adapted regularly to address changes in the landscape.

The City commits to reviewing the plan annually and adapting the priorities and timeline to current developments and best practices. Additionally, we commit to taking inventory of our local greenhouse gas emissions at least every five years and incorporating the results into renewed commitments and strategies.

Santa Barbara's Climate Action Cycle

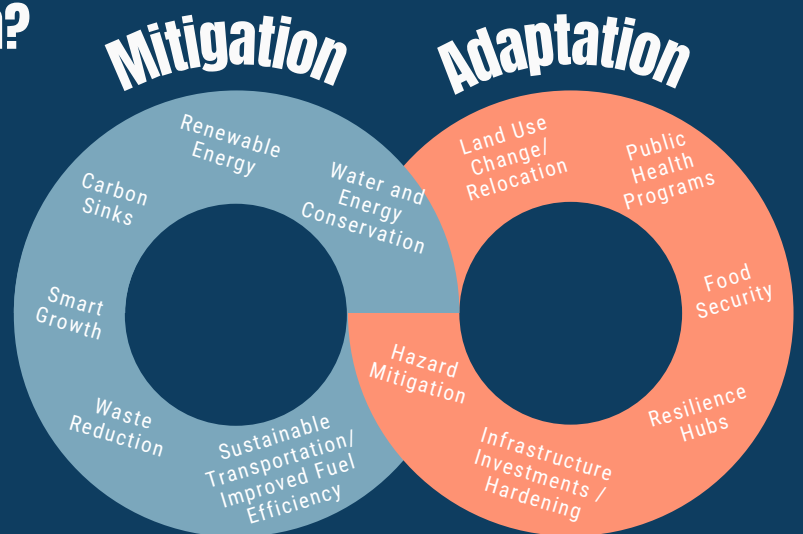


What About Climate Adaptation?

Some impacts of climate change are inevitable and have already begun to affect our community. Though this Climate Action Plan addresses proactive ways to reduce those climate impacts, the City is also building resilience within the community to address the impacts we won't be able to avoid.

The City has many ongoing initiatives such as the planning work done by its Resilience Program, including sea-level rise adaptation, flood and storm water management, and resources to protect the community in times of extreme heat and drought.

Additional climate adaptation planning will continue to take place under the City's Resilience Program.



ACKNOWLEDGEMENTS

In every measure and commitment outlined in this plan, we see the potential for transformative impact. This plan is not merely a document; it is a living testament to our dedication, innovation, and shared vision for a healthier planet.

As we step into implementation, we carry the torch of inspiration, recognizing that each action, no matter how small, contributes to a larger narrative of positive change. The journey is dynamic, and it is fueled by the passion and commitment of this community and of each individual involved.

Below are listed the contributors of a story that speaks of hope, responsibility, and the enduring power of collective action. As we move forward, let the inspiration we've cultivated within this plan propel us to new heights and amplify our impact.

Thank you for your unwavering dedication, and let this City's shared commitment to climate action continue to be a source of inspiration for us all.

Thank you!

Thank you to our Mayor and Councilmembers for their unwavering leadership!

Mayor Randy Rowse

Councilmember Eric Friedman*

Councilmember Alejandra Gutierrez

Councilmember Oscar Gutierrez

Councilmember Meagan Harmon*

Councilmember Mike Jordan

Councilmember Kristen Sneddon*

**Indicates members of the Sustainability Council Committee. The Committee vetted and reviewed the development of this plan.*

This document was written by the

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**NEVER UNDERESTIMATE THE POWER OF A SMALL
GROUP OF PEOPLE TO CHANGE THE WORLD
IN FACT, IT IS THE ONLY THING THAT EVER HAS.**

- MARGARET MEAD

Appendix A: City of Santa Barbara Climate Action Plan Greenhouse Gas Emissions Reduction Measures and Actions

1 Overview of Measures and Actions

Measures are developed under each of the following sectors pursuant to the GHG Inventory and Forecast and in line with the Community Protocol and the California Air Resources Board (CARB) 2017 Climate Change Scoping Plan:

- Building Energy
- Transportation
- Solid Waste, Water, and Wastewater
- Carbon Sequestration

Additional measures developed for the City of Santa Barbra Climate Action Plan include:

- Community Climate Potential
- Administrative

GHG Reduction Actions identify the supportive programs, policies, financial pathways, and other commitments that will help further measures and accomplish the City’s climate goals. See the figure below for a depiction of how the goals, measures, and actions are connected.



2 Key Strategic Themes

These specific key strategic themes have been identified to be specific community impact areas that together will activate or guide the buildout of actions for each measure. The key strategic themes are:

- **Foundational:** Actions that are **already** being pursued and/or implemented by the City or one of its partners. Foundational actions are included in part to give context as well as track emissions reductions wholistically to meet state and local goals. Foundational actions also allow the City to measure and apply its greenhouse gas reductions in the time between the last emissions inventory period and the adoption of the new Climate Action Plan.
- **Structural Change:** Actions that establish a program, policy, or ordinance that will allow the City to reach the target identified within a measure.
- **Education:** Actions that support a structural change by increasing community awareness and understanding, getting community buy in, and promoting the existence of programs.
- **Equity:** Actions that engage and consider under-resourced populations that are more likely to have a harder time undertaking the actions in this plan and adapting to climate change. Equity actions also consider ways for the overall community to equitably experience the benefits and costs of greenhouse gas reduction measures.
- **Funding:** Actions that provide pathways for financial backing and adequate resources (e.g., staffing) to implement a program.
- **Partnerships:** Actions that identify outside non-profits or agencies that can help with implementation of a measure's actions and consistently or sustainably move a measure forward.
- **Feasibility Studies:** Actions that provide additional context about the details, obstacles, or feasibility for implementation of a program. These include analysis necessary to identify the best path forward or the feasibility of implementing a specific measure.
- **Moonshot:** Actions that are innovative, aspirational, and serve as ambitious targets to move the City towards the cutting edge for climate planning.

Many of the actions within this document will not be included in Together to Zero, the executive summary of the CAP, however, they are included here and in the technical appendix for quantification and analysis purposes.

3 Measures

This section provides a high-level list of measures. Sections 4 to 8 detail the actions that accompany each measure.

City of Santa Barbara CAP GHG Emissions Reduction Measures List

Measure #	Measure
Building Energy	
BE-1 (Municipal)	Decarbonize 50% of municipal buildings and facilities by 2030 and all remaining municipal facilities by 2035
BE-2 (Municipal)	Procure carbon free or 100% renewable electricity for municipal operations by 2030
BE-3 (Municipal)	Increase municipally owned distributed renewable energy generation throughout the City
BE-4	Expand existing natural gas prohibition ordinance for new construction
BE-5	Reduce Existing Residential Natural Gas Consumption by 10% Below 2019 Levels by 2030 and 17% Below 2019 Levels by 2035
BE-6	Reduce Commercial Natural Gas Consumption 10% Below 2019 Levels by 2030 and 18% Below 2019 Levels by 2035
BE-7	Increase the impact of Santa Barbara Clean Energy (SBCE)
Transportation	
T-1 (Municipal)	Continue to develop and implement the municipal Transportation Demand Management (TDM) program
T-2 (Municipal)	Electrify or otherwise decarbonize the municipal fleet by 2035
T-3	Implement Programs that Enhance Access to Safe Active Transportation, such as Walking and Biking, to Increase Active Transportation Mode Share to 6% by 2030 and to 10% by 2035
T-4	Implement Programs to Encourage Public Transportation to Increase Public Transportation Mode Share to 7% by 2030 and to 8% by 2035
T-5	Support and promote regional programs that reduce the use of the single occupancy vehicles
T-6	Increase Zero-Emission Passenger Vehicle Use and Adoption to 30% by 2030 and 55% by 2035
T-7	Accelerate Zero-Emission Commercial Vehicle Use and Adoption to 26% by 2030 and 45% by 2035
T-8	Electrify or Otherwise Decarbonize 6% of Off-Road Equipment by 2030 and 20% by 2035
Water, Solid Waste, and Wastewater	
W-1 (Municipal)	Increase municipal procurement of recovered organic waste products
W-2 (Municipal)	Reduce municipal water consumption
W-3	Reduce Per Capita Potable Water Consumption 1.05% by 2030 and 1.58% by 2035
W-4	Reduce Organic Waste 80% below 2014 levels by 2030 and 85% by 2035
Carbon Sequestration	
CS-1	Increase carbon sequestration by maintaining existing trees and natural lands and by planting 4,500 new trees throughout the community by 2030
CS-2	Explore new carbon sequestration and carbon capture opportunities

Appendix A: City of Santa Barbara Climate Action Plan
GHG Reductions Measures and Actions

Measure #	Measure
CS-3	Maintain and expand existing restoration projects to sequester carbon through a 25-acre net increase in restored, non-irrigated land areas by 2030
CS-4	Increase Carbon Sequestration by Applying 0.08 tons of Compost per Capita Annually in the Community through 2030 and 2035
CS-5	Reduce GHG emissions of residential and commercial building materials 20% by 2030 and a 40% by 2035 in line with AB 2446
Community Climate Potential	
CP-1	Encourage community innovation and empower the local green economy through investment in a green technology workforce
Administrative	
A-1 (Municipal)	Facilitate Climate Action Planning updates and supportive programming
A-2	Staff appropriately across sector-based programs and projects to fully source funds and implement actions

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4 Building Energy Measures

Measure BE-1 (Municipal) Decarbonize 50% of Municipal Buildings and Facilities by 2030 and All Remaining Municipal Facilities by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
BE-1.1	Feasibility Study	Develop a plan to electrify 50% of City-owned municipal buildings by 2030 and decarbonize 100% of municipal facilities by 2035. The plan will include an inventory of fossil fuel-powered municipal building equipment, low/zero-carbon technologies available for replacing the equipment (where available), and a short- and long-term schedule for completion. Address diesel generators and recent natural gas investments. Address feasibility concerns around community swimming pool decarbonization. Any buildings that are unable to be electrified due to technological infeasibility should be decarbonized with other technology.	Supportive
BE-1.2	Structural Change	By 2031, develop an ordinance to require the installation of solar and energy storage backup power instead of diesel generators, where feasible.	Supportive
BE-1.3	Structural Change	Implement the municipal building decarbonization plan developed under BE-1.1 to decarbonize 100% of municipal buildings by 2035 (any buildings that are unable to be electrified due to technological infeasibility shall be decarbonized with other technology).	Supportive
BE-1.4	Structural Change	Develop and implement a plan for retrofitting all remaining streetlights, facility lighting, and traffic signals to LEDs by 2035.	Supportive
BE-1.5	Foundational, Funding	Leverage the grant writer position(s) in strategy A-2.2 to expand funding efforts for municipal decarbonization.	Supportive
BE-1.6	Structural Change	Include, at the time of lease renewal, requirements for City-owned leased buildings and facilities to be all-electric.	Supportive

Measure BE-2 (Municipal) Procure Carbon Free or 100% Renewable Electricity for Municipal Operations by 2030

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
BE-2.1	Foundational	Require all municipal electrical accounts to remain in SBCE's 100% Green option and purchase carbon-free electricity.	Supportive

Measure BE-3 (Municipal) Increase Municipally Owned Distributed Renewable Energy Generation throughout the City

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
BE-3.1	Foundational, Feasibility Study	Implement all feasible microgrid projects at municipal facilities as identified by the 2017 Zero Net Energy study and re-evaluate viability of additional facilities.	Supportive
BE-3.2	Feasibility Studies	Conduct a feasibility study to understand the barriers of installing additional distributed energy resources such as solar and battery	Supportive

Appendix A: City of Santa Barbara Climate Action Plan
 GHG Reductions Measures and Actions

storage, or other renewable energy generation infrastructure, at municipal facilities. Plan for directing resources through the City for funding, energy storage, and distributed energy resources. Direct municipal efforts to sourcing space for energy storage projects and microgrid implementation.

Measure BE-4 Expand Existing Natural Gas Prohibition Ordinance for New Construction

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO _{2e})
BE-4.1	Structural Change	In 2025 and every 3-years thereafter, revisit building ordinances to update the scope and exemptions to align with industry technology and maximize GHG reduction. Examples include requiring all major remodels (over 50% of building effected or an addition of over 50% of gross floor space) and removing exemptions in the all-electric building requirements. The building code cycle updates are processed in 2025, effective in 2026, and updated every 3-years.	2030: 7,918 2035: 12,975

Measure BE-5 Reduce Existing Residential Natural Gas Consumption by 10% Below 2019 Levels by 2030 and 17% Below 2019 Levels by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO _{2e})
BE-5.1	Structural Change	Adopt a time of renovation energy efficiency and electrification requirement by 2025, effective 2026. This ordinance could require replacement of HVAC systems, hot water heaters, and other appliances to be all electric and low hydrofluorocarbons (HFC) gas emitters or provide a checklist of cost-effective efficiency and electrification options for renovations to complete based on the scope of the project. Adopt an electrification ordinance for existing residential buildings by 2028, effective 2029, to be implemented through the building permit process, which bans expansion or reconnection of natural gas infrastructure.	2030: 426 2035: 859
BE-5.2	Feasibility Studies, Education, Equity	Complete an existing building electrification feasibility analysis in collaboration with UCSB or another research institution by 2025 to determine the upfront and on-bill costs associated with building electrification strategies. This information will be used to inform and support future ordinances addressing existing building electrification as well as the building electrification accelerator (BE-5.3). The study will include extensive community input and an equity analysis to ensure all people have affordable access to the health, comfort, economic, and resilience benefits of building electrification.	2030: 7,880
BE-5.3	Structural Change, Education, Equity	Create a residential building electrification accelerator program to increase community access to building electrification resources. This program should include the provision and expansion of resources needed to support residents in electrifying their homes. For example, by providing rebates, enhanced funding for income-qualified homeowners, technical expertise, and contractor support.	2035: 13,551 (reductions associated with combined actions of Action 5.2-5.18)
BE-5.4	Feasibility Study, Structural Change	Identify opportunities for the strategic reduction of gas infrastructure within the City and develop a gas infrastructure pruning pilot program.	
BE-5.5	Structural Change,	Complete a low income and affordable housing electrification pilot	

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
	Education, Equity	project in collaboration with affordable housing owners, utilities, and the community. The pilot project will ensure that there is not an increase to energy bills for occupants of pilot buildings.	
BE-5.6	Structural Change, Funding	Provide a rebate at time of sale for qualifying building electrification upgrades including panels, wiring, and heat pump appliances. Implement the rebate program by 2025.	
BE-5.7	Education, Structural Change	Improve the City's building electrification permit process through a comprehensive permitting compliance program that streamlines processes, reduces fees, provides permit and inspection checklists, shortens review times, and educates affected trades and staff, thus reducing barriers to electrification and unlocking available incentives.	
BE-5.8	Feasibility Studies	Conduct a feasibility study of a smart building market demand program, such as ReCurve's <i>flexgrid</i> program. The study should include a pilot project that allows building owners to track the power generation and consumption of their retrofitted structures and work on making this a widely available and affordable option.	
BE-5.9	Structural Change	Develop the program studied in BE-5.8 that allows building owners to track the power generation and consumption of their retrofitted structures to optimize energy management.	
BE-5.10	Funding	Partner with ReCurve or similar entity to design and implement a market demand program that would pay energy users to save energy during times of peak demand, use energy more efficiently, and help balance the grid.	
BE-5.11	Education	Expand education programs directed at homeowners and renters on energy resource programs (examples include energy efficiency programs, demand response, and market demand programs).	
BE-5.12	Structural Change	Promote residential energy disclosure legislation, requiring home energy score at time of all residential property sale or rental listings.	
BE-5.13	Structural Change, Funding	Establish a program that provides targeted direct install services and cost share for specific electrification measures with multi-unit residential development owners. City to cover incremental cost in addition to an incremental electricity rate from SBCE.	
BE-5.14	Structural Change, Equity	Develop and implement a multi-family residential property regulation by 2028 to promote phased building energy efficiency and decarbonization. The regulation would require periodic energy inspections and prescriptive energy efficiency and decarbonization points requirements from a standardized checklist, with required performance increasing over time.	
BE-5.15	Structural Change	Develop an emergency hot water appliance program where the City provides residents with emergency natural gas hot water heaters within 24 hours of a request, with an agreement that the resident's gas powered hot water heater will be replaced within 6 months with a heat pump water heater.	
BE-5.16	Education	Increase community awareness and understanding of tax benefits for residential building energy efficiency upgrades (Example: the Residential Energy Efficiency Property Tax Credit).	
BE-5.17	Funding	Develop incentives for California Alternate Rates for Energy (CARE)/ Family Electric Rate Assistance (FERA) subsidized rate programs for	

Appendix A: City of Santa Barbara Climate Action Plan
 GHG Reductions Measures and Actions

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
		low-income resident customers to increase energy assurance.	
BE-5.18	Structural Change, Funding	Implement direct installation and/or incentive programs that facilitate the installation of combined solar and battery energy storage system installations on local area single family residential buildings. Target 120 installations by 2035.	
BE-5.19	Moonshot	Adopt a natural gas end of flow date by 2040. ¹ Create public engagement and education campaigns around this action to give the community advanced notice as well as signify all progress being made to make this possible.	

¹ Action not included in GHG emission reductions quantification to avoid double counting with rest of measure.

Measure BE-6 Reduce Commercial Natural Gas Consumption 10% Below 2019 Levels by 2030 and 18% Below 2019 Levels by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
BE-6.1	Structural Change	Based on the results of measure BE-5.2, the existing building electrification feasibility analysis, develop and adopt an ordinance for existing commercial buildings by 2025, effective 2026, that requires the replacement of fossil fuel building systems such as HVAC and Domestic Hot Water systems with heat pumps at time of renovation. Any buildings that are unable to be electrified due to technological infeasibility shall be decarbonized with other technology. Adopt an electrification ordinance for existing commercial buildings by 2028, effective 2029, to be implemented through the building permit process, which bans expansion or reconnection of natural gas infrastructure.	2030: 1,174 2035: 3,158
BE-6.2	Structural Change	Develop and implement a commercial and mixed-use building benchmarking program for commercial and multifamily buildings over 20,000 square feet by 2025, effective 2026. The program would include reporting electricity and natural gas usage (and any other energy source) data through energy star portfolio manager. It would establish monetary penalties for non-compliance. Residential portions of buildings that are part of a mixed-use development would be exempt. Create incentives for buildings not covered to encourage voluntary compliance.	2030: 4,113 2035: 6,149
BE-6.3	Structural Change	Develop and implement a building performance standard by 2028. The standard should identify a GHG emissions per square footage threshold for each commercial building type using the data collected under action BE-6.2. The program will start with larger commercial/multifamily residential buildings and decrease in size over time.	
BE-6.4	Structural Change, Feasibility Studies	Re-evaluate building performance program every 3 years to gauge implementation progress and possible expansion to smaller sized buildings.	
BE-6.5	Funding, Education	Work collaboratively (via SBCE) with SCE to incentivize all-electric retrofits by combining rebate programs and financing mechanisms to create cost effective electrification packages. Prioritize small, and under-resourced population-owned businesses.	
BE-6.6	Funding, Feasibility	Expand education, outreach and engagement efforts relating to building	

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
	Studies, Partnerships, Education	electrification and energy resources, including these actions: <ul style="list-style-type: none"> ▪ Partner with the Santa Barbara South Coast Chamber of Commerce to inform and facilitate electrification for commercial business owners. ▪ Conduct a survey of small businesses detailing obstacles and needed resources to inform equity considerations of the ordinance. ▪ Conduct engagement efforts to the commercial sector to identify ways the City can support commercial energy storage installations and neighborhood scale microgrid opportunities. ▪ Leverage the grant writer position(s) in strategy A-2.2 to facilitate funding opportunities for commercial business electrification by identifying and supporting grant opportunities, prioritizing small businesses and under-resourced communities. ▪ Implement feedback provided during the community outreach process to small businesses and under-resourced population-owned businesses to address potential equity impacts of the building performance program. 	
BE-6.7	Structural Change	Track and require rental energy use disclosures at all commercial property over 10,000 SF. Require an ASHRAE (American Society of Heating, Refrigeration, and Air-Conditioning Engineers) level-1 audit for properties over 10,000 SF, and property over 20,000 SF requires an ASHRAE level-2 audit to be conducted and disclosed to the City, tenants, and potential buyers prior to sale and/or listing.	
BE-6.8	Structural Change, Funding	Establish a decarbonization incentive rate pilot program that would charge SBCE customers a reduced marginal cost rate for installation of specific electrification measures. Target commercial kitchens/restaurants, Hotel/Motels, etc.	
BE-6.9	Education	Publicize tax breaks for commercial building energy efficiency upgrades. For example, Section 179D Deduction is a federal tax deduction that allows commercial building owners to deduct up to \$1.80 per square foot of the cost of qualifying energy-efficient upgrades made to their buildings, including HVAC systems, lighting, and building envelope improvements.	
BE-6.10	Structural Change, Funding	Implement direct installation and/or incentive programs that facilitate the installation of combined solar and battery energy storage system installations on local area commercial buildings. Target 36 installations by 2035.	
BE-6.11	Structural Change	Develop an emergency hot water appliance program where the City provides commercial residents with emergency natural gas hot water heaters within 24 hours of a request, with an agreement that the hot water heater will be replaced within 6 months with a heat pump.	
BE-6.12	Structural Change, Education, Equity	Create a commercial and mixed-use building electrification accelerator program to increase community access to building electrification resources. This program should include the provision and expansion of resources needed to support building electrification. For example, providing rebates, enhanced funding for income-qualified homeowners, technical expertise, and contractor support.	

Measure BE-7 Increase the Impact of Santa Barbara Clean Energy (SBCE)

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO2e)
BE-7.1	Foundational	Adopt a reach code requiring all non-residential new construction and major remodels to include solar PV and potentially batteries as well.	Supportive
BE-7.2	Structural Change, Education	Convert SCE direct access customers to SBCE through targeted programs, incentives, and engagement. Direct access customers purchase electricity from a competitive provider called an Electric Service Provider (ESP), instead of from a regulated electric utility like Southern California Edison (SCE).	Supportive
BE-7.3	Structural Change	Develop targeted rate structures and other incentives for large commercial customers including demand response.	Supportive
BE-7.4	Education, Equity	Develop a local education program detailing incentives for electrification and promoting the benefits of opting in to SBCE's service, particularly for under-resourced populations.	Supportive
BE-7.5	Education, Foundational	Maintain SBCE opt-out rates below 10%.	Supportive
BE-7.6	Structural Change, Foundational	Create innovative pilots for SBCE through local partnerships addressing technical, low-income, market, and policy barriers to progress the City's sustainability and resilience goals. Consider working with departments at UCSB like Technology and Management Program for innovative solutions that leverage technology, Engineering for data-driven solutions, and Environmental Science for cutting edge environmental research.	Supportive
BE-7.7	Structural Change	Develop a Feed-In Tariff to increase and incentivize distributed energy resources. Feed-In Tariffs allow eligible small-scale renewable energy generating sources to sell their energy back to the utility or major energy grid.	Supportive

5 Transportation Measures

Measure T-1 (Municipal) Continue to Develop and Implement the Municipal Transportation Demand Management (TDM) Program

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-1.1	Structural Change, Foundational, Funding	Provide free or discounted access to public transit passes and the electric bicycle share program for all municipal employees and expand the WorkTRIP program to offer additional carbon-free or carbon-reduced modes of travel incentives.	Supportive
T-1.2	Structural Change	Explore a hybrid remote work program policy that supports municipal office employees to work from home as feasible (including alternative work schedules where feasible). City to explore financial assistance to help offset costs associated with home office needs.	Supportive
T-1.3	Structural Change, Funding	Provide cash incentives or paid time off for City employees to bike, walk, and carpool to work.	Supportive
T-1.4	Feasibility Study	Conduct a detailed survey of City staff commute data annually including employee feedback to identify both major emission sources and potential gaps in planning.	Supportive
T-1.5	Feasibility Study, Structural Change	Identify opportunities for accessing bike lockers and showers at municipal office buildings.	Supportive

Measure T-2 (Municipal) Electrify or Otherwise Decarbonize the Municipal Fleet by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-2.1	Foundational	Complete and implement the City's Zero Emission Vehicle Acquisition Policy to convert fossil fuel municipal fleet vehicles, where feasible, to electric or otherwise decarbonize the fleet by 2035, including a short and long-term schedule for completion as well as potential for regional bulk procurement. Gain approval from City Council to allow discretionary electric vehicle purchases from different vendors.	Supportive
T-2.2	Structural Change	Install additional zero emission vehicle chargers in municipal parking lots for fleet and employee use.	Supportive
T-2.3	Foundational, Feasibility Studies	Procure biofuels (renewable diesel and biogas) to operate municipally owned on and off-road equipment with no existing opportunities for decarbonization. Re-evaluate decarbonization opportunities regularly to ensure biofuels are not being used for equipment that could otherwise be decarbonized.	Supportive
T-2.4	Structural Change	Develop and adopt a purchasing policy for smaller equipment (e.g., landscaping equipment) that includes reviews and prioritization of emissions-free equipment each time equipment is purchased.	Supportive

Measure T-3 Implement Programs that Enhance Access to Safe Active Transportation, such as Walking and Biking, to Increase Active Transportation Mode Share to 6% by 2030 and to 10% by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-3.1	Foundational, Funding	Implement the City's Bicycle Master Plan and Pedestrian Master Plan goals and policies to enhance community access to safe active transportation options. Using these guiding documents, identify, design, and procure funding for projects that can forward the goals of the BMP and PMP, and create bike and pedestrian infrastructure that is safer, easier to use, and widely accessible for all community members.	2030: 952 2035: 2,757
T-3.2	Foundational, Funding	Pursue funding and coordinate with existing streets maintenance programs to close gaps in the pedestrian and bike network, as identified in the Bicycle Master Plan, Pedestrian Master Plan, and Capital Improvement Program.	Supportive
T-3.3	Feasibility Studies, Structural Change	Evaluate existing bike parking facilities and identify what improvements can be made to increase parking supply, reduce theft, and increase rider attraction. Include analysis of last mile limitations and hurdles and add bike parking near transit stops accordingly. Consider AB 2097 and expanding bike parking with private facilities when vehicle parking is limited.	Supportive

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-3.4	Structural Change, Equity	Adopt the State’s Slow Streets Program and expand the City’s existing neighborhood traffic calming efforts with a focus on equity considerations for additional locations.	Supportive
T-3.5	Partnerships, Education	Engage MOVE SBC, SBCAG, MTD, Santa Barbara County Public Health Department, Cottage Hospital, school districts, local law enforcement, bike advocates, and community stakeholders to continue to identify and implement additional short-term and long-term bikeway and pedestrian infrastructure improvements, Vision Zero messaging and efforts, and general education regarding the safe utilization of our public active infrastructure.	Supportive
T-3.6	Equity, Foundational	Build new infrastructure to ensure there is equitable access to safe bike and pedestrian infrastructure in all areas of the city. Focus planning, development, and construction of active transportation infrastructure in regionally defined disadvantaged communities.	Supportive
T-3.7	Structural Change	Evaluate amending the zoning ordinance to increase bike parking and types of bike parking facilities for land development projects.	Supportive
T-3.8	Foundational	Implement the recommended bike facilities outlined in the Santa Barbara Bicycle Master Plan to add 30 miles of bike ways to the City by 2030.	
T-3.9	Foundational, Equity	Implement Santa Barbara's Vision Zero Strategy to eliminate serious injuries and fatalities on City streets.	Supportive
T-3.10	Feasibility Studies	Leverage technology to track mode shifts to active transportation. Conduct an annual review of progress on implementation progress, data quality, and potential barriers to implementation. Once an effective tracking method is developed, the City shall aim to achieve 6% increase in active transportation mode share by 2030 and 10% by 2035.	Supportive
T-3.11	Structural Change, Equity	Increase bike parking in nonresidential places like populated areas, City Parks, beaches, etc.	Supportive
T-3.12	Structural Change	Accelerate the production and availability of affordable housing near urban centers by updating and adopting the Housing Element and Zoning Code to reduce VMTs; by exploring alternative strategies to create and preserve affordable housing, such as co-ops, housing or land trusts; and by streamlining project review with objective design standards.	Supportive

Measure T-4 Implement Programs to Encourage Public Transportation to Increase Public Transportation Mode Share to 7% by 2030 and to 8% by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-4.1	Structural Change, Feasibility Studies	Explore alternative forms of public transit, such as micro transit and/or new electric shuttle routes, in areas with higher congestion and population densities. Micro transit is a type of on-demand, shared transportation service that typically operates with smaller vehicles, such as vans or mini-buses, and offers flexible routes and schedules.	
T-4.2	Education, Foundational	Market and publicize public transportation improvements as they are planned and implemented in a variety of methods (social media, newspaper, radio, etc.) and languages to help facilitate use and success of improvement.	
T-4.3	Partnerships, Feasibility Studies	Partner with Santa Barbara MTD to determine transit priority projects and determine best potential locations for expansion and increased service.	2030: 3,547 2035: 4,641
T-4.4	Partnerships, Foundational	Work with nonprofit and community stakeholders to enhance public transit opportunities.	
T-4.5	Equity, Foundational	Work with Santa Barbara MTD to ensure public transportation access and improvements are prioritized in low-income and high population density areas of the City.	
T-4.6	Partnerships	Work with MTD to identify and implement pilot projects and infrastructure updates to make transit safer, more consistent, and more convenient.	

Measure T-5 Support and Promote Regional Programs that Reduce the Use of Single Occupancy Vehicles

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-5.1	Structural Change, Partnerships, Education, Foundational	Continue to work with SBCAG to encourage employers to develop Transportation Demand Management (TDM) Plans for their employees. TDM plans should include incentives for employees to bike, walk, carpool, or take the bus to work and should be publicized on a website.	Supportive
T-5.2	Feasibility Studies, Partnerships, Equity	To enhance the Santa Barbara community's ability to telecommute, implement SBCAG's Broadband Regional Study to identify areas of the City that have limited access to broadband service due to infrastructure and financial limitations.	Supportive
T-5.3	Funding, Equity	To enable telecommuting, leverage the grant writer position(s) in strategy A-2.2 to identify funding opportunities to bridge the broadband access gap in the City by helping to fund installation of infrastructure or subsidize broadband service for low-income households.	Supportive
T-5.4	Funding, Equity	Provide active and alternative transportation resources across all businesses in the city prioritizing small, women owned, and minority owned businesses regardless of Transportation Demand Management Plan (TDM) membership.	Supportive
T-5.5	Foundational	Implement AB 2097 which prohibits the City from imposing minimum parking requirements on residential and commercial development, if located with ½ mile of public transit that is consistent with AB 2097.	Supportive

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-5.6	Structural Change, Funding	In line with the General Plan, develop and implement a program to manage parking of single-occupancy vehicles. Utilize on street parking pricing for all downtown parking locations and use revenue to fund active transportation, public transportation projects, and neighborhood improvements. The program should address parking issues citywide and consider measures to prevent impacts to surrounding areas and coastal access. This analysis may include citywide use of parking permit programs and other measures.	Supportive
T-5.7	Structural Change	Develop the Pilot Bike Share Program into a permanent and dependable bike share network that provides access to key destinations throughout the City, and work with regional partners to assess potential for a regional bike share system.	Supportive
T-5.8	Education, Foundational	Coordinate with SBCAG and regional partners to update regional active transportation maps. Distribute active transportation maps and educational materials to various stakeholders. Prioritize education regarding digital mapping that is available on regularly used platforms like Google Maps.	Supportive
T-5.9	Partnerships	Partner with the tourism and business sectors of the greater Santa Barbara County region to identify pathways to increase active transportation by tourists and employees.	Supportive
T-5.10	Equity, Education	Reduce driving of single occupancy vehicles through public education and engagement. Examine equity concerns around reducing single occupancy vehicles and ensure there are adequate resources available for alternative forms of transportation.	Supportive
T-5.11	Structural Change, Feasibility Study	Explore options to address long distance commuter parking. For example, add a parking lot outside of the downtown area for long distance commuters and use mode share to bring these employees into the downtown area from the new parking lot, reducing parking congestion.	Supportive

Measure T-6 Increase Zero-Emission Passenger Vehicle Use and Adoption to 30% by 2030 and 55% by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-6.1	Structural Change	In 2025 and every 3-years thereafter, amend the Municipal Code to require increased number of electric vehicle capable charging spaces in new construction and major redevelopment for commercial, mixed-use, and multi-family development.	2030: 53,948 2035: 107,774
T-6.2	Structural Change	In 2025 and every 3-years thereafter, revisit commercial and multi-family building ordinances to be updated and require large commercial (more than 10,000 square feet) and large multi-family (more than 20 units) building owners that are providing parking to install working electric vehicle chargers in 20% of parking spaces for existing buildings when undergoing a major remodel (over 50% of building effected or an addition of over 50% of gross floor space).	Supportive
T-6.3	Foundational	Add 1,788 (by 2030) and 3,536 (by 2035) new publicly accessible electric vehicle charging stations throughout the City and at City-owned facilities to support community EV charger access.	Supportive
T-6.4	Foundational	Support private development of EV charger installations by effectively streamlining City processes, such as expediting permitting, easing onerous regulations, develop a permitting design guide.	Supportive
T-6.5	Equity, Partnerships	Identify private sector partnerships and develop affordable, zero-emission vehicle car share programs to serve affordable housing and/or multi-unit developments with a priority to target under-resourced populations.	Supportive

Measure T-7 Accelerate Zero-Emission Commercial Vehicle Use and Adoption to 26% by 2030 and 45% by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-7.1	Feasibility Studies	Develop and implement a City Zero Emission Vehicle Action Plan (ZEVAP) to identify policies to accelerate ZEV adoption community wide.	2030: 1,777 2035: 2,140
T-7.2	Funding, Education, Equity	Identify and connect commercial vehicle owners, particularly those serving under-resourced communities, to resources that can incentivize vehicle electrification. This could include local tax breaks.	Supportive
T-7.3	Education, Partnerships	Provide information to the public on low-carbon fuel standards (LCSF) and how businesses can develop LCSF credits or other state and federal programs to help fund conversion of commercial fleets to zero emissions vehicles.	Supportive
T-7.4	Funding	Create a small business truck buyback program to buyback trucks from local small businesses to upgrade to electric.	Supportive
T-7.5	Moonshot	Consider establishing a licensing fee for commercial delivery vehicles operating on fossil fuels (such as Amazon and FedEx) to provide funding for new active transportation and EV charging/ZEV fueling infrastructure and discounting the fee for the proportion of electric vehicles the delivery company uses.	Supportive

Measure T-8 Electrify or Otherwise Decarbonize 6% of Off-Road Equipment by 2030 and 20% by 2035¹

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-8.1	Structural Change, Funding	Align with or exceed AB 1346 and expand enforcement of the ordinance that bans gas powered small off-road engines by 2024 (e.g., lawn and garden equipment). Provide income tiered incentives or buyback programs for burdened residents and businesses. Identify staffing needs for an enforcement and implementation tracking program run by the relevant City department.	2030: 2,857 2035: 9,859
T-8.2	Education	Inform, educate, and support the transition of local employers to zero emission off-road equipment, including major construction companies, manufacturers, landscapers, and warehouse companies.	Supportive
T-8.3	Feasibility Studies	Investigate off-road equipment fleets in the City of Santa Barbara, identify fleets with highest decarbonization potential, and conduct engagement to under-resourced communities to understand how to support conversion.	Supportive
T-8.4	Partnerships, Funding	Partner with Santa Barbara County Air Pollution Control District to expand rebate and incentive programs for upgrading off-road equipment to hybrids, biofuels, or fully electric.	Supportive
T-8.5	Funding	Leverage the grant writer position(s) in strategy A-2.2 to source state funding to decarbonize off-road equipment as a result of Executive Order N-79-20 and State Climate Funding Package.	Supportive
T-8.6	Education	Develop a landscape equipment education and incentive program incentivizing motorized landscape equipment electrification (electric leaf blowers already required, but can get rolled into an education campaign) for hedge trimmers, etc.	Supportive

¹ This would not apply to recreational or commercial marine vessels. The California Air Resources Board currently has regulations in place to develop a performance standard program for commercial marine vessels. This requires zero- emission options where feasible, and cleaner combustion Tier 3 and 4 engines on all other vessels. Implementation of these regulations will occur in 2023 through the end of 2032.

6 Water, Solid Waste, and Wastewater Measures

Measure W-1 (Municipal) Increase Municipal Procurement of Recovered Organics Waste Products

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
W-1.1	Structural Change, Funding	Require City agencies to procure and apply compost generated from municipal organic waste to the exterior of suitable facilities as part of their operations.	Supportive
W-1.2	Structural Change	Increase signage for municipal buildings, parking, and sidewalk bins on accepted landfill, recyclable, and compostable materials.	Supportive
W-1.3	Feasibility Studies	Investigate opportunities for procuring recovered organic waste products within municipal facilities.	Supportive

Measure W-2 (Municipal) Reduce Municipal Water Consumption

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
W-2.1	Foundational	Continue implementing City policies for water-conserving equipment upgrades and practices at City government facilities. Implement additional facility, landscape, and procedure improvements to further conserve water as identified and determined feasible.	Supportive
W-2.2	Structural Change, Foundational	Create a Green Community Infrastructure Program based on the Stormwater BMP Guidance Manual with upgraded public spaces, green parking lots, green alleys and increased green stormwater infrastructure on City facilities.	Supportive

Measure W-3 Reduce Per Capita Potable Water Consumption 1.05% by 2030 and 1.58% by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
W-3.1	Structural Change, Foundational	Implement all cost-effective measures identified in the Water Conservation Strategic Plan.	2030: 1.72 2035: 0.67
W-3.2	Structural Change, Funding	Leverage the grant writer position(s) in strategy A-2.2 to source funding for the Water Conservation Strategic Plan programs and rebates.	
W-3.3	Education, Foundational	Educate the community through the Water Resources division of Public Works to understand available incentives, options, and programs to reduce per capita water use.	
W-3.4	Education	Expand public engagement campaigns to promote the available rebates through the City's Water Conservation Programs.	
W-3.5	Education, Foundational	Utilize available enhanced water consumption data from the City's Automated Metering Infrastructure, along with the WaterSmart customer portal, to educate water customers about water use patterns and leak detection.	

W-3.6	Funding, Equity	Leverage the grant writer position(s) in strategy A-2.2 to provide specialized rebate or other funding to low and medium incomes homes for installing laundry to landscape, rainwater catchment system, low-flow appliances, and fixing water leaks.
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Measure W-4 Reduce Organic Waste 80% below 2014 levels by 2030 and 85% by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
W-4.1	Foundational	Meet the requirements of SB 1383 to reduce organics in the waste stream by 80% below 2014 levels. Include existing activities of: <ul style="list-style-type: none"> • Pilot and evaluate emerging technologies like at-source organic waste digestion to reduce organic waste by restaurants and other major food waste producers. • Implement enforcement and fee for incorrectly sorted materials with sensitivity to shared collection. • Increase bin signage across commercial and residential areas of acceptable landfill, recyclable, and compostable materials. 	2030: 45,773 2035: 50,271
W-4.2	Education, Funding	Create a templated training for businesses to educate their employees about circular economy-based practices annually by providing training resources and rebate program to fund employee time for training. Support lower-impact reusable and reduced packaging businesses.	Supportive
W-4.3	Education, Equity	Conduct targeted multicultural education and assistance campaigns to enhance reuse, ways to prolong the useful life of common materials and items, and sustainable purchasing practices.	Supportive
W-4.4	Education	Conduct a Bring Your Own (BYO) education and outreach training for the community on reusables and implementing more sustainable packaging into daily use. Provide resources of education on City website. Educate community on food scraps on resource center.	Supportive
W-4.5	Feasibility Studies	Conduct waste characterization studies every 4-5 years to inform programs and policies. Leverage study to understand the waste stream and create a plan to increase diversion and reduce contamination.	Supportive
W-4.6	Partnerships, Structural Change	Collaborate with the County and Resource Conservation District to develop a regional compost trading program to provide farmers with compost to meet organic procurement target set by SB 1383.	Supportive
W-4.7	Funding	Establish regional consortium to plan and pursue funding for infrastructure beyond 2025 SB 1383 targets.	Supportive
W-4.8	Equity, Education	Establish relationships with multi-unit property owners/managers to develop signage for their properties. Go door-to-door at each multi-unit unit yearly to provide supplies and education for proper sorting.	Supportive
W-4.9	Equity, Education	Conduct outreach campaign to low and medium -income residents educating them on issues related to abandoned waste and informing them on how to access bulky item and abandoned waste services at no cost.	Supportive
W-4.10	Structural Change, Partnerships	Partner with the harbor, airport and other major Santa Barbara facilities to facilitate no single use plastic practices.	Supportive
W-4.11	Structural Change, Foundational	Continue to provide different bin size options for green waste, recycling, and trash at different costs (smaller bins being cheaper options) and work towards discontinuing the use of larger waste containers as feasible.	Supportive
W-4.12	Structural Change, Foundational	Ban items without means of recycling or recycling markets, such as sale of polystyrene, produce bags, plastic packaging, straws, plastics #4-7, and mixed materials.	Supportive

Appendix A: City of Santa Barbara Climate Action Plan
 GHG Reductions Measures and Actions

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
W-4.13	Structural Change	Implement pilot project for reusable restaurant to-go containers.	Supportive
W-4.14	Structural Change, Partnerships	Explore opportunities to promote a "circular economy" among local manufacturers and industry. Build on existing AB 619 legislation to fund temporary or permanent food facility item reuse.	Supportive
W-4.15	Education, Partnerships	Partner with libraries and other existing facilities to market campaigns about waste reductions, reuse, and repair.	Supportive
W-4.16	Feasibility Studies, Partnerships	Partner with UCSB, ICLEI and other organizations to cost effectively evaluate and develop resources around consumption-based emissions. Utilize consumption-based emissions inventory to understand Santa Barbara's most carbon intensive consumption habits and emission reduction potential and promote closed-loop circular economy. Based on the results, create a plan to achieve the objective of zero growth of waste generation. Consider reusable diaper service, plant-based diets, etc.	Supportive
W-4.17	Equity, Education	Create a training/education program that is free and accessible to all residents and employees to learn about circular economy practices and diversion strategies and effects of overconsumption.	Supportive

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7 Carbon Sequestration

Measure CS-1 Increase Carbon Sequestration by Maintaining Existing Trees and Natural Lands and by Planting 4,500 New Trees throughout the Community by 2030

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CS-1.1	Education, Structural Change, Partnerships	Continue to implement and expand the City's Urban Forest Management Plan to include goals for promoting street tree health, enhancing resiliency, increasing the environmental benefits and co-benefits resulting from street trees and shading, community engagement around the urban forest. Include activity to promote street tree health and maintaining existing trees through partnerships with the community and local non-profits.	2030: 159 2035: 159
CS-1.2	Structural Change, Feasibility Studies	Continue to look for opportunities to increase carbon sequestration via land acquisitions and tree protections in alignment with the City's Open Space, Parks and Recreation Element.	Supportive
CS-1.3	Structural Change, Foundational	Implement the City's Community Wildfire Protection Plan to reduce fire risk and carbon loss due to wildfires by conducting vegetation management throughout the City. Ensure that vegetation management projects minimize full removal of vegetation or conversion of land cover type from a higher carbon sequestration land cover (shrubs and trees) to a lower carbon sequestration land cover type (annual grasses).	Supportive
CS-1.4	Feasibility Study	Develop a Citywide, or participate in a regional, carbon sequestration analysis and plan to explore opportunities to increase sequestration in the City.	Supportive
CS-1.5	Structural Change, Equity, Education	Implement the City of Santa Barbara's Creek Tree Program to assist private creekside landowners with improving wildlife habitat along creeks in Santa Barbara through the protection and planting of native trees. Develop a wildlife habitat installation program where the City provides carbon sequestering plants and creek trees and removes non-natives as feasible for appropriate creekside properties. Prioritize low-income areas for implementation of the Creek Tree Program and keep an updated publicly accessible page on the City website with important information about the program.	Supportive
CS-1.6	Feasibility Studies	Update tree canopy coverage data within the City to measure the change in coverage over time as it relates to sequestration as part of the next Urban Forest Management Plan update.	Supportive
CS-1.7	Partnerships	Invest and participate in regional development of local carbon off-set program in partnership with the County and/or Central Coast Regional Collaborative.	Supportive
CS-1.8	Equity	Prioritize low-income areas of the City with less existing tree canopy for tree plantings and increase shading in gathering spaces.	Supportive

Measure CS-2 Explore New Carbon Sequestration and Carbon Capture Opportunities

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CS-2.1	Partnerships, Feasibility Studies	Create an organizational body (internally within the City or through a partnership like with UCSB or the Santa Barbara Botanical Garden) to lead program development and research for facilitating emergent carbon sequestration and carbon capture plans relevant to the City.	Supportive
CS-2.2	Education	Pilot and promote carbon sequestering construction materials like low-carbon	Supportive

Appendix A: City of Santa Barbara Climate Action Plan
GHG Reductions Measures and Actions

		concrete and mass timber.	
CS-2.3	Education, Partnerships	Work with local architects, construction trades, and workforce development organizations to expand industry knowledge and adoption of carbon sequestering building materials and techniques.	Supportive
CS-2.4	Feasibility Studies	Conduct a feasibility study to explore carbon capture and storage opportunities for the community.	Supportive
CS-2.5	Feasibility Studies, Partnerships	Initiate a study partnering with local academic institutions and the ReSource Center to identify and research ways to create a circular economy around organic waste and increasing edible food rescue.	Supportive
CS-2.6	Feasibility Studies	Conduct a feasibility study to explore repurposing biosolids into biochar locally and replacing conventional fertilizer through Public Works.	Supportive
CS-2.7	Partnerships, Feasibility Studies	Invest in the existing kelp farming efforts by studying regional environmental impacts and sequestration potential through a partnership with UCSB.	Supportive
CS-2.8	Partnerships	Partner with furniture, home renovation, and construction companies to promote sustainable and locally harvested timber to reduce embodied carbon from transit of construction materials and reduce the price premium of emerging timber uses.	Supportive
CS-2.9	Funding	Leverage the grant writer position(s) in strategy A-2.2 to expand funding for the carbon sequestration program.	Supportive
CS-2.10	Equity	If there are localized co-benefits to any sequestration projects focus development, when possible, to benefit historically adversely impacted under-resourced communities.	Supportive

Measure CS-3 Maintain and Expand Existing Restoration Projects to Sequester Carbon through a 25-acre Net Increase in Restored Land Areas by 2030

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CS-3.1	Structural Change, Partnerships, Equity, Education	Develop a Citywide restoration plan in partnership with the Creeks Division, Parks and Recreation, and Public Works to achieve target net increases in restored land area and waterways. Prioritize implementation of restoration projects in disadvantaged communities. Facilitate community outreach through surveys and public meetings on ways to best restore lands and waterways within the City as well as identify additional priority areas.	Supportive
CS-3.2	Structural Change, Equity	Should parcels be identified for potential rezoning from their existing state to a park or open space, consider the following: 1) Provide flexible solutions for developing urban parks in infill areas where traditional neighborhood and community parks are not feasible; 2) Aim to achieve the greatest carbon sequestration possible, given constraints around use and amenities to be included. Use and amenities are determined by Parks and Recreation staff through a community process; and 3) Selection of parcels be made with an aim to serve underserved communities.	Supportive
CS-3.3	Partnerships	Expand Creeks Division volunteering programs to help maintain creek restoration projects. Coordinate projects with Parks and Recreation and Sustainability and Resilience Departments.	Supportive
CS-3.4	Structural Change, Feasibility Studies, Education	Facilitate annual reporting as part of the urban forestry, wildfire prevention, and Citywide restoration efforts by developing and maintaining existing projects to gauge progress over time and identify any gaps related to ongoing projects. Incorporate GHG reduction calculations into this monitoring plan.	Supportive

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CS-3.5	Funding, Foundational	Leverage the grant writer position(s) in strategy A-2.2 to pursue funding for restoration activities with a focus on projects that have not reached completion due to funding constraints.	Supportive
CS-3.6	Structural Change, Foundational	Include long term maintenance in restoration planning and implementation by partnering with the community and local organizations to assist in maintenance activities. Include continued maintenance and expansion of Creeks Division projects of the Upper Las Positas Creek, Mission Creek, Palermo Open Space, Arroyo Burro, and the Andree Clark Bird Refuge.	Supportive

Measure CS-4 Increase Carbon Sequestration by Applying 0.08 tons of Compost per Capita Annually in the Community through 2030 and 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CS-4.1	Structural Change	Enforce compliance with SB 1383 and aim to exceed the baseline requirement by establishing a minimum level of compost application per year on applicable/appropriate land throughout the City including City-owned land twice that of SB 1383 requirements.	2030: 1,778 2035: 1,853
CS-4.2	Feasibility Studies	Identify additional locations within the City to apply compost and provide household incentives for small-scale implementation.	Supportive
CS-4.3	Structural Change	Maintain procurement policies to comply with SB 1383 requirements for jurisdictions to purchase recovered organic waste products.	Supportive
CS-4.4	Partnerships, Education	Work with the ReSource Center to provide residents, businesses, and developers with educational material on where compost can be acquired and how it can be used (i.e., landscaping).	Supportive
CS-4.5	Partnerships	Collaborate with Santa Barbara Community College, UC Santa Barbara, local schools, and Public Works to identify opportunities to apply compost to landscaping.	Supportive

Measure CS-5 Reduce GHG Emissions of Residential and Commercial Building Materials 20% by 2030 and 40% by 2035 in Line with AB 2446

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CS-5.1	Feasibility Studies	Conduct a feasibility study on carbon capture technologies to locally produce calcium carbonate (low carbon concrete) creating sequestration via construction materials. Determine viability within the City and project demand.	Supportive
CS-5.2	Partnerships, Feasibility Studies	Partner with UCSB to pilot a building specific embodied carbon reduction project for planned construction.	Supportive
CS-5.3	Moonshot	Develop a strategic construction and procurement plan to promote construction projects that use alternative materials to reduce embodied carbon. Include scoring criteria in City request for proposals for construction projects that identify resilience features such as water and energy efficiency, reduced urban heat, and decrease the embodied carbon in line with AB 2446.	Supportive

8 Community Climate Potential

Measure CP-1 Encourage Community Innovation and Empower the Local Green Economy through Investment in a Green Technology Workforce

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CP-1.1	Structural Change	Create a Green Technology incubator in partnership with UCSB to determine technological advancement research into clean power, built environment advancement, and carbon sequestration.	Supportive
CP-1.2	Funding	Leverage the grant writer position(s) in strategy A-2.2 to source funding for the Green Technology incubator through involvement of venture capitalist and private equity firms.	Supportive
CP-1.3	Education	Facilitate workforce training by partnering with local academic institutions to offer scholarships for students pursuing climate trades.	Supportive
CP-1.4	Education	Partner with Santa Barbara Community College and/or UCSB to develop a clean energy technology certificate program.	Supportive
CP-1.5	Moonshot	Leverage the grant writer position(s) in strategy A-2.2 to establish an Innovation Bootcamp with funding from SBCE to encourage forward thinking sustainability and resilience ideas and pilots. The Innovation Bootcamp will be tiered based on stages.	Supportive
CP-1.6	Moonshot	Create a climate innovation competition for local area students where the prize is a scholarship or grant.	Supportive

9 Administrative

Measure A-1 (Municipal) Facilitate Climate Action Planning updates and supportive programming

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
A-1.1	Structural Change	Update the Climate Action Plan based on significant new information, regulation, technology, and best available science to reflect changes every 5 years.	Supportive
A-1.2	Education	Explore adding life cycle emissions into the City's decision-making process as data becomes available.	Supportive
A-1.3	Structural Change, Equity	Develop a CAP equity program to monitor implementation of the CAP program to avoid potential inequitable impacts or benefits resulting from the CAP implementation. Adjust the CAP as necessary to avoid identified inequities.	Supportive
A-1.4	Education	Engage with builders and developers to provide information on the requirements for development projects.	Supportive
A-1.5	Education	Create a climate ambassador program to provide on the ground knowledge sharing of climate programs, initiatives, resources, and best practices.	Supportive
A-1.6	Education	Create and expand public engagement campaigns to educate the community and promote rebates and resources available to community members to facilitate participation in climate action.	Supportive

Measure A-2 Staff appropriately across sector-based programs and projects to fully source funds and implement actions

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
A-2.1		Increase staff time or create at least one new position for additional/increased building inspections, permitting, and new ordinance procedures from the work outlined in the updated Climate Action Plan. (See Strategies BE: Building Operational Energy) - (Staffing increase estimate 1-2 people)	Supportive
A-2.2	Funding	Create at least one grant writer and grant manager position to advance the Climate Action Plan Update/Together to Zero implementation plan through funding opportunities. (See Strategies: BE-1.5, BE-6.6, T-3.2, T-3.6, T-5.3, T-8.5, W-3.2, W-3.6, CS-2.9, CS-3.5, CP-1.2, CP-1.5) (Staffing increase estimate 1-2 people)	Supportive
A-2.3	Funding	Create at least two positions and purchase a new truck for the Parks and Recreation department to increase the number of trees planted per year for carbon sequestration goals. (See Strategies: CS-1) (Staffing increase estimate 1-2 people / Equipment increase estimate 1-2 trucks)	Supportive
A-2.4	Education	Create an SBCE Program Manager position to design, develop, implement, and manage SBCE customer programs. (Staffing increase estimate 1 person)	Supportive
A-2.5	Moonshot	Increase staff time or create at least one new position for prioritization of new EV chargers throughout the City, project coordination for transportation feasibility studies, and additional work around increased active transportation and reduction of single-use passenger vehicles from the work outlined in the updated Climate Action Plan. (See Strategies T: Transportation) (Staff increase estimate: 1-2 people)	Supportive

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Climate Action Plan Update

GHG Emissions Reductions Technical Evidence

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EXHIBIT C

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1 Introduction

This report presents the technical quantification and evidence supporting the greenhouse gas (GHG) emissions reduction potential of the City 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) of the statute, 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 City of Santa Barbara’s fair share of GHG emissions consistent with the reduction target established in 2022 by Senate Bill (SB) 32 of 40% below 1990 levels by 2030 and make substantial progress towards the City’s aspirational climate target of reaching carbon neutrality by 2035 (which exceeds California’s carbon neutrality target established by Assembly Bill [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 City is not on track to reach the 2030 GHG reduction specified here or the City’s aspirational carbon neutrality goal, 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 City’s climate action targets.

1.1 Climate Action Targets

The City of Santa Barbara’s climate action target of carbon neutrality by 2035 is more aggressive than California’s goals to reduce GHG emissions 40% below 1990 levels by 2030 (SB 32) and 85% below 1990 levels or net zero¹ by 2045 (AB 1279). Therefore, the City of Santa Barbara’s targets align with state legislation and this document focuses on the GHG emission reductions associated with 2030 and 2035. Future CAP updates will evaluate progress made towards the 2045 time horizon.

¹ Net-zero refers to a state of carbon neutrality GHG emissions (in units of carbon dioxide equivalent, or CO₂e), 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.

1.2 Measures and Actions Organization

As part of the CAP Update process, the City of Santa Barbara has developed a comprehensive set of measures reducing community wide GHG emissions in all sectors to achieve the City'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 City has also developed a set of measures and actions for offsetting GHG emissions through carbon sequestration. AB 1757 requires California Natural Resources Agency (CNRA) to set carbon sequestration targets by 2024 as well as methodologies to track carbon sequestration effectiveness by 2025. Consequently, carbon sequestration measures and actions have been quantified when substantial evidence is available to affirm these reductions. 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 Building Energy, Transportation, Solid Waste, Water, and Wastewater and Carbon Sequestration.
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:
 - Building Energy
 - Transportation
 - Solid Waste, Water, and Wastewater
 - Carbon Sequestration

Additional measures developed for the City of Santa Barbara Climate Action Plan that are not quantified in emissions reductions include:

- Municipal Measures (are a part of each sector)²
- Community Climate Potential
- Administrative and Implementation

These measures are not quantified in this report because reductions would either be minor or could cause double counting of other measures and actions.

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 City of Santa Barbara will meet 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 provide the

² Note that the City's municipal measures as established in the CAP Update are not quantified within this document. The City'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.

substantial evidence and a transparent approach to achieving the City’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.
- 3. **GHG Reduction Metrics:** Identify specific goals (i.e., activity data targets by 2030 and 2035) to address GHG emissions in each sector. Each quantifiable measure has at least one metric to track implementation and GHG emissions reductions. Each sector may have one or more measures with associated metrics. For example, three measures and metrics may be established under the Transportation sector to address active transportation, public transportation, and single-passenger vehicles subsectors.
- 4. **Actions:** Actions identify the programs, policies, funding pathways, and other specific commitments that the City of Santa Barbara will implement. Each measure contains a suite of actions, which together have been designed to accomplish the measure goal and metrics.
 - **Key Strategic Themes:** The actions supporting each measure have been designed around a set of key strategic themes. Each theme 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 City must design a suite of actions that support these changes by emphasizing specific needs of the community. The key strategic themes are: Structural Change, Education, Equity, Funding, Partnerships, and Feasibility Studies. In general, the actions under a single measure should collectively address all the key themes.³ Identification of the themes and their inclusion into the CAP helps plan for implementation. More information on the themes can be found in the CAP.

1.3 GHG Emissions Reductions

The GHG emissions reduction associated with the City of Santa Barbara CAP measures and actions have been calculated and presented in this report in terms of mass emissions (in units of MT CO₂e). Population projections are shown in Table 1 and give context to how emissions scale over time. Population growth well beyond these projections may require additional GHG reductions to achieve the City’s goals.⁴

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

⁴ City of Santa Barbara’s climate action target of carbon neutrality by 2035 is more aggressive than California’s goals to reduce GHG emissions 85% below 1990 levels or net zero by 2045 (AB 1279). Therefore, City of Santa Barbara’s targets align with state legislation and this document does not include a discussion of 2045 reduction. Future CAP updates will evaluate progress made towards the 2045 time horizon.

Table 1 Population Projections for City of Santa Barbara¹

	2019	2030	2035
Population	87,670	96,637	100,713

¹ Population estimates for 2035 were provided by traffic consultant, Iteris. RE: Santa Barbara Housing Element Update – Draft CEQA Transportation Impact Analysis Memorandum. Dated December 22, 2022. The estimated 2035 population was then interpolated to get a 2019 and 2030 estimate.

A breakdown of the GHG emissions reductions calculated for each measure is included in Table 2.

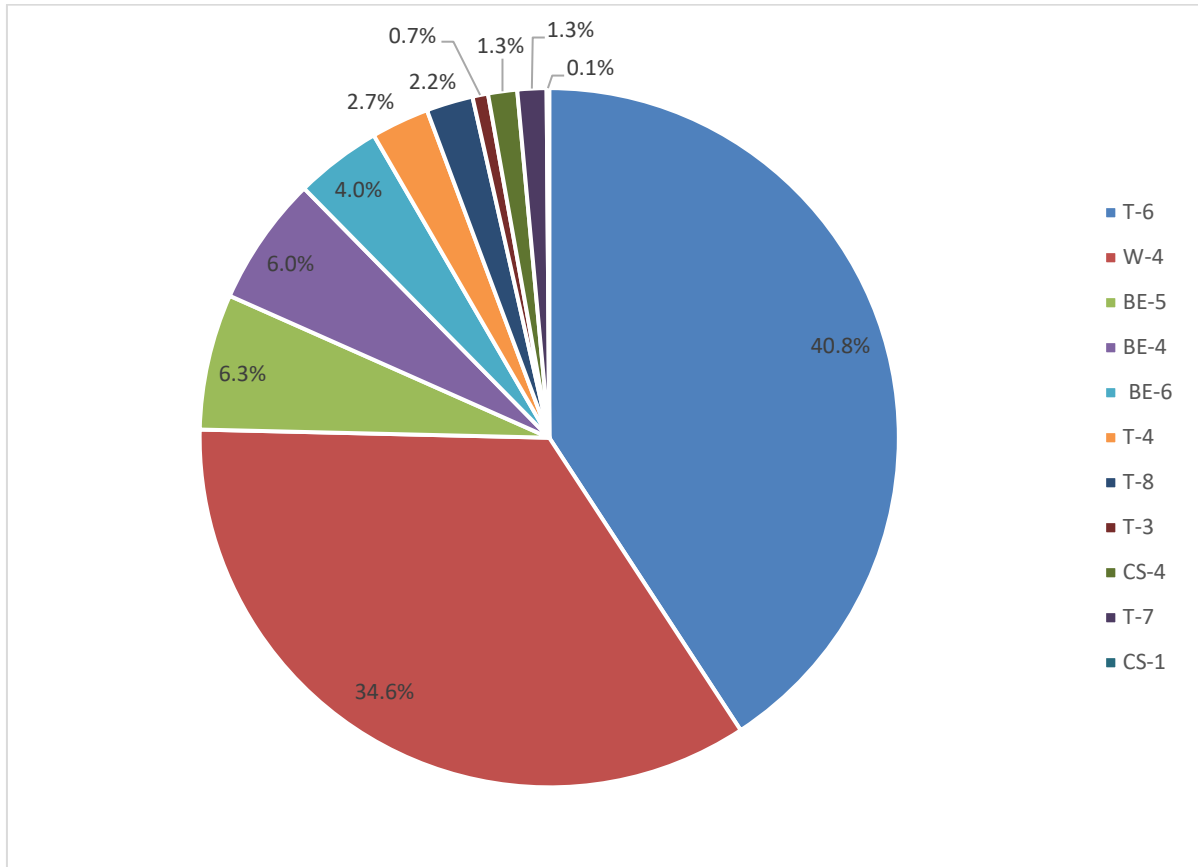
Table 2 Estimated GHG Emissions Reductions by Measure

Measure Number	GHG Emissions Reduction Measures	2030 Anticipated Reduction/ Sequestration (MT CO ₂ e)	2035 Anticipated Reduction/ Sequestration (MT CO ₂ e)
Building Energy			
BE-1 (Municipal)	Decarbonize 50% of municipal buildings and facilities by 2030 and all remaining municipal facilities by 2035	Supportive	Supportive
BE-2 (Municipal)	Procure carbon free or 100% renewable electricity for municipal operations by 2030	Supportive	Supportive
BE-3 (Municipal)	Increase municipally owned distributed renewable energy generation throughout the City	Supportive	Supportive
BE-4	Expand existing natural gas prohibition ordinance for new construction	7,918	12,975
BE-5	Reduce existing residential natural gas consumption by 10% below 2019 levels by 2030 and 17% below 2019 levels by 2035	8,306	14,410
BE-6	Reduce commercial natural gas consumption 10% below 2019 levels by 2030 and 18% below 2019 levels by 2035	5,288	9,307
BE-7	Increase the impact of Santa Barbara Clean Energy (SBCE)	Supportive	Supportive
Transportation			
T-1 (Municipal)	Continue to develop and implement the municipal Transportation Demand Management (TDM) program	Supportive	Supportive
T-2 (Municipal)	Electrify or otherwise decarbonize the municipal fleet by 2035	Supportive	Supportive
T-3	Implement programs that enhance access to safe active transportation, such as walking and biking, to increase active transportation mode share to 6% by 2030 and to 10% by 2035.	952	2,757
T-4	Implement programs to encourage public transportation to increase public transportation mode share to 7% by 2030 and to 8% by 2035.	3,547	4,641
T-5	Support and promote regional programs that reduce the use of single occupancy vehicles	Supportive	Supportive
T-6	Increase zero-emission passenger vehicle use and adoption to 30% by 2030 and to 55% by 2035	53,948	107,774
T-7	Accelerate zero-emission commercial vehicle use and adoption to 26% by 2030 and 45% by 2035	1,777	2,140
T-8	Electrify or otherwise decarbonize 6% of off-road equipment by 2030 and 20% by 2035	2,857	9,859

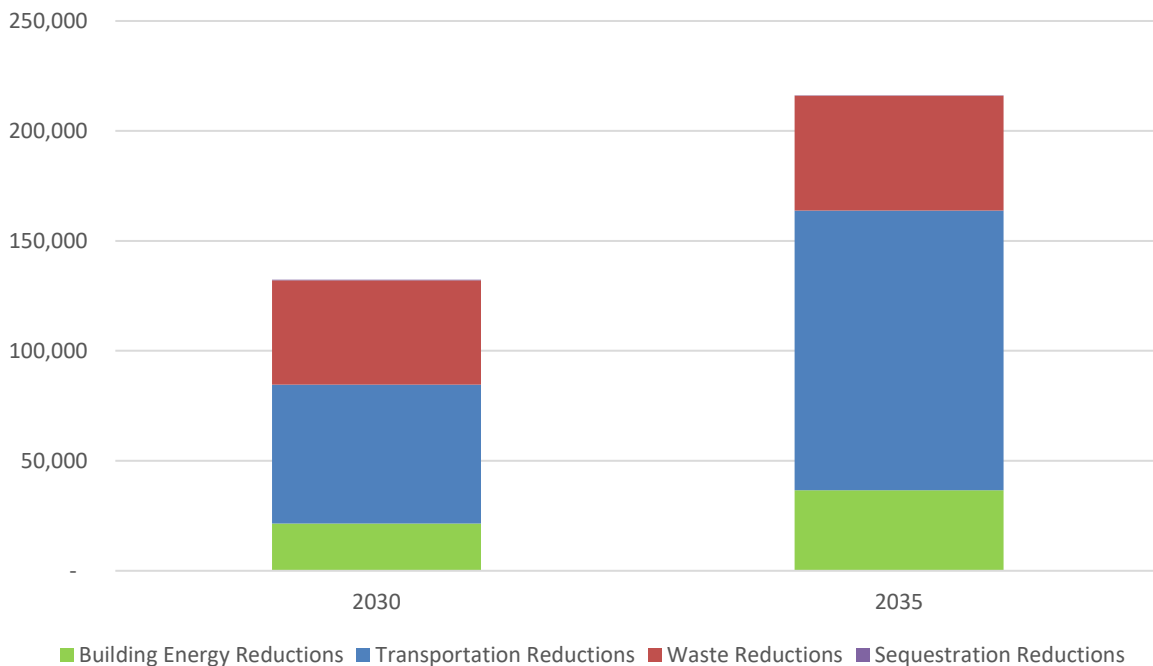
Measure Number	GHG Emissions Reduction Measures	2030 Anticipated Reduction/ Sequestration (MT CO ₂ e)	2035 Anticipated Reduction/ Sequestration (MT CO ₂ e)
Water, Solid Waste, and Wastewater			
W-1 (Municipal)	Increase municipal procurement of recovered organic waste products	Supportive	Supportive
W-2 (Municipal)	Reduce municipal water consumption	Supportive	Supportive
W-3	Reduce per capita potable water consumption 1.05% by 2030 and 1.58% by 2035	1.72	0.67
W-4 ¹	Reduce organic waste 80% below 2014 levels by 2030 and 85% by 2035	45,773	50,271
Carbon Sequestration			
CS-1	Increase carbon sequestration by maintaining existing trees and natural lands and by planting 4,500 new trees throughout the community by 2030	159	159
CS-2	Explore new carbon sequestration and carbon capture opportunities	Supportive	Supportive
CS-3	Maintain and expand existing restoration projects to sequester carbon through a 25-acre net increase in restored, non-irrigated land areas by 2030	Supportive	Supportive
CS-4 ²	Increase carbon sequestration by applying 0.08 tons of compost per capita annually in the community through 2030 and 2035	1,778	1,853
CS-5	Reduce GHG emissions of residential and commercial building materials 20% by 2030 and a 40% by 2035 in line with AB 2446	Supportive	Supportive
Community Climate Potential			
CP-1	Encourage community innovation and empower the local green economy through investment in a green technology workforce	Supportive	Supportive
Administrative			
A-1 (Municipal)	Facilitate Climate Action Planning updates and supportive programming	Supportive	Supportive
A-2	Staff appropriately across sector-based programs and projects to fully source funds and implement actions	Supportive	Supportive
Total Reductions		132,305	216,147
Total Reductions (excluding ReSource Center reductions)		87,615	169,936
¹ Measure includes continued use of Santa Barbara ReSource Center that as of 2021 met SB 1383 compliance obligation of 75% diversion of organic waste. Intent of measure is to exceed SB 1383 compliance obligation.			
² Measure includes continued use of Santa Barbara ReSource Center that as of 2021 met the 100% of the procurement target. Intent of measure is to continue to meet 100% of procurement target.			

GHG emissions reductions calculated for each measure included in Table 2 is shown below in Figure 1 to visualize the contribution of each measure. As shown in Figure 1, T-6 and W-4 result in the most GHG emissions in 2030. Overall, most GHG emissions reductions come from the transportation sector followed by the waste sector, energy sector, and sequestration sector, as shown in Figure 2.

Figure 1 Estimated GHG Emissions Reduction Percentages by Measure in 2030⁵



⁵ Measure W-3 Reduce per capita potable water consumption 1.05% by 2030 and 1.58% by 2035 is not included in this graph because the contribution is less than 0.00% of the total reductions.

Figure 2 Estimated GHG Emissions Reductions by Sector 2030 and 2035 (MT CO₂e)

1.4 GHG Emissions Reductions Compared to Targets

Together, the measures and actions in the CAP provide the City of Santa Barbara with the GHG reductions necessary to meet the state target of 40% below 1990 levels by 2030 (SB 32) (Table 3). However, the 2035 GHG emissions reductions quantified in this report are not yet enough to meet the City’s aspirational climate action target of carbon neutrality by 2035. 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 City 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 City of Santa Barbara will implement to close the remaining gap to achieve the carbon neutrality target.

1.4.1 Benefits of SBCE

In addition to the State legislation expected to reduce GHG emissions in the City of Santa Barbara, the City also began receiving carbon-free electricity through Santa Barbara Clean Energy (SBCE) in 2021. The default electricity mix offered by SBCE is carbon-free, giving an emission factor of 0 MT CO₂e kWh.⁶ Participation is extremely high; both residential and commercial customers have demonstrated an opt out rate of 5%. By receiving electricity from a carbon-free source now, the City

⁶ SBCE 2021 Power Content Label: <https://www.energy.ca.gov/filebrowser/download/4668>

of Santa Barbara significantly decreases their electricity emissions to near zero in the short term ahead of SB 100 requirements. These expected reductions from enrollment in SBCE are included in Table 3. GHG reductions associated with switching to SBCE carbon-free energy accounts for a reduction of 75,608 MT CO₂e in 2030 and 19,586 MT CO₂e in 2035. SBCE carbon-free energy also provides the foundation needed for the electrification of buildings and vehicles which are both main pathways for GHG emission reduction in this CAP. For information see the *Santa Barbara GHG Inventory, Targets, and Forecast Memorandum*.

1.4.2 Resource Center

As of 2021, Santa Barbara’s ReSource Center, a state-of-the-art waste management facility, came online to increase the community’s recycling rate to above 85%, generate resources, such as green energy and compost, and dramatically lower local greenhouse gas emissions. The ReSource Center converts commercial and residential waste into resources by recovering recyclable materials, transforming organics into landscape nutrients, and creating renewable energy in the process.

Even though the ReSource Center has come online, it is still working towards the GHG emission reductions associated with meeting SB 1383 requirements, which lay out specific programs, policies, and objectives for cities to support the state’s goal of a 75% reduction from 2014 levels in organics waste by 2025. Therefore, the emission reductions associated with the ReSource Center are not included in the Business-as-Usual or Legislative Adjusted Forecast provided in Table 3. The expected reductions from continued use of the ReSource Center to achieve SB 1383 compliance are included in Table 3 for informational purposes. GHG reductions associated with the ReSource Center accounts for a reduction of 44,690 MT CO₂e in 2030 and 46,210 MT CO₂e in 2035. Reductions associated with the ReSource Center organic waste diversion are included as part of Measure W-4 discussed in further detail in Section 4 *Water, Solid Waste, and Wastewater* of this report. Reductions associated with the ReSource Center procurement compliance are included as part of Measure CS-4 discussed further in detail in Section 5 *Carbon Sequestration* of this report.

1.4.3 Overall Reductions to Meet Targets

Table 3 provides the results summary of the GHG emissions forecast for the City of Santa Barbara, including the BAU Forecast and the Legislative Adjusted Forecast, as well as the reductions anticipated from continued implementation of existing local programs including SBCE and ReSource Center, and the reductions expected from implementation of the CAP measures and actions. It also provides the City of Santa Barbara’s 2030 target to meet SB 32, which is consistent with developing a “qualified GHG reduction plan” by establishing a target below which GHG emissions are considered less than significant (Section 15183.5(b)(1) of the CEQA guidelines). The estimated total GHG emission reductions associated with full implementation of this plan exceeds the City’s 2030 SB 32 target. However, the actions identified in this plan do not achieve the City’s ambitious 2035 target for carbon neutrality. Additional actions will need to be identified over time as new legislation, technologies, and programs are put in place.

As shown in Figure 1, T-6 and W-4 result in the most GHG emissions in 2030. Consequently, implementation of Measure W-4, which includes the ReSource Center meeting SB 1383, would cause the City to achieve its SB 32 goal; however, implementation of additional measures and actions in the CAP would result in further reductions that work towards meeting the City’s 2035 carbon neutrality target.

Table 3 Targets Versus GHG Emissions Reductions

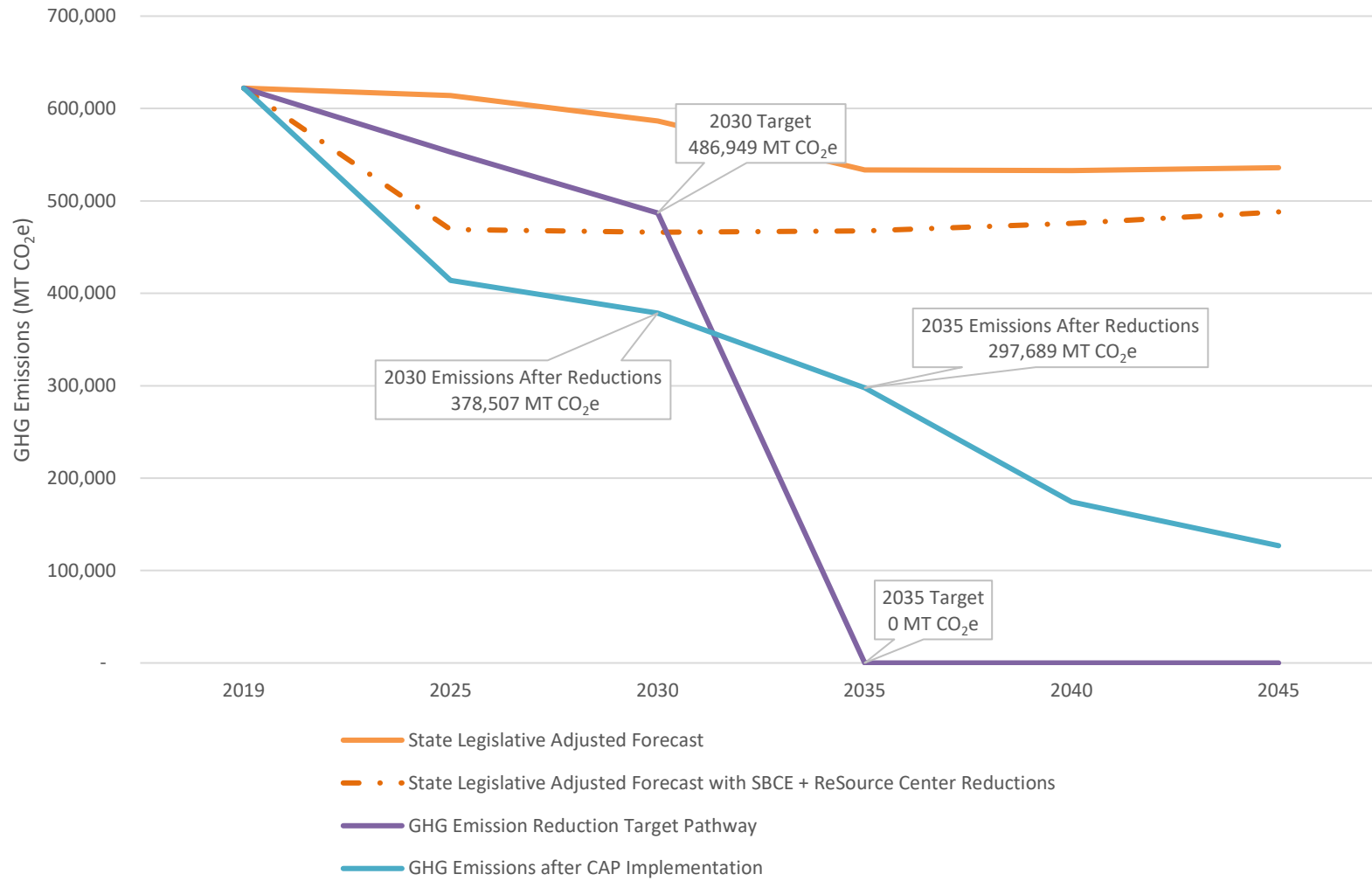
Target/Forecast	2030 GHG Emissions (MT CO₂e)	2035 GHG Emissions (MT CO₂e)
Business-as-usual Forecast	698,596	734,467
GHG Emission Reductions from State Laws/Programs	(112,176)	(201,046)
State Legislative Adjusted Forecast	586,420	533,421
GHG Emission Reductions from SBCE	(75,608)	(19,586)
GHG Emission Reductions from ReSource Center ¹	(44,690)	(46,210)
GHG Emissions after implementation of State legislation, SBCE, and ReSource Center	466,122	467,625
GHG Emissions Reductions from Full Implementation of Measures (excluding ReSource Center reductions) ²	(87,615)	(169,936)
GHG Emissions after Implementation of State Laws/Program, SBCE, ReSource Center, and remaining Measure Reductions	378,507	297,687
City of Santa Barbara Target	486,949	0.0
Target Met?	Yes	No – Additional actions will be needed to meet the aspirational 2035 target

MT CO₂e = metric tons of carbon dioxide

1. The GHG reductions achieved with continued status quo operation of the ReSource Center, which is meeting SB 1383 organic diversion and procurement requirements since 2021, is separated from the rest of the Measures presented in this CAP for informational purposes.
2. Because the GHG reductions associated with the ReSource Center are presented separate from the rest of the CAP Measures in this table, only the reductions from the remaining Measures are presented herein to avoid double counting of reductions.

Figure 3 shows the climate action targets in relation to the City’s GHG emissions after measure implementation. Although the actions identified in this plan do not achieve the City’s ambitious 2035 target for carbon neutrality; Figure 3 shows how implementation of these actions would make substantial progress toward the 2035 target. Additional actions will need to be identified over time as new legislation, technologies, and programs are put in place. A complete description of each measure and its contributing actions is included in the remainder of the report.

Figure 3 Targets Versus GHG Emissions Reductions



2 Building Energy Measures

The Building Energy Measures are focused on reducing natural gas consumption through the electrification of the building stock. This leverages the renewable energy portfolio offered by SBCE's 100% carbon-free energy plan (100% Green)⁷. All-electric buildings are powered 100% by electricity and when coupled with renewable electricity generation, their operational energy footprint becomes GHG emissions-free. The CAPUpdate's energy measures based on this strategy are as shown in Table 4 below.

Table 4 Building Energy Measures

Measure Number	GHG Emissions Reduction Measures	Anticipated Reduction/ Sequestration (MT CO ₂ e)
BE-1 (Municipal)	Decarbonize 50% of municipal buildings and facilities by 2030 and all remaining municipal facilities by 2035	Supportive
BE-2 (Municipal)	Procure carbon free or 100% renewable electricity for municipal operations by 2030	Supportive
BE-3 (Municipal)	Increase municipally owned distributed renewable energy generation throughout the City	Supportive
BE-4	Expand existing natural gas prohibition ordinance for new construction	2030: 7,918 2035: 12,975
BE-5	Reduce residential natural gas consumption by 10% below 2019 levels by 2030 and 17% by 2035	2030: 8,306 2035: 14,410
BE-6	Reduce commercial natural gas consumption 10% below 2019 levels by 2030 and 18% by 2035	2030: 5,288 2035: 9,307
BE-7	Increase the impact of Santa Barbara Clean Energy (SBCE)	Supportive

These Building Energy Measures provide the framework of updated regulations, programs, funding mechanisms, education, and advocacy to drive electrification of both new and existing residential and commercial buildings. SBCE procures low or no-carbon renewable energy for the community through renewable energy portfolios that contain sources like wind and solar. Using electricity from SBCE 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 BE-7 supports the City to maintain high levels of participation in SBCE, which increases the GHG reduction potential for SBCE's renewable electricity. Santa Barbara's building stock currently relies heavily on natural gas, therefore, GHG emissions from the City's existing buildings must also be reduced to achieve the City's climate action targets.

⁷ 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 BE-1 (Municipal) Decarbonize 50% of Municipal Buildings and Facilities by 2030 and All Remaining Municipal Facilities by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
BE-1.1	Feasibility Study	Develop a plan to electrify 50% of City-owned municipal buildings by 2030 and decarbonize 100% of municipal facilities by 2035. The plan will include an inventory of fossil fuel-powered municipal building equipment, low/zero-carbon technologies available for replacing the equipment (where available), and a short- and long-term schedule for completion. Address diesel generators and recent natural gas investments. Address feasibility concerns around community swimming pool decarbonization. Any buildings that are unable to be electrified due to technological infeasibility should be decarbonized with other technology.	Supportive
BE-1.2	Structural Change	By 2031, develop an ordinance to require the installation of solar and energy storage backup power instead of diesel generators, where feasible.	Supportive
BE-1.3	Structural Change	Implement the municipal building decarbonization plan developed under BE-1.1 to decarbonize 100% of municipal buildings by 2035 (any buildings that are unable to be electrified due to technological infeasibility shall be decarbonized with other technology).	Supportive
BE-1.4	Structural Change	Develop and implement a plan for retrofitting all remaining streetlights, facility lighting, and traffic signals to LEDs by 2035.	Supportive
BE-1.5	Foundational, Funding	Leverage the grant writer position(s) in strategy A-2.2 to expand funding efforts for municipal decarbonization.	Supportive
BE-1.6	Structural Change	Include, at the time of lease renewal, requirements for City-owned leased buildings and facilities to be all-electric.	Supportive

Measure BE-1 involves the City leading by example and includes actions to decarbonize the buildings that are owned and operated by the City. These actions are similar to the community decarbonization actions described in Measure BE-4. This measure is not quantified because the overall GHG emission reductions from building electrification are already accounted for in the community GHG emission reduction estimate.

Measure BE-2 (Municipal) Procure Carbon Free or 100% Renewable Electricity for Municipal Operations by 2030

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
BE-2.1	Foundational	Require all municipal electrical accounts to remain in SBCE's 100% Green option and purchase carbon-free electricity.	Supportive

Measure BE-2 involves the City leading by example and ensures that all City operations are powered by carbon free or 100% renewable electricity by 2030. This measure is not quantified because the overall GHG emission reductions from building electrification are already accounted for in the community GHG emission reduction estimate.

Measure BE-3 (Municipal) Increase Municipally Owned Distributed Renewable Energy Generation throughout the City

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
BE-3.1	Foundational, Feasibility Study	Implement all feasible microgrid projects at municipal facilities as identified by the 2017 Zero Net Energy study and re-evaluate viability of additional facilities.	Supportive
BE-3.2	Feasibility Studies	Conduct a feasibility study to understand barriers to installing additional distributed energy resources such as solar and battery storage, or other renewable energy generation infrastructure, at municipal facilities. Plan for directing resources through the City for funding, energy storage, and distributed energy resources. Direct municipal efforts to sourcing space for energy storage projects and microgrid implementation.	Supportive

Measure BE-3 involves the City leading by example to increase energy capacity and resilience through improving the microgrid and increasing battery storage. This measure is not quantified because microgrids do not inherently reduce GHG emissions. However, they do support a resilient and fully electrified City.

Measure BE-4 Expand Existing Natural Gas Prohibition Ordinance for New Construction

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
BE-4.1	Structural Change	In 2025 and every 3-years thereafter, revisit building ordinances to update the scope and exemptions to align with industry technology and maximize GHG reduction. Examples include requiring all major remodels (over 50% of building effected or an addition of over 50% of gross floor space) and removing exemptions in the all-electric building requirements. The building code cycle updates are processed in 2025, effective in 2026, and updated every 3-years.	2030: 7,918 2035: 12,975

Measure BE-4 has only one Action (BE-4.1) and involves the City updating their Natural Gas Prohibition (Municipal Code Chapter 22.110) that applies to all building permits submitted on or after January 1, 2022, and prohibits natural gas infrastructure in all newly constructed buildings. The City must actively study the Natural Gas Prohibition ordinance every 18 months and may update the ordinance periodically as needed. The ordinance consists of amendments to local health and safety municipal codes and does not amend the State Energy or Green Building Code. Other supporting actions as part of Measures BE-5, BE-6, and BE-7 (e.g., BE-5.11, BE-6.4, BE- 7.1) also ensure the City provides community resources and education on electrification to further strengthen the implementation of the Natural Gas Prohibition ordinance.

The methods and assumptions used to calculate the GHG emissions reductions associated with this metric are explained further here and shown in Table 5 below. The GHG emissions reduction

benefits associated with building electrification of new construction were quantified by estimating the increase in gas use from 2021 to 2030 and 2035, based on the adjusted forecast which does not include the City’s Natural Gas Prohibition to ensure there is not double counting of emission reductions. These emissions are expected to be replaced primarily with carbon-free electricity.⁸ Reductions associated with Measure BE-4 and supporting actions assume no exemptions for new residential and commercial buildings even though the current Natural Gas Prohibition does allow exemptions for restaurants, clean rooms, laboratories, and projects where electrification is not feasible. We assumed Measure BE-4 will reevaluate and remove these exemptions as electrification technology is more available and consequently, we did not assume any exemptions in the reduction calculation.

Table 5 GHG Emissions Reductions from Measure BE-4

Inputs and Assumptions		
Implementation year for residential development		2022
Implementation year for commercial development		2022
Natural gas emission factor (MT CO ₂ e/therm) ¹		0.00531
Natural gas fugitive emissions factor (MT CO ₂ e/therm) ²		0.05307
Convert kWh to therms (kWh/therm) ³		29.3
Average increased efficiency of electric appliances over natural gas appliances (%) ³		300%
GHG Emissions Reductions Calculations	2030	2035
Residential Reductions		
Forecasted residential NG usage (therms) ⁴	13,223,176	13,768,839
NG usage in implementation year (therms) ⁴	12,350,115	12,350,115
NG usage avoided (therms)	873,061	1,418,724
Emissions from NG usage avoided (MT CO ₂ e)	4,637	7,535
Emissions from methane leakage avoided (MT CO ₂ e)	1,297	2,108
Electricity usage from converting to electric (kWh)	8,526,894	13,856,203
Weighted electricity EF (lbs CO ₂ e/MWh) ⁵	16.91	4.23
Emissions from converted electricity usage (MT CO ₂ e)	65	27
Residential emission annual reductions (MT CO₂e)	5,869	9,617
Commercial Reductions		
Commercial NG usage (therms) ⁴	8,098,368	8,288,888
NG usage in implementation year (therms) ⁴	7,793,538	7,793,358
NG usage avoided (therms)	304,831	495,350
Emissions from NG usage avoided (MT CO ₂ e)	1,619	2,631
Emissions from methane leakage avoided (MT CO ₂ e)	453	736
Electricity usage from converting to electric (kWh)	2,977,182	4,837,920
Weighted electricity EF (lbs CO ₂ e/MWh) ⁵	16.91	4.23
Emissions from converted electricity usage (MT CO ₂ e)	23	9
Commercial emission annual reductions (MT CO₂e)	2,049	3,358
Total Annual Reductions (MT CO₂e)⁶	7,918	12,975

Notes: MT CO₂e = metric tons of carbon dioxide; kWh =kilowatt-hour

¹ EPA’s Emission Factors for Greenhouse Gas Inventories

⁸ 95% of electricity provided to the City of Santa Barbara is obtained from SBCE and is carbon-free. The remaining 5% of electricity is served by SCE. A weighted emission factor to account for 95% of the electricity coming from SBCE and 5% of SCE was used for emission reduction calculations.

² Calculated by multiplying cubic meter of natural gas per therm (2.85) [source: <https://www.abraxasenergy.com/energy-resources/toolbox/conversion-calculators/energy/>] by density of natural gas (0.000712 MT/ cubic meter) [source: <https://www.unitrove.com/engineering/tools/gas/natural-gas-density>] by methane content of natural gas (94.9%) [source: North American Energy Standards Board]. Adjusted for GWP of CH₄.

³ Conversion factor of 29.3001 kWh/therms and the assumption that electric appliances are generally three time more efficient than gas appliances obtained from <https://help.leonardo-energy.org/hc/en-us/articles/203047881-How-efficient-is-a-heat-pump->.

⁴ Values obtained from *City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum*

⁵ Electricity emission factors are weighted averages of the SBCE and SCE forecasted emission actors in the target year assuming 95% of electricity is from SBCE based on current opt out rate of 5%.

Measure BE-5 Reduce Existing Residential Natural Gas Consumption by 10% Below 2019 Levels by 2030 and 17% Below 2019 Levels by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e) ⁴
BE-5.1	Structural Change	Adopt a time of renovation energy efficiency and electrification requirement by 2025, effective 2026. This ordinance could require replacement of HVAC systems, hot water heaters, and other appliances to be all electric and low hydrofluorocarbons (HFC) gas emitters or provide a checklist of cost-effective efficiency and electrification options for renovations to complete based on the scope of the project. Adopt an electrification ordinance for existing residential buildings by 2028, effective 2029, to be implemented through the building permit process, which bans expansion or reconnection of natural gas infrastructure.	2030: 426 2035: 859
BE-5.2	Feasibility Studies, Education, Equity	Complete an existing building electrification feasibility analysis in collaboration with UCSB or another research institution by 2025 to determine the upfront and on-bill costs associated with building electrification strategies. This information will be used to inform and support future ordinances addressing existing building electrification as well as the building electrification accelerator (BE-5.3). The study will include extensive community input and an equity analysis to ensure all people have affordable access to the health, comfort, economic, and resilience benefits of building electrification.	
BE-5.3	Structural Change, Education, Equity	Create a residential building electrification accelerator program to increase community access to building electrification resources. This program should include the provision and expansion of resources needed to support residents in electrifying their homes. For example, by providing rebates, enhanced funding for income-qualified homeowners, technical expertise, and contractor support.	2030: 7,880 2035: 13,551 (reductions associated with combined actions of Action 5.2-5.18)
BE-5.4	Feasibility Study, Structural Change	Identify opportunities for the strategic reduction of gas infrastructure within the City and develop a gas infrastructure pruning pilot program.	
BE-5.5	Structural Change, Education, Equity	Complete a low income and affordable housing electrification pilot project in collaboration with affordable housing owners, utilities, and the community. The pilot project will ensure no increase in energy bills for occupants of subject buildings.	
BE-5.6	Structural Change, Funding	Provide a rebate at time of sale for qualifying building electrification upgrades including panels, wiring, and heat pump appliances. Implement the rebate program by 2025.	
BE-5.7	Education, Structural Change	Improve the City's building electrification permit process through a comprehensive permitting compliance program that streamlines processes, reduces fees, provides permit and inspection checklists, shortens review times, and educates affected trades and staff, thus	

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e) ¹
		reducing barriers to electrification and unlocking available incentives.	
BE-5.8	Feasibility Studies	Conduct a feasibility study of a smart building market demand program, such as Recurve’s <i>flexgrid</i> program. The study should include a pilot project that allows building owners to track the power generation and consumption of their retrofitted structures and work on making this a widely available and affordable option.	
BE-5.9	Structural Change	Develop the program studied in BE-5.8 that allows building owners to track the power generation and consumption of their retrofitted structures to optimize energy management.	
BE-5.10	Funding	Partner with ReCurve or similar entity to design and implement a market demand program that would pay energy users to save energy during times of peak demand, use energy more efficiently, and help balance the grid.	
BE-5.11	Education	Expand education programs directed at homeowners and renters on energy resource programs (examples include energy efficiency programs, demand response, and market demand programs).	
BE-5.12	Structural Change	Promote residential energy disclosure legislation, requiring home energy score at time of all residential property sale or rental listings.	
BE-5.13	Structural Change, Funding	Establish a program that provides targeted direct install services and cost share for specific electrification measures with multi-unit residential development owners. City to cover incremental cost in addition to an incremental electricity rate from SBCE.	
BE-5.14	Structural Change, Equity	Develop and implement a multi-family residential property regulation by 2028 to promote phased building energy efficiency and decarbonization. The regulation would require periodic energy inspections and prescriptive energy efficiency and decarbonization points requirements from a standardized checklist, with required performance increasing over time.	
BE-5.15	Structural Change	Develop an emergency hot water appliance program where the City provides residents with emergency natural gas hot water heaters within 24 hours of a request, with an agreement that the resident’s gas powered hot water heater will be replaced within 6 months with a heat pump water heater.	
BE-5.16	Education	Increase community awareness and understanding of tax benefits for residential building energy efficiency upgrades (Example: the Residential Energy Efficiency Property Tax Credit).	
BE-5.17	Funding	Develop incentives for California Alternate Rates for Energy (CARE)/ Family Electric Rate Assistance (FERA) subsidized rate programs for low-income resident customers to increase energy assurance.	
BE-5.18	Structural Change, Funding	Implement direct installation and/or incentive programs that facilitate the installation of combined solar and battery energy storage system installations on local area single family residential buildings. Target 120 installations by 2035.	
BE-5.19	Moonshot	Adopt a natural gas end of flow date by 2040. ¹ Create public engagement and education campaigns around this action to give the community advanced notice as well as signify all progress being made to make this possible.	

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e) ¹
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¹ Action BE 5.1 is quantified separately from the other actions as quantification is based on the adoption of a specific ordinance. As described in detail *Section Action BE-5.2 through BE-5.18*, GHG emissions reduction anticipated from Actions BE-5.2 through Action BE-5.18 are quantified together as the combination of programs, incentives, and actions will work together to generate a reduction in emissions from voluntary behavior changes.

Measure BE-5 employs a variety of policies, programs, incentives, and requirements to facilitate the transition away from natural gas to electricity in Santa Barbara’s residential building stock. GHG emissions reductions stem from two primary strategies. The first is through an electrification requirement at time of renovation (BE-5.1) and the second is through the combination of incentives and other programs that will support the voluntary transition to electric appliances. In addition, the City will develop an existing building residential electrification plan (BE-5.2) which will determine the feasibility for additional electrification requirements and specify any additional programs needed to meet the City’s long term decarbonization goals. Developing solutions for potential equity impacts is key to successful implementation when considering the comparably higher capital cost of existing building electrification. (Action BE-5.2, BE-5.5, BE-5.6, BE-5.13, BE-5.17).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.

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.¹⁰ However, the City 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.¹¹ On-bill or financed incentives to offset these costs for the end-user are therefore among the most promising opportunities for electrification.¹² 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 and equity will be a key step before mandatory requirements can be set (Action BE-5.1). Action BE-5.2, BE-5.3, BE-5.5, BE-5.6, BE-5.13, and BE-5.17 commits the City to determining the equity needs and to provide funding to meet those needs, two prominent barriers to electrification. Additional funding opportunities are identified through BE-5.10, and BE-5.18. Actions BE-5.11 and BE-5.16 support the measure through educating residents on the benefits of electrification, how to electrify, and existing tax benefits for electrification.

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

¹⁰ 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/>

¹¹ California Center for Sustainable Energy. 2009. *Solar Water Heating Pilot Program: Interim Evaluation Report*.

¹² 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>

Action BE-5.1

Action BE-5.1 commits the City to planning for an electrification ordinance for existing residential buildings by 2025. Natural gas usage from residential buildings accounted for about 10% of GHG emissions in Santa Barbara in 2019. To address these GHG emissions, the existing residential electrification ordinance could ban natural gas line expansions and reconnections as well as require the installation of electric heating, ventilation, and air conditioning (HVAC) systems, hot water heaters, and other appliances at time of renovation 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.¹³ Additionally, Action BE-5.5 commits the City to adopting an electrification ordinance for existing residential buildings by 2028 to be implemented through the building permit process, which bans expansion or reconnection of natural gas infrastructure.

The City recognizes that successful implementation of building electrification programs 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 studies finding permitted HVAC systems only accounting for 8-29% of total installations.^{14,15} City staff has indicated that this number is much lower in Santa Barbara. 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.¹⁶ Action BE-5.7 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 BE-5.7, the City will work to streamline permitting for electrification and other energy projects at a city level.

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). 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, significantly avoiding contribution to peak demand in the summer. Electrifying a heat pump or other space heating appliance has the added benefit of being highly efficient and widespread electrification of temperature control appliances would likely reduce electricity demand throughout the year.¹⁷ The electric grid is, therefore, well-suited for absorbing increased electrical demands from building electrification, which, even under full electrification scenarios, would not exceed current peak summer electricity demands.¹⁸

¹³ 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

¹⁴ 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

¹⁵ 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: https://www.calmac.org/publications/HVAC_WO6_FINAL_REPORT_Volumel_22Sept2017.pdfhttp://www.calmac.org/publications/HVAC_WO6_FINAL_REPORT_Volumel_22Sept2017.pdf

¹⁶ 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>

¹⁷ 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?

¹⁸ 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>

The methods and assumptions used to calculate the GHG emissions reductions associated with Action BE-5.1 are explained further here and shown in Table 6 below. The City will start with voluntary actions and move towards an electrification at time of renovation ordinance¹⁹ by 2025 depending on progress made towards 2030 and 2035 targets. Based on studies conducted by the Harvard Joint Center for Housing Studies (JCHS) using data from the US Department of Housing and Urban Development (HUD), approximately 25 percent of existing homes in 2021 in the Los Angeles metro area conducted renovations.²⁰ Of the renovation projects, approximately 2 percent and 9 percent of the projects included water heater and HVAC replacements, respectively. This equates to an estimated replacement of water heaters and HVAC units at a 0.4 percent and 2.3 percent annual rate, respectively, due to renovation. For the purposes of this calculation, it was assumed that trends in the City of Santa Barbara are similar to those of the Los Angeles metro area. GHG emissions were quantified by multiplying the annual percent of unit replacement by the number of years since implementation of the ordinance multiplied by the estimated contribution to total natural gas consumption in residences from the unit (e.g., water heater, HVAC). The calculation also assumes that 10% of all appliances being replaced would adhere to the requirement established through Action BE-5.1. This percentage of compliance is based on the CPUC study on HVAC and code compliance and further substantiated by the City staff that have found low permit compliance due to cost and complexity of permitting process.¹⁵

While the replace at time-of-renovation does help the City achieve the 2030 target, it does not guarantee the City will meet its goal of carbon neutrality by 2035. Achievement of complete building sector decarbonization will depend on the success of the education, funding, and technical assistance the City will provide. As the City will be tracking compliance, future CAP updates may need to outline new actions to close any remaining gaps. Santa Barbara’s energy portfolio with carbon-free electricity supports these reductions and is captured in the calculations. Also, it is important to clarify that Action BE-5.19 which looks to adopt a natural gas end of flow date by 2040 was not included in the quantification of emission reductions. This is a City’s moonshot action, and more information and community engagement will be needed for the City to determine how that may occur.

Table 6 GHG Emissions Reductions from Action BE-5.1

Inputs and Assumptions	
Ordinance implementation year	2025
Natural gas emissions factor (MT CO ₂ e/therm) ¹	0.00531
Methane Leakage (% of NG delivered) ²	2.8%
Methane Leakage EF (MT CO ₂ e/therm) ³	0.05307
Conversion Factor (kWh/therm) ⁴	29.3
Average increased efficiency of electric appliances over natural gas appliances (%) ⁴	300%
Residences undergoing renovation annually ⁵	25%
Renovations including water heater replacement ⁵	2%
Renovations including HVAC replacement ⁵	9%
Natural gas usage that comes from water heater ⁶	38%
Natural gas usage that comes from space heating/cooling ⁶	39%

¹⁹ This type of ordinance is triggered by the replacement or upgrade of a natural gas system during renovation of the building.

²⁰ Joint Center for Housing Studies of Harvard University. 2023. Improving America’s Housing 2023. <https://www.jchs.harvard.edu/sites/default/files/reports/files/JCHS-Improving-Americas-Housing-2023-Report.pdf>

Assumed compliance⁷

10%

GHG Emissions Reductions Calculations	2030	2035
Annual existing building natural gas usage (therms) ⁸	12,350,115	12,350,115
Annual existing natural gas usage for water heaters (therms)	4,631,293	4,631,293
Annual existing natural gas usage for space heating (therms)	4,824,264	4,824,264
Percentage of renovated homes with replaced water heaters, assuming some 10% compliance	0.2%	0.4%
NG reduction from water heater replacement (therm)	8,928	17,855
NG reduction from space heater replacement (therm)	54,462	108,925
Percentage of renovated homes with replaced HVAC, assuming some 10% compliance	1.1%	2.3%
Total NG avoided (therms)	63,390	126,780
Combustion emissions from total NG saved (MT CO ₂ e)	337	673
Methane leakage avoided (therms)	1,775	3,550
Emissions from methane leaked avoided (MT CO ₂ e)	94	188
Electricity usage from converting to electric (kWh)	619,111	1,238,222
Weighted electricity EF (lbs CO ₂ e/MWh)	16.91	4.23
Emissions from converted electricity usage (MT CO ₂ e)	5	2
Total Residential Reductions (MT CO₂e)	426	859

Notes: MT CO₂e = metric tons of carbon dioxide; kWh =kilowatt-hour

¹ EPA’s Emission Factors for Greenhouse Gas Inventories

² Based on recent studies, there is a leakage rate of approximately 2.8% of all natural gas delivered. See references from *City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum*

³ Calculated by multiplying cubic meter of natural gas per therm (2.85) [source:<https://www.abraxasenergy.com/energy-resources/toolbox/conversion-calculators/energy/>] by density of natural gas (0.000712 MT/ cubic meter) [source: <https://www.unitrove.com/engineering/tools/gas/natural-gas-density>] by methane content of natural gas (94.9%) [source: North American Energy Standards Board]. Adjusted for GWP of CH₄.

⁴ Conversion factor of 29.3001 kWh/therms and the assumption that electric appliances are generally three time more efficient than gas appliances obtained from <https://help.leonardo-energy.org/hc/en-us/articles/203047881-How-efficient-is-a-heat-pump>.

⁵ JCHS. 2023. Improving America’s Housing 2023. <https://www.jchs.harvard.edu/sites/default/files/reports/files/JCHS-Improving-Americas-Housing-2023-Report.pdf>

⁶ 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>

⁷ 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

⁸ Values obtained from *City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum*

Action BE-5.2 through BE-5.18

As discussed above, the primary strategy for electrification in the near term will be through voluntary adoption supported by targeted incentives, information, programs and policies outlined by the actions under measure BE-5. The City will begin voluntary actions immediately with the CAP adoption to accelerate the electrification of existing residential buildings. It is assumed that with the programs and incentives in place developed through Measure BE-5, approximately 25% of natural gas appliances would be voluntarily replaced with electric versions at time of burnout. This would be in addition to the electrification at time of renovation ordinance (Action BE-5.1). This level of reduction is in line with the CARB 2022 State SIP which calls for an end to gas water heater and

HVAC sales by 2030.²¹ Furthermore, sales of air source heat pumps have been increasing throughout California and has reached upwards of 20% already while electric water heaters are closer to 11%.²² With the addition of the incentives and programs identified in Measure BE-5 as well as those provided through the Inflation Reduction Act which would help create upfront cost parity and will increase these adoption rates even higher. Adjustments to the program will be further refined to meet these targets based on the results of the feasibility study performed as part of Action BE-5.2. To estimate the GHG reductions associated with replacing appliances at time of burnout with an electric alternative, 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 7.

Table 7 GHG Emissions Reductions from Voluntary Actions as Part of Measure BE-5 (Actions BE 5.2 through BE 5.18)

Inputs and Assumptions	
Program Implementation year	2023
Natural gas emissions factor (MT CO ₂ e/therm) ¹	0.00531
Methane Leakage (% of NG delivered) ²	2.8%
Methane Leakage EF (MT CO ₂ e/therm)	0.05307
Conversion Factor (kWh/therm)	29.3
Average increased efficiency of electric appliances over natural gas appliances (%) ³	300%
Natural gas usage that comes from water heater ⁴	38%
Natural gas usage that comes from space heating/cooling ⁵	39%
Average natural gas water heater lifespan ⁷	13
Average natural gas HVAC lifespan ⁸	21.5
Average natural gas stove lifespan ⁹	12
Assumed voluntary implementation ¹⁰	25%

GHG Emissions Reductions Calculations	2030	2035
Building natural gas usage (therms) ¹¹	12,286,725	12,223,335
Percentage of homes with replaced water heaters, assuming voluntary electrification	13%	23%
NG reduction from water heater replacement (%)	5%	9%
Percentage of homes with replaced HVAC, assuming voluntary electrification	8%	14%
NG reduction from HVAC replacement (%)	3%	5%
Percentage of homes with replaced stoves, assuming voluntary electrification	15%	25%
NG reduction from stove replacement (%)	1%	2%
Total percent reduction of NG (%)	10%	16%
Total NG saved (therms)	1,172,164	1,999,056
Emissions from total NG saved (MT CO ₂ e)	6,226	10,618
Methane Leakage Avoided (therms)	32,821	55,974
Emissions from Methane Leaked Avoided (MT CO ₂ e)	1,742	2,970

²¹ https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf

²² <https://www.calmac.org/publications/OD-CPUC-Heat-Pump-Market-Study-Report-5-17-2022.pdf>

GHG Emissions Reductions Calculations	2030	2035
Electricity usage from converting to electric (kWh)	11,448,132	19,524,118
Weighted electricity EF (lbs CO ₂ e/MWh)	16.91	4.23
Emissions from converted electricity usage (MT CO ₂ e)	88	37
Total Residential Reductions (MT CO₂e)	7,880	13,551

¹ City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum

² City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum

³ 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?

⁴ 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>

⁵ 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>

⁶ <https://treehozz.com/how-many-ccf-of-natural-gas-does-a-home-use>

⁷ 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>

⁸ 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>

⁹ 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>

¹⁰ Assumed percent of voluntary electrification based on market trends and impacts of supportive programs

¹¹ Natural Gas Prohibition in new buildings from Measure BE-4 and electrification at time of renovation ordinance (Action BE-5.5) accounted for in calculation.

Measure BE-6 Reduce Commercial Natural Gas Consumption 10% Below 2019 Levels by 2030 and 18% Below 2019 Levels by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
BE-6.1	Structural Change	Based on the results of measure BE-5.2, the existing building electrification feasibility analysis, develop and adopt an ordinance for existing commercial buildings by 2025, effective 2026, that requires the replacement of fossil fuel building systems such as HVAC and Domestic Hot Water systems with heat pumps at time of renovation. Any buildings that are unable to be electrified due to technological infeasibility shall be decarbonized with other technology. Adopt an electrification ordinance for existing commercial buildings by 2028, effective 2029, to be implemented through the building permit process, which bans expansion or reconnection of natural gas infrastructure.	2030: 1,174 2035: 3,158
BE-6.2	Structural Change	Develop and implement a commercial and mixed-use building benchmarking program for commercial and multifamily buildings over 20,000 square feet by 2025, effective 2026. The program would include reporting electricity and natural gas usage (and any other energy source) data through energy star portfolio manager. It would establish monetary penalties for non-compliance. Residential portions of buildings that are part of a mixed-use development would be exempt. Create incentives for buildings not covered to encourage voluntary compliance.	2030: 4,113 2035: 6,149
BE-6.3	Structural Change	Develop and implement a building performance standard by 2028. The standard should identify a GHG emissions per square footage threshold for each commercial building type using the data collected	

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
		under action BE-6.2. The program will start with larger commercial/multifamily residential buildings and decrease in size over time.	
BE-6.4	Structural Change, Feasibility Studies	Re-evaluate building performance program every 3 years to gauge implementation progress and possible expansion to smaller sized buildings.	
BE-6.6	Funding, Feasibility Studies, Partnerships, Education	<p>Expand education, outreach and engagement efforts relating to building electrification and energy resources, including these actions:</p> <ul style="list-style-type: none"> • Partner with the Santa Barbara South Coast Chamber of Commerce to inform and facilitate electrification for commercial business owners. • Conduct a survey of small businesses detailing obstacles and needed resources to inform equity considerations of the ordinance. • Conduct engagement efforts to the commercial sector to identify ways the City can support commercial energystorage installations and neighborhood scale microgrid opportunities. • Leverage the grant writer position(s) in strategy A-2.2 to facilitate funding opportunities for commercial business electrification by identifying and supporting grant opportunities, prioritizing small businesses and under-resourced communities. <p>Implement feedback provided during the community outreach process to small businesses and under-resourced population-owned businesses to address potential equity impacts of the building performance program.</p>	
BE-6.7	Structural Change	Track and require rental energy use disclosures at all commercial property over 10,000 SF. Require an ASHRAE (American Society of Heating, Refrigeration, and Air-Conditioning Engineers) level-1 audit for properties over 10,000 SF, and property over 20,000 SF requires an ASHRAE level-2 audit to be conducted and disclosed to the City, tenants, and potential buyers prior to sale and/or listing.	
BE-6.8	Structural Change, Funding	Establish a decarbonization incentive rate pilot program that would charge SBCE customers a reduced marginal cost rate for installation of specific electrification measures. Target commercial kitchens/restaurants, Hotel/Motels, etc.	
BE-6.9	Education	Publicize tax breaks for commercial building energy efficiency upgrades. For example, Section 179D Deduction is a federal tax deduction that allows commercial building owners to deduct up to \$1.80 per square foot of the cost of qualifying energy-efficient upgrades made to their buildings, including HVAC systems, lighting, and building envelope improvements.	
BE-6.10	Structural Change, Funding	Implement direct installation and/or incentive programs that facilitate the installation of combined solar and battery energy storage system installations on local area commercial buildings. Target 36 installations by 2035.	
BE-6.11	Structural Change	Develop an emergency hot water appliance program where the City provides commercial residents with emergency natural gas hot water heaters within 24 hours of a request, with an agreement that the hot water heater will be replaced within 6 months with a heat pump.	

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
BE-6.12	Structural Change, Education, Equity	Create a commercial and mixed-use building electrification accelerator program to increase community access to building electrification resources. This program should include the provision and expansion of resources needed to support building electrification. For example, providing rebates, enhanced funding for income-qualified homeowners, technical expertise, and contractor support.	

Measure BE-6 supports the electrification of commercial buildings within the City of Santa Barbara through a variety of mandatory actions, incentives, policies and programs. GHG emissions reductions are achieved through two major pathways. Action BE-6.1 commits the City to developing and implementing a commercial building electrification ordinance triggered by retrofits and covers both HVAC and hot water systems. Additional reductions are achieved through a variety of policies and programs which include components such as developing and maintaining a building benchmarking program through Action BE-6.2 and Action BE-6.12 and energy use disclosure through Action BE-6.5. Existing building electrification in the commercial sector is less 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.²³ However, the commercial sector accounts for a large portion of the City’s total natural gas usage (about 7% of the total City emissions), and therefore provides significant opportunity for decarbonization. Because commercial buildings are more variable than residential buildings, and their systems can be more complicated, additional data is needed to identify cost effective decarbonization strategies. The building benchmarking program will allow the City and building owners to gather more data on commercial buildings over time, perform cost saving retro-commissioning, and ultimately plan for the most cost effective decarbonization strategy. Future updates to the building strategy could identify specific GHG emissions reductions targets to allow for additional quantified GHG emissions reductions.

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 the system.²⁴ 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.²⁵ 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.²⁶ However, it should be noted that these costs are not specific to Santa Barbara, and additional study (through action BE-5.2) will provide more detail related to cost effectiveness. To bridge the gap between gas and electric infrastructure costs, Actions BE-6.3, BE-6.6, and BE-6-9 support Measure BE-6 by establishing pathways for funding, such as rebate and grant programs, and incentivizing

²³ 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>

²⁴ 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>

²⁵ 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>

²⁶ 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>

electrification of commercial properties by owners. Actions BE-6.11 and Action BE-6.12 establish programs to allow commercial owners a grace period to transition to electric water heaters in the case of emergencies and aim to accelerate commercial building electrification through community access to electrification resources.

Education has been shown to improve code compliance when implemented in addition to a permitting compliance program and has therefore, been identified as a key component of the electrification ordinance implementation process.²⁷ To close the knowledge gap about commercial building electrification in Santa Barbara, Actions BE-6.1, BE-6.6, BE-6.9, and BE-6.12 commits the City to engaging with the commercial sector and business community to understand barriers, equity concerns, cost impacts, and opportunities associated with electrification of commercial natural gas end uses. Outreach would include engagement with the local business community, such as the Santa Barbara South Coast Chamber of Commerce, to continuously understand the challenges of electrification and removed challenges and provide support. Action BE-6.10 commits the City to enforcing the electrification requirements on commercial buildings through the same permitting program established under Measure BE-5 (Action BE-5.7).

While electrification is not expected to result in additional strain on the electrical grid due to the efficiency of heat pumps,²⁸ 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.²⁹ 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%.³⁰ Action BE-6.9 commits the City to exploring opportunities to support commercial battery storage installations beyond these requirements for existing buildings.

Action BE-6.1

The methods and assumptions used to calculate the GHG emissions reductions associated with this metric are explained further here and shown in Table 8 below. The reductions gained from commercial building electrification follow a similar process as residential buildings with the development of programs to accelerate and encourage voluntary electrification of commercial businesses followed by the adoption of a time of renovation electrification ordinance by 2027. Further, by 2028 an ordinance banning reconnection to natural gas infrastructure will be adopted. Based on the market research report by IBISWorld on commercial property remodeling in the United States, the commercial building renovation market made up about 22 percent of the total commercial building market in 2022.³¹ It is anticipated that the commercial renovation market will continue to grow and make up a larger portion of the commercial building market due to the aging building stock and need for upgrades. A study by the Lawrence Berkely National Laboratory found that of the renovation and retrofit projects occurring at commercial buildings, approximately 18 percent and 20 percent of the projects included water heater and HVAC system replacements,

²⁷ 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>

²⁸ 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>

²⁹ National Renewable Energy Laboratory (NREL). June 2021. Battery Storage for Resilience. Accessed at: <https://www.nrel.gov/docs/fy21osti/79850.pdf>

³⁰ Kelsey Misbrenner. 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/>

³¹ IBISWorld. May 2023. Commercial Property Remodeling Industry in the US – market Research Report. Accessed at: <https://www.ibisworld.com/united-states/market-research-reports/commercial-property-remodeling-industry/>

respectively.³² This equates to an estimated replacement of water heaters and HVAC units at a 4.0 percent and 4.5 percent annual rate, respectively, due to renovation or retrofit. Similar to Measure BE-5, GHG emissions were quantified by multiplying the annual percent of unit replacement by the number of years since implementation of the ordinance, multiplied by the estimated contribution to total natural gas consumption in residences from the unit (e.g., water heater, HVAC). The calculation also assumes that 25% of all appliances being replaced would be in compliance with the requirements established through Action BE-6.1 and BE-6.2. This percentage of compliance is based on recent findings by the Natural Resources Defense Council (NRDC) that only about 25 percent of commercial HVAC replacements are permitted and undergo inspection.³³

Table 8 GHG Emissions Reductions from Action BE-6.1

Inputs and Assumptions	
Ordinance implementation year	2027
Natural gas emissions factor (MT CO ₂ e/therm) ¹	0.00531
Methane Leakage (% of NG delivered) ²	2.8%
Methane Leakage EF (MT CO ₂ e/therm) ³	0.05307
Conversion Factor (kWh/therm) ⁴	29.3
Average increased efficiency of electric appliances over natural gas appliances (%) ⁴	300%
Commercial buildings undergoing renovation annually ⁵	22%
Renovations including water heater replacement ⁶	18%
Renovations including HVAC replacement ⁶	20%
Natural gas usage that comes from water heater ⁷	28%
Natural gas usage that comes from space heating/cooling ⁷	42%
Assumed compliance ⁸	25%

GHG Emissions Reductions Calculations	2030	2035
Annual existing building natural gas usage (therms) ⁹	7,793,538	7,793,538
Annual existing natural gas usage for water heaters (therms)	2,164,872	2,164,872
Percentage of renovated homes with replaced water heaters, assuming 25% compliance	3.0%	8.1%
NG reduction from water heater replacement (therm)	65,506	174,683
Annual existing natural gas usage for space heating (therms)	3,247,307	3,247,307
Percentage of renovated homes with replaced HVAC, assuming some 10% compliance	3.4%	9.0%
NG reduction from HVAC replacement (therm)	109,177	291,138
Total NG avoided (therms)	174,683	465,821
Emissions from total NG saved (MT CO ₂ e)	928	2,474
Methane Leakage Avoided (therms)	4,891	13,043
Emissions from Methane Leaked Avoided (MT CO ₂ e)	260	692

³² Cindy Regnier P.E., Paulk Mathew Ph.D., Alastair Robinson, Jordan Shackelford, Travis, Walter Ph.D. February 2020. System Retrofit Trends in Commercial Buildings: Opening Up Opportunities for Deeper Savings. Lawrence Berkeley National Laboratory. Accessed at: https://buildings.lbl.gov/sites/default/files/Regnier%20-%20Systems%20Retrofit%20Trends.docx__1.pdf

³³ Kiki Velez, Merrian Morgeson. April 2023. Poor-Quality HVAC Installs are Costing Us – A solution is within reach. NRDC. Accessed at: <https://www.nrdc.org/bio/kiki-velez/poor-quality-hvac-installs-are-costing-us-solution-within-reach>

GHG Emissions Reductions Calculations	2030	2035
Electricity usage from converting to electric (kWh)	1,706,068	4,549,515
Weighted electricity EF (lbs CO ₂ e/MWh)	16.91	4.23
Emissions from converted electricity usage (MT CO ₂ e)	13	9
Total Residential Reductions (MT CO₂e)	1,174	3,158

MT CO₂e = metric tons of carbon dioxide; kWh = kilowatt-hour

¹ EPA's Emission Factors for Greenhouse Gas Inventories

² Based on recent studies, there is a leakage rate of approximately 2.8% of all natural gas delivered. See references from *City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum*

³ Calculated by multiplying cubic meter of natural gas per therm (2.85) [source: <https://www.abraxasenergy.com/energy-resources/toolbox/conversion-calculators/energy/>] by density of natural gas (0.000712 MT/ cubic meter) [source: <https://www.unitrove.com/engineering/tools/gas/natural-gas-density>] by methane content of natural gas (94.9%) [source: North American Energy Standards Board]. Adjusted for GWP of CH₄.

⁴ Conversion factor of 29.3001 kWh/therms and the assumption that electric appliances are generally three time more efficient than gas appliances obtained from <https://help.leonardo-energy.org/hc/en-us/articles/203047881-How-efficient-is-a-heat-pump->.

⁵ IBISWorld. May 2023. Commercial Property Remodeling Industry in the US – market Research Report. Accessed at: <https://www.ibisworld.com/united-states/market-research-reports/commercial-property-remodeling-industry/>

⁶ Cindy Regnier P.E., Paulk Mathew Ph.D., Alastair Robinson, Jordan Shackelford, Travis, Walter Ph.D. February 2020. System Retrofit Trends in Commercial Buildings: Opening Up Opportunities for Deeper Savings. Lawrence Berkeley National Laboratory. Accessed at: https://buildings.lbl.gov/sites/default/files/Regnier%20-%20Systems%20Retrofit%20Trends.docx__1.pdf

⁷ 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>

⁸ Kiki Velez, Merrian Morgeson. April 2023. Poor-Quality HVAC Installs are Costing Us – A solution is within reach. NRDC. Accessed at: <https://www.nrdc.org/bio/kiki-velez/poor-quality-hvac-installs-are-costing-us-solution-within-reach>

⁹ Values obtained from *City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum*

Action BE-6.2 through BE-6.12

In addition to the reductions associated with the electrification at time of retrofit program identified under BE-6.1, the City has also identified a suite of actions to promote voluntary electrification of gas appliances at time of replacement. To estimate the GHG reductions associated with replacing appliances at time of burnout with an electric alternative, the expected life span of each appliance (HVAC, water heater) 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 9. It is assumed that with the programs and incentives in place, approximately 25% of appliances replaced at burnout would be electrified. This level of reduction is in line with the CARB 2022 State SIP which calls for an end to gas water heater and HVAC sales by 2030.³⁴ While market penetration of heat pumps in commercial buildings specifically in California is less well understood, market trends show an overall increase in heat pump installations.³⁵ Furthermore, the City has the option to leverage the building performance standard to require additional GHG emission reductions based on performance of the voluntary programs. Quantification of actions BE-6.2 through BE-6.12 are shown below in Table 9.

³⁴ https://www2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf

³⁵ <https://www.pmmag.com/articles/104065-heat-pump-water-heaters-poised-for-growth-in-commercial-markets>

Table 9 GHG Emissions Reductions from Voluntary Actions as Part of Measure BE-6

Inputs and Assumptions		
Program implementation year	2023	
Natural gas emissions factor (MT CO ₂ e/therm) ¹	0.00531	
Methane leakage (% of NG delivered) ²	2.8%	
Methane leakage EF (MT CO ₂ e/therm)	0.05307	
Conversion factor (kWh/therm)	29.3	
Natural gas usage that comes from water heater ³	28%	
Natural gas usage that comes from space heating/cooling ⁴	42%	
Average natural gas water heater lifespan ⁵	10	
Average natural gas HVAC lifespan ⁶	23	
Assumed voluntary implementation ⁷	25%	

GHG Emissions Reductions Calculations	2030	2035
Commercial NG usage after new building electrification ordinance is implemented (therms)	7,618,855	7,327,717
Percentage of buildings with replaced water heaters, assuming some non-compliance	18%	25%
NG reduction from water heater replacement (%)	5%	7%
Percentage of commercial buildings with replaced HVAC, assuming some non-compliance	8%	13%
NG reduction from HVAC replacement (%)	3%	5%
Total percent reduction of NG (%)	8%	12%
Total NG saved (therms)	611,901	907,115
Emissions from total NG saved (MT CO ₂ e)	3,250	4,818
Methane leakage avoided (therms)	17,133	25,399
Emissions from methane leaked (MT CO ₂ e)	909	1,348
Electricity usage from converting to electric (kWh)	5,976,231	8,859,487
Weighted electricity EF (lbs CO ₂ e/MWh)	16.91	4.23
Emissions from converted electricity usage (MT CO ₂ e)	46	17
Total Commercial Emission Reductions (MT CO₂e)⁸	4,113	6,149

¹ City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum

² City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum

³ 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>

⁴ 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>

⁵ 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>

⁶ 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>

⁷ Assumed percent of voluntary electrification

⁸ See Calculations for Measure BE-1

Measure BE-7 Increase the Impact of Santa Barbara Clean Energy (SBCE)

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO2e)
BE-7.1	Foundational	Adopt a reach code requiring all non-residential new construction and major remodels to include solar PV and potentially batteries as well.	Supportive
BE-7.2	Structural Change, Education	Convert SCE direct access customers to SBCE through targeted programs, incentives, and engagement. Direct access customers purchase electricity from a competitive provider called an Electric Service Provider (ESP), instead of from a regulated electric utility like Southern California Edison (SCE).	Supportive
BE-7.3	Structural Change	Develop targeted rate structures and other incentives for large commercial customers including demand response.	Supportive
BE-7.4	Education, Equity	Develop a local education program detailing incentives for electrification and promoting the benefits of opting in to SBCE's service, particularly for under-resourced populations.	Supportive
BE-7.5	Education, Foundational	Maintain SBCE opt-out rates below 5%.	Supportive
BE-7.6	Structural Change, Foundational	Create innovative pilots for SBCE through local partnerships addressing technical, low-income, market, and policy barriers to progress the City's sustainability and resilience goals. Consider working with departments at UCSB like Technology and Management Program for innovative solutions that leverage technology, Engineering for data driven solutions, and Environmental Science for cutting edge environmental research.	Supportive
BE-7.7	Structural Change	Develop a Feed-In Tariff to increase and incentivize distributed energy resources. Feed-In Tariffs allow eligible small-scale renewable energy generating sources to sell their energy back to the utility or major energy grid.	Supportive

For Santa Barbara to reach its 2030 reduction target and 2035 carbon-neutrality target, energy utilized in the City will need to be carbon-free. Renewable electricity procurement by SBCE is essential for decarbonizing the City's emissions from electricity and creates the foundation for a carbon-free future. Decarbonizing electricity works hand-in-hand with building electrification and EVs to achieve carbon neutrality in both the building and transportation sectors. The actions associated with increasing SBCE's impact are supportive in nature because GHG emissions reductions have already been quantified in the emissions forecast. These actions work to support additional reductions and support a resilient and carbon-free power supply. Action BE-7.1 will ensure that all new non-residential development is equipped to generate its own renewable energy. BE-7.2, BE-7.3, and BE 7.5 work towards maintaining low SBCE opt-out rates to maximize the renewable energy provided by SBCE. BE-7.4 works together with other educational actions in the building sector to assist residents and businesses in taking necessary steps towards electrification. BE-7.6 ensures that the City stays up-to-date with cutting edge technology to improve electrification as the field evolves. BE-7.7 incentivizes small-scale renewable energy generation by developing a market for selling energy and supplementing the grid. As these actions are developed and implemented, it is assumed that tracking their effectiveness will be available and therefore, quantifying their associated GHG reduction will be feasible.

3 Transportation Measures

The City has many existing programs to support all modes of transportation in Santa Barbara. In order to meet its carbon neutrality target, the City must further reduce transportation emissions as passenger vehicles accounted for 41% of GHG emissions in Santa Barbara in 2019. Reducing these emissions is complicated as it requires reducing each individual's number of miles driven by fossil fuel-powered vehicles.

The City's transportation strategy consists of a multi-pronged approach for incentivizing alternatives to fossil fuel-powered vehicle trips, including shifting transportation mode share to active transportation and public transit options, electrifying passenger and commercial vehicle trips, and decarbonizing off-road equipment.³⁶ This CAP prioritizes reducing vehicle miles travelled (VMT) by improving active and public transportation mode share, supporting regional programs that reduce the use of single occupancy vehicles, and shifting the remaining VMT to Zero Emission Vehicles. While, in theory, 100% electrification of all vehicles in Santa Barbara could achieve zero-emissions in the transportation sector without reducing VMT, the City recognizes that cars and roadways carry huge amounts of embodied emissions (emissions associated with the construction of cars and roads) that are not accounted for in the inventory.^{37, 38}

Reducing VMT carries additional potential benefits outside of GHG emissions reductions as well, including reduced congestion, reduced space needed for roadways and parking, local economic revitalization, and lifestyle improvements.³⁹ Based on this strategy, the CAP's transportation measures are shown in Table 10 below.

³⁶ 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.

³⁷ 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/>

³⁸ Embodied emissions are associated with energy used in the extraction, processing, and transportation of materials.

³⁹ Richard Campbell and Margaret Wittgens. March 2004. The Business Case for Active Transportation. Accessed at: http://thirdwavecycling.com/pdfs/at_business_case.pdf

Table 10 Transportation Measures

Measure Number	GHG Emissions Reduction Measures	Anticipated Reduction/ Sequestration (MT CO ₂ e)
T-1 (Municipal)	Continue to develop and implement the municipal Transportation Demand Management (TDM) program	Supportive
T-2 (Municipal)	Electrify or otherwise decarbonize the municipal fleet by 2035	Supportive
T-3	Implement programs that enhance access to safe active transportation, such as walking and biking, to increase active transportation mode share to 6% by 2030 and to 10% by 2035	2030: 952 2035: 2,757
T-4	Implement programs to encourage public transportation to increase public transportation mode share to 7% by 2030 and to 8% by 2035.	2030: 3,547 2035: 4,641
T-5	Support and promote regional programs that reduce the use of single occupancy vehicles	Supportive
T-6	Increase zero-emission passenger vehicle use and adoption to 30% by 2030 and 55% by 2035	2030: 53,948 2035: 107,774
T-7	Accelerate zero-emission commercial vehicle use and adoption to 26% by 2030 and 45% by 2035	2030: 1,777 2035: 2,140
T-8	Electrify or otherwise decarbonize 6% of off-road equipment by 2030 and 20% by 2035	2030: 2,857 2035: 9,859

These Measures and associated actions will build off existing City programs to provide incentivized options and infrastructure to increase active transportation, public transportation, Zero Emission Vehicle (ZEV) use and reduce the use of single occupancy vehicles. Measure T-3 aims to achieve greater mode-shifts to active transportation as well as low-stress and convenient infrastructure. To increase safe access to bicycle and pedestrian facilities, infrastructure improvements are needed in order to remove existing barriers to active transportation. With safer, more accessible active transportation opportunities, more people will choose active transportation modes.⁴⁰

To achieve greater reliability in public transit (Measure T-4), MTD and the City will continue to develop and improve public transit programs and services. This measure prioritizes shared and public transit in the city, 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. Measure T-5 provides the supportive framework for the goals in Measures T-3 and T-4 by creating programs and policies that both incentivize use of the active transportation and transit network, while also disincentivizing driving a single-occupancy vehicle, such as limited parking options. Reduction in single-occupancy vehicle VMT is largely based on behavior change which can be influenced with a combination of infrastructure that provides the alternative network to use and incentives/disincentives to single-occupancy vehicles. While the City cannot require its residents or businesses to buy ZEVs, Measures T-6 and T-7 will ensure that the ZEV infrastructure and incentives are available throughout the City to continue to remove barriers to passenger and commercial ZEV adoption. Lastly, Measure T-8 directs City efforts and activity in decarbonizing off-road equipment.⁴¹

⁴⁰ Smith, M., Hosking, J., Woodward, A. et al. Systematic literature review of built environment effects on physical activity and active transport – an update and new findings on health equity. *Int J Behav Nutr Phys Act* 14, 158 (2017). <https://doi.org/10.1186/s12966-017-0613-9>

⁴¹ 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 T-1 (Municipal) Continue to Develop and Implement the Municipal Transportation Demand Management (TDM) Program

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-1.1	Structural Change, Foundational, Funding	Provide free or discounted access to public transit passes and the electric bicycle share program for all municipal employees and expand the WorkTRIP program to offer additional carbon-free or carbon-reduced modes of travel incentives.	Supportive
T-1.2	Structural Change	Explore a hybrid remote work program policy that supports municipal office employees to work from home as feasible (including alternative work schedules where feasible). City to explore financial assistance to help offset costs associated with home office needs.	Supportive
T-1.3	Structural Change, Funding	Provide cash incentives or paid time off for City employees to bike, walk, and carpool to work.	Supportive
T-1.4	Feasibility Studies	Conduct a detailed survey of City staff commute data annually including employee feedback to identify both major emission sources and potential gaps in planning.	Supportive
T-1.5	Feasibility Study, Structural Change	Identify opportunities for accessing bike lockers and showers at municipal office buildings.	Supportive

All actions of Measure T-1 work together to reduce the emissions associated with City staff commutes. Action T-1.2 allows for staff to work from home and eliminate commuter emissions on those days. Actions T-1.1 and T-1.3 provides incentives to carpool, use transit, or use alternative transportation when commuting and Actions T-1.4 and T-1.5 addresses challenges associated with these modes of transportation. The development and implementation of a successful TDM program will act as a case-study for other agencies, organizations, and businesses in the city to learn from and implement accordingly. This measure is not quantified to avoid double counting. Municipal emissions are a subset of community emissions and are already quantified under the community actions.

Measure T-2 (Municipal) Electrify or Otherwise Decarbonize the Municipal Fleet by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-2.1	Foundational	Complete and implement the City's Zero Emission Vehicle Acquisition Policy to convert fossil fuel municipal fleet vehicles, where feasible, to electric or otherwise decarbonize the fleet by 2035, including a short and long-term schedule for completion as well as potential for regional bulk procurement. Gain approval from City Council to allow discretionary electric vehicle purchases from different vendors.	Supportive
T-2.2	Structural Change	Install additional zero emission vehicle chargers in municipal parking lots for fleet and employee use.	Supportive
T-2.3	Foundational, Feasibility Studies	Procure biofuels (renewable diesel and biogas) to operate municipally owned on and off-road equipment with no existing opportunities for decarbonization. Re-evaluate decarbonization opportunities regularly to ensure biofuels are not being used for equipment that could otherwise be decarbonized.	Supportive
T-2.4	Structural Change	Develop and adopt a purchasing policy for smaller equipment (e.g., landscaping equipment) that includes reviews and prioritization of emissions-free equipment each time equipment is purchased.	Supportive

Actions in Measure T-2 build from existing work the City has done doing to reduce emissions associated with electrification and decarbonization of the municipal fleet. Action T-2.1 will implement the City's existing zero-emission vehicle first purchasing policy for all municipal vehicles and Action T-2.4 will adopt a new policy for smaller equipment. Actions T-2.2 and Actions T-2.3 involves the provision of additional infrastructure and resources to support electric and biofuel vehicles. Municipal emissions are a subset of community emissions and are already quantified under the community actions.

Measure T-3 Implement Programs that Enhance Access to Safe Active Transportation, such as Walking and Biking, to Increase Active Transportation Mode Share to 6% by 2030 and to 10% by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-3.1	Foundational, Funding	Implement the City's Bicycle Master Plan and Pedestrian Master Plan goals and policies to enhance community access to safe active transportation options. Using these guiding documents, identify, design and procure funding for projects that can forward the goals of the BMP and PMP, and create bike and pedestrian infrastructure that is safer, easier to use, and widely accessible for all community members.	2030: 952 2035: 2,757
T-3.2	Foundational, Funding	Pursue funding and coordinate with existing streets maintenance programs to close gaps in the pedestrian and bike network, as identified in the Bicycle Master Plan, Pedestrian Master Plan, and Capital Improvement Program.	Supportive
T-3.3	Feasibility Studies, Structural Change	Evaluate existing bike parking facilities and identify what improvements can be made to increase parking supply, reduce theft, and increase rider attraction. Include analysis of last mile limitations and hurdles and add bike parking near transit stops accordingly. Consider AB 2097 and expanding bike parking with private facilities when vehicle parking is limited.	Supportive

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-3.4	Structural Change, Equity	Adopt the State’s Slow Streets Program and expand the City’s existing neighborhood traffic calming efforts with a focus on equity considerations for additional locations.	Supportive
T-3.5	Partnerships, Education	Engage MOVE SBC, SBCAG, MTD, Santa Barbara County Public Health Department, Cottage Hospital, school districts, local law enforcement, bike advocates, and community stakeholders to continue to identify and implement additional short-term and long-term bikeway and pedestrian infrastructure improvements, Vision Zero messaging and efforts, and general education regarding the safe utilization of our public active infrastructure.	Supportive
T-3.6	Equity, Foundational	Build new infrastructure to ensure there is equitable access to safe bike and pedestrian infrastructure in all areas of the city. Focus planning, development, and construction of active transportation infrastructure in regionally defined disadvantaged communities.	Supportive
T-3.7	Structural Change	Evaluate amending the zoning ordinance to increase bike parking and types of bike parking facilities for land development projects.	Supportive
T-3.8	Foundational	Implement the recommended bike facilities outlined in the Santa Barbara Bicycle Master Plan to add 30 miles of bike ways to the City by 2030.	
T-3.9	Foundational, Equity	Implement Santa Barbara's Vision Zero Strategy to eliminate serious injuries and fatalities on City streets.	Supportive
T-3.10	Feasibility Studies	Leverage technology to track mode shifts to active transportation. Conduct an annual review of progress on implementation progress, data quality, and potential barriers to implementation. Once an effective tracking method is developed, the City shall aim to achieve 6% increase in active transportation mode share by 2030 and 10% by 2035.	Supportive
T-3.11	Structural Change, Equity	Increase bike parking in nonresidential places like populated areas, City Parks, beaches, etc.	Supportive
T-3.12	Structural Change	Accelerate the production and availability of affordable housing near urban centers by updating and adopting the Housing Element and Zoning Code to reduce VMTs; by exploring alternative strategies to create and preserve affordable housing, such as co-ops, housing or land trusts; and by streamlining project review with objective design standards.	Supportive

Santa Barbara is ranked 3rd in the nation for the percentage of bicycle commute trips for cities of its size (65,000 to 100,000 people), and 8th overall.⁴² A complete description of the goals, strategy, policy, and implementation framework for expanding and improving Santa Barbara’s bikeway network is included in the Bicycle Master Plan (BMP) that was adopted in 2016. The BMP will continue to be updated as needed to identify new projects for implementation, and to ensure that improvement projects are correctly prioritized and meet the plan’s guiding principles. The most recent update occurred in 2022.

The overall goal of the City's BMP is to provide a long-term vision for improving the active transportation network in Santa Barbara and enhance connections to residential areas, transit facilities, employment, retail and commercial centers, and public facilities. The community-driven

⁴² 2016 Bicycle Master Plan – Chapter 1: Introduction
<https://santabarbaraca.gov/sites/default/files/documents/Public%20Works/Bicycle%20Master%20Plan/2016%20Bicycle%20Master%20Plan%20-%20Introduction.pdf>

2016 BMP identified bikeway projects to help create a continuous bicycle network and enhance safety with a goal to increase commuting bicycle mode share by 6.9% by 2025 compared with 2016 bicycle mode share.⁴³ These projects were prioritized across three phases with milestone implementation years of 2020, 2025, and 2030. Implementing the BMP will consist of coordinating City departments with stakeholders (e.g., MOVE SBC, and underserved communities) to accomplish bikeway projects. The 2016 BMP documented 61 miles of bicycle routes. As of 2019, there were approximately 76 miles of bicycle routes in the city. As of the most recent BMP update in 2022, there were 84.6 miles of bike ways in the city and the overall goal of the BMP is to add an additional 30 miles by 2030, for which the City is on track to accomplish.⁴⁴

Improving active transportation networks is an important part of building complete streets, which are streets that accommodate bikes, cars, shared transit, and pedestrians in an accessible way. Santa Barbara's Bicycle Master Plan and Pedestrian Master Plan implements the City's Complete Streets Policy.⁴⁵ Nationally, 48% of all vehicle trips were three miles or less in 2019, a distance easily travelled by foot, bicycle, or other micro mobility platforms.⁴⁶ An improved and expanded pedestrian network is the most effective and direct approach for shifting those shorter vehicle trips to walking, and studies show that distance to destinations is one of the strongest predictors of walking as a mode choice. However, little research has been conducted to determine quantitatively how improving the pedestrian network (rather than shortening the distance) translates to increased pedestrian mode share. This is further complicated by the fact that while improved pedestrian networks almost always have a positive correlation with increased walking, that does not always translate to decreased VMT. In other words, increased walking does not mean that walking trips are replacing driving trips. Therefore, while Santa Barbara will implement many projects to increase its active transportation network, the mode shift associated with this was estimated more conservatively and does not include reductions associated with increased walking. Lastly, the actions included in Measure T-5, which support and promote regional programs that reduce the use of the single occupancy vehicles, will also work to support Measure T-3 by encouraging programs that enhance the need for safe active transportation.

In order to estimate the mode shift potential associated with Measure T-3, other cities with similar buildouts (bike network mileage versus city land square footage) were compared. Results from significant investment in bicycle infrastructure in California suggest that bicycle mode share can be increased on par with leading bicycle cities in the state. The City of Davis leads the state with a 20% bicycle mode share⁴⁷ and 9.2 miles of bike lane per square mile of the city.⁴⁸ City of Berkeley has a 9.7% bicycle mode⁴⁹ with approximately 4.8 miles of bike land per square mile of the city.⁵⁰ Santa Barbara's bicycle mode share in 2019 was 3.9% according to Census data⁵¹ and had 3.6 miles of bike

⁴³ <https://santabarbaraca.gov/government/departments/public-works/public-works-downtown-team/transportation-policy#:~:text=The%20community%2Ddriven%20Santa%20Barbara,the%20City%20of%20Santa%20Barbara.>

⁴⁴ Communications with Samuel Furtner, City of Santa Barbara Mobility Coordinator and Associate Transportation Planner via email on June 8, 2023.

⁴⁵ 2016 Bicycle Master Plan – Goal 3: Complete Streets & Multi-modal Access.

<https://santabarbaraca.gov/sites/default/files/documents/Public%20Works/Bicycle%20Master%20Plan/2016%20Bicycle%20Master%20Plan%20-%20Goal%203%3A%20Complete%20Streets%20%26%20Multi-modal%20Access.pdf>

⁴⁶ <https://inrix.com/blog/2019/09/managing-micromobility-to-success/>

⁴⁷ <https://www.theguardian.com/cities/2015/aug/03/davis-california-the-american-city-which-fell-in-love-with-the-bicycle>

⁴⁸ <https://www.cityofdavis.org/city-hall/public-works-engineering-and-transportation/bike-pedestrian-program/davis-bike-and-pedestrian-infrastructure#:~:text=4%20miles%20of%20buffered%20bike,and%20twenty%20Done%20underpass%20crossings.>

⁴⁹ City of Berkeley. May 2017. City of Berkeley Bicycle Plan. Accessed at:

https://www.cityofberkeley.info/uploadedFiles/Public_Works/Level_3_-_Transportation/Berkeley-Bicycle-Plan-2017-Executive%20Summary.pdf

⁵⁰ <https://www.visitberkeley.com/media-press/press-kit/fact-sheet/>

⁵¹ 5-year estimate of bicycle mode share in 2019 according to census data obtained from:

<https://data.census.gov/table?t=Commuting&g=160XX00US0669070&tid=ACSST1Y2019.S0801>

lane per square mile of the city.^{52,53} With the City on track to add an additional 30 miles of bike lane by 2030⁵⁴ there would be approximately 5.4 miles of bike lane per square mile of city. Based on other similar cities it would seem that this increase in bicycle lane miles would lead to a bicycle mode share of approximately 10%. However, Census data has shown that bicycle mode share in the city has been slowly decreasing over time despite an increase in bicycle lanes, with 2021 Census data showing a 2.9% bicycle mode share.⁵⁵ This may be due in part to commuting characteristics of the community and spread out structure of the city compared with Berkely and Davis that are significantly more condensed. As Measure T-3 includes programs and policies to not just increase the quantity of bicycle lanes, but also the quality and safety of bicycle infrastructure and include programs to enhance affordable housing and equitable access to bicycle infrastructure, it is anticipated that there will be an increase in bicycle mode shift compared with current levels. As such, to remain conservative Measure T-3 sets a goal of increasing bicycle mode share to 6% by 2030 and 10 % by 2035.

The methods and assumptions used to calculate the GHG emissions reductions associated with these actions are shown in Table 11 below. EMFAC data for Santa Barbara County was utilized to determine the average trips per vehicle mile traveled and this is the best available data for the City. This factor was then used to convert City passenger VMT to the number of trips. The number of trips was multiplied by the bicycle mode share percentage to determine the number of trips that would be substituted by bicycle travel rather than passenger vehicle with the implementation of Measure T-3. It was assumed the average bike trip length was 1.5 miles⁵⁶ and therefore for every vehicle trip replaced by bicycle trip, 1.5 vehicle miles traveled would be reduced. Emission reductions were calculated by multiplying the replaced VMT by the emission factor for internal combustion engine passenger vehicles in the target year obtained from EMFAC.

⁵² Based on information from the City of Santa Barbara Mobility Coordinator and Associate Transportation Planner, there was 76 miles of bike lanes completed in the city in 2019.

⁵³ City of Santa Barbara includes 21 square miles of land obtained from: <https://santabarbaraca.gov/getting-around/maps-santa-barbara/area-city-explained#:~:text=The%20total%20area%20of%20the,total%20of%2043.09%20square%20miles>.

⁵⁴ Communications with Samuel Furtner, City of Santa Barbara Mobility Coordinator and Associate Transportation Planner via email on June 8, 2023.

⁵⁵ <https://data.census.gov/table?t=Commuting&g=160XX00US0669070&tid=ACST5Y2021.S0801>

⁵⁶ Caltrans California Household Travel Survey (2013)/CARB Bike Path Reductions Technical Documentation (2019)

Table 11 Measure T-3 Calculations

	2030	2035
Mode share target	6%	10%
Mode share increase beyond baseline ¹	2.1%	6.1%
Passenger VMT ²	841,131,670	904,613,570
Passenger trips per mile ³	0.1261	0.1258
Estimated passenger vehicle trips	106,090,611	113,832,239
New bike trips substituted for vehicle trips ⁴	2,227,903	6,943,767
Passenger VMT reduced with bike trips (miles) ⁵	3,341,854	10,415,650
Passenger Vehicle Emission Factor (MTCO ₂ e/mile) (EMFAC) ³	0.00028494	0.00026472
Total reductions (MT CO₂e)	952	2,757

¹ Santa Barbara 5-year estimate from 2019 is at 3.9% bicycle mode share.
<https://data.census.gov/table?t=Commuting&g=1600000US0669070&tid=ACSS1Y2019.S0801>

² Values from forecast. See City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum

³ Derived from EMFAC model output for Santa Barbara County 2030 and 2035; note that EMFAC generates data at the County level, and this is the best available data for the City.

⁴ Determined by multiplying estimated passenger trips by the mode share increase beyond baseline.

⁵ Assume the average bicycle trip is 1.5 miles. Caltrans California Household Travel Survey (2013)/CARB Bike Path Reductions Technical Documentation (2019)

Providing education on the benefits of active transportation as well as technical information such as trip planning, safety best practices, incentives and other programs will help generate momentum around active transportation and support the overall strategy. The City continues to work with MOVE SBC, SBCAG, MTD, Santa Barbara County Public Health Department, Cottage Hospital, school districts, local law enforcement, bike advocates, and community stakeholders to identify and implement additional short-term and long-term bikeway and pedestrian infrastructure improvements, Vision Zero messaging and efforts, and general education regarding the safe utilization of our public active infrastructure. The additional promotional activities identified under this measure, including leveraging technology to track mode shifts in active transportation, would involve conducting an annual review of progress on implementation progress, data quality, and potential barriers to implementation.

Measure T-4 Implement Programs to Encourage Public Transportation to Increase Public Transportation Mode Share to 7% by 2030 and to 8% by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-4.1	Structural Change, Feasibility Studies	Explore alternative forms of public transit, such as micro transit and/or new electric shuttle routes, in areas with higher congestion and population densities. Micro transit is a type of on-demand, shared transportation service that typically operates with smaller vehicles, such as vans or mini-buses, and offers flexible routes and schedules.	
T-4.2	Education, Foundational	Market and publicize public transportation improvements as they are planned and implemented in a variety of methods (social media, newspaper, radio, etc.) and languages to help facilitate use and success of improvement.	
T-4.3	Partnerships, Feasibility Studies	Partner with Santa Barbara MTD to determine transit priority projects and determine best potential locations for expansion and increased service.	2030: 3,547 2035: 4,641
T-4.4	Partnerships, Foundational	Work with nonprofit and community stakeholders to enhance public transit opportunities.	
T-4.5	Equity, Foundational	Work with Santa Barbara MTD to ensure public transportation access and improvements are prioritized in low-income and high population density areas of the City.	
T-4.6	Partnerships	Work with MTD to identify and implement pilot projects and infrastructure updates to make transit safer, more consistent, and more convenient.	

In general, increases and improvements to public transportation systems reduce a city’s dependence on fossil fuels and reduce VMT. To further support a transition to shared transit, the City has identified six actions which work together to improve transit adoption. In order to estimate the mode shift potential associated with Actions T-4.1 through T-4.6, other cities with similar levels and types of public transportation investment were compared. Success in other cities suggests that significant investment in public transportation can increase public transportation mode share on par with those cities. The City of San Francisco leads the state with 26% public transportation mode share in 2017 (pre-COVID). The City of Seattle has documented significant increases in public transportation mode share to 48% in 2017 (pre-COVID). Key strategies employed by these cities include significant expansions of public transportation service lines, designated streets or lanes for bus lines to decrease headways, implementation of taxes to support transit, and reduced parking availability (Measure T-5.6). Santa Barbara is following the lead of San Francisco and Seattle by implementing Actions T-4.1, T- 4.3, T-4.4. T-4.5, and T-4.6. Most of these actions involve the City working with Santa Barbara Metropolitan Transit District (MTD), a public transit agency providing bus service in the southern portion of Santa Barbara County, California. It serves the surrounding local communities (i.e., Carpinteria, Goleta, Summerland, Isla Vista, and Montecito) which often commute to Santa Barbara for work, travel, or recreation. The City will work with MTD to determine transit priority projects and determine best potential locations for expansion and increased service, which will be prioritized in low-income and high population density areas of the City. 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. Approximately 1% increase in transit frequency saves 0.5% in VMT. Bus Rapid Transit can also yield a corridor-level VMT reduction of 1-2%.⁵⁷

⁵⁷ <https://www.smartgrowthamerica.org/app/legacy/documents/smartgrowthclimatepolicies.pdf>

Action T-4.1 involves the City exploring alternative forms of transit, such as providing micro-transit and/or new electric shuttle routes. These will be alternative means of shifting mode share to transit with the goal of increasing the convenience of transit by reducing the time it takes to reach a destination via transit as well as reducing wait times (headways) for transit. One recent study modeled automated shuttles in Santa Clara County that would result in several benefits: a decrease in gasoline-based trips, an overall increase in transit usage, and additional first- and last-mile connections to transit, proving a higher accessibility of transit, especially during night hours.⁵⁸ Many cities in California and throughout the Country have been conducting micro-transit projects for several years and the number of projects is continuing to grow.^{59, 60} Action T-4.2 directs the City to improve communication of the transportation improvements with the local community. Effective communication, especially communication that takes advantage of new and emerging technologies to accurately and easily disseminate trip planning and real-time status information, is a strong factor in helping customers decide to use transit for business or leisure trips.⁶¹ Further, improving transit access has the potential to shift trips from cars to transit, which may reduce vehicle trips, VMT, and GHG emissions, with time spent getting to a transit stop being the key indicator of transit access.⁶²

Santa Barbara's baseline public transit mode share of 3.9% was calculated from 2019 Census data.⁶³ Based on T-4.1 through T-4.6 Actions, which includes strategies similar to San Francisco (26% public transit mode share) and Seattle (48% public transit mode share), it is reasonable to assume that Santa Barbara can achieve a 4% increase in transit mode share (reaching a 7% public transit mode share) in 2030. Lastly, the actions included in Measure T-5, which support and promote regional programs that reduce the use of the single occupancy vehicles will also support Measure T-4.

The methods and assumptions used to calculate the GHG emissions reductions associated with these actions are shown in Table 12 below. To avoid double-counting of VMT reduction, passenger VMT reduced due to mode shift to bicycle trips calculated as part of Measure T-3 were subtracted from total passenger VMT in the target year. The adjusted passenger VMT was converted to trips using passenger trips per mile from EMFAC, similar to the calculations described in Measure T-3. The number of trips was multiplied by the transit mode share percentage to determine the number of trips that would be substituted by transit rather than passenger vehicle with the implementation of Measure T-4. It was assumed the average transit trip length on a bus was 3.8 miles⁶⁴ and therefore for every vehicle trip replaced by a bus trip, 3.8 vehicle miles traveled would be reduced. Emission reductions were calculated by multiplying the replaced VMT by the emission factor for internal combustion engine passenger vehicles in the target year obtained from EMFAC.

⁵⁸ Poliziani C, Hsueh G, Czerwinski D, Wenzel T, Needell Z, Laarabi H, Schweizer J, Rupi F. Micro Transit Simulation of On-Demand Shuttles Based on Transit Data for First- and Last-Mile Connection. ISPRS International Journal of Geo-Information. 2023; 12(4):177. <https://doi.org/10.3390/ijgi12040177>

⁵⁹ <https://www.apta.com/research-technical-resources/mobility-innovation-hub/microtransit/>

⁶⁰ <https://transweb.sjsu.edu/research/2249-Demand-Responsive-Transportation-Shared-Mobility>

⁶¹ <https://transitleadership.org/docs/TLS-WP-Improving-the-Customer-Experience.pdf>

⁶² https://www3.arb.ca.gov/cc/sb375/policies/transitaccess/transit_access_brief120313.pdf

⁶³ 5-year estimate obtained from: <https://data.census.gov/table?t=Commuting&g=160XX00US0669070&tid=ACST1Y2019.S0801>

⁶⁴ American Public Transportation Association. December 2018. 2018 Public Transportation Fact Book. Accessed at: <https://www.apta.com/wp-content/uploads/Resources/resources/statistics/Documents/FactBook/2018-APTA-Fact-Book.pdf>

Table 12 Measure T-4 Calculations

	2030	2035
Mode share increase from baseline	7%	8%
Mode share increase beyond baseline ¹	3.1%	4.1%
Passenger miles (VMT) ²	837,789,816	894,197,921
Passenger trips per mile ³	0.1261	0.1258
Passenger trips	105,669,109	112,521,584
New transit trips substituted for vehicle trips ⁴	3,275,742	4,613,385
VMT reduced with transit trips ⁵	12,447,821	17,530,863
Passenger emission factor ³	0.00028494	0.00026472
Emission reductions from VMT avoided (MT CO₂e)	3,547	4,641

¹ Santa Barbara 5-year estimate from 2019 is at 3.9% public transportation mode share.

<https://data.census.gov/table?t=Commuting&g=1600000US0669070&tid=ACSS1Y2019.S0801>

² Values from forecast less VMT reduced with bicycle trips calculated in Measure T-3 (Table 17). See City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum.

³ Derived from EMFAC model output for Santa Barbara County 2030 and 2035; note that EMFAC generates data at the County level, and it is assumed that this is the best available data for the City.

⁴ Determined by multiplying estimated passenger trips by the mode share increase beyond baseline.

⁵ Assume that the majority of public transit in the City is bus. The average bus trip is 3.8 miles. 2018 Public Transportation Fact Book

Measure T-5 Support and Promote Regional Programs that Reduce the Use of Single Occupancy Vehicles

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-5.1	Structural Change, Partnerships, Education, Foundational	Continue to work with SBCAG to encourage employers to develop Transportation Demand Management (TDM) Plans for their employees. TDM plans should include incentives for employees to bike, walk, carpool, or take the bus to work and should be publicized on a website.	Supportive
T-5.2	Feasibility Studies, Partnerships, Equity	To enhance the Santa Barbara community’s ability to telecommute, implement SBCAG’s Broadband Regional Study to identify areas of the City that have limited access to broadband service due to infrastructure and financial limitations.	Supportive
T-5.3	Funding, Equity	To enable telecommuting, leverage the grant writer position(s) in strategy A-2.2 to identify funding opportunities to bridge the broadband access gap in the City by helping to fund installation of infrastructure or subsidize broadband service for low-income households.	Supportive
T-5.4	Funding, Equity	Provide active and alternative transportation resources across all businesses in the city prioritizing small, women owned, and minority owned businesses regardless of Transportation Demand Management Plan (TDM) membership.	Supportive
T-5.5	Foundational	Implement AB 2097 which prohibits the City from imposing minimum parking requirements on residential and commercial development, if located with ½ mile of public transit that is consistent with AB 2097.	Supportive

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-5.6	Structural Change, Funding	In line with the General Plan, develop and implement a program to manage parking of single-occupancy vehicles. Utilize on street parking pricing for all downtown parking locations and use revenue to fund active transportation, public transportation projects, and neighborhood improvements. The program should address parking issues citywide and consider measures to prevent impacts to surrounding areas and coastal access. This analysis may include citywide use of parking permit programs and other measures.	Supportive
T-5.7	Structural Change	Develop the Pilot Bike Share Program into a permanent and dependable bike share network that provides access to key destinations throughout the City, and work with regional partners to assess potential for a regional bike share system.	Supportive
T-5.8	Education, Foundational	Coordinate with SBCAG and regional partners to update regional active transportation maps. Distribute active transportation maps and educational materials to various stakeholders. Prioritize education regarding digital mapping that is available on regularly used platforms like Google Maps.	Supportive
T-5.9	Partnerships	Partner with the tourism and business sectors of the greater Santa Barbara County region to identify pathways to increase active transportation by tourists and employees.	Supportive
T-5.10	Equity, Education	Reduce driving of single occupancy vehicles through public education and engagement. Examine equity concerns around reducing single occupancy vehicles and ensure there are adequate resources available for alternative forms of transportation.	Supportive
T-5.11	Structural Change, Feasibility Study	Explore options to address long distance commuter parking. For example, add a parking lot outside of the downtown area for long distance commuters and use mode share to bring these employees into the downtown area from the new parking lot, reducing parking congestion.	Supportive

Measure T-5 supports a transition to alternative modes of transportation besides single occupancy vehicles and therefore, is supportive of both Measure T-3 and T-4. The Actions included under Measure T-5 have been shown to be effective in changing community choices around transportation. The impacts of incentive-based policies and programs improving infrastructure for safe and convenient active transportation (Measure T-3) and transit use (Measure T-4) increase when coupled with disincentives for less favorable choices, such as making it less convenient to drive a gasoline-fueled single passenger vehicle. However, disincentive-based policies can be unpopular and place a burden on the community if not implemented carefully. Measure T-5 includes both incentives and disincentives to support the infrastructure changes and programs developed in Measure T-3 and T-4. Measure T-5 includes several actions focused on developing incentives and programs to promote active transportation (Action T-5.7, Action T-5.8, Action T-5.9), alternative transportation (Action T-5.4), and teleworking (Action T-5.2, Action T-5.3). By leveraging the grant writing position through Action T-5.3, the City will work to identify funding for telework efforts and ensure low-income and disadvantage communities also have access to telework options where possible. Under Action T-5.1, the City will work with SBCAG to encourage employers to develop and implement Transportation Demand Management (TDM) Plans that incentivize alternative modes of commute for their employees.

Reduced parking supply, when combined with other VMT reduction measures such as efficient public transit, land use policies, and urban parking pricing can reduce VMT.⁶⁵ Reduced parking supply makes driving single-passenger vehicles less attractive and can shift traveler choice to other options. Parking supply can be reduced by decreasing parking requirements for new development when near public transit (Action T-5.5) and eliminating parking spots for single-occupancy vehicles (Action T-5.6). Additionally, studies have indicated that implementing a paid parking program can lead to a 1 to 2.8 percent decrease in regional VMT.⁶⁶ However, potential VMT reduction is variable and highly dependent on the specific community design, supporting programs, and how parking limits interact with other efforts to reduce VMT such as public transit and active transportation infrastructure. Structural change actions limiting single-occupancy vehicle parking and developing a street parking price for all downtown parking (Action T-5.6) should be supported by feasibility planning and engagement efforts. Action T-5.6 will generate the additional analysis needed to better understand the scale of GHG reductions that might be achieved.

Actions T-5.10 and T-5.11 provide the engagement efforts and feasibility planning needed to make structural changes limiting single-occupancy vehicle parking and developing a street parking price for all downtown parking (Action T-5.6) successful. These actions, as well as part of Action T-5.6 are also focused on identifying equity concerns so that they may be addressed in the implementation of such programs. Measure T-5 supports Measure T-3 and Measure T-4 in reducing communitywide VMT and therefore, the GHG emission reductions are not quantified.

⁶⁵ Lee Provost. Caltrans Division of Research, Innovation and System Information. March 2018. Pricing and Parking Management to Reduce Vehicle Miles Travelled (VMT). Accessed at: <https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/preliminary-investigations/final-pricing-parking-management-to-reduce-vehicles-miles-traveled-pi-a11y.pdf>

⁶⁶ Steven Spears, Marlon G. Boarnet, Susan Handy. California Environmental Protection Agency Air Resources Board, Policy Brief. September 2014. Impact of Parking Pricing and Parking Management on Passenger Vehicle Use and Greenhouse Gas Emissions. Accessed at: https://ww2.arb.ca.gov/sites/default/files/2020/06/Impacts_of_Parking_Pricing_Based_on_a_Review_of_the_Empirical_Literature_Policy_Brief.pdf

Measure T-6 Increase Zero-Emission Passenger Vehicle Use and Adoption to 30% by 2030 and 55% by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-6.1	Structural Change	In 2025 and every 3-years thereafter, amend the Municipal Code to require increased number of electric vehicle capable charging spaces in new construction and major redevelopment for commercial, mixed-use, and multi-family development.	2030: 53,948 2035: 107,774
T-6.2	Structural Change	In 2025 and every 3-years thereafter, revisit commercial and multi-family building ordinances to be updated and require large commercial (more than 10,000 square feet) and large multi-family (more than 20 units) building owners that are providing parking to install working electric vehicle chargers in 20% of parking spaces for existing buildings when undergoing a major remodel (over 50% of building effected or an addition of over 50% of gross floor space).	Supportive
T-6.3	Foundational	Add 1,788 (by 2030) and 3,536 (by 2035) new publicly accessible electric vehicle charging stations throughout the City and at City-owned facilities to support community EV charger access.	Supportive
T-6.4	Foundational	Support private development of EV charger installations by effectively streamlining City processes, such as expediting permitting, easing onerous regulations, develop a permitting design guide.	Supportive
T-6.5	Equity, Partnerships	Identify private sector partnerships and develop affordable, zero-emission vehicle car share programs to serve affordable housing and/or multi-unit developments with a priority to target under-resourced populations.	Supportive

Measure T-7 Accelerate Zero-Emission Commercial Vehicle Use and Adoption to 26% by 2030 and 45% by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-7.1	Feasibility Studies	Develop and implement a City Zero Emission Vehicle Action Plan (ZEVAP) to identify policies to accelerate ZEV adoption community wide.	2030: 1,777 2035: 2,140
T-7.2	Funding, Education, Equity	Identify and connect commercial vehicle owners, particularly those serving under-resourced communities, to resources that can incentivize vehicle electrification. This could include local tax breaks	Supportive
T-7.3	Education, Partnerships	Provide information to the public on low-carbon fuel standards (LCSF) and how businesses can develop LCSF credits or other state and federal programs to help fund conversion of commercial fleets to zero emissions vehicles.	Supportive
T-7.4	Funding	Create a small business truck buyback program to buyback trucks from local small businesses to upgrade to electric.	Supportive
T-7.5	Moonshot	Consider establishing a licensing fee for commercial delivery vehicles operating on fossil fuels (such as Amazon and FedEx) to provide funding for new active transportation and EV charging/ZEV fueling infrastructure and discounting the fee for the proportion of electric vehicles the delivery company uses.	Supportive

Together the Actions within Measures T-6 and T-7 will encourage electric vehicle (EV) adoption within the community. The state has established a goal of putting 5 million EVs on the road by 2030.⁶⁷ However, the recent passing of executive order N-79-20 calls for 100% of passenger vehicles sold to be all electric by 2035.⁶⁸ This new executive order puts the total number of EVs on the road by 2035 at approximately 15 million.⁶⁹ Based on the current number of vehicles registered in California and a 2% growth rate per year, 15 million EVs accounts for 35% of total vehicles in 2035. Interpolating between today's EV percentage at the state level (5%) and this projected growth yields an expected EV adoption rate of 25% by 2030. As a part of this CAP, the City has established its own goal in line with this and aims to reach 30% passenger EV adoption by 2030 and 55% by 2035. As of 2020, Santa Barbara has 8,408 electric vehicles, fuel cell, and plug-in hybrid vehicles out of 116,101 vehicles currently registered, together accounting for 7% of the vehicles registered within the City.⁷⁰

The City has also adopted commercial EV adoption goals, with 26% by 2030 and 45% by 2035. This is backed by new regulations that CARB adopted in June 2020, requiring truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024, and establishing a target for every new truck sold in California to be zero-emission by 2045.⁷¹ CARB recently adopted the Advanced Clean Fleets rule requiring private services, federal fleets, state and local government fleets to begin their transition toward zero emission vehicles starting in 2024 with the goal of achieving a zero-emission truck and bus California fleet by 2045.⁷² The Advanced Clean Fleets rule also includes an end of combustion truck sales in 2036. Companies in the commercial sector are already moving to electrify their fleets, with Amazon planning to have 100,000 electric delivery vehicles on the road by 2030.⁷³ If both passenger and commercial EV adoption rates are outpacing EV charging infrastructure, adjustments can be made over time to reflect total EVs as well as charging technologies and consumer behaviors.

While the City cannot require residents or businesses to buy and use EVs rather than gas-powered vehicles, the City will take actions to incentivize this behavior change and support this level of EV adoption. As a part of this strategy, the City's primary target will be to provide one public EV charger for every 20 EVs and ensure as many privately owned chargers are installed in new development as practicable, in line with the leading cities in California (San Francisco, Los Angeles, and San Jose) and recent charging infrastructure studies. Since the City of Santa Barbara already has 132 existing public charging stations⁷⁴, there is currently one public EV charger for every 64 EVs, and the City will need to have 1,788 new public chargers installed to meet the forecasted demand from passenger vehicles by 2030. The actual number and ideal locations for these EV charging stations would need to be further investigated through a Zero Emission Vehicle Action Plan including analysis of greater fast charging infrastructure needed to power the 19 zero-emission commercial truck models set to come to the North American market over the next three years (Action T-7.1).⁷⁵ Increasing the amount of EV charging infrastructure overall will support these vehicles operating in Santa Barbara. As the need for charging infrastructure changes over time depending on new technologies such as smart chargers, megawatt-scale charging systems tailored specifically to medium- and heavy-duty

⁶⁷ <https://www.cpuc.ca.gov/zev/>

⁶⁸ <https://ww2.arb.ca.gov/resources/fact-sheets/governor-newsoms-zero-emission-2035-executive-order-n-79-20>

⁶⁹ <https://spectrumnews1.com/ca/la-west/transportation/2020/10/05/what-it-will-take-to-sell-100--evs-in-california>

⁷⁰ https://www.dmv.ca.gov/portal/uploads/2020/09/MotorVehicleFuelTypes_City_01012020.pdf

⁷¹ <https://ww2.arb.ca.gov/news/california-takes-bold-step-reduce-truck-pollution#:~:text=SACRAMENTO%20%E2%80%93%20Today%2C%20the%20California%20Air,California%20will%20be%20zero%2Demission.>

⁷² <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets/about>

⁷³ <https://www.businessinsider.com/amazon-creating-fleet-of-electric-delivery-vehicles-rivian-2020-2>

⁷⁴ <https://www.plugshare.com/directory/us/california/santa-barbara>

⁷⁵ <https://www.greenbiz.com/article/we-should-be-talking-about-charging-infrastructure-heavy-duty-trucks>

electric trucks, and trends in personal EV adoption, it will be important for the City to continue updating its long-term goals as necessary.⁷⁶

T-6.1 through T-6.3 will account for the majority of the targeted number of EV chargers in 2030 and 2035. A 2015 report by Idaho National Laboratory, *Plugged In: How Americans Charge Their Electric Vehicles*, found that nearly 98% of all EV charging events occurred at home or work.⁷⁷ In support of these findings, and to address the challenges faced by those who may not be able to install their own home chargers, amendment of the Municipal Code (Action T-6-1) to require increased number of electric vehicle capable charging spaces would support increased infrastructure at new and existing commercial and multi-family residential developments. EV-ready building codes are one of the most effective and low-cost strategies for states and local governments to encourage consumers to buy or lease electric vehicles and can save consumers thousands of dollars in installation costs.⁷⁸

Title 24, Part 11, Chapter 5 of the California Green Building Standards Code requires non-residential new construction to provide some parking spaces with electrical infrastructure sufficient to support future installation of electric vehicle supply equipment/system (EVSE).⁷⁹ This strategy ensures that Santa Barbara will have clear guidelines and standards in place for installing EVSE infrastructure. It also calls for creating a streamlined permitting and inspection procedure for EVSE to ensure reduced wait times and costs for new EV owners. Applying for a permit and waiting for an inspector can be time intensive and costly – as many as three separate visits by the installer may be required to apply for the permit, perform the work, and complete the inspection, and a fourth visit may be needed if the utility requires a separate inspection. To avoid this, the City will implement Action T-6.4 and streamline the EVSE permitting and inspection process to further ease the burden on new EV owners and support Measure T-6. The next phase for EVSE expansion will provide additional publicly accessible charging (Action T-6.3).

Establishing a licensing fee for commercial delivery vehicles will also help support Measure T-7 and decrease emissions from the commercial transportation sector. This would provide additional funding for the City to install additional EV charging infrastructure. The retail delivery sector is already trending in this direction, with Amazon revealing its first electric vehicle delivery van in 2020, which began making deliveries in 2021. The company has ordered 100,000 electric delivery vehicles already from electric vehicle maker Rivian.⁸⁰

The methods and assumptions used to calculate the GHG emissions reductions associated with these actions are shown in the table below. The number of new public chargers needed to support Santa Barbara's passenger EV adoption goals were also calculated, shown below in Table 13. This was based on 2020 vehicle registration data from the DMV and the assumption that one public charger should be available for every 20 EVs. The existing 6.83% of passenger EVs and 6.57% of commercial EVs⁸¹ in the City were also taken into account. Total registered vehicles were forecasted based on the 2020 ratio of registered vehicles to population. Emission reductions from the actions in Measure T-6 and T-7 were calculated together as emissions saved by meeting EV adoption goals in 2030 and 2035. Emission reduction calculations are shown below in Table 14.

⁷⁶ <https://www.nrel.gov/transportation/medium-heavy-duty-vehicle-charging.html>

⁷⁷ <https://www.osti.gov/biblio/1369632-plugged-how-americans-charge-electric-vehicles>

⁷⁸ <https://www.swenergy.org/cracking-the-code-on-ev-ready-building-codes>

⁷⁹ <https://codes.iccsafe.org/content/CAGBSC2016/chapter-5-nonresidential-mandatory-strategys>

⁸⁰ <https://www.businessinsider.com/amazon-creating-fleet-of-electric-delivery-vehicles-rivian-2020-2>

⁸¹ EMFAC, 2021

Table 13 EV Charger Count for Passenger Vehicles Calculations

	2030	2035
Population ¹	96,637	100,713
Total registered vehicles ²	127,976	133,374
Registered EV goal ³	38,393	73,356
EVs per charger ⁴	20	20
New publicly available EV chargers needed ⁵	1,788	3,536

¹ Values from forecast. See Appendix A.

² Based on a calculated value for cars for capita (1.321) derived by dividing the total number of registered vehicles in Santa Barbara in 2020 (https://www.dmv.ca.gov/portal/uploads/2020/09/MotorVehicleFuelTypes_City_01012020.pdf) by the 2020 population of Santa Barbara as established in Appendix A.

³ Calculated as total registered vehicles multiplied by EV adoption percentage in above table

⁴ https://theicct.org/sites/default/files/publications/US_charging_Gap_20190124.pdf

⁵ Based on the assumption that approximately one public EV charger is needed per 20 EVs, taking into account the existing 132 EV chargers already in Santa Barbara. This assumption may change over time due to better technology, changes to consumer behavior, or both. The total number of chargers especially in 2035 will need to be revisited to ensure the numbers reflect the current EV landscape. https://theicct.org/sites/default/files/publications/US_charging_Gap_20190124.pdf

Table 14 GHG Emissions Reductions from Measure T-6 and T-7

	2030	2035
Passenger Vehicles		
Passenger VMT after alternate transit VMT reductions	825,341,995	876,667,058
EV adoption beyond baseline ²	23%	47%
Passenger Vehicle Emission Factor (MTCO ₂ e/mile) (EMFAC) ³	0.000284942	0.000264718
Emissions Reductions from EV Passenger VMT (MT CO ₂ e) ⁴	54,489	108,063
EV electricity usage (kWh/EV-mile)	0.369	0.369
EV electricity usage from increased EV adoption (kWh)	70,470,365	150,621,912
Electricity EF (lbs CO ₂ e/MWh) ⁵	16.91	4.23
Emissions from electricity usage for EVs	541	289
Total Passenger Vehicle Emission Reductions	53,948	107,774
Commercial Vehicles		
Commercial VMT after mode shift to bikes and transit (VMT) ¹	8,797,048	8,998,020
EV adoption beyond baseline ²	19%	27%
Commercial Vehicle Emission Factor (MTCO ₂ e/mile) (EMFAC) ³	0.00104733	0.00089524
Emissions reduced from EV adoption (MT CO ₂ e) ⁴	1,790	2,144
EV electricity usage (kWh/EV-mile)	1.02	1.00
Additional kWh from new EV miles	1,736,036	2,389,197
Electricity EF (lbs CO ₂ e/MWh) ⁵	16.91	4.23
Emissions from electricity usage for EVs	13	5
Total Commercial Vehicle Emission Reductions	1,777	2,140
Total reductions (MT CO₂e)	55,725	109,914

¹ VMT from forecast (see Appendix A) minus VMT avoided from mode shift to bikes in Strategy T-1

² Baseline EV penetration rates for Santa Barbara County obtained from EMFAC2021. EV adoption beyond the baseline is based on executive order N-79-20 100% of passenger vehicle sales will be electric by 2035. Assuming 15 million EVs by 2035 due to N-79-20 and a 2% growth rate from current vehicle registrations (32,000,000) and a 5% current share of EVs California would be projected to have 25%

	2030	2035
EVs by 2030. 25% is in line with State goals. (https://spectrumnews1.com/ca/la-west/transportation/2020/10/05/what-it-will-take-to-sell-100-evs-in-california)		
³ Derived from EMFAC model output for Santa Barbara County 2030 and 2045; note that EMFAC generates data at the County level, and it is assumed that this is the best available data for the City.		
⁴ Emissions reduced from EV adoption is calculated as the VMT after mode shift, multiplied by the EV adoption beyond baseline percentage multiplied by the weighted vehicle emission factor in that year.		
⁵ The residential electricity emission factor was calculated based on opt-out rates for Santa Barbara according to EMFAC.		

Measure T-8 Electrify or Otherwise Decarbonize 6% of Off-Road Equipment by 2030 and 20% by 2035¹

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
T-8.1	Structural Change, Funding	Align with or exceed AB 1346 and expand enforcement of the ordinance that bans gas powered small off-road engines by 2024 (e.g., lawn and garden equipment). Provide income tiered incentives or buyback programs for burdened residents and businesses. Identify staffing needs for an enforcement and implementation tracking program run by the relevant City department.	2030: 2,857 2035: 9,859
T-8.2	Education	Inform, educate, and support the transition of local employers to zero emission off-road equipment, including major construction companies, manufacturers, landscapers, and warehouse companies.	Supportive
T-8.3	Feasibility Studies	Investigate off-road equipment fleets in the City of Santa Barbara, identify fleets with highest decarbonization potential, and conduct engagement to under-resourced communities to understand how to support conversion.	Supportive
T-8.4	Partnerships, Funding	Partner with Santa Barbara County Air Pollution Control District to expand rebate and incentive programs for upgrading off-road equipment to hybrids, biofuels, or fully electric.	Supportive
T-8.5	Funding	Leverage the grant writer position(s) in strategy A-2.2 to source state funding to decarbonize off-road equipment as a result of Executive Order N-79-20 and State Climate Funding Package.	Supportive
T-8.6	Education	Develop a landscape equipment education and incentive program incentivizing motorized landscape equipment electrification (electric leaf blowers already required, but can get rolled into an education campaign) for hedge trimmers, etc.	Supportive

¹ This would not apply to recreational or commercial marine vessels. The California Air Resources Board currently has regulations in place to develop a performance standard program for commercial marine vessels. This requires zero- emission options where feasible, and cleaner combustion Tier 3 and 4 engines on all other vessels. Implementation of these regulations will occur in 2023 through the end of 2032.

Off-road equipment in Santa Barbara accounts for 7% of the community’s GHG emissions. While only a small part of GHG emissions in the city, achieving carbon neutrality will involve decarbonizing all 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 T-8.1 commits the City to enforcing a ban on the operation of gasoline and diesel-powered small off-road equipment by 2024 (in compliance with AB 1346). The City expects that this action will be further supported by future CARB regulations for off-road equipment that may ban their sale in the region by 2035.⁸² 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

⁸² See: <https://ww2.arb.ca.gov/rulemaking/2021/sore2021>

electrified or use biodiesel today. In 2030, it is forecasted that portable and lawn and garden equipment would make up 16% total off-road equipment.⁸³ Therefore, a 6% reduction in overall off-road emissions is feasible through the enforcement of an off-road electrification ordinance that bans gasoline and diesel-powered portable and lawn and garden equipment.

Action T-8.3 commits the City to investigating the feasibility of reducing emission from major off-road equipment fleets in the City. The study will help the City better understand what types of commercial off-road equipment exists, how old it is, how much potential there is, and how the City can support electrification or decarbonization.

Actions T-8.2, T-8.4, T-8.5, and T-8.6 support implementation through increased education, 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 Table 15 below. The GHG reductions were quantified based on a reduction in fuel use by 6 percent and 40 percent from the forecasted fuel consumption in 2030 and 2035, respectively. Forecasted fuel use was obtained from California Air Resources Board’s off-road emissions inventory tool, OFFROAD2021. This model provides annual fuel consumption from various types of off-road equipment operating in Santa Barbara County. The OFFROAD results were allocated to the City of Santa Barbara using population (i.e., recreational equipment, lawn and garden equipment) and employment (i.e., construction and mining equipment, industrial equipment, light commercial equipment, other portable equipment, and transportation refrigeration units) as compared to the county totals.⁸⁴ Off-road diesel, gasoline, and natural gas emissions were acquired through EMFAC fuel usage data and multiplied by respective emissions factors.⁸⁵

Table 15 GHG Emissions Reductions from Measure T-8

	2030	2035
Decarbonized Percentage	6%	20%
Diesel Fuel Use (gal)	2,707,729	2,798,265
Gasoline Fuel Use (gal)	1,866,281	1,946,720
Natural Gas Fuel Use (gal)	399,675	400,051
Weighted Emission Factor ¹	0.009574	0.009581
Fuel Use Reduction (gal)	298,421	1,029,007
Total Reductions (MT CO₂e)²	2,857	9,859

¹ A weighted emission factor for all fuel is based on the forecasted fuel consumption by fuel type and the specific fuel type emission factor.

² Total reductions do not account for the emissions associated with electric to biofuel usage because these emissions would be minimal due to Santa Barbara’s carbon-free electricity.

⁸³ City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum (utilizes CARB's OFFROAD 2021 Santa Barbara County off-road emissions and attributes them to Santa Barbara).

⁸⁴ City of Santa Barbara 2019 Greenhouse Gas Emissions Inventory, Forecast, and Targets Technical Memorandum

⁸⁵ See: <https://arb.ca.gov/emfac/emissions-inventory/c58cfe3d0072dfc3ea8eae4234049042e52ed4df>

4 Water, Solid Waste, and Wastewater Measures

Santa Barbara’s waste measures build on the City’s existing infrastructure and programs that reduce solid waste generation and increase 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 City’s overall goal of working toward zero wasted resources such as water. The actions that address inorganic waste have relatively smaller impacts in meeting the City’s communitywide greenhouse gas emissions reduction goals and, therefore, the impact of diverted inorganic waste is not quantified.

The CAP’s water, solid waste, and wastewater measures are as shown in Table 16.

Table 16 Water, Solid Waste, and Wastewater Measures

Measure #	GHG Emissions Reduction Measures	Anticipated Reduction/ Sequestration (MT CO ₂ e)
W-1 (Municipal)	Increase municipal procurement of recovered organics waste products.	Supportive
W-2 (Municipal)	Reduce municipal water consumption.	Supportive
W-3	Reduce per capita potable water consumption 1.05% by 2030 and 1.58% by 2035.	2030: 1.72 2035: 0.67
W-4	Reduce organic waste 80% below 2014 levels by 2030 and 85% by 2035.	2030: 45,773 2035: 50,271

The City has been successful in reducing potable water consumption through implementation of programs and policies in the Enhanced Urban Water Management Plan, enforcing the Model Water Efficient Landscape Ordinance, increasing the available supply in infrastructure for use of recycled water, and providing water efficient devices and appliance incentives.

Measure W-1 (Municipal) Increase Municipal Procurement of Recovered Organics Waste Products

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
W-1.1	Structural Change, Funding	Require City agencies to procure and apply compost generated from municipal organic waste to the exterior of suitable facilities as part of their operations.	Supportive
W-1.2	Structural Change	Increase signage for municipal buildings, parking, and sidewalk bins on accepted landfill, recyclable, and compostable materials.	Supportive
W-1.3	Feasibility Studies	Investigate opportunities for procuring recovered organic waste products within municipal facilities.	Supportive

Measure W-1 includes municipal actions to increase the use of organic waste for all City agencies. This measure is not quantified because emission reductions are captured in the community-wide emission reductions.

Measure W-2 (Municipal) Reduce Municipal Water Consumption

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
W-2.1	Foundational	Continue implementing City policies for water-conserving equipment upgrades and practices at City government facilities. Implement additional facility, landscape, and procedure improvements to further conserve water as identified and determined feasible.	Supportive
W-2.2	Structural Change, Foundational	Create a Green Community Infrastructure Program based on the Stormwater BMP Guidance Manual with upgraded public spaces, green parking lots, green alleys and increased green stormwater infrastructure on City facilities.	Supportive

Measure W-2 includes municipal actions to improve landscaping and infrastructure on City green spaces with the goal of reducing water usage. Energy used to transport water is low and has minimal carbon emissions due to SBCE’s provision renewable energy. Even so, water conservation is important as California expects to experience more drought conditions in the future. Emission reductions associated with this measure are not quantified since reductions are captured in the community-wide emission reductions.

Measure W-3 Reduce Per Capita Potable Water Consumption 1.05% by 2030 and 1.58% by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
W-3.1	Structural Change, Foundational	Implement all cost-effective measures identified in the Water Conservation Strategic Plan.	2030: 1.72 2035: 0.67
W-3.2	Structural Change, Funding	Leverage the grant writer position(s) in strategy A-2.2 to source funding for the Water Conservation Strategic Plan programs and rebates.	
W-3.3	Education, Foundational	Educate the community through the Water Resources division of Public Works to understand available incentives, options, and programs to reduce per capita water use.	
W-3.4	Education	Expand public engagement campaigns to promote the available rebates through the City’s Water Conservation Programs.	
W-3.5	Education	Utilize available enhanced water consumption data from the City’s Automated Metering Infrastructure, along with the WaterSmart customer portal, to educate water customers about water use patterns and leak detection.	
W-3.6	Funding, Equity	Leverage the grant writer position(s) in strategy A-2.2 to provide specialized rebate or other funding to low and medium incomes homes for installing laundry to landscape, rainwater catchment system, low-flow appliances, and fixing water leaks.	

Action W-3.1 commits the City to implementing all cost-effective measures identified in the Water Conservation Strategic Plan. The Water Conservation Strategic Plan provides measures for commercial uses, residential uses, irrigation, and community and education. Action W-3.2 leverage grant writer position(s) to implement the Water Conservation Strategic Plan. Actions W-3.3 and W-3.4 commit the City to continuing public engagement and conservation programs, focusing on frontline communities. Engagement on these topics has been shown to improve the efficacy of

structural changes to water systems and build community wide trust and stewardship.⁸⁶ The City will also expand existing programs to provide specialized rebate or other funding to low and medium income homes for installing laundry to landscape, rainwater catchment system, low-flow appliances, and fixing water leaks. These actions provide funding for integrating more water conservation practices into the City’s households, providing more opportunity for lower-income residents to adopt these technologies.

Because the City has other methods of tracking and calculating water use reduction in the city and the emission reduction associated with water use reduction is minimal; a simple percent reduction from the forecasted projection was applied. The 2035 reduction is lower than 2030 due to the expected decreasing electricity emissions factor in line with the City’s carbon-free electricity.

Table 17 GHG Emissions Reductions from Measure W-3

	2030	2035
Water use reduction	1.05%	1.58%
Imported water delivery (acre feet)	475	491
Water Emissions (MT CO ₂ e)	163	42
Total Reductions (MT CO₂e)	1.72	0.67

Measure W-4 Reduce Organic Waste 80% below 2014 levels by 2030 and 85% by 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
W-4.1	Foundational	Meet the requirements of SB 1383 to reduce organics in the waste stream by 80% below 2014 levels. Include existing activities of: <ul style="list-style-type: none"> • Pilot and evaluate emerging technologies like at-source organic waste digestion to reduce organic waste by restaurants and other major food waste producers. • Implement enforcement and fee for incorrectly sorted materials with sensitivity to shared collection. • Increase bin signage across commercial and residential areas of acceptable landfill, recyclable, and compostable materials. 	2030: 45,773 2035: 50,271
W-4.2	Education, Funding	Create a templated training for businesses to educate their employees about circular economy-based practices annually by providing training resources and rebate program to fund employee time for training. Support lower-impact reusable and reduced packaging businesses.	Supportive
W-4.3	Education, Equity	Conduct targeted multicultural education and assistance campaigns to enhance reuse, ways to prolong the useful life of common materials and items, and sustainable purchasing practices.	Supportive
W-4.4	Education	Conduct a Bring Your Own (BYO) education and outreach training for the community on reusables and implementing more sustainable packaging into daily use. Provide resources of education on City website. Educate community on food scraps on resource center.	Supportive
W-4.5	Feasibility Studies	Conduct waste characterization studies every 4-5 years to inform programs and policies. Leverage study to understand the waste stream and create a plan to increase diversion and reduce contamination.	Supportive

⁸⁶ 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

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
W-4.6	Partnerships, Structural Change	Collaborate with the County and Resource Conservation District to develop a regional compost trading program to provide farmers with compost to meet organic procurement target set by SB 1383.	Supportive
W-4.7	Funding	Establish regional consortium to plan and pursue funding for infrastructure beyond 2025 SB 1383 targets.	Supportive
W-4.8	Equity, Education	Establish relationships with multi-unit property owners/managers to develop signage for their properties. Go door-to-door at each multi-unit unit yearly to provide supplies and education for proper sorting.	Supportive
W-4.9	Equity, Education	Conduct outreach campaign to low and medium -income residents educating them on issues related to abandoned waste and informing them on how to access bulky item and abandoned waste services at no cost.	Supportive
W-4.10	Structural Change, Partnerships	Partner with the harbor, airport and other major Santa Barbara facilities to facilitate no single use plastic practices.	Supportive
W-4.11	Structural Change, Foundational	Continue to provide different bin size options for green waste, recycling, and trash at different costs (smaller bins being cheaper options) and work towards discontinuing the use of larger waste containers as feasible.	Supportive
W-4.12	Structural Change, Foundational	Ban items without means of recycling or recycling markets, such as sale of polystyrene, produce bags, plastic packaging, straws, plastics #4-7, and mixed materials.	Supportive
W-4.13	Structural Change	Implement pilot project for reusable restaurant to-go containers.	Supportive
W-4.14	Structural Change, Partnerships	Explore opportunities to promote a "circular economy" among local manufacturers and industry. Build on existing AB 619 legislation to fund temporary or permanent food facility item reuse.	Supportive
W-4.15	Education, Partnerships	Partner with libraries and other existing facilities to market campaigns about waste reductions, reuse, and repair.	Supportive
W-4.16	Feasibility Studies, Partnerships	Partner with UCSB, ICLEI and other organizations to cost effectively evaluate and develop resources around consumption-based emissions. Utilize consumption-based emissions inventory to understand Santa Barbara's most carbon intensive consumption habits and emission reduction potential and promote closed-loop circular economy. Based on the results, create a plan to achieve the objective of zero growth of waste generation. Consider reusable diaper service, plant-based diets, etc.	Supportive
W-4.17	Equity, Education	Create a training/education program that is free and accessible to all residents and employees to learn about circular economy practices and diversion strategies and effects of overconsumption.	Supportive

As of 2021, Santa Barbara’s ReSource Center, a state-of-the-art waste management facility, came online to increase the community’s recycling rate to above 85%, generate resources such as green energy and compost, and dramatically lower local greenhouse gas emissions.⁸⁷ The ReSource Center converts commercial and residential waste into resources by recovering recyclable materials, transforming organics into landscape nutrients, and creating renewable energy in the process.

The Resource Center works to address two factors: 1) waste generation (reducing the amount of waste generated regardless of its destination such as landfilling, recycling, and composting); and 2)

⁸⁷ https://lessismore.org/material_categories/9-trrp/

waste diversion (i.e., recycling the waste that is generated through available facilities). Measure W-4 provides quantitative goals addressing 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 City to support the state's goal of a 75% reduction from 2014 levels in organics waste by 2025. While not explicitly modeled, many of these actions support the achievement of SB 1383 goals. Actions that address inorganic waste are not quantified in this analysis due to their very minimal impact on communitywide greenhouse gas emission reduction goals.

Emission reductions in the waste sector are already being implemented due to the new ReSource Center and driven by the City surpassing 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 City.
- Monitor compliance beginning in 2022, conduct enforcement beginning in 2024, and maintain records of implementation.

The City is expected to provide the level of composting and food donation that will exceed SB 1383 requirement of organic waste disposal by 75% by 2025. Landfilled organics are a large source of methane emissions and the majority of anaerobic waste emissions, as such it is assumed that an 80% reduction in organic waste equates to an 80% reduction in emissions.⁸⁸

Educational actions such as W-4.2, W-4.3, W-4.4 will not lead to direct GHG emission reductions but they are critical components 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 reduce their overall waste. Providing these materials in multiple languages in a culturally appropriate manner will further the impacts of this action.

Action W-4.5 and W-4.17 encompass studies and plans that will not directly impact GHG emissions but will support the City's goal to reduce all waste generation. Action W-4.6 will directly support implementation of SB 1383, as providing farmers with compost to meet organic procurement target falls within SB 1383's scope.

⁸⁸ See:

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

Action W-4.3 will support SB 1383’s targets by enacting a local ordinance to reduce single use items across the City. Adoption is further encouraged through partnerships with local businesses in Action W-4.2 and W-4.14 promoting reusable items to reduce general waste production.

Additionally, these actions complement Measure CS-2 which is to increase carbon sequestration by applying 0.08 tons of compost per capita annually in the community through 2030 and 2045. See *Section 5 Carbon Sequestration*.

The methods and assumptions used to calculate the GHG emissions reductions associated with metrics in Measure W-4 are shown in Table 18 below. As mentioned previously, the ReSource Center already began meeting the SB 1383 organic waste diversion obligation in 2021 and Measure W-4 is intended to exceed the compliance obligation. Therefore, the table below presents the amount of GHG reductions achieved with the ReSource Center meeting the compliance obligation and exceedance of the obligation to be achieved with implementation of Measure W-4. The GHG emissions reduction benefits associated with organic diversion were quantified by multiplying the forecasted waste emissions by the target organics diversion rate. This is because organic materials are anaerobically converted into methane and make up 100% of landfill related methane emissions.⁸⁹ The actual diversion rate will be tracked on an annual basis and if there is a circumstance in which the City doesn’t achieve the incremental targets the CAP will be updated accordingly.

Table 18 GHG Emissions Reductions from Measure W-4

Calculations	2030	2035
Waste Emissions	57,216	59,142
ReSource Center Organic Waste Diversion Compliance Obligation (%)	75%	75%
Emissions Reduction from continued ReSource Center SB 1383 Compliance	42,912	44,357
Measure W-4 Organic Waste Target Achievement (%)	80%	85%
Exceedance of SB 1383 Compliance Obligation (%)	5%	10%
Emissions Reduction from exceedance of SB 1383 Compliance Obligation	2,861	5,914
Total Reductions (MT CO₂e)	45,773	50,271

⁸⁹ US Community Protocol Appendix E – Solid Waste <https://icleiusa.org/ghg-protocols/>

5 Carbon Sequestration

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 carbon sinks by sequestering carbon from the atmosphere and storing it in vegetation and soils, playing an increasingly important role in pursuing state carbon neutrality goals. Maintaining healthy natural 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.

Carbon capture involves the capture of GHG emissions from industrial processes, such as steel and cement production, or from the burning of fossil fuels in power generation. This carbon is then transported from where it was produced, via ship or in a pipeline, and stored deep underground in geological formations. The CAP’s carbon sequestration and carbon capture measures are as shown below.

Table 19 Carbon Sequestration Measures

Measure Number	GHG Emissions Reduction Measures	Anticipated Reduction/ Sequestration (MT CO ₂ e)
CS-1	Increase carbon sequestration by maintaining existing trees and natural lands and by planting 4,500 new trees throughout the community by 2030.	2030: 159 2035: 159
CS-2	Explore new carbon sequestration and carbon capture opportunities.	Supportive
CS-3	Maintain and expand existing restoration projects to sequester carbon through a 25-acre net increase in restored land areas by 2030.	Supportive
CS-4	Increase carbon sequestration by applying 0.08 tons of compost per capita annually in the community through 2030 and 2035.	2030: 1,778 2035: 1,853
CS-5	Reduce GHG emissions of residential and commercial building materials 20% by 2030 and 40% by 2035 in line with AB 2446.	Supportive

Santa Barbara's Parks and Recreation system includes over 1,800 acres of parkland including developed parks, open space, beaches, trails, and sports facilities. The Santa Barbara Parks and Recreation Department has a Creeks Restoration and Water Quality Improvement Division (Creeks Division) which has a mission to improve creek and ocean water quality and restore natural creek systems through storm water and urban runoff pollution reduction, creek restoration, and community education programs. To accomplish this mission, the Creeks Division executes large capital projects to reconstruct creeks and wetlands, returning them to more natural conditions by reshaping the creek channels, removing of aging infrastructure, manage invasive species, and install native plants and trees. These projects have many benefits, including increasing carbon sequestration. The measures and actions in this CAP build off of existing City programs to expand their impact and quantify the carbon sequestration associated with them. Carbon sequestration quantification and tracking is a relatively newer field. However, with the large role carbon sequestration will play in meeting state and the City’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 City will integrate those goals and tracking methods within these measures and actions and update them as needed.

Measure CS-1 Increase Carbon Sequestration by Maintaining Existing Trees and Natural Lands and by Planting 4,500 New Trees throughout the Community by 2030

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CS-1.1	Education, Structural Change, Partnerships	Continue to implement and expand the City's Urban Forest Management Plan to include goals for promoting street tree health, enhancing resiliency, increasing the environmental benefits and co-benefits resulting from street trees and shading, community engagement around the urban forest. Include activity to promote street tree health and maintaining existing trees through partnerships with the community and local non-profits.	2030: 159 2035: 159
CS-1.2	Structural Change, Feasibility Studies	Continue to look for opportunities to increase carbon sequestration via land acquisitions and tree protections in alignment with the City's Open Space, Parks and Recreation Element.	Supportive
CS-1.3	Structural Change, Foundational	Implement the City's Community Wildfire Protection Plan to reduce fire risk and carbon loss due to wildfires by conducting vegetation management throughout the City. Ensure that vegetation management projects minimize full removal of vegetation or conversion of land cover type from a higher carbon sequestration land cover (shrubs and trees) to a lower carbon sequestration land cover type (annual grasses).	Supportive
CS-1.4	Feasibility Study	Develop a City-wide, or participate in a regional, carbon sequestration analysis and plan to explore opportunities to increase sequestration in the City.	Supportive
CS-1.5	Structural Change, Equity, Education	Implement the City of Santa Barbara's Creek Tree Program to assist private creekside landowners with improving wildlife habitat along creeks in Santa Barbara through the protection and planting of native trees. Develop a wildlife habitat installation program where the City provides carbon sequestering plants and creek trees and removes non-natives as feasible for appropriate creekside properties. Prioritize low-income areas for implementation of the Creek Tree Program and keep an updated publicly accessible page on the City website with important information about the program.	Supportive
CS-1.6	Feasibility Studies	Update tree canopy coverage data within the City to measure the change in coverage over time as it relates to sequestration as part of the next Urban Forest Management Plan update.	Supportive
CS-1.7	Partnerships	Invest and participate in regional development of local carbon off-set program in partnership with the County and/or Central Coast Regional Collaborative.	Supportive
CS-1.8	Equity	Prioritize low-income areas of the City with less existing tree canopy for tree plantings and increase shading in gathering spaces.	Supportive

Action CS-1.1 is to continue to implement the City's Urban Forest Management Plan and expand the goals to capture more co-benefits. The City has a robust urban forest management program that involves a number of City departments including Parks and Recreation, Public Works, Community Development, and Fire. Planting and maintenance of City trees is primarily the responsibility of the Parks and Recreation Department. Other departments such as Fire, Community Development, and Public Works are involved as part of public safety, public capital improvement projects, and land use planning and development. Public review and policymaking related to tree planting, maintenance, and preservation is provided by the Street Tree Advisory Committee, Parks and Recreation

Commission, Single Family Design Board, Historic Landmarks Commission, Architectural Board of Review, Planning Commission, and City Council. There are also additional planning efforts that support the urban forest management program including the Street Tree Master Plan, Santa Barbara Municipal Code (e.g., Chapter 15 and Chapter 22), the Local Coastal Plan, and the General Plan. Additionally, Action CS-1.2 looks to update the Open Space, Parks and Recreation Element to include policy guidance and support for activities to increase carbon sequestration.

Continued expansion and implementation of the urban forest management program, especially to focus on under-resourced communities, will need strong community partnerships and education. Action CS-1.5 and CS 1.6, and CS-1.8 look to Identify and partner with local community-based organizations with connections to under-resourced communities to assist with identification of priority planting areas, provide education, and support community tree planting events.

Due to the success of the City’s programs and the additional actions in this measure, City could set a goal of planting and maintaining an additional 4,500 trees by 2030. The City does not currently have a confirmed goal for tree planting past 2030. However, the 4,500 trees planted by 2030 will continue to sequester carbon on an annual basis throughout their lifespan. GHG emission reductions were estimated based on the number of trees to be added to the inventory and the average CO₂e accumulation factor per tree (0.0354 MT CO₂e/tree/year).⁹⁰ The calculations and assumptions used to estimate emission reductions from Measure CS-1 are provided in Table 20. Although there many actions under CS-1 that collectively support substantial increases in carbon sequestration, this analysis conservatively only quantifies carbon sequestration associated with planting trees. As more feasibility studies are done (Actions CS-1.4 and CS-1.6) and more tracking and monitoring are put in place, then the City will have additional substantial evidence to better quantify carbon sequestration reduction potential. Although not quantified here, urban greening can further reduce building carbon emissions by reducing the heat island effect in cities which reduces the need to rely on air conditioning in homes.⁹¹

Table 20 Measure CS-1 GHG Emission Reduction Calculations

Calculation Factor	2030	2035
Newly Planted Trees (compared to 2019)	4,500	4,500
Tree Sequestration Factor (MT CO ₂ e/tree/year) ¹	0.0354	0.0354
Total GHG Emissions Reductions (MT CO₂e)	159	159

Notes: MT CO₂e = metric tons of carbon dioxide; kWh =-kilowatt-hour Values may not add up due to rounding

¹ Default annual CO₂e sequestration per tree per year with a maximum lifespan of 20 years per tree is 0.0354 MT CO₂e/tree/year was obtained from CAPCOA. 2010. Quantifying Greenhouse Gas Mitigation Measures.

Measure CS-2 Explore New Carbon Sequestration and Carbon Capture Opportunities

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CS-2.1	Partnerships, Feasibility Studies	Create an organizational body (internally within the City or through a partnership like with UCSB or the Santa Barbara Botanical Garden) to lead program development and research for facilitating emergent carbon sequestration and carbon capture plans relevant to the City.	Supportive

⁹⁰CAPCOA. 2011. Quantifying Greenhouse Gas Mitigation Measures. <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

⁹¹The Trust for Public Land (TPL). Quantifying the greenhouse gas benefits of urban parks. August 2008.

CS-2.2	Education	Pilot and promote carbon sequestering construction materials like low-carbon concrete and mass timber.	Supportive
CS-2.3	Education, Partnerships	Work with local architects, construction trades, and workforce development organizations to expand industry knowledge and adoption of carbon sequestering building materials and techniques.	Supportive
CS-2.4	Feasibility Studies	Conduct a feasibility study to explore carbon capture and storage opportunities for the community.	Supportive
CS-2.5	Feasibility Studies, Partnerships	Initiate a study partnering with local academic institutions and the ReSource Center to identify and research ways to create a circular economy around organic waste and increasing edible food rescue.	Supportive
CS-2.6	Feasibility Studies	Conduct a feasibility study to explore repurposing biosolids into biochar locally and replacing conventional fertilizer through Public Works.	Supportive
CS-2.7	Partnerships, Feasibility Studies	Invest in the existing kelp farming efforts by studying regional environmental impacts and sequestration potential through a partnership with UCSB.	Supportive
CS-2.8	Partnerships	Partner with furniture, home renovation, and construction companies to promote sustainable and locally harvested timber to reduce embodied carbon from transit of construction materials and reduce the price premium of emerging timber uses.	Supportive
CS-2.9	Funding	Leverage the grant writer position(s) in strategy A-2.2 to expand funding for the carbon sequestration program.	Supportive
CS-2.10	Equity	If there are localized co-benefits to any sequestration projects focus development, when possible, to benefit historically adversely impacted under-resourced communities.	Supportive

Measure CS-2 focuses on exploring new carbon sequestration and carbon capture opportunities in the City of Santa Barbara. Over time as GHG emissions are reduced from more and more sectors, carbon sequestration and carbon removal will play an increasingly important role in California's and the City's ability to achieve carbon neutrality. The measure includes several actions aimed at facilitating research, partnerships, education, feasibility studies, and funding to identify and develop potential carbon sequestration projects. Actions CS-2.1, CS-2.2, CS-2.3, CS-2.4, and CS-2.6 focus on establishing partnerships with various entities, such as UCSB, the Santa Barbara Botanical Garden, and local academic institutions, to conduct research and development in the field of carbon capture and sequestration. This approach acknowledges that the technology for high levels of carbon capture and sequestration may not be readily available or cost-effective for the City to pursue independently at this time. Actions CS-2.5 and CS-2.7 propose investing in existing local efforts, such as the ReSource center and kelp farms, to expand carbon sequestration opportunities and promote the development of a circular economy. This highlights the City's commitment to utilizing available resources and infrastructure to advance carbon sequestration goals. Action CS-2.9 supports the measure through focusing on funding opportunities specific to carbon capture and sequestration such as through CARB. This demonstrates a proactive approach to seeking financial support for the implementation of carbon capture and sequestration projects. Action CS-2.10 will promote how identified carbon capture and sequestration opportunities bring benefits to the underserved communities. The potential for GHG reduction via carbon capture and carbon sequestration varies drastically depending on the technology and methods used for carbon capture and sequestration. Therefore, until the technology or means for carbon capture is identified, the measure remains supportive and will not be quantified until adequate data is available from an implementable project.

Measure CS-3 Maintain and Expand Existing Restoration Projects to Sequester Carbon through a 25-acre Net Increase in Restored Land Areas by 2030

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CS-3.1	Structural Change, Partnerships, Equity, Education	Develop a Citywide restoration plan in partnership with the Creeks Division, Parks and Recreation, and Public Works to achieve target net increases in restored land area and waterways. Prioritize implementation of restoration projects in disadvantaged communities. Facilitate community outreach through surveys and public meetings on ways to best restore lands and waterways within the City as well as identify additional priority areas.	Supportive
CS-3.2	Structural Change, Equity	Should parcels be identified for potential rezoning from their existing state to a park or open space, consider the following: 1) Provide flexible solutions for developing urban parks in infill areas where traditional neighborhood and community parks are not feasible; 2) Aim to achieve the greatest carbon sequestration possible, given constraints around use and amenities to be included. Use and amenities are determined by Parks and Recreation staff through a community process; and 3) Selection of parcels be made with an aim to serve underserved communities.	Supportive
CS-3.3	Partnerships	Expand Creeks Division volunteering programs to help maintain creek restoration projects. Coordinate projects with Parks and Recreation and Sustainability and Resilience Departments.	Supportive
CS-3.4	Structural Change, Feasibility Studies, Education	Facilitate annual reporting as part of the urban forestry, wildfire prevention, and City-wide restoration efforts by developing and maintaining existing projects to gauge progress over time and identify any gaps related to ongoing projects. Incorporate GHG reduction calculations into this monitoring plan.	Supportive
CS-3.5	Funding, Foundational	Leverage the grant writer position(s) in strategy A-2.2 to pursue funding for restoration activities with a focus on projects that have not reached completion due to funding constraints.	Supportive
CS-3.6	Structural Change, Foundational	Include long term maintenance in restoration planning and implementation by partnering with the community and local organizations to assist in maintenance activities. Include continued maintenance and expansion of Creeks Division projects of the Upper Las Positas Creek, Mission Creek, Palermo Open Space, Arroyo Burro, and the Andree Clark Bird Refuge.	Supportive

Measure CS-3 includes actions to facilitate and track City-led restoration efforts that will help to increase carbon sequestration. Implementing and tracking restoration efforts that increase carbon sequestration will be critical for the City to meet its 2035 carbon neutrality goal. Action CS-3.1 includes a restoration plan that will provide goals, targets, and actions to facilitate restoration throughout the city. Actions CS-3.3, CS-3.5, and CS-3.6 develop volunteer programs, partnerships, and grant funding positions(s) to help implement CS-3.1. CS-3.4 will create a reporting program to showcase the City’s progress and monitor GHG sequestration. As the goals and targets for carbon sequestration associated with restorations have yet to be developed, the measure is not yet quantified.

Measure CS-4 Increase Carbon Sequestration by Applying 0.08 tons of Compost per Capita Annually in the Community through 2030 and 2035

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CS-4.1	Structural Change	Enforce compliance with SB 1383 and aim to exceed the baseline requirement by establishing a minimum level of compost application per year on applicable/appropriate land throughout the City including City-owned land twice that of SB 1383 requirements.	2030: 1,778 2035: 1,853
CS-4.2	Feasibility Studies	Identify additional locations within the City to apply compost and provide household incentives for small-scale implementation.	Supportive
CS-4.3	Structural Change	Maintain procurement policies to comply with SB 1383 requirements for jurisdictions to purchase recovered organic waste products.	Supportive
CS-4.4	Partnerships, Education	Work with the ReSource Center to provide residents, businesses, and developers with educational material on where compost can be acquired and how it can be used (i.e., landscaping).	Supportive
CS-4.5	Partnerships	Collaborate with Santa Barbara Community College, UC Santa Barbara, local schools, and Public Works to identify opportunities to apply compost to landscaping.	Supportive

Compost is also discussed under Measure W-4 because compost application is part of the overall waste management process and is a requirement under SB 1383. The City surpassed 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, which includes waste product procurement targets.

The ReSource Center began meeting the SB 1383 procurement obligation in 2021. Measure CS-4 is intended to ensure the City continues to meet the procurement obligation in the future. Actions CS-4.1 through CS-4.5 build upon existing City programs but provide additional support to identify application gaps (Action CS-4.2), improve processes (CS-4.3), provide education (Action CS-4.4) and develop additional partnerships (Action CS-4.5). Emission reductions associated with procurement of 0.08 tons of recovered organic waste products, such as compost, per person are demonstrated in Table 21 below.

Table 21 GHG Emissions Reductions from Measure CS-4

Inputs and Assumptions		
City procurement requirement in 2021 (tons) ¹	7,444	
City population that procurement is requirement based on ¹	93,055	
Procurement requirement per capita	0.0800	
Emission reduction factor associated with mixed organics compost application due to avoided landfill emissions, decreased soil erosion, decreased fertilizer use (MT CO ₂ e/ton) ²	0.23	
Calculations	2030	2035
Population	96,637	100,713
Estimated procurement requirement (tons)	7,731	8,057
City Recovered Organic Waste Product Procurement Obligation (%)	100%	100%
Measure CS-4 Procurement Target (%)	100%	100%

Emissions Reduction from Continued ReSource Center SB 1383 Compliance of Procurement Requirements (MT CO₂e)³	1,778	1,853
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¹ <https://calrecycle.ca.gov/organics/slcp/procurement/recoveredorganicwasteproducts/>

² <https://ww2.arb.ca.gov/sites/default/files/classic/cc/waste/cerffinal.pdf>

³These emissions are also associated with the implementation of Measure CS-2. To review the actions that will implement Measure CS-2 are discussed in Section 5 *Carbon Sequestration*.

Measure CS-5 Reduce GHG Emissions of Residential and Commercial Building Materials 20% by 2030 and 40% by 2035 in Line with AB 2446

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CS-5.1	Feasibility Studies	Conduct a feasibility study on carbon capture technologies to locally produce calcium carbonate (low carbon concrete) creating sequestration via construction materials. Determine viability within the City and project demand.	Supportive
CS-5.2	Partnerships, Feasibility Studies	Partner with UCSB to pilot a building specific embodied carbon reduction project for planned construction.	Supportive
CS-5.3	Moonshot	Develop a strategic construction and procurement plan to promote construction projects that use alternative materials to reduce embodied carbon. Include scoring criteria in City request for proposals for construction projects that identify resilience features such as water and energy efficiency, reduced urban heat, and decrease the embodied carbon in line with AB 2446.	Supportive

AB 2446, adopted in 2022, requires CARB to develop a strategy for achieving a 40 percent net reduction in the embodied carbon in building materials by end of 2035.⁹² As part of this bill, CARB is also tasked with developing a framework for measuring and tracking the reduction in building material carbon intensity by 2025. Measure CS-5 supports the state’s efforts to reduce embodied carbon emissions in construction materials and prepares the City for legislation related to building materials that may be passed in the coming years. Under Action CS-5.1 the City will conduct a feasibility study to evaluate the viability of products like low carbon concrete and carbon sequestering concrete. Concrete is one of the most extensively used materials in buildings and traditional manufacturing of concrete is a carbon intense process.⁹³ There are a number of emerging technologies that reduce the emissions from concrete production as well as technologies for using concrete as a means to sequester carbon emissions.⁹⁴ Understanding the feasibility of other building materials is the first step to development a strategy to reduce embodied emissions in building materials. Through Action CS-5.2 the City will develop a partnership with UCSB to pilot a project focused on reducing embodied carbon in building construction. This collaborative effort aims to explore and implement strategies to minimize the carbon footprint associated with planned construction projects. By leveraging the expertise of UCSB, the City, can benefit from cutting-edge research and innovative approaches to reduce GHG emissions in the building environment. Action CS-5.3 is a moonshot effort by the City that would involve the development of a strategic construction and procurement plan to promote of alternative materials with lower embodied

⁹² 2022 - Assembly Bill 2446 (Holden, Chris), Embodied Carbon Emissions: Construction Materials (Chaptered) | California Air Resources Board

⁹³ Jeremy Gregory, Hessam Azarjafaris, Ehsan Vahidi, and Randolph Kirchain. September 2021. The role of concrete in life cycle greenhouse gas emissions of US buildings and pavements. PNAS Vol. 118 No. 37. Accessed Here: <https://www.pnas.org/doi/full/10.1073/pnas.2021936118>

⁹⁴ CarbonCure's Sustainable Concrete Solution - Concrete Technology Reducing Carbon Impact

carbon and construction designs that increases climate resiliency. At this time the Measure is supportive to the overall efforts of the City but is not quantifiable since lifecycle emissions are not quantified in the overall GHG inventory.

6 Community Climate Potential

Any increase in government and private sector spending related to the CAP and associated greenhouse gas reduction measures will generate economic activity, resulting in changes to employment. To meet the City’s goals in the CAP, the City will need to help transform its economy into one that supports a zero-carbon future and moves toward energy efficiency. This greener economy will involve an increasing number of sectors with lower carbon outputs and decreased environmental impacts. Early studies show that there will be some economic decline in certain industries and limited job losses; however, the overall economic impact is expected to be net positive. For this reason, it is important that the City needs to address equity explicitly in the green transition. Ensuring equitable outcomes result from transformative climate investments is critical. Measure CP-1 outlines the City’s plan to integrate innovation and equity into the green economy.

Measure CP-1 Encourage Community Innovation and Empower the Local Green Economy through Investment in a Green Technology Workforce

Action Number	Strategic Theme	Action	Anticipated Reduction (MT CO ₂ e)
CP-1.1	Structural Change	Create a Green Technology incubator in partnership with UCSB to determine technological advancement research into clean power, built environment advancement, and carbon sequestration.	Supportive
CP-1.2	Funding	Leverage the grant writer position(s) in strategy A-2.2 to source funding for the Green Technology incubator through involvement of venture capitalist and private equity firms.	Supportive
CP-1.3	Education	Facilitate workforce training by partnering with local academic institutions to offer scholarships for students pursuing climate trades.	Supportive
CP-1.4	Education	Partner with Santa Barbara Community College and/or UCSB to develop a clean energy technology certificate program.	Supportive
CP-1.5	Moonshot	Leverage the grant writer position(s) in strategy A-2.2 to establish an Innovation Bootcamp with funding from SBCE to encourage forward thinking sustainability and resilience ideas and pilots. The Innovation Bootcamp will be tiered based on stages.	Supportive
CP-1.6	Moonshot	Create a climate innovation competition for local area students where the prize is a scholarship or grant.	Supportive

Green jobs are broadly defined as occupations that include tasks associated with meeting green economic goals and improving the environment. This could be jobs in businesses that produce goods or provide services that conserve natural resources or reduce the environmental impact of production processes. Green goods, services, and production processes typically fall into the following categories of economic activity: renewable energy; energy efficiency; greenhouse gas reduction; pollution reduction and cleanup; recycling and waste reduction; natural resources conservation; and education, compliance, public awareness and training.

Green jobs may include, but are not limited to, the following:

- Clean renewable energy
- Public transportation
- Waste management/recycling

- Eco-tourism
- Sustainable agriculture
- Land conservation/remediation
- Construction/Building remediation

These measures and actions in the CAP will increase spending on projects that are expected to increase employment in these jobs. While increased jobs are generally viewed as a positive impact, Measure CP-1 contains actions to ensure equitable outcomes of this job creation, such as implementing retraining programs and outreach for underrepresented communities. Actions CP-1.1 and CP-1.2 will create a Green Technology incubator to understand how anticipated growth—particularly ones spurred by transformative climate investments—can create employment opportunities that connect with historically underrepresented, under-served and under-resourced members of the community.

Actions CP-1.3, CP-1.4, CP-1.5, and CP-1.6 work together to facilitate the training and help the development of a local green workforce. Workforce development ensures and expands employability by aligning skills of employees with business needs and labor market trends. These workforce development initiatives need to be holistic and take form multiple ways which is why the City has actions to include apprenticeship programs, targeted development programs, and funding incentives. Coordination among business and education communities, labor and trade groups as well as the local and regional governments will ensure sound delivery of workforce development initiatives. Being proactive in developing a green workforce is particularly important in Santa Barbara where it is difficult to attract and retain talent due to the region's high costs for housing.

City of Santa Barbara CAP

Analysis of Costs and Benefits

The City of Santa Barbara (City) is setting an aggressive goal to achieve carbon neutrality by 2035, more aggressive than the State of California's goals to reduce greenhouse gas (GHG) emissions 40% below 1990 levels by 2030 (SB 32) and 85% below 1990 levels or net zero by 2045. The City is developing a Climate Action Plan (CAP) to serve as a roadmap to achieve these GHG emissions reduction targets and to promote a higher quality of life for its residents. Achieving GHG emissions reduction requires strategic investments related to the measures and actions contemplated within the CAP including policies, infrastructure, technology, and programs that support behavioral change. To provide transparency around the City's investment priorities, Hatch and Rincon evaluated the potential benefits and costs of implementing a subset of the City's CAP measures and actions. This memo also identifies funding and financing strategies that can support the implementation of the select measures and actions.

Benefit and Cost Considerations

The goal for this benefit and cost evaluation is to provide the City with insights into the variability of the impact of key measures and actions to the City, its residents, local property and business owners, and other stakeholders.

Some of the key variables that may affect cost effectiveness of measures and actions in the CAP include upfront costs, lifecycle costs, incremental or marginal costs, the time value of money, and the cost of inaction.

- **Upfront vs. Lifetime Costs**

It is important to differentiate between upfront costs and lifetime costs of implementing a measure. Upfront costs include the labor and material costs of an intervention (e.g., the purchase of an electric vehicle and the installation of an at-home electric vehicle charger). Lifetime costs include the upfront costs as well as the costs of operating, maintaining, renewal and disposing of the intervention upon renewal (e.g., annual service or unplanned repair of both the electric vehicle and its charger). Lifetime costs are estimated over a finite period and are discounted to reflect net present value. While electric vehicles may be more expensive at the time of purchase than an internal-combustion engine, its lifecycle costs (e.g., its maintenance over the lifetime of ownership) are significantly lower than traditional vehicles, providing a significant return on investment.

- **Incremental or Marginal Costs**

An incremental or marginal cost is the difference in cost between a new intervention versus the old or typical approach. For example, purchasing an average sale price of a new electric vehicle in 2023 is \$60,000, roughly 20 percent more than the sales price of a traditional car. While the marginal or incremental cost in the *short-term* is significant in this example, it may be zero or near zero in the *long-term* because of reduced fuel costs and maintenance costs (e.g., fluid replacement, transmission repair, etc.) throughout the *lifetime* of the electric

vehicle. In many cases the difference between choosing an emission reducing intervention versus the traditional alternative is negligible especially when considering the ongoing costs of the intervention.

- **Financing: Time Value of Money and Savings or Avoided Costs**

Financing includes mechanisms (e.g., loans, bonds, etc.) that cover costs of a large investment such as upfront capital for infrastructure, equipment, or building re/development that must eventually be repaid over time. Financing leverages the time value of money and utilizes future revenues to back large investments today. In the case of revenue bonds, the repayment dollars may be from the large investment's revenue stream. This return on investment (ROI) allows high-cost investments to be low, or no-cost over time given the potential savings and avoided costs gained over the useful life of an investment. Partnerships with third parties such as financial institutions and/or utilities can be structured against a capital investment's cost savings or revenue streams. For example:

- Energy efficiency retrofits can generate cost savings of more than 30 percent for 15 to 20 years. If external partners are involved, such as with an energy savings performance contract (ESPC), cities may not need to provide any upfront capital, but the project's cost savings would accrue with a private third party and be ceded by the city.
- An anaerobic digester may need \$5 million to \$10 million in upfront capital but could also generate \$1 million to \$2 million annually in natural gas delivery revenue. Scaled over a 20-year period, the annual revenue can be an attractive financial investment for a city.

In addition to identifying the measures prioritized for this memo, the following table outlines approximate **upfront cost estimates** to assist in measure implementation. For each measure, both internal upfront (municipal-focus) and external costs (community-focus) are considered. The upfront costs presented in the tables do not consider the exact scale of the measures and do not represent the precise calculations of exact measure costs. Rather, these approximate upfront costs are presented to illustrate the order of magnitude of cost impacts to parties affected. Given the unpredictability of maintenance required and variables that affect operations, lifecycle costs are excluded in this analysis. Sunk costs or expenses already incurred and committed--such as salaries, lease payments, deposits, or cost of any investments made upfront--are also excluded from this analysis. The approximate upfront costs are sourced from various municipalities in California and are presented in today's value (as of the time of writing, 2023). Additionally, upfront costs presented in this memo do not consider inflation, any potential for cost changes beyond inflation, or any future unforeseen fluctuations in cost (e.g., escalation of construction material costs due to supply shortages).

The findings from this memo may be utilized for prioritizing actions for implementation, for identifying more detailed scopes of work for an action, and as a discussion document when engaging with internal City departments and divisions for planning and implementation of measures and actions.

Funding and Financing Strategies

Local governments already face challenges in meeting their constituents' needs for investment in many types of critical infrastructure and programs. This memo examines approaches that go beyond

the use of general fund monies to pay for climate-related infrastructure; funding and financing sourced outside municipal sources is central to unlocking investments that generate benefits for a wider group of constituencies in Santa Barbara and beyond. Funding and financing strategies that go beyond publicly-led approaches may also reduce the burden on low-income residents to fund investments that broadly support all residents and businesses in the City of Santa Barbara. This analysis identifies funding and financing approaches and relevant case studies in building electrification, building performance standards, and zero-emissions off-road equipment that result in emissions reductions.

DRAFT

Analyzed CAP Measures/Actions

To facilitate the City’s CAP implementation, this memo seeks to identify benefits and costs variables and to refine funding and financing approaches for a subset of measures and actions in the City of Santa Barbara CAP. The four subsets of measures and actions selected by the City for analysis are below.¹

#	Measure	Actions
1	Electrification Programs and Policies for Multifamily Residential Properties	
	BE-5: Reduce Existing Residential Natural Gas Consumption by 10% Below 2019 Levels by 2030 and 17% Below 2019 by 2035	5.13: Establish a program that provides targeted direct install services and cost share for specific electrification measures with multi-unit residential development owners. City to cover incremental cost in addition to an incremental electricity rate from SBCE. 5.14: Develop and implement a multi-family residential property regulation by 2028 to promote phased building energy efficiency and decarbonization. The regulation would require periodic energy inspections and prescriptive energy efficiency and decarbonization points requirements from a standardized checklist, with required performance increasing over time.
2	Residential Electrification at Time of Renovation and Time of Sale	
	BE-5: Reduce Existing Residential Natural Gas Consumption by 10% Below 2019 Levels by 2030 and 17% by 2035	5.1: Adopt a time of renovation energy efficiency and electrification requirement by 2025, effective 2026. This ordinance could require replacement of HVAC systems, hot water heaters, and other appliances to be all electric and low hydrofluorocarbons (HFC) gas emitters or provide a checklist of cost-effective efficiency and electrification options for renovations to complete based on the scope of the project. Adopt an electrification ordinance for existing residential buildings by 2028, effective 2029, to be implemented through the building permit process, which bans expansion or reconnection of natural gas infrastructure.
3	Commercial and Mixed-Use Energy Benchmarking Programs and Building Performance Standards	
	BE-6: Reduce Commercial Natural Gas Consumption 10% Below 2019 Levels by 2030 and 18% by 2035	BE-6.2: Develop and implement a commercial and mixed-use building benchmarking program for commercial and multifamily buildings over 20,000 square feet by 2025, effective 2026. The program would include reporting electricity and natural gas usage (and any other energy source) data through energy star portfolio manager. It would establish monetary penalties for non-compliance. Residential portions of buildings that are part of a mixed-use development would be exempt. Create incentives for buildings not covered to encourage voluntary compliance.

¹ Example funding tools and financing mechanisms are not exhaustive, rather provides recent examples and prioritizes approaches applicable to California or have local precedence. Additional funding sources and financing opportunities can also be found in the Better Building Financing Navigator managed by the U.S. Department of Energy.

4	Off-road Equipment Electrification and Decarbonization
T-8: Electrify or otherwise decarbonize 6% of off-road equipment by 2030 and 20% by 2035	All actions including alignment with or exceeding AB 1346 (ban on gas powered small offroad engines by 2024)

DRAFT

Measure/Action 1: Electrification Programs and Policies for Multifamily Residential Properties

This set of measures and actions is associated with residential multi-unit electrification programs and policies.

BE-5: Reduce Existing Residential Natural Gas Consumption by 10% Below 2019 Levels by 2030 and 17% by 2035

BE-5.13: Establish a program that provides targeted direct install services and cost share for specific electrification measures with multi-unit residential development owners. City to cover incremental cost in addition to an incremental electricity rate from SBCE.

BE-5.14: Develop and implement a multi-family residential property regulation by 2027 to promote phased building energy efficiency and decarbonization. The regulation would require periodic energy inspections and prescriptive energy efficiency and decarbonization points requirements from a standardized checklist, with required performance increasing over time.

Enacting BE-5.13 and 5.14 would allow the City to meet the targets set in the CAP, reduce existing residential natural gas consumption by 10% below 2019 levels by 2030 and 17% by 2035. Currently, the City does not have programs or policies that prohibits natural gas use in existing residential properties; however, it adopted a natural gas prohibition in newly constructed buildings in 2022.²

The City is considering equity and funding of electrification in multi-unit properties by incorporating targeted direct install services and cost sharing. Cost sharing for multi-unit electrification would typically be partially funded by customers rather than fully incurred by the utilities. A phased approach to adopting multi-unit electrification would also grant the City the time to develop financing strategies on incremental costs and further its partnership with Santa Barbara Clean Energy (SBCE) and Southern California Edison (SCE) to negotiate an incremental electricity rate. It will also lessen the cost burden for many building owners.

Benefits and Cost Considerations

Benefits

Direct install rebates and cost-sharing of incremental costs for the electrification of multi-unit residential buildings have a variety of benefits to help meet zero-emission goals, although electrification requirements for multi-unit residential properties may vary. Some state and/or local governments provide financial support to audit the capacity for electrification at such properties. In New York, the Multifamily Buildings Low-Carbon Capital Planning Support program offers cost-share incentives through New York State Energy Research and Development's (NYSERDA) Flexible Technical Assistance (FlexTech) program to help pay for an energy study for a multifamily portfolio.³ Services cost-shared by the FlexTech program includes general energy feasibility studies, peak-load reduction and load management, and long-term energy master planning. These services are designed to

² City of Santa Barbara Natural Gas Prohibition, FAQ 2022

³ Multifamily Buildings Low-Carbon Capital Planning Support - NYSERDA

support commercial, industrial, institutional, government, and not-for-profit sectors with objective and customized information to help inform energy decisions.

Other municipalities, such as Piedmont in California, also have lending programs that provide residents—renters or homeowners—with loaner electric appliances. This includes programs that provide induction cooktops, an electric alternative appliance, that can replace natural gas stoves and reduce emissions.⁴ The replacement of gas stove tops with induction stove tops would help decrease the negative effects of harmful pollutants to residents, which often can cause headaches and fatigue, and at very high levels, brain and heart damage.^{5,6} Santa Barbara Clean Energy also has a similar program where induction cooktop kits are available for loan through the Santa Barbara Public Library.⁷

Though the specific budget of these programs is not publicly available, existing program information from the City of Piedmont indicates that the main costs of these initiatives are staff time, which is used to set up and monitor partnerships (e.g. with the library), and funding to procure induction cooktops. These cooktops are \$100 or less.⁸ In the case of Piedmont’s induction cooktop lending program, induction cooktops were procured through partnerships with AVA (previously East Bay Community Energy). Replicating these successful partnerships and expanding existing programming through Santa Barbara Clean Energy could be helpful for the City of Santa Barbara in reducing programmatic costs associated with material procurement and staff time.

Another successful program for multifamily building electrification and energy efficiency is the Bay Area Multifamily Enhancements Program (BAMBE). BAMBE offers rebates starting at \$500 per unit to help multifamily property owners (5+ units) lower the cost of energy efficiency upgrades while providing technical assistance. It also includes an ‘adder’ for building electrification, with total potential incentives coming in at \$5,000 or more per unit. Since BAMBE began programmatic work in 2013, the program has upgraded over 45,000 units across the Bay Area and has provided over \$34 million in direct rebates to multifamily property owners.

BAMBE’s climate impact through energy savings of these initiatives is significant, totaling 0.85 gross GWh and 87,000 gross therms saved as the direct result of programmatic work. According to the BayREN 2022 annual report, BAMBE program expenditures for the calendar year added up to a total of \$2,951,888. It should be noted that these program expenditures encompass multiple programmatic areas beyond just building electrification (e.g. energy efficiency). In 2022, BayREN spent \$477,650 on administration, \$224,119 on marketing, \$1,933,520 on direct implementation no incentive costs (DINI), and \$316,600 on incentives.^{9,10}

Another successful program for multifamily building electrification is a 2018 Pacific Gas and Electric (PG&E) multifamily rebate program that covered a range of energy-efficient upgrades and measures

4 Induction Cooktop Lending Program | City of Piedmont

5 Indoor Air Pollution from Cooking | California Air Resources Board

6 Combustion Pollutants & Indoor Air Quality | California Air Resources Board

7 Induction Cooktop Kits, Santa Barbara Clean Energy

⁸ <https://www.nytimes.com/wirecutter/reviews/best-portable-induction-cooktop/>

⁹ Bay Area Regional Energy Network (BayREN 2022 Annual Report) | BayREN <https://www.bayren.org/multifamily-property-owners/building-improvements>.

¹⁰ BayREN Increases Rebates for Multifamily Rebates, Yemi Reyes for CivicWell.org. <https://www.bayren.org/sites/default/files/2023-05/BayREN%20AR%2011x17.pdf>

such as lighting upgrades, heating and cooking systems, water heating, building envelope improvements, appliances, and energy audits.¹¹ These incentives were recommended based on assessment results in order to provide comprehensive, whole-building energy savings.¹² The program aimed to promote long-term energy benefits through energy efficient solutions including those that would incentivize customers to eliminate unnecessary energy use, reduce carbon footprints, and save money.¹³

To be able to pay for the incremental costs of electrification, cost-sharing between utilities (and community choice aggregators) and residents would help with upfront costs that would otherwise be infeasible if solely paid for by one party. The City would achieve its decarbonization goals, while residents get support transitioning to all-electric buildings. Additionally, some states, like New York, have implemented bill relief programs that help support low-income customers or even exempt low-income customers from cost-sharing to allow for more equitable access to the electrification transition.¹⁴ Other states like California have programs for income-qualified residents and owners to receive energy-efficient appliances at no or minimal charge.¹⁵

These cost sharing programs help reduce the marginal cost to upgrade appliances from gas to all-electric. The increase in the marginal cost of appliance replacement is seen as the main cost hurdle for procuring and installing electric appliances, and thus, building electrification. In some cases, the incentives and cost sharing structures described above can even bring the cost of multifamily building electrification to be equal to the cost of gas upgrades that would have happened anyway in a 'business as usual' scenario.

Benefits to Community

Direct install rebates allow residents and property owners to move toward electrification of multifamily residential buildings with financial incentives to invest in electric alternatives. Ultimately, cost-sharing allows building owners to share the upfront costs of energy efficiency upgrades with the utilities and residents. As stated above, utilities benefit through more efficient appliances (heat pumps) and strategies such as storing thermal energy with hot water heaters equipped with mixing valves or demand response programs.¹⁶

This cost-sharing allows for multiple parties to be invested in supporting zero-emission goals and will reduce electricity bills for both residents and property owners in the long-term. In this way, the community has a direct contribution to lowering emissions in multifamily buildings. For the building owners, cost-sharing with residents would also allow for a faster return on investment as well as improved building value, as compared to other less energy efficient buildings. As federal policy towards electrification continues to advance, building owners that participate in cost-sharing will meet the requirements for energy saving earlier rather than later.

11 Multifamily Property Program Energy-Efficiency Rebates Catalog | PG&E

12 High-Impact Programs Targeting Regional Multifamily Energy Savings Opportunities, July 2021 | ACEEE

13 PG&E Energy Efficiency Annual Report, 2018

14 Electric and Gas Bill Relief Program | New York State

15 Energy Savings Assistance | California Public Utilities Commission

16 Water Heaters Have Battery Potential | IEEE

Benefits to City

The main benefit to the City of electrification is the achievement of decarbonization goals associated with electrification. Incentivizing electrification at the most cost-effective time and preparing the community for this transition is a primary goal of the City.

Across the City of Santa Barbara, multi-unit residential properties use a total of 4,027,341 therms of natural gas every year. It is important to break out this natural gas use by appliance type, as building electrification will ultimately depend on the replacement of natural-gas burning appliances as they fail ('burnout') replaced with electric alternatives. These appliances will function anywhere from 10-22 years. When all multi-family housing units in Santa Barbara are accounted for, the appliance units used for a multifamily household are collectively expected to emit 421,284 MT CO₂e across their functional lifespan. As shown in Table 1, the City would reduce 86 therms of natural gas per year for each water heater that is electrified, 88 therms for each furnace, and 20 therms for each stove on average. Other includes all other gas uses, likely clothes dryers, pool heaters, and other less common uses.

Table 1: Multifamily Building Electrification (GHG Savings & Marginal Cost)

Household Appliance Type	Water heating	Spacing heating/cooling	Cooking	Other	Total
Appliance Lifespan (Years)	13	22	12	10	N/A
Total annual natural gas use (therms/year)	86	88	20	32	226
Total therms (lifespan)	1,119	1,899	245	317	3,580
Appliance Lifespan GHG Emissions (MT/CO₂e/Source/Unit)	7	13	2	2	24

*Total emissions includes both combustion and associated leakage

Although the City is expected to cover the incremental costs of some rebate programs which adds to the City's upfront costs, the cost-sharing approach will alleviate and reduce some of the upfront cost to the City. Long-term energy reduction will ultimately benefit the management of the City's grid and utilities. The reduction of overall energy demand in the City will help conserve natural resources and encourage a more sustainable energy ecosystem. While electrification of buildings and vehicles will ultimately require grid upgrades to handle additional electricity use, it is important to identify the nuances of how building and transportation electrification will impact future electrical load. Heat pumps, when combined with weatherization upgrades can reduce summer peak electrical demands, and reduce electricity use by 50 percent in comparison to traditional HVAC systems.¹⁷ Heating and cooling buildings take up the largest percentage of total building electrical loads, with HVAC electrical loads ranging from 25-33 percent of total household energy load.¹⁸ Most relevant to Santa Barbara's climate, a Natural Resources Defense Council (NRDC) analysis on air conditioning replacement with heat pumps came to the conclusion that California's electric grid, which is "summer-peaking" would experience reduced risk of heat-induced blackouts through the installation of heat pumps in place of older air conditioning units.¹⁹

Jobs Impacts

It is hard to challenge the fact that electrification is on the rise and the increasing need for skilled labor workers to keep up with the demand of end-use technology transformations for stove-tops, hot water heaters, furnaces, and the necessary home and commercial electrical upgrades (breaker boxes) to electrify buildings, as well as grid infrastructure updates. A [2020 study](#) shows that decarbonization can create millions of well-paying American jobs with opportunity to become an exporter of clean energy technologies also increasing job growth.

A Hatch-led study for the City of Santa Cruz shows that capital expenditures ranging from \$80 million to \$100 million for electrification of existing commercial and residential buildings in the city may result to 50 to 55 California jobs annually.

It is also important to consider future projections for vehicle electrification when thinking about future electrical loads related to building electrification. New State targets for vehicle electrification, target 12.5 million electric cars on California's roads by 2035, is expected to increase electric loads across the State. As an example State grid planners are projecting a more modest estimate of 3.7 million electric vehicles by 2035 an increase of 35,000 GWH by Though these grid planning efforts are factoring in rates of new renewable energy procurement to shape this demand, designing in future flexibility and incentives for strategic vehicle charging will be critical in allowing for continued grid reliability.^{20,21} Though building electrification offers significant opportunities to reduce peak summer loads, increases in EV adoption may need to be met with incentives for flexible charging, and more aggressive energy efficiency moves. These energy efficiency initiatives could be partially achieved through reductions in commercial building energy usage through BE-6, which aims to establish efficiency standards in the often oversized and energy-intensive commercial building sector.

¹⁷ Pump Up Your Savings with Heat Pumps, May 30, 2023 | Energy.gov [U.S. Department of Energy]

¹⁸ Duty-cycling buildings aggressively: The next frontier in HVAC control, Agarwal et al. 2021; Proceedings of the 10th ACM/IEEE International Conference on Information Processing in Sensor Networks

¹⁹ Want to Cut Heating Costs? Replace Your AC! Kiki Velez, October 2022 | Natural Resources Defense Council

²⁰ Race to Zero: California's bumpy road to electrify cars and trucks, Jan 2023, Nadia Lopez | CalMatters

²¹ 2021 IEPR California Energy Demand Forecast Summary

Additionally, energy efficiency programs have potential to create jobs in various sectors and can stimulate local economic growth and provide employment opportunities.²² The initiatives supported by the City may also resonate with the larger public and rally more environmentally conscious residents and businesses towards the effort.

Costs

Although there are many benefits to direct install rebates and cost-sharing, there are regulatory uncertainties, potentially substantial upfront financial costs, and technological information gaps that may become challenges for both the community and local governments.

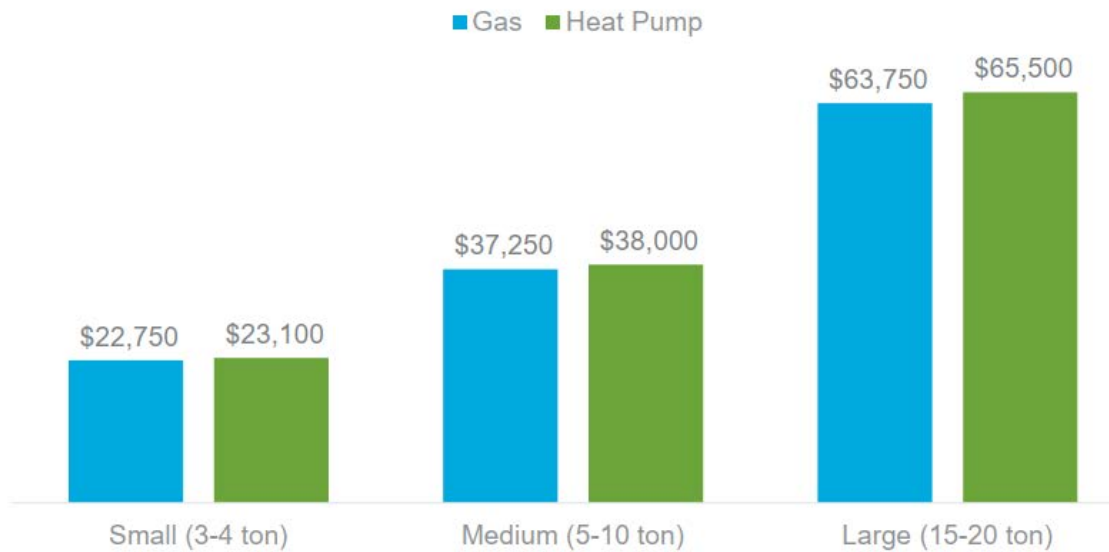
Costs to Community

Multi-family housing utilizes a wide variety of equipment and electrical infrastructure depending on the age and design of the building and the number of units. Some multi-family buildings utilize the same equipment as those found in single-family residential units (the costs for which can be found in Figure 4 under Action 2). In some cases, equipment such as water heaters may even serve multiple units resulting in lower per unit costs. However, other larger buildings could utilize rooftop package units, hot and chilled water loops, boilers, or other technologies. Each of these equipment types as well as other physical attributes of the specific building will have significant impacts on costing. While it is possible to identify costs associated with specific appliances, it is difficult to identify general costs for electrical infrastructure upgrades associated with multifamily buildings, such as panel and service upgrades due to the nuances associated with age, scale and design of multifamily buildings. The cost of infrastructure up-grades requires a significant study that falls outside of the scope of this analysis.

One potential area for the City to focus on is rooftop heat pump package units which have been shown to be cost competitive and have similar footprints to gas package units. Data provided by Peninsula Clean Energy in San Mateo County details different sized heat pump package units only slightly increasing costs compared to gas package units, as shown in Figure 1. This near-cost parity between existing gas and electric technologies means that transitioning rooftop heat pump package units offers an opportunity to electrify buildings with no, or minimal upfront costs.

²² Mobilizing for a Zero Carbon America | Laskey and Rewiring America

Figure 1 Median Rooftop Packaged Heat Pump Installation Costs (PCE Decarbonization Plan)



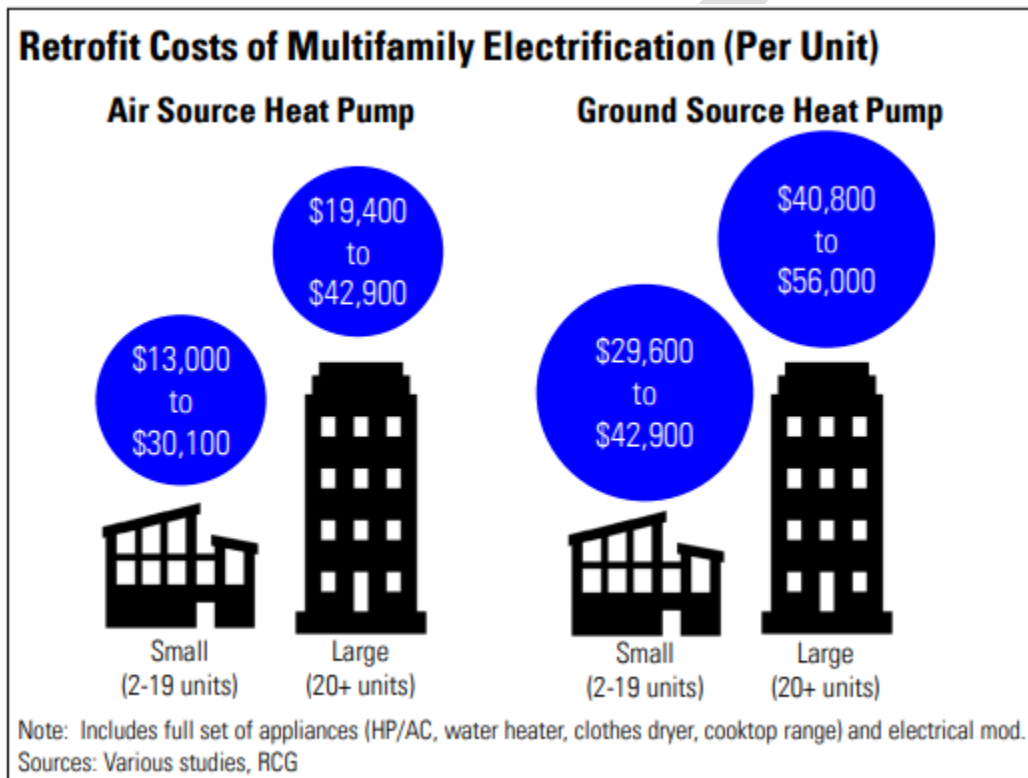
Larger buildings also tend to have systems that are oversized which can lead to inefficiencies. As documented in the 2023 City of Sacramento Existing Building Electrification Strategy, interviews with local contractors and facility managers concluded that commercial building infrastructure is mostly oversized. From the vantage point of commercial building/facility managers, oversizing building heating and cooling systems was considered easier in guaranteeing heat and hot water performance rather than fine-tuning the needs of a smaller system to match the timed demand for heating and cooling.²³

When electrifying, it will be important to understand the buildings existing electrical infrastructure and actual heating and cooling needs and to identify any cost-effective efficiency actions to allow for downsizing of new electric equipment. Balancing the heating and cooling needs with the electrical service and infrastructure of each building is critical to limiting added infrastructure costs related to building electrification. To fully understand the costs associated with multi-family housing electrification in Santa Barbara, additional research should be conducted on the most common building electrical infrastructure and heating and cooling systems and their electric alternatives. In addition, depending on the on-bill savings (which are heavily dependent on the difference in cost between gas and electric), some investments in electrification may also have lengthy payback periods where the long-term benefits are not seen by the residents nor the property owners until many years later. Both property owners and residents may be reluctant to commit to improvements that they will not see in their time living in the complex or owning the property.

²³ City of Sacramento Existing Building Strategy, 2023 | City of Sacramento

Some studies have estimated average retrofit costs for the full electrification of multifamily buildings. Detail from a study completed in New York State is shown in Figure 2.²⁴ This is the total upfront cost to install all new electric appliances and infrastructure. To understand the marginal cost, the single-family gas installation cost could be used as an estimate. Smaller multifamily buildings are likely to use similar appliances as single family units but may even share a single appliance between two units, decreasing the per unit cost to upgrade.²⁵ Based on data from the San Francisco Bay Area the marginal cost to install all new gas appliances is between \$11,000 and \$18,000 depending on whether an air conditioning is in place. This results in an average marginal cost of \$8,000 to \$25,000 per unit.

Figure 2 Retrofit Costs of Multifamily Buildings Per Unit (NY State; all-appliance replacement)



Costs to City

For Action 5.13 the City’s costs would be based on the number of direct install projects completed and the per unit costs described in Figure 4. If the City’s project covered larger systems, like boilers, those costs could be significantly higher. In addition, the City would likely need dedicated staff to support this program as well as for potential technical consulting support, the cost of which would be dependent on the size of the program and the program needs.

²⁴ <https://www.nyscrda.ny.gov/-/media/Project/Climate/Files/2022-Comments/NY-Building-Electrification-Cost-Full-Report-June2022>
²⁵ U.S. Households are Using Less Energy, 2018 | Joint Center for Housing Studies of Harvard University

For Action 5.14 the City would need to develop an ordinance and checklist, which could be completed by a consultant or City Staff for an estimate of approximately \$100,000. However, the City would also likely need additional staff to support the program and to conduct inspections. Likely between 1 and 2 full time staff at a minimum would be needed to actively manage the program and complete the inspections.

Current Rebates and Incentives

Figure 3 includes a list of rebates and incentives that are currently available for multifamily buildings in Santa Barbara based on information from The Switch Is On which compiles rebates for each geographic area. These rebates were accessed on September 15, 2023 and are subject to change. Additional low-medium income upfront incentives are expected to be made available by the Inflation Reduction Act in early 2024.

Figure 3 Multifamily Electrification Rebates For City of Santa Barbara

Multi-Family Electrification Rebates			
Appliance	Funder	Incentive Amount	Source
Heat Pump Hot Water Heater (HPWH)	3C-REN: Low-range	\$500	https://incentives.switchison.org/rebate-profile/3c-ren-500-750-heat-pump-water-heater-multifamily-building-project-s?view=residents&origin=directory
	3C-REN: High-Range	\$750	https://incentives.switchison.org/rebate-profile/3c-ren-500-750-heat-pump-water-heater-multifamily-building-project-s?view=residents&origin=directory
	IRA*	\$2,000	CityofSanMateo CostData Clean V2.xlsx; backed up by: https://incentives.switchison.org/residents/incentives?field_zipcode=93101&field_zipcodes1=93101&field_functional_category=All&f%5B0%5D=incentive_type%3A2794
Total HPWH Incentives- Low-Range		\$2,500	
Total HPWH Incentives- High-Range		\$2,750	
Heat Pump HVAC	3C-REN: Ductless (Mini-Split) low-end	\$500	https://incentives.switchison.org/residents/incentives?field_zipcode=93101&field_zipcodes1=93101&field_functional_category=6
	3C-REN Ductless (Mini-Split) high-end	\$750	https://incentives.switchison.org/residents/incentives?field_zipcode=93101&field_zipcodes1=93101&field_functional_category=7
	IRA*	\$2,000	CityofSanMateo CostData Clean V2.xlsx; backed up by: https://incentives.switchison.org/residents/incentives?field_zipcode=93101&field_zipcodes1=93101&field_functional_category=All&f%5B0%5D=incentive_type%3A2794
Total Heat Pump HVAC Incentives; Low-End		\$2,500	

Multi-Family Electrification Rebates			
Appliance	Funder	Incentive Amount	Source
<i>Total Heat Pump HVAC Incentives; High-End</i>		\$2,750	
Panel Upgrade	IRA*	\$600	CityofSanMateo_CostData_Clean_V2.xlsx; backed up by: https://incentives.switchison.org/residents/incentives?field_zipcode=93101&field_zipcodes1=93101&field_functional_category=All&f%5B0%5D=incentive_type%3A2794
<i>Total incentives for Panel</i>		\$600	
Whole-Home Electrification Credit (All-Systems)	CA Energy Smart Homes	\$3,550	https://incentives.switchison.org/rebate-profile/energy-smart-homes-whole-house-rebate-multi-family?view=residents&origin=directory
<p><i>*Incentive values reflect available rebates and incentives written upon the writing of this memorandum during late summer of 2023.</i></p> <p><i>IRA rebates may vary in timing and applicability of availability of funding. TECH and 3C-REN incentives should be continually monitored by City staff as funding availability and deadlines change often.</i></p>			

Additional Funding and Financing Strategies

Strategies to fund or finance projects resulting from the implementation of BE-5.13 and 5.14 include the use of state and federal grants as well as co-funding; ratepayer energy efficiency programs for multifamily properties; low or no interest loans from utilities and other state-run organizations; and on-bill financed programs. Rebates and assistance programs are widely available particularly for affordable multifamily housing units; however, these are competitive.

To undertake BE-5.13 and 5.14, a coordinated approach with multi-unit properties and property owners in the City will be needed. Before implementation, the City should consider an electrification readiness of multi-unit properties in the City through BE-5.2.²⁶ The City may use existing rate studies from Southern California Edison and SBCE to understand current rates and other associated electrical costs today. Funding and financing strategies will be based on these studies. Additional example funding and financing case studies follow below.

Cost-sharing Among Distributed Energy Resource Customers in Minnesota

Minnesota is the first state to adopt an approach to interconnection upgrades that spreads costs among certain distributed energy resource (DER) customers, rather than asking all utility ratepayers or individual DER customers to foot the bill. The local utility provider is [Xcel Energy](#), a major utility that serves approximately 3.7 million electricity customers across parts of the Midwest and Western states.

Under the [cost-sharing program](#), all Xcel Energy customers applying to interconnect a project up to 40 kilowatts will be asked to pay a cost-share fee of \$200, which will then make them eligible to have grid upgrade costs covered, up to a cap of \$15,000 per project.

The program also includes two key equity considerations. First, the program will exempt under-resourced or “low-income” customers qualifying for Xcel’s income qualified Solar Rewards program from paying the cost share fee. Additionally, Xcel is required to create a waitlist for customers participating in the program—ensuring that, even in the case of temporary insufficient funding, all customers who pay the cost share fee will be able to have up to \$15,000 of upgrades covered by the fund.

Bay Regional Energy Network (BayREN)²⁷ Bay Area Multifamily Building Enhancements (BAMBE)

Agency/Implementer: Regional Association | Program Type: Rebate | Beneficiary: Property Owners

BayREN assists eligible multifamily properties²⁸ and their owners seeking to replace old equipment and upgrade building’s energy and water efficiency. BayREN provides technical assistance and cash rebates for qualifying upgrades including gas-to-electric conversions. The rebate program includes a base rebate—\$500 per apartment unit—for the installation of two or more energy efficiency upgrades that save 10% or more of a property’s energy use.

Additional rebates for in-unit electrification upgrades, such as electric laundry dryers or electric cooking range from \$250 to \$1,500 per apartment unit. The rebates for system upgrades such as those for central systems, common areas, and electrical panels vary by equipment, by the number of apartments served or by property.

Properties located in high-priority zones—areas most affected by air pollution, extreme heat, and high housing costs—qualify for additional rebates. In these zones, upgrades that mitigate extreme heat and improve indoor air quality may earn \$500 per apartment served. Properties that are

²⁶ The completion of an existing building electrification feasibility analysis in collaboration with UC Santa Barbara and other research institutions by 2025.

²⁷ A regional organization managed by the Association of Bay Area Governments. BayREN is funded by California utility ratepayers under the California Public Utilities Commission (CPUC) and the public purpose surcharge, as well as through grants and funding from member agencies, other state and federal agencies, and foundations.

²⁸ Eligible properties must meet target criteria, see page 8 of the BayREN Annual Report 2022. Any other properties that do not meet at least one of the target criteria are put on a waitlist or admitted into the queue periodically given availability.

affordable (properties built before 2010 with less than 50 units or deed-restricted affordable properties) seeking any upgrades earn 1.5x to 2x more above all other program rebates.²⁹

California Energy Design Assistance Program (CEDA; run by Willdan)

Agency/Implementer: Third-party Program Administrator; Utility Provider | Program Type: Technical Services, Rebate | Beneficiary: Property Owners

SCE commissioned the California Energy Design Assistance (CEDA) program as part of the California Public Utilities Commission's Energy Efficiency program. The program provides complimentary custom energy modeling to analyze energy efficiency options and potential energy savings from common areas and in-unit upgrades or building controls and energy recovery systems in new construction and major alteration multifamily projects. A property's incentive is provided and based on estimated energy savings across the building's lifetime and paid after installation and savings are verified. Incentives are capped at \$1 million per project and lesser of 100% incremental measure cost or 50% full measure cost.³⁰

Bay Area Air Quality Management District (BAAQMD) Climate Tech Finance

Agency/Implementer: Local Air District; Bank | Program Type: Loans | Beneficiary: Local Governments; Small Businesses

Climate Tech Finance, through the California Infrastructure and Economic Development Bank (iBank), offers government-back loan guarantees to municipalities, universities, schools, hospitals, as well as small businesses and eligible nonprofits or public-private partnerships within the BAAQMD jurisdiction for climate tech financing. Direct loans are available to public-sector facilities. Loan guarantees of up to \$5 million are offered on loans of up to \$20 million, with up to a seven-year term. iBank provides loans for public entities ranging from \$500,000 to \$30 million, with up to 30-year terms. Interest rates vary and are based on public entities' ratings. Eligible projects include any that has direct greenhouse gas reductions, such as electrification, on-site or indirect reductions.

Southern California Edison (SCE) On-Bill Financing (OBF) Program for Non-Residential Customers

Agency/Implementer: Utility Provider | Program Type: OBF, No/Low Interest Loan | Beneficiary: Utility Customers

Eligible³¹ SCE non-residential customers may participate in on-bill financing (OBF) for qualifying energy efficiency projects. OBF through the SCE includes no interest, no fees or loan costs, and repayment through the SCE utility bill. Loans are at a minimum of \$5,000 and a maximum of \$250,000 for projects by multifamily customers with loan terms of up to 10 years. Loans may be bundled or consolidated but all loans are capped at a maximum of \$4,000,000 per service account, though exceptions apply on a case-by-case basis.

²⁹ More details on additional rebates by in-unit or system upgrades and geographic locations are found at [BayREN.org/multifamily-property-owners/building-improvements](https://www.bayren.org/multifamily-property-owners/building-improvements).

³⁰ CEDA Factsheet

³¹ Eligible SCE customers are those who participate in the capital projects under the Strategic Energy Management Program or those who participate in statewide Energy Efficiency program such as CEDA for multifamily and are in good credit standing.

US Department of Health and Human Services, Low Income Home Energy Assistance Program (LIHEAP)

Agency/Implementer: Federal; State Government | Program Type: Funding Assistance | Beneficiary: Local Governments; Residents

The State of California received \$179 million in LIHEAP funding in 2022 to assist households with low income, particularly those with the lowest incomes that pay a high proportion of household income for home energy. The resulting programs implemented by municipalities within the state can support the City in providing free energy efficiency upgrades to low-income households, including those in low-income multifamily housing, to lower their monthly utility bills while also improving the health and safety of the household's occupants. Eligibility is based on income requirements. Funds for the state in 2023 are not yet available at the time of this writing.

Retrofit Electrification Pilot in New York City

Building owners receiving Housing Preservation and Development (HPD) financing for rehabilitations of multifamily buildings up to seven stories that are interested in electrification of hot water heating and/or space heating and cooking may be eligible for funding and technical support through the [HPD-New York State Research and Development Authority \(NYSERDA\) Electrification Retrofit Pilot](#). Projects must meet the criteria to be considered. Funding will cover incremental costs for electrification and will be granted on a first-come, first-served basis. Funding may be capped on a per-project basis and will be limited to \$1 million per project.

Measure/Action 2: Time of Renovation/Sale Electrification Requirements

This measure and action involves two actions associated with time of renovation and time of sale electrification policies under the City's Measure BE-5: BE-5.5 and BE-5.6.

BE-5: Reduce Existing Residential Natural Gas Consumption by 10% Below 2019 Levels by 2030 and 17% by 2035

BE-5.5: Adopt a time of renovation energy efficiency and electrification requirement by 2025. This ordinance could require replacement of HVAC systems, hot water heaters, and other appliances to be all electric and low hydrofluorocarbons (HFC) gas emitters or provide a checklist of cost-effective efficiency and electrification options for renovations to complete based on the scope of the project.

BE-5.6: Provide a rebate at time of sale for qualifying building electrification upgrades including panels, wiring, and heat pump appliances. Implement the rebate program by 2025.

Benefits and Cost Considerations

Benefits

The adoption of a time of renovation and time of sale electrification requirements will benefit both the community and the City in several ways. Overall, building energy efficiency measures can benefit the broader society by reducing GHG emissions and help meet carbon reduction goals. Increasing energy efficiency helps lower utility bills for residents and can increase comfort levels during high summers and cold winter months. This can lead to a better quality of life for residents and higher resident retention rates.³² Utility programs are incentivized to encourage customers to upgrade their systems since electrification alternatives to on-site fossil-fueled heating can be as much as three times more energy efficient.³³

The addition of adopting these requirements at the time of renovation and time of sale will further accelerate electrification especially in the case of multifamily buildings. To support, the federal government has dedicated \$4.5 billion towards the Home Electrification and Appliances Rebates to advance a high-efficiency electric home rebate program.³⁴ These types of programs help households reduce energy bills and allows for easier access to residential energy improvements. Due to the demand, these programs also attract qualified workforces to serve both single and multifamily markets and increase market demand for residential efficiency and electrification.³⁵

Benefits to Community

Time of renovation and time of sale requirements will incentivize property owners to focus on electrification through a rebate. These energy efficiency adjustments can produce benefits for both building owners and occupants, such as lower energy costs and improved comfort, increase

32 Standard Rebates for Multifamily Properties | Austin Energy

33 Renovating Regulation to Electrify Buildings | Shipley, Hopkins, Takahashi, Farnsworth, 2021 <https://www.raonline.org/wp-content/uploads/2021/01/rap-shipley-hopkins-takahashi-farnsworth-renovating-regulation-electrify-buildings-2021-january.pdf>

34 Home Electrification and Appliance Rebates | Department of Energy

35 IRA Home Energy Rebate Program Informational Webinar

property values, reduce work orders, and decrease maintenance costs for properties.³⁶ For example a Rocky Mountain Institute 2018 Report ‘The Economics of Existing Buildings’ shows a lower 15-year net present cost for Oakland homes with a retrofit using a flexible heat pump in any electrical rate scenario (\$20.8-22.9) instead of a natural gas with new air conditioning scenario (\$24.2).³⁷

Benefits to City

As stated above, the major benefit to the City of electrification is meeting the aggressive GHG reduction goals adopted in the CAP. Across the City of Santa Barbara, single-family properties use a total of 8,105,606 therms of natural gas every year. Similar to the multifamily GHG and marginal cost description described above, the gas appliances that will ultimately need to be replaced with electric technologies to effectively electrify buildings will function anywhere from 10-22 years. When all single-family housing units in Santa Barbara are accounted for, the appliance units used for a single-family household are collectively expected to emit 871,756 MT CO₂e across their functional lifespan. At the single-family household level, each household can reduce 40 MT CO₂e GHG through whole home electrification by electrifying gas appliances as they fail.

As the appliances being replaced are the same as for multifamily properties, the total cost of whole-home appliance replacement is projected to be \$17,200 before incentives. This cost is the marginal cost (electric-gas replacement) without factoring any incentives for electrification, so can be considered a conservative cost estimate to electrify. When broken out by appliance type, this means that the building owner would be paying \$256-\$556 for each MT of CO₂e when they electrify before any incentives, as displayed below in Table 2.

Table 2: Single-family Building Electrification (GHG Savings & Marginal Cost)

Household Appliance Type	Water heating	Spacing heating/cooling	Cooking	Other	TOTAL (Whole-Home- as applicable)
Appliance Lifespan (Years)	13	22	12	10	
Total annual natural gas use (therms/ lifespan of appliance)	1,886	3,201	412	535	6,034
Appliance Lifespan GHG Emissions (MT/CO₂e/Source/Unit)	12	21	3	4	40
Electric Replacement Cost	\$ 6,000	\$ 17,900	\$ 2,400	\$ 2,000	\$ 28,300
Gas Replacement Cost	\$ 2,800	\$ 6,100	\$ 1,200	\$ 1,000	\$ 11,100
Marginal Cost	\$ 3,200	\$ 11,800	\$ 1,200	\$ 1,000	\$ 17,200
Marginal Cost/Lifespan MT CO₂e	\$ 256	\$ 557	\$ 440	\$ 283	\$ 431

³⁶ Renovating Regulation to Electrify Buildings | Shipley, Hopkins, Takahashi, Farnsworth, 2021

³⁷ Rocky Mountain Institute, the Economics of Electrifying Existing Buildings, 2018 [The Economics of Electrifying Buildings - RMI](#)

These electrification measures could also offer economic and workforce development opportunities. A UCLA Luskin Center for Innovation 2019 Report analysis revealed that electrification of building stock across the state would create over 100,000 full time equivalent jobs, even after accounting for job losses in the fossil fuel industry. This new demand for skilled workers is expected to grow in sectors including construction jobs for energy-efficient improvements, building upgrades and modifications, and electric equipment installation. Planning for this workforce transition will be critical to ensure a just transition, as an estimated 55% of gas workers are expected to reach retirement age over the next 25 years. This growth in electrification-related jobs could be a major opportunity for job growth in the City, as well as an opportunity to aid a just transition of fossil-fuel workers to clean-energy jobs³⁸

Costs

Time of renovation and time of sales requirements encourage the electrification of buildings. However, there are several challenges that the community and City could face in doing so. Upfront costs pose a challenge and can be a financial burden for building owners, especially for owners with limited budgets or resources. The time at which electrification takes place is very important for determining costs. As shown in Figure 4, the total upfront cost to electrify a single-family building is approximately \$32,000 and assumes a shift from natural gas to electric for the stove, HVAC, dryer, and water heater, as well as a panel upgrade and new wiring for 220v appliances. However, the marginal cost of upgrading (compared to replacing it with another natural gas appliance) is only \$13,400 before rebates. By stacking rebates, the marginal cost could potentially be lower to electrify than to replace with gas.

Costs to Community

Single family residential electrification costs are becoming more readily understood. Figure 4 summarizes average installation costs in San Mateo County. While these costs are likely similar in Santa Barbara, some cost variables can significantly change the costs for a particular building or region. The major cost variables include:

- Need for a panel upgrade (as shown in the figure panel upgrades can add nearly \$4,000)
- Existing or desired air conditioning (a single heat pump provides both heating and cooling, saving money compared to a separate furnace and AC unit installation)
- Labor costs in the region (higher labor costs increase installation costs)
- Existing electrical infrastructure (knob and tube is a safety hazard and difficult to work with)
- Space constraints (heat pumps are larger)

Consistent with the major cost variables described above, Figure 4 below includes specific rows for air conditioning because the installation of a heat pump HVAC functions as both an air conditioning and space heating unit, displacing the need for two separate appliances. This means that the entire cost of an air conditioner (\$7,500) is functionally displaced by one appliance: a heat pump HVAC, leading to cost savings equivalent to the cost of a new air conditioner. The City is expected to experience future effects of extreme heat, like the heat advisory experienced throughout the region in August of 2023. In response, more City of Santa Barbara residents are expected to install AC to adapt to these changing temperature conditions.³⁹

³⁸ California Building Decarbonization: Workforce Needs and Recommendations, Nov 2019, UCLA Luskin Center for Innovation
³⁹ County of Santa Barbara, Heat Expected in Santa Barbara County, August 2023

Similarly, the need for an electric panel upgrade, triggered by a greater electrical load through new electric appliances is a critical cost variable to consider, as it is estimated to cost \$3,700 upfront. The addition of an electric panel upgrade depends on the existing panel size of the house, which is closely correlated to building vintage (age). An analysis by Redwood Energy estimates that housing with a 100-amp panel can accommodate whole-home electrification, if there is incorporation of a “watt diet” strategy. Watt diets allow for maximization of the existing panel, avoiding the cost of a panel upgrade through selection of highly efficient appliances, and if necessary, prioritized circuit sharing devices.⁴⁰

Accordingly, the last four rows of Figure 4 describe different scenarios for electric, gas, and marginal cost replacement when factoring potential cost savings from avoided AC installation, or cost increases from electrical panel upgrades.

Figure 4 Residential Electric and Gas Replacement Upfront Appliance Installation Costs*

Residential Appliance	Electric Replacement Cost	Gas Replacement Cost	Marginal Cost
Gas HVAC to Heat Pump HVAC	\$17,900	\$6,100	\$11,800
Gas water heater to Heat Pump water heater	\$6,000	\$2,800	\$3,200
Air Conditioning (Gas case only)	Included with heat pump	\$7,500	(\$7,500)
Gas stove to electric stove	\$2,400	\$1,200	\$1,200
Gas dryer to electric dryer	\$2,000	\$1,000	\$1,000
Electric Panel Upgrade	\$3,700	N/A	\$3,700
Total with AC + Panel	\$32,000	\$18,600	\$13,400
Total Without AC + Panel	N/A	\$11,100	\$20,900
Total with AC no Panel	\$28,300	N/A	\$9,700
Total without AC no Panel	N/A	N/A	\$17,200

*Based on 2023 appliance costs and labor costs for the San Francisco Bay Area

A slow payback rate of lower energy bills may make it difficult for some households to justify a higher upfront cost for electrification, especially those without extra cash on hand.⁴¹ For multifamily residential homes, rebates to a building owner who does not pay the utility bill may

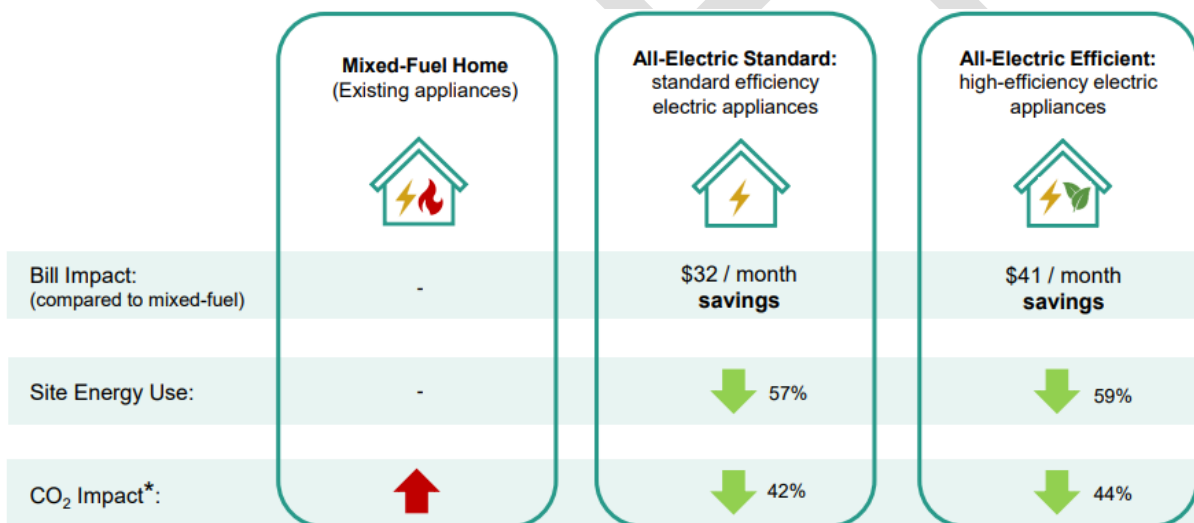
⁴⁰ Redwood Energy, Watt Diet Calculator.

⁴¹ To Decarbonize Households, America Needs Incentives for Electric Appliances | American Progress, 2021

not be a strong enough incentive. Similarly, a resident living in an older apartment building may not want to invest in a home they do not own. Actions BE-5.5 and BE-5.6 will need additional public outreach and education for both property owners and residents. Any incentive program that the City may develop should be coupled with extensive and targeted outreach efforts to reach property owners and residents that may not have the resources for a full-electrification transition.

While on-bill costs could not be calculated specifically for Santa Barbara in this report (due to the complexity of time of use rates, variability of gas rates over time, and other factors) studies in other locations have shown that electrification of single-family buildings can be cost effective within the correct rate structure. For example, a recent analysis conducted by Peninsula Clean Energy and Silicon Valley Clean Energy showed that after electrification an average single-family home which stayed on basic electricity rates saw an on-bill increase of approximately \$300 per year. However, if the all-electric rate was used (which has electrification friendly time of use rates) the same home would save about \$200 per year or \$32 per month as shown in Figure 5.⁴² These savings may or may not represent conditions in Santa Barbara due to differences in rate structure and climate zone. However, a significant departure from these results (a small increase or small decrease in energy bills) is not likely.

Figure 5 On-bill savings after electrification on the E-Elec Rate (PCE/SVCE Single Family On-Bill Impacts Results)



*Based on 0.720 lbs CO₂e/kWh per SVCE 2022 GreenStart Power Content Label and 13.446 lbs CO₂e/therm per PG&E.

Costs to City

The City may face similar high upfront cost issues as having to support the payment of incremental costs for electrification. Although some larger cities like New York City fund programs that will support residents and building owners in their transition, not many other cities have as ample services. The City would need to work with the local utility companies to determine upgrades that may be needed to support additional energy use. Collaboration would include planning, coordination, permitting approvals, infrastructure investment, and oversight with utility companies.⁴³

⁴² [SVCE-PCE-Single-Family-On-Bill-Impacts-Results-2023.pdf \(svcleanenergy.org\)](#)

⁴³ Building the Electricity Grid of the Future | Governor Gavin Newsom, 2023

Current Rebates and Incentives

Figure 6 provides some examples of single-family residential rebates available for heat pump hot water heaters (HPWH), heat pump HVAC, panel upgrades, and whole-home electrification credits. Rebates are currently available from 3C-REN, TECH Clean California, and the Inflation Reduction Act. Many of these incentives can “stack”, meaning a single project can take advantage of multiple incentive streams.

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Figure 6 Single-Family Electrification Rebates For Santa Barbara

Single-Family Electrification Rebates			
Appliance	Funder	Incentive Amount	Source
Heat Pump Water Heater (HPWH)	3C-REN: Low-range	\$2,420	https://www.3c-ren.org/for-residents#!directory:https://incentives.switchison.org/rebate-profile/3c-ren-500-750-heat-pump-water-heater-multifamily-building-project-s?view=residents&origin=directory
	3C-REN: High-Range	\$8,450	https://www.3c-ren.org/for-residents#!directory:https://incentives.switchison.org/rebate-profile/3c-ren-500-750-heat-pump-water-heater-multifamily-building-project-s?view=residents&origin=directory
	IRA*	\$2,000	CityofSanMateo_CostData_Clean_V2.xlsx; backed up by : https://incentives.switchison.org/residents/incentives?field_zipcode=93101&field_zipcodes1=93101&field_functional_category=All&f%5B0%5D=incentive_type%3A2794
Total incentives for HPWH - Low; Range:		\$4,420	
Total Incentives for HPWH- High-Range:		\$10,450	
Heat Pump HVAC	TECH	\$1,000	CityofSanMateo_CostData_Clean_V2.xlsx; backed up by : https://incentives.switchison.org/residents/incentives?field_zipcode=93101&field_zipcodes1=93101&field_functional_category=All&f%5B0%5D=incentive_type%3A2794
	3C-REN low-end	\$3,896	https://incentives.switchison.org/rebate-profile/3c-ren-single-family-hvac-heat-pump?view=residents&origin=directory
	3C-REN high-end	\$14,535	https://incentives.switchison.org/rebate-profile/3c-ren-single-family-hvac-heat-pump?view=residents&origin=directory
	IRA*	\$2,000	CityofSanMateo_CostData_Clean_V2.xlsx; backed up by : https://incentives.switchison.org/residents/incentives?field_zipcode=93101&field_zipcodes1=93101&field_functional_category=All&f%5B0%5D=incentive_type%3A2794
Total incentives for HP HVAC -low-end		\$6,896	
Total incentives for HP HVAC -high-end		\$17,535	
Panel Rebates	IRA*	\$600	CityofSanMateo_CostData_Clean_V2.xlsx; backed up by : https://incentives.switchison.org/residents/incentives?field_zipcode=93101&field_zipcodes1=93101&field_functional_category=All&f%5B0%5D=incentive_type%3A2794
Total incentives for Panel		\$600	

Single-Family Electrification Rebates			
Appliance	Funder	Incentive Amount	Source
Whole-Home Electrification Credit (All-Systems)	CA Energy Smart Homes	\$5,500	https://incentives.switchison.org/rebate-profile/energy-smart-homes-whole-house-rebate-single-family?view=residents&origin=directory
<i>Total Available for Whole-Home Electrification (No Panel Electrification- Low Range)</i>		\$17,416	
<i>Total Available for Whole-Home Electrification (No Panel Electrification- High Range)</i>		\$34,085	
<i>Total Available for Whole-Home Electrification (+ Panel Upgrade); low-range</i>		\$16,816	
<i>Total Available for Whole-Home Electrification (+ Panel Upgrade); high-range</i>		\$33,485	

**Note that IRA; 3C-REN rebates may vary in timing and applicability of availability of funding. Costs displayed in this memo reflect incentives and rebates available in fall of 2023.*

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Additional Funding and Financing Strategies

In addition to the incentives listed above, some cities have begun developing additional incentives and programs to support adoption of electric appliances. Property-based pilot programs or incentives for individual appliances educate property owners on the benefits and drawbacks of electrification before major alterations or property sales occur.

Some of the residential electrification funding and financing strategies referenced in BE-5.13 and 5.14 may also apply to BE-5.5 and 5.6, and vice versa.

Rebates for Electrifying Gas Appliances in the City of Berkeley, CA

Agency/Implementer: Local Government | Program Type: Rebates | Beneficiary: Homeowners

The City of Berkeley adopted an ordinance in 2019 requiring new buildings and major renovations must be equipped with fully electric home appliances. The Berkeley legislation allowed residents with existing gas-powered appliances to keep them and helped connect those who wanted to make the switch of their own accord with rebates and resources to ease the process.⁴⁴ To reach lower-income residents, the City Council approved \$600,000 out of the City's general fund's discretionary budget in 2022 to establish a Climate Equity Fund Pilot Program, which consists of several sustainability programs.⁴⁵ Within that fund \$100,000 is to cover necessary City staff hours. Additionally, \$250,000 is set aside for three contracts not to exceed \$83,334 each with the Association for Energy Affordability, BlocPower, and Northern California Land Trust to run programs that identify and support low-income Berkeley residents in electrifying their homes and businesses.^{46,47}

Property-Assessed Clean Energy (PACE) Financing

Agency/Implementer: Local Governments | Program Type: Assessment Districts | Beneficiary: Property Owners; Taxpayers

Property Assessed Clean Energy (PACE) is a financing mechanism that enables low-cost, long-term funding for energy efficiency, renewable energy, and water conservation projects. PACE financing is repaid as an assessment on the property's regular tax bill and is processed the same way as other local public benefit assessments (sidewalks, sewers) have been for decades. Depending on local legislation, PACE can be used for commercial, non-profit, and residential properties. It is currently available for residents in the City of Santa Barbara.^{48,49}

Block-level Residential Retrofits in Oakland's EcoDistrict

Agency/Implementer: Local Governments | Program Type: Assessment Districts; Neighborhood Trusts | Beneficiary: Property owners; Taxpayers

⁴⁴ Berkeley first city in California to ban natural gas in new buildings

⁴⁵ City of Berkeley Adopted Budget FY 2023 & 2024

⁴⁶ City of Berkeley Council Report April 26, 2022

⁴⁷ Berkeley Climate Equity Action Fund

⁴⁸ PACE FAQ

⁴⁹ Strategic Energy Plan for the County of Santa Barbara

Lowering GHG emissions at the community wide level is often left in the hands of individuals, which has been a major contributing factor to the relatively slow pace of the adoption of climate-friendly measures. EcoBlock aims to develop a framework under which the process of retrofitting residential blocks to be more sustainable and resilient is more cost effective, equitable, and efficient. In partnership with the City of Oakland, EcoBlock is developing a prototype of an energy efficient and resilient city block in lower-income neighborhoods in the city where residents are historically less empowered to make energy and water efficient upgrades to their homes. This pilot program combines sustainability actions like solar panels and energy efficient appliances with infrastructure like electric vehicle (EV) chargers, bike sharing systems, and street trees and aims to have six fully complete eco-districts by 2030.⁵⁰

Approaches like EcoBlock are a great example of what can be accomplished when sustainability measures are leveraged with economies of scale, which can be accomplished and funded through established mechanisms like assessment districts and neighborhood level trusts. Assessment Districts are funded by a charge paid by property owners within the district to fund projects or services that provide direct benefits to properties in that district. A neighborhood trust is a nonprofit community-based fund that manages capital, operations, and maintenance related to energy efficiency projects. Funds for the trust are raised by the same community members that receive the benefits. Both approaches function in a similar way and are an effective way to leverage unique community priorities, expand access to potential grants, and save on implementation costs that are spread across an entire neighborhood rather than individuals.

As of October 2023, the initial goal of capping the neighborhood's gas line was delayed by the opposition of ten of the 25-neighbors residing on the Fruitvale EcoBlock project site. However, voluntary home electrification, community EV car-sharing and curbside charging, and fast-tracked rooftop solar plus battery storage for the neighborhood has been a success, with construction being six months away from implementation by PG&E. There have also been a couple of pandemic-related supply chain shortages that slowed construction, and the initial vision for a microgrid was scaled back due to inflation. However, residents note that a major success of the program is relatively wide-spread support among the neighborhood for the program, which has been integral to the success so far.^{51, 52}

Golden State Rebates

Agency/Implementer: CleaResult under contract by Investor Owned Utilities (SCE, PG&E SDG&E, SoCalGAS) | Program Type: Rebates | Beneficiary: Homeowners, Renters within Utility Service Territories

Funded by ratepayers, the program offers instant rebates through coupons for measures that increase the energy efficiency of single-family homes including replacement of gas heating or cooling pumps into electric. Coupons are provided to eligible buyers (SCE customers) who can then apply the coupons to their purchases at participating retailers.⁵³

⁵⁰ EcoBlock, University of California Berkeley

⁵¹ Electric Avenue: One Oakland Block's Improbably Journey to Ditch Gas; Oct 30| KQED

⁵² Oakland Fund for Innovation, Ecoblock

⁵³ Golden State Rebates

State of California GoGreen Home Energy Financing

Agency/Implementer: State Agencies | Program Type: Loans | Beneficiary: Homeowners; Renters within Utility Service Territories

The California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) partners with California Public Utilities Commission (CPUC) and California Hub for Energy Efficiency Financing (CHEEF) provide financing for eligible residential electrification and efficiency renovations. Eligible properties are those that receive service from SCE and include both single-family and multifamily housing (making this loan applicable for BE-5.13 and 5.14). Eligible projects include upgrades to ENERGY STAR accredited electric appliances.⁵⁴ Interest rates are reduced in exchange to energy efficiency benefits and is capped using 10-year Treasury bonds plus 750 basis points. Maximum loan terms per unit is \$50,000 for up to four units with a minimum of \$2,500 (though this varies). GoGreen Home Energy Financing is available for affordable⁵⁵ multifamily properties with five or more properties and businesses.

U.S. Department of Energy Clean Energy Tax Credits for Consumers

Agency/Implementer: Federal Government | Program Type: Tax Credits | Beneficiary: Taxpayers

The federal Inflation Reduction Act allocated \$4.5 billion to tax credit programs for appliance electrification and other energy savings. The program is available to taxpayers—both homeowners and renters—from 2023 to 2032. Credit amounts are typically 30% of equipment costs with a cap depending on equipment type or energy efficiency upgrades including credits for home energy audits.⁵⁶

U.S. Department of Energy Home Energy Rebate Program

Agency/Implementer: Federal and State Governments | Program Type: Rebates | Beneficiary: Homeowners; Renters

As part of the Inflation Reduction Act, the US DOE allocated \$582 million to the state of California to develop programs and accelerate deployment of clean energy technology. Half of the allocation is dedicated to help states develop home energy performance-based, whole-house rebates, called the Homeowner Managing Energy Savings (HOMES) rebate program. This grants rebates for retrofits ranging \$2,000 (reduces energy use by 20% or more) to \$4,000 (reduces energy use by 35% or more) per individual households and up to \$400,000 per multifamily buildings in the states. Rebates are increased if applied at retrofits for low- and moderate-income homes.

The other half of the allocated funds to the state is dedicated to high efficiency electric home rebates. This includes point-of-sale rebates administered by states (see coupon referenced above). Total amount of rebate is adjusted based on the consumer's area median income. Caps for certain equipment apply.^{57,58}

⁵⁴ Detailed list of eligible energy efficiency measures for GoGreen are found here.

⁵⁵ At least 50% of the unites are income-restricted.

⁵⁶ Clean Energy Tax Credits for Consumers | Department of Energy

⁵⁷ HOME and High Efficiency Electric Home Rebate

⁵⁸ Inflation Reduction Act Residential Energy Rebate Programs in California | California Energy Commission

Measure/Action 3: Benchmarking and Incentives for Building Performance Standards

This measure and associated actions involve the creation of building performance standards (BPS) for commercial buildings over 20,000 square feet with residential components of mixed-use development exempted beyond state building energy code requirements for commercial construction:⁵⁹

BE-6: Reduce Commercial Natural Gas Consumption 10% Below 2019 Levels by 2030 and 18% by 2035

BE-6.2: Develop and implement a commercial and mixed-use building benchmarking program for commercial buildings over 20,000 square feet in advance of state building performance standards. The program would include reporting electricity and natural gas usage data through the ENERGY STAR portfolio manager. Establish monetary penalties for non-compliance. Residential portions of buildings that are part of a mixed-use development would be exempt. Create incentives for buildings not covered to encourage voluntary compliance.

This action is largely based on the California Energy Commission which created a statewide benchmarking program mandated by Assembly Bill 802 (AB 802), which establishes a statewide program for benchmarking and publicly disclosing building energy use for commercial, multifamily, and mixed-use buildings 50,000 square feet or larger.⁶⁰

Typically, local governments develop building performance standards (BPS) to require energy and water efficiency, electrification, and GHG emission reduction compliance amongst larger buildings including commercial developments. While BPS hold contractors and developers up to high standards, enforcement is currently difficult given the variability of commercial buildings and the complexity of commercial building systems. A building benchmarking program will allow the City and

Implementing a Building Efficiency Program at Brisbane, California

The [Brisbane Building Efficiency Program \(BBEP\)](#) addresses energy and water use in existing buildings, making them more efficient, thereby saving owners money, improving the safety and comfort of building stock, and reducing emissions that are driving climate change. The City of Brisbane created a [map-based, interactive dashboard](#) that shows compliance status and results. At a later stage of the program, buildings at the City of Brisbane will need to show that they are high-performing or take steps to improve. Requirements advance state goals and will include buildings that are (1) privately owned and is 10,000 square feet or more OR (2) owned by a local agency of the State that is required to comply with the City's building ordinances pursuant to California State Government Code Section 53090, et seq., or successor legislation, and is 10,000 square feet or more OR (3) Owned by the City of Brisbane and is 2,000 square feet or more.

property owners to gather more data on commercial buildings over time, perform cost saving retro-

⁵⁹ Among other requirements, the 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%.

⁶⁰ State Assembly Bill 802

commissioning, and ultimately plan for the most cost effective decarbonization strategy and its enforcement.

Benefits and Cost Considerations

Benefits

When energy benchmarking is done correctly and is followed up with action (e.g. energy efficiency and subsequent electrification retrofits), a building will end up with lower energy costs, lower maintenance costs, and better lighting and comfort. In a case study of 11 deep energy retrofits by the New Buildings Institute, buildings were estimated to see annual cost savings ranging from \$8,000 to an annual payback period of 4-6 years.

The Aventine, a medium-sized office building located in La Jolla was profiled in a case study analyzing existing building benchmarking and retrofits. The building is LEED-EB Platinum, with a 75% better than baseline rating, and an Energy Star Score of 100. As part of the retrofit, the design team upgraded the building's HVAC to a high-efficiency all-variable-speed chiller plant, added controls for HVAC, and

Creating Partnerships for Comprehensive Building Performance Standards

As BPS is still a relatively new strategy, knowledge sharing is critical to achieve success. This is the motivation behind the [White House's Building Performance Standards Coalition](#), a partnership of state and local governments with an interest in developing comprehensive nationwide energy efficient building standards alongside the US Department of Energy. Together, the member organizations have nearly 20% of the nation's building square footage in their jurisdictions, so the group has the potential to influence the pursuit of more sustainable building codes.

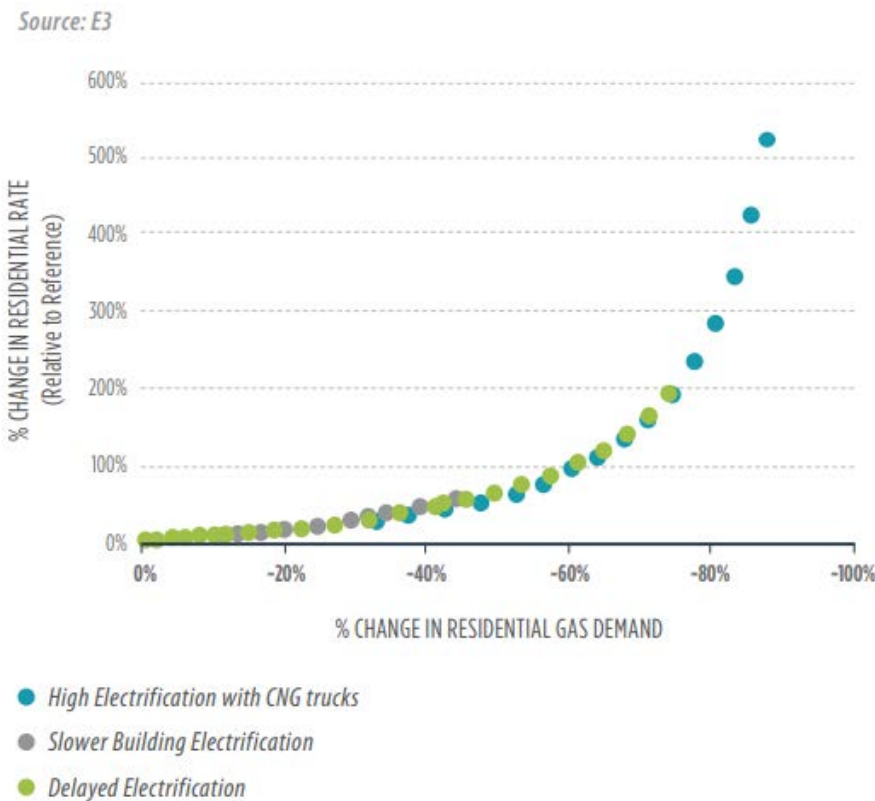
lighting retrofits to CFLs with sensors. Following this retrofit, energy use dropped by 63%. In total, the cost of the retrofits at the Aventine retrofits was \$801,540 before rebates (approx. \$3.02/sf). The project received \$175,000 in utility incentives for central plant upgrades and lighting retrofits resulting in a projected payback period of 2-4 years. The project reduced electricity use by over 2 million kWhs of in year one. First-year energy and operating expenses fell by \$116,000 and the building saw a 600,000 MT CO₂e reduction in carbon emissions.⁶¹

Though the initial switch from gas to all-electric technologies may cost more today due to comparatively low costs for gas, analysis of long-term gas rate costs project that there will be multi-fold increase in gas rates by 2045. As more households and governments make the switch from gas to carbon-free electricity to achieve carbon neutrality goals, the prices to maintain the same network of natural gas pipelines is projected to increase as a lower amount of natural gas flows through the same infrastructure to a shrinking customer base. The remaining natural gas customer base will then bear the burden of rising natural gas costs. In fact, the analysis states that if the transition from the natural gas system is not managed, remaining customers on natural gas could experience costs of \$19/therm of gas by 2050 (in comparison to \$3/ therm in 2018). This future trend is shown below in Figure 6.⁶²

61 A Case for Deep Savings: 11 Case Studies of Deep Energy Retrofits, September 2011 | New Buildings Institute

62 California's Gas System in Transition: Equitable, Affordable, Decarbonized, and Smaller, 2019 | Gridworks

Figure 7: Impacts of Decline in Gas Demand on Future Gas Rates



Source: Gridworks, *California's Gas System in Transition* (2019)

From many perspectives—the state and local government as well as property owners, facility operators, manager, and designers—benchmarking facilitates energy accounting, comparing a facility’s energy use to similar facilities to assess opportunities for improvement, and quantifying/verifying energy savings. Commercial building energy performance benchmarking is a foundational element of a property owner’s or organization’s energy management strategy—management of energy requires measurements.⁶³

According to the US EPA, the public disclosure of energy efficiency ratings has influence over people’s behavior in their energy consumption. A benchmarking tool—like the free Portfolio Manager by ENERGY STAR⁶⁴—is a way to evaluate these efficiencies.

Benefits to Community

Energy assessments and benchmarking can help building managers or owners in several ways including:

- 1) receiving expert advice on energy performance and energy-saving recommendations,
- 2) understanding energy performance over time compared to other buildings,
- 3) uncovering hidden problems that may be making the building less efficient,

⁶³ Building Energy Use Benchmarking | Department of Energy

⁶⁴ Benchmark Your Building Using ENERGY STAR® Portfolio Manager® | ENERGY STAR

- 4) identifying potential health and safety concerns,
- 5) futureproofing the building ahead of municipal or statewide benchmarking and disclosure requirements.⁶⁵

By reducing a building's energy use the owners can lower their energy bill, reduce greenhouse gas emissions, improve air quality, and gain recognition for being energy efficient.⁶⁶ Resilient and efficient buildings are essential to grappling with inconsistent and increasingly expensive energy supplies in the region. Building benchmarking and performance standards allow for a greater level of flexibility for building owners compared to a more prescriptive approach. This allow building owners to identify the most cost effective and beneficial actions for their individual buildings.

Benefits to City

Energy assessments and benchmarking can help futureproof the building ahead of municipal or statewide benchmarking and disclosure requirements.⁶⁷ Benefits of benchmarking of building energy include actionable information to market actors, identification of investment opportunities, a proven strategy for energy savings, enhanced real estate values, and stimulation of the local economy through the creation of building construction and energy service jobs.⁶⁸

Chula Vista's Benchmarking Map Tool

In 2021, as part of its CAP, the City of Chula Vista adopted their Building Energy Saving Ordinance. It stipulates that multifamily, commercial, and industrial buildings must benchmark and report their energy use through a web platform managed by the Energy Star Portfolio Manager. That data is then visualized on a public-facing map platform where citizens can see the emissions and energy efficiency of large buildings. The data gathered by Energy Star is also used by the City to [perform audits](#) that ensure compliance.

Costs

While there are several benefits to assessing and benchmarking energy efficiency in large buildings, this process comes with additional difficulties. Property owners may benefit in ways to reduce energy efficiency but concerns with privacy and competitiveness in the market may need to be addressed before benefits are realized. For example, since the ENERGY STAR score is based on a building's energy consumption compared to similar buildings, building owners may not want the public or their tenants to know the inefficiencies of an owner's building as compared to another.

Another issue is the up-front cost and labor. Energy use data must be collected and uploaded into the ENERGY STAR Portfolio Manager database, as an example, before certain deadlines. This would be an additional task that would need to be handled by the property owner and eventually relayed to the tenants as part of an initiative to reduce energy use in the property. There would be potential need for outreach, and in areas with disadvantaged communities or communities where the primary language

⁶⁵ NYSERDA, 2023

⁶⁶ Ruff, 2016

⁶⁷ NYSERDA, 2023

⁶⁸ NEEP, 2023

is not spoken in English, translators may be needed. The upfront cost of integrating benchmarking and assessment is not without added time, labor, and finances.

Additional costs would be incurred if the performance standard required infrastructure changes to meet thresholds over time. In this case, costs would be dependent on the type of upgrades employed and the specific building characteristics.

Costs to Community

Compiling energy data into energy star portfolio manager could be done by existing staff/building owners.. If the benchmarking program ultimately included GHG or energy consumption thresholds for buildings to meet, additional costs may be incurred. These costs would depend on the thresholds set, the equipment in the building, and the age of the building. The City should utilize the benchmarking data to complete a more detailed analysis of building costs when setting potential future GHG reduction thresholds for commercial buildings.

Costs to City

Building benchmarking programs require upfront costs to develop the program and ordinance language and long term staffing by the City. The upfront costs to develop the standard would include the development of an ordinance, research into setting thresholds for reductions, and outreach and engagement. Recent costs for consultant support for building benchmarking programs are estimated to be between \$100,000 and \$200,000 depending on the detail of the work. The City could expect to save some money by combining this with the existing building electrification study which would include much of the same research and information. The number of staff required to run the program will be based on the requirements of the standard itself as well as the number of buildings covered by the program. Figure 6 provides examples for the number of FTEs from several building performance standards from programs covering between 900 and 1,850 units. The City’s actual operating costs would depend on staff salaries.⁶⁹

Figure 6 Staffing Examples from Several Cities with Building Performance Standards

Jurisdiction	Number of Covered Properties	BPS Staff	Budget (including non-personnel costs)
Montgomery County MD	1,850	7 FTEs	\$1.1 million annually
St. Louis MO	~900	4 FTEs	\$299,600
Washington DC	1,662 in 1 st compliance cycle; increasing to 5,000 by 3 rd cycle	7 FTEs	\$1.1-1.2 million annually

Other Examples of Funding and Financing Strategies

Support for the City’s mission of increasing building performance is not limited to utility providers. The federal and state governments offer a broad range of grant and loan programs accessible to property owners to modify and upgrade their properties to standards. As an example, federal funding was specifically allocated to the County through the state Department of Energy (DOE) in 2013. The

⁶⁹ Putting Policy in Action: Building Performance Standard Implementation Guide (imt.org)

Elective Municipal Programs to Optimize Water, Energy and Renewables (emPower) program was supported by \$2.4 million in federal seed money funded through the United States' DOE's Better Buildings Neighborhood Program which encouraged energy efficient home upgrades through a combination of financing, rebates, and technical advising and training.^{70,71}

A sampling of funding and financing strategies for these actions follow below. Previously referenced funding or financing programs for Measure BE-5 including those currently provided by SCE as part of the utility's energy efficiency partnerships and program may be applicable to BE-6.2.

City of Boston's Building Emissions Reduction and Disclosure Ordinance (BERDO) Enforcement Fund

Agency/Implementer: Local Governments | Program Type: Enforcement Fund | Beneficiary: Property Owners including Members of Environmental Justice Communities

The City of Boston updated its BPS, called BERDO, in 2021 to meet the City's significant decarbonization goals.⁷² While stringent, Boston's BPS allows for flexibility. For example, emission standards for mixed-use buildings will be calculated as a weighted average based on the square footage of each use. With approval from the City, owners of multiple properties can comply based on its portfolio-wide emissions, but every portfolio will need to reach carbon neutrality by 2050. Property owners can also opt in a Hardship Compliance Plan.

Property owners who do not meet emissions targets can pay an "Alternative Compliance Payment" of \$234 per metric ton of CO₂e in excess of each building's target. The resulting revenue will be used for an "Equitable Emissions Investment Fund". This fund will be assigned to environmental justice communities that need help in upgrading energy performance to relevant buildings.⁷³ A "Review Board"—consisting of members of environmental justice communities (defined by the State of Massachusetts) and community-based organizations—ensures benefits of the fund are realized by these communities. The "Review Board" will administer the fund.⁷⁴

Washington DC's Green Bank Commercial Loan for Energy Efficiency and Renewables (CLEER)

Agency/Implementer: Investment Banks | Program Type: Loans | Beneficiary: Advisory Neighborhood Commissions (ANCs); Business and Property Owners; and Developers

The District of Columbia set a Green Bank alongside its building energy performance standards. In partnership with the Montgomery County Green Bank, the DC Green Bank runs the Commercial Loan for Energy Efficiency and Renewables (CLEER) program for multifamily, commercial, and industrial buildings—targeting retrofits, renovations, and additions. The loans are complementary with other financing including DC's PACE program and rebates from DC Sustainable Energy Utility. Initial funding is granted by the DC Government in 2018. CLEER provides 100% financing for projects that provide energy savings of at least 15% of a building's current consumption over a 12-month baseline.⁷⁵

⁷⁰ Empowering Santa Barbara to Invest in Upgrades | Department of Energy

⁷¹ SB County emPower | Final Program Report

⁷² Boston's BPS require buildings containing 20,000 or more square feet of gross floor area meet a series of emissions intensity targets starting in 2025 and ending at carbon neutrality in 2050.

⁷³ BERDO Review Board, November 2023 | City of Boston

⁷⁴ More information on the City of Boston's BERDO from the Institute for Market Transformation.

⁷⁵ Related enhancements that are not energy improvements may account for up to 30% of the total project cost financed. CLEER – DC Green Bank

Energy Services Agreements (ESA) or Energy Savings Performance Contracting (ESPC)

Agency/Implementer: Utility Provider or Energy Service Company | Program Type: Performance Savings Agreements | Beneficiary: Property Owners

An ESA or ESPC may allow a facility owner—typically large buildings or group of buildings such as city, county, and state buildings; schools; hospitals; commercial office buildings; and multifamily buildings—to implement agreed upon building energy efficiency upgrades upfront at no cost by contracting with a third-party to pay for the building upgrades who then benefit from the building energy savings. Private, commercial facilities often do not employ ESAs since they require a strict payback threshold; however, this “pay today-earn tomorrow” approach applies to government facilities more directly given their long-term ownership of their facilities and their longer financing terms. The City may employ ESAs to evaluate building performance standards and energy conservation measures at municipally owned facilities—namely, municipal offices—prior to enacting the BPS citywide.⁷⁶

California Energy Commission’s 1% Interest Loan Energy Conservation Assistance Act (ECAA)

Agency/Implementer: State Agencies | Program Type: Loan | Beneficiary: Local Governments; Other Public Entities

ECAA is a revolving loan fund—loan repayments fund the program—for public schools and public entities seeking to finance energy efficiency, electric vehicle infrastructure, and energy generation or storage projects. Cities are eligible for a 1% interest loan program with a maximum loan amount of \$3 million. Eligible projects vary but must have net energy savings and wholly owned by the applicant. While this loan assistance program does not fund the creation or implementation of building performance standards in the private, commercial sector, the City could use funds to pilot energy efficiency project that tests building performance standards set as part of BE-5.5 at City-owned facilities such as municipal offices.⁷⁷

California Energy Commission’s Energy Partnership Program

Agency/Implementer: State Agencies | Program Type: Assistance Program | Beneficiary: Local Governments; Special Districts; Other Public Entities

The CEC provides technical assistance services (up to \$20,000 of a consultant’s costs) to help local governments and public entities in the state to identify energy savings opportunities for existing properties and new construction including development of equipment performance specifications, design review consultations, selection of contractors or energy efficiency expertise.⁷⁸ The program is competitive and requires participants who are seeking assistance to commit to energy efficiency recommendations and to provide plans to fund energy efficiency project recommendations. Like the ECAA and ESA, the City can incorporate lessons learned from the technical assistance as it adopts BPS for large commercial buildings.

⁷⁶ Energy Savings Performance Contracting | Department of Energy

⁷⁷ CEC ECAA

⁷⁸ Applicants with studies beyond \$20,000 may opt in to share in the cost or reduce the scope.

Measure/Action 4: Off-road Equipment Decarbonization

This measure and associated actions involve the decarbonization of off-road equipment:

T-8: Electrify or otherwise decarbonize 6% of off-road equipment by 2030 and 20% by 2035

T-8 includes the alignment or expansion of AB 1346 which California Governor Gavin Newsom signed a law in 2021 ordering state regulators to ban the sale of new gas-powered equipment using small off-road engines, which includes generators, lawn equipment, and pressure washers, to help curb emissions from a category of small engines on pace to produce more pollution each year than passenger vehicles. This law orders regulators to offer rebates for people to replace their equipment and aims to electrify the landscaping business. These regulations are set to apply to engines produced on or after January 1, 2024.⁷⁹ Other actions associated to the measure include education and outreach to local employers and City staff regarding the transition to zero-emission off-road equipment.

Benefits and Cost Considerations

Benefits

Off-road emissions make up 7% of the City of Santa Barbara's overall GHG emissions profile (~44,000 MT CO₂e). In addition, according to the California Air Resources Board, off-road equipment makes up the single largest source of mobile air pollution emissions in the state of California.⁸⁰ Electrification of these end uses will reduce both GHG emissions and air pollution providing substantial health benefits for the community.

There is a wide range in the size and function of off-road equipment, ranging from large construction equipment to small lawn equipment. While adoption, operations, and maintenance of smaller off-road equipment like electric lawnmowers can be easily adopted at near cost-parity with existing gas alternatives, others like large construction equipment will likely require additional incentives to ease the cost burden of decarbonization.⁸¹ The State of California has already started making moves to increase incentives for large off-road equipment decarbonization through programs like the California Air Resources Board (CARB) Clean Off-Road Equipment Vouchers, which has allocated \$273 million to incentivize California fleets to purchase or lease cleaner offroad equipment.⁸²

Benefits to Community

Communities will benefit from reducing air pollution when converting to electric off-road equipment through vouchers and incentive programs. The diesel off-road equipment adds to the vehicle exhaust and poor air quality that is a precursor to lung and heart diseases, and an issue to tackle for both residents and the larger community. Construction with smaller electric construction vehicles could be applicable in settings where diesel vehicles were impractical, such

⁷⁹ Air Pollution: small off-road engines, 2021 | Legiscan

⁸⁰ <https://ww2.arb.ca.gov/resources/documents/off-road-equipment-research#:~:text=Under%20current%20regulations%2C%20off%20road,of%20mobile%20emissions%20in%20California.>

⁸¹ Gas vs. Electric Lawn Mower: Which Is Better? May 2023 | Consumer Reports

⁸² Funding for Fiscal Year 2022-2023. Project Background for Clean Off-Road Equipment Vouchers | California Air Resources Board

as indoor settings, orchards, and fish hatcheries.⁸³ The operation of electric alternatives can also be substantially lower.⁸⁴

Benefits to City

Providing cleaner air to the community is beneficial to the City and County following the County's Regional Transportation Plan and agenda towards emissions reduction. Recently, some municipalities have passed propositions to alleviate property owners from the responsibility of maintaining sidewalks and street trees, shifting the responsibilities to cities and their operating engineers. Studies have shown that operating engineers (those that operate and maintain heavy construction equipment) have higher potential for exposure to numerous hazards includes whole-body vibration, dust, diesel exhaust, and noise.⁸⁵ Electric off-road equipment would help to prevent many of the complications operating engineers would face if diesel equipment were replaced.

Costs

Although there are several benefits to off-road equipment, there are also several barriers and drawbacks to electrifying off-road vehicles. Benchmarking costs and performance of vehicles would be vital to improving product development and system operations. The federal government must continue to play a central role in convening diverse stakeholders, conducting foundational pre-competitive research, development, and deployment, and coordinating case studies and technology validations to advance the industry.⁸⁶ Due to the numerous types of vehicles, the off-road sector has few one-size-fits-all solutions which does not allow for streamlined production of electrified vehicles, but rather would need high levels of customization.⁸⁷

A challenge to transitioning into electric equipment is ensuring capacity and availability of charging infrastructure.⁸⁸ Additionally, grid support and stability will be necessary to evaluate, and municipalities and utilities would need to continuously find solutions and assess grid infrastructure. Charging infrastructure varies between offroad equipment types. For example, large frequently used equipment may require similar chargers to electric on-road vehicles. However, the regulation referenced in this measure covers small motors which would use 110v electrical outlets common in every building. In the example of a commercial-electric lawn mower, initially higher costs are ultimately offset by the reduced maintenance costs (e.g. electric mowers don't have belts, oil changes, etc.) and lower operation costs, meaning that the payback period for making the switch from gas to electric lawnmowers can be as short as two years.⁸⁹

Costs to Community

In California, current off-road engines are focused on smaller, but highly polluting engine tools such as leaf blowers and lawn mowers. In the City of Santa Barbara, those tools are used primarily

⁸³ Volvo Construction Equipment, 2021

⁸⁴ <https://www.fleetequipmentmag.com/electric-yard-trucks-cost/>

⁸⁵ Whole-Body Vibration and Postural Stress among Operators of Construction Equipment: A Literature Review (cdc.gov)

⁸⁶ Solutions Emerge for Decarbonizing Historically Difficult Off-Road Vehicle Sector | NREL, 2022

⁸⁷ Off-Road Vehicle Decarbonization and Energy Systems Integration | NREL, 2022

⁸⁸ Volvo Construction Equipment

⁸⁹ Benefits of Electric Riding Lawn Mowers, Gravely

for single-family household lawns and in the hotel industry, one of Santa Barbara County and City’s top employing industries.⁹⁰ Figure 7 provides example costs of electric small off-road engines (SORE) rated at or below 25 horsepower. Costs vary by equipment with most being cost comparable (and much less cost to operate). Some equipment like larger mowers can incur more substantial marginal costs and is a good place to identify rebates or incentives. Long term cost savings should be seen for most if not all equipment similar to electric vehicles.⁹¹ It has been shown that operating an electric lawn mower would cost 32 times less than a gas lawn mower, according to some estimates leading to a payback period of around two years.⁹² Electric equipment needs no oil, no fuel mixing, minimal to no maintenance, and is cheaper to fuel than gas equipment.

Figure 7 Small Combustion Engine Electrification Upfront Cost Examples

Equipment	Gas Costs	Cost source	Electric Cost	Cost Source	Marginal Cost
Soft wash/Power washer	\$350	https://shorturl.at/fwIR0	\$400	https://shorturl.at/tDJR7	\$50
Zero turn lawn mowers	\$3,800	https://shorturl.at/inJ69	\$6,000	https://shorturl.at/oxJNT	\$2,200
Residential lawn mowers*	\$550	https://shorturl.at/uwSZ5	\$500	https://tinyurl.com/yfmpu32a	-\$50
Leaf blowers	\$274	https://tinyurl.com/c57ksc8w	\$250	https://tinyurl.com/yzshseyr	-\$24

**Note that electric lawn mowers up to commercial size, likely have a payback period of up to two years [see reference above], depending on use case.*

90 Major Employers in Santa Barbara County | State of California, 2023

91 <https://thehill.com/changing-america/sustainability/energy/559971-finally-heres-the-exact-cost-of-owning-an-electric-car/>

92 <https://smartenergy.illinois.edu/electric-lawn-mowers/>

Costs to City

The largest cost to the City is likely to be enforcement. Successfully implementing an off-road vehicle electrification requirement would require some level of enforcement for those who continue to operate fossil fuel equipment. This could be one or multiple FTEs, or potentially covered by existing code enforcement staff. As these types of municipal programs are largely in

Heavy Duty Equipment and Infrastructure Enhancements in Los Angeles, California

The [Electric Crane Project](#) for cargo handling equipment at the Port of Los Angeles has reduced crane emissions by 100%. A 1987 diesel ship-loading crane was replaced with a Liebherr 550 electric crane which has helped eliminate air pollutants such as nitrogen oxides, particulate matter, hydrocarbons, carbon monoxide, and GHG. The new electric crane is the Port of Los Angeles' first electric mobile ship-loading crane for non-container cargo, an important step in the port's goal of becoming a zero-emission green port. Just the particulate matter emission eliminated from this replacement is equivalent to taking 3,400 heavy duty trucks off the road for a year. The funding for this project came from the EPA which granted a total of \$1.3 million of Diesel Emission Reduction Act (DERA) funding.

their exploratory stage across the State, the City should continue to monitor statewide and existing examples staffing and enforcement models for these types of enforcement and programming strategies.

Possible Funding and Financing Strategies

Transition into zero-emissions off-road equipment will require coordination and outreach efforts on behalf of the City to connect the users of machinery and equipment with applicable funding opportunities. The City itself will require additional funds to replace its existing fossil-fuel powered equipment alongside local enterprises. Some of the costs of vehicle replacement and the charging infrastructure can be recouped through specifically earmarked grant programs from state and federal governments. Existing partnerships with the Santa Barbara Air Pollution Control District can be leveraged for the creation of rebate and incentive programs. Examples below show possible funding and financing strategies for the City and independent, private operators.

County of Santa Barbara and Santa Barbara Air Pollution Control District (the District) Vehicle Replacement Grants and Local Charger Infrastructure

Agency/Implementer: Local Government; Local Air Districts | Program Type: Grants | Beneficiary: Local Businesses; Local Governments; Other Public/Private Entities

The District offers grants for replacing vehicles for lower-emissions options including off-road vehicles and agriculture equipment ranging in amount from \$10,000 to \$250,000. While the 2022 application window has closed, the 2023 grant categories should be announced in the coming months and will likely include similar project eligibility requirements.⁹³ Though not dedicated to off-road equipment, the District pledged close to \$150,000 for the expansion of local charger infrastructure in the County of Santa Barbara, which the County matched with about \$60,000 in

⁹³ Clean Air Grants for Off-Road Equipment | Santa Barbara County Air Pollution Control District (ourair.org)

funding for the goal.⁹⁴ This charging infrastructure will be pivotal for the success of T-8 and similar zero-emissions vehicle measures.

California Air Resources Board (CARB) Funding Agricultural Replacement Measures for Emission Reductions (FARMER) Program

Agency/Implementer: State Agencies; Local Air Districts | Program Type: Formula Grant | Beneficiary: Farmers; Agricultural Businesses

The California Air Resource Board (CARB) FARMER Program funds the replacement of agricultural equipment with zero emissions replacements. Applications are evaluated on a case-by-case basis by CARB staff and grant funds are allocated to regional air districts before they are awarded to applicants. Eligible applicants must work entirely within the boundaries of the air district and project equipment can include off-road vehicles, tractors, irrigation pump engines, and other equipment used entirely for agricultural purposes.⁹⁵

Agricultural Equipment Penetration Rates in California

A [CalStart Technology and Market Assessment](#) has shown that smaller and lightweight agricultural equipment are feasible to electrify for off-road equipment. While the number of electric tractors in the field to-date is small, penetration of zero- or low-emission agricultural equipment is expected to grow. In California, it is estimated that 12% of annual tractor sales will be battery-electric by 2029 with another 8% being hybrid electric.

California Air Resources Board (CARB) Clean Off-Road Equipment (CORE) Voucher

Agency/Implementer: State Agencies; Local Air Districts | Program Type: Formula Grant | Beneficiary: Farmers; Agricultural Businesses

The State through CARB implemented the Clean Off-Road Equipment Voucher Incentive Project (CORE), which is a part of the California Climate Investments, a statewide initiative allocating billions of cap-and-trade dollars. The program provides funds for the replacement of heavy-duty and off-road equipment with zero-emissions models for California businesses. Specific funds are set aside to support micro and small businesses and can be used to purchase equipment from lawnmowers to construction equipment. CORE voucher amounts are tailored by the cost premium of new zero-emission alternatives over traditional equipment.⁹⁶ The program provides additional funding is available for charging infrastructure and equipment deployed in pollution-overburdened and low-income communities.⁹⁷

California Air Resources Board (CARB) Carl Moyer Program Lawn and Garden Equipment Replacement

Agency/Implementer: State Agencies; Local Air Districts | Program Type: Formula Grant | Beneficiary: Individuals; Business Owners

94 County launches move to electric vehicle fleet; first 56 EVs to hit road by summer | Government and Politics | syvnews.com

95 Funding sources for the FARMER program varies including the state's Air Pollution Fund, the Greenhouse Gas Reduction Fund, among others. More information at California Air Resource Board (CARB) FARMER Program.

96 California Off-Road - Advanced Clean Equipment | California Air Resources Board

97 Low-income communities as defined by AB1550

In partnership with local air districts, CARB runs the Carl Moyer Program through which it funds fleet upgrades and replacement incentives for eligible equipment like heavy-duty trucks, emergency vehicles, solid waste collection vehicles, and charging infrastructure. The program has a Lawn and Garden Equipment (LG&E) Replacement program which provides California residents who own and operate existing combustion LG&E funds to replace or acquire batteries for electric LG&E. The program allows for bulk purchasing. Maximum funding amounts are set by equipment type and differ between residential and commercial users with a maximum amount of \$15,000 for commercial ride-on or stand/site mowers.⁹⁸

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⁹⁸ CARB Carl Moyer Program

Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis

Final Draft

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EXHIBIT E



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1 Introduction

1.1 GHG Emissions Analyses Under CEQA

The California Environmental Quality Act (CEQA) requires discretionary plans and projects to undergo an environmental review process, which includes an evaluation of project-related¹ contribution of greenhouse gas (GHG) emissions. Section 15183.5 of the CEQA Guidelines establishes a framework for developing a qualified GHG emissions reduction plan to cumulatively reduce GHG emissions and allow CEQA lead agencies to analyze and mitigate the effects of plan- and project-level GHG emissions. This document is intended to provide methodological guidance and quantitative thresholds of significance for use by City planners, project applicants, consultants, agencies, and members of the public in the preparation of GHG emissions analyses under CEQA for projects located within the City of Santa Barbara (City).

The City prepared a Climate Action Plan (CAP) Update designed to be consistent with CEQA Guidelines Section 15183.5. See Appendix A Climate Action Plan Summary for more background information on the CAP Update process and the GHG emissions inventories, reduction strategies, and forecasts developed as part of the process. As required by Section 15183.5, the City updated the CAP with targets that are consistent with or exceed state goals. The CAP Update establishes a goal of achieving a 40 percent reduction in per capita GHG emissions compared to 1990 levels by 2030 (consistent with California Senate Bill [SB] 32) and a goal of achieving carbon neutrality by 2035 (ten years sooner than Assembly Bill [AB] 1279 goal of carbon neutrality by 2045).² The 2030 goal is set using efficiency metrics (i.e., GHG emissions expressed as a per-capita metric) translated to a total GHG emission reduction target. In California Air Resource Board's (CARB's) 2017 Scoping Plan Update, the State recommends using efficiency metrics for local targets to avoid penalizing cities which are experiencing population growth at significant rates.³ Efficiency metrics still calculate GHG emissions on a per capita basis but are combined into a total GHG emission reduction goal. The State continues to recommend use of efficiency metrics in the 2022 Scoping Plan. The City's goals translate to a short-term target of reducing communitywide GHG emissions to 486,949 metric tons of carbon dioxide equivalent (MT of CO₂e)⁴ by 2030 and zero MT CO₂e by 2035.⁵

In addition to meeting or exceeding State goals, a qualified GHG emissions reduction plan must undergo CEQA review and must be adopted by local decision makers. An Initial Study-Negative Declaration (IS-ND) was prepared for the CAP Update. With adoption of the CAP Update IS-ND and approval of the CAP Update by City Council, the CAP Update serves as a qualified GHG emissions

¹ Project refers to the definition of a project under the California Environmental Quality Act within the CEQA Guidelines Section 15378 and Public Resources Code Section 21065.

² Carbon neutrality is defined as net zero carbon emissions, which is achieved either by balancing carbon emissions with carbon removal or by completely eliminating carbon emissions.

³ California Air Resources Board. 2017. California's Climate Change Scoping Plan, p. 99-102.

⁴ Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas, CO₂, is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as carbon dioxide equivalent (CO₂e), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 25, meaning its global warming effect is 25 times greater than CO₂ on a molecule per molecule basis (Intergovernmental Panel on Climate Change 2007).

⁵ The 2030 target was calculated by reducing 1990 per capita GHG emissions (i.e., 8.40 MT CO₂e/person) by 40 percent (providing a 2030 per capita target of 5.04 MT CO₂e/person) and multiplying the resulting 2030 per capita target by Santa Barbara's projected population in 2030 (i.e., 96,637 people). The result of the calculation provides a 2030 target for the City of 486,949 MT CO₂e.

reduction plan consistent with CEQA Guidelines Section 15183.5. Appendix B, Overview of GHG Emissions and Climate Change, offers an overview of relevant regulations and case law pertaining to the analysis of GHG emissions consistent with the CEQA Statute and Guidelines.

Projects that are substantially consistent with the underlying demographic projections (i.e., residents and employees) and land use assumptions used in the CAP Update will be able to tier from the adopted CAP Update IS-ND pursuant to CEQA Guidelines Section 15183.5. The CAP Update relied on the Santa Barbara County Association of Governments (SBCAG) Connected 2050 projections and the land use assumptions for existing uses and densities allowed by land use designations in the City of Santa Barbara General Plan, including the Land Use Element and any associated amendments current as of 2023, and the 2023-2031 Housing Element. In addition, the assumptions account for the maximum buildout allowed by existing zoning districts, zoning overlays, and municipal code ordinances that increase density on top of the baseline density. To streamline the CEQA GHG emissions analysis process, the City has prepared a CEQA GHG Checklist that can be used in CEQA review documents to confirm that such proposed projects are consistent with the CAP Update GHG emissions reduction strategy. Section 2 of this document, *Determining Consistency with the CAP Update* and Section 3 of this document, *CEQA GHG Checklist*, include guidance on how to navigate the consistency determination process.

For projects that exceed the CAP Update's demographic projections and assumptions based on existing land use designations and existing maximum densities allowed by zoning, including zoning ordinances as of 2023 related to housing overlays, multi-unit housing, and accessory dwelling units, a different methodology and assessment utilizing quantitative thresholds of significance would be necessary to evaluate GHG emissions impacts. Section 4 of this document, *Quantitative CEQA GHG Thresholds*, includes guidance on how to utilize the quantitative thresholds that were developed for purposes of evaluating the level of significance of GHG emissions impacts. Furthermore, Appendix C, *Quantifying GHG Emissions*, provides direction regarding how to quantify a project's GHG emissions for comparison to the applicable threshold of significance.

The CAP Update acknowledges that additional actions beyond those identified in the plan will be required to achieve its long-term goal of carbon neutrality by 2035. As a result, the plan provides mechanisms for monitoring CAP Update progress which include providing the Sustainability Committee an annual update on progress, conducting regular GHG emission inventories, and preparing a new CAP Update by 2030 in order to incorporate new strategies and technologies that will further move the City toward meeting its longer-term carbon neutrality target. Section 5 of this document, *Moving into the Future*, offers further explanation of how CEQA review of plans and projects could be affected by future updates of the CAP Update.

1.2 Qualified GHG Emissions Reduction Plan

According to CEQA Guidelines Section 15183.5, a CEQA Lead Agency can determine that a project consistent with the CAP Update has GHG impacts that were already assessed as part of the CAP Update's CEQA document. Project-specific environmental documents can tier from, or incorporate by reference, the CAP Update CEQA document when the project is deemed consistent with the GHG emissions reduction strategy included in the qualified GHG emissions reduction plan.

As shown in Table 1, the CAP Update meets the requirements of a qualified GHG emissions reduction plan per CEQA Guidelines Section 15183.5(b)(1) for projects with buildout years through 2030.

Table 1 CAP Consistency with CEQA Guidelines Section 15183.5(b)(1) for 2030

CEQA Guidelines Section 15183.5(b)(1) Requirement ¹	Climate Action Plan Consistency
1. Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.	Consistent. The CAP Update includes a communitywide GHG emissions inventory for year 2019 and forecasts GHG emissions for years 2025, 2030, 2035, 2040 and 2045.
2. Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.	Consistent. A key aspect of a qualified GHG emissions reduction plan is substantial evidence that the identified GHG emissions reduction target establishes a threshold where GHG emissions are not cumulatively considerable. The Association of Environmental Professionals' (AEP) 2016 Beyond Newhall and 2020 white paper identifies this threshold as being a local target that aligns with the State legislative targets. ¹ The CAP Update establishes a long-term aspirational target of carbon neutrality by 2035 and short-term target equivalent to reducing GHG emissions 40 percent below 1990 per capita levels by 2030. As discussed in Appendix A, <i>Climate Action Plan Summary</i> , the plan's measures will exceed the short-term target and reduce total communitywide GHG emissions 47 percent below 1990 emissions levels by 2030. Therefore, this local target meets the state goals of a 40 percent emission reduction in 1990 levels by 2030.
3. Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.	Consistent. The CAP Update divides its inventory and forecasts into sectors including transportation (passenger vehicles, commercial vehicles, buses, and off-road equipment), residential energy (electricity and natural gas), non-residential energy (electricity and natural gas), water and wastewater, and solid waste.
4. Specify 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.	Consistent. The CAP Update specifies measures and actions that the City will enact and implement between 2024 and 2030 to meet its 2030 GHG emissions target. As discussed in Appendix A, <i>Climate Action Plan Summary</i> , implementation of the plan will achieve a 47 percent reduction in total GHG emissions compared to 1990 emission levels by 2030, which exceeds the state goal of a 40 percent emission reduction in 1990 levels by 2030 and demonstrates substantial progress by 2030 toward achieving the City's longer-term goal of carbon neutrality by 2035.
5. Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels.	Consistent. The CAP Update includes a process to complete community GHG emissions inventories every three years. The inventories will allow the City to measure progress towards meeting the CAP Update goals. If an inventory indicates that the City is not on track to meet the CAP Update GHG emissions targets, additional measures may be required at that time to increase emissions reduction strategies and maintain the CAP Update status as a CEQA qualified GHG emissions reduction plan.
6. Be adopted in a public process following environmental review.	Consistent. The City prepared an IS-ND for the CAP Update that was circulated for public review and comment and adopted prior to approval of the CAP Update Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis by City Council.

¹ AEP. Beyond Newhall and 2020: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets in California (October 2016). Accessed at: https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf.

Development projects can demonstrate consistency with a qualified GHG emissions reduction plan if they are consistent with the plan's assumptions regarding future growth projections and consistent with the plan's GHG emissions reduction strategies.⁶ Projects consistent with the qualified GHG emissions reduction plan such as the CAP Update, including conformance with performance strategies applicable to the project, would not require additional GHG emissions analysis or mitigation under CEQA Guidelines Sections 15064(h) and 15183.5(b)(2). The City has developed the CEQA GHG Checklist to assist with determining project consistency with the CAP. The checklist is intended to provide individual projects the opportunity to demonstrate that they are minimizing GHG emissions while ensuring new development achieves its proportion of emissions reduction consistent with the assumptions of the CAP Update. Project consistency with a GHG emissions reduction plan can also be demonstrated through a quantitative analysis that demonstrates the project will not impede, or will facilitate, the City's ability to meet its GHG emissions reduction targets.

⁶ CAPs typically use growth projections from the local jurisdiction's General Plan or applicable Metropolitan Planning Organization's regional demographic forecast.

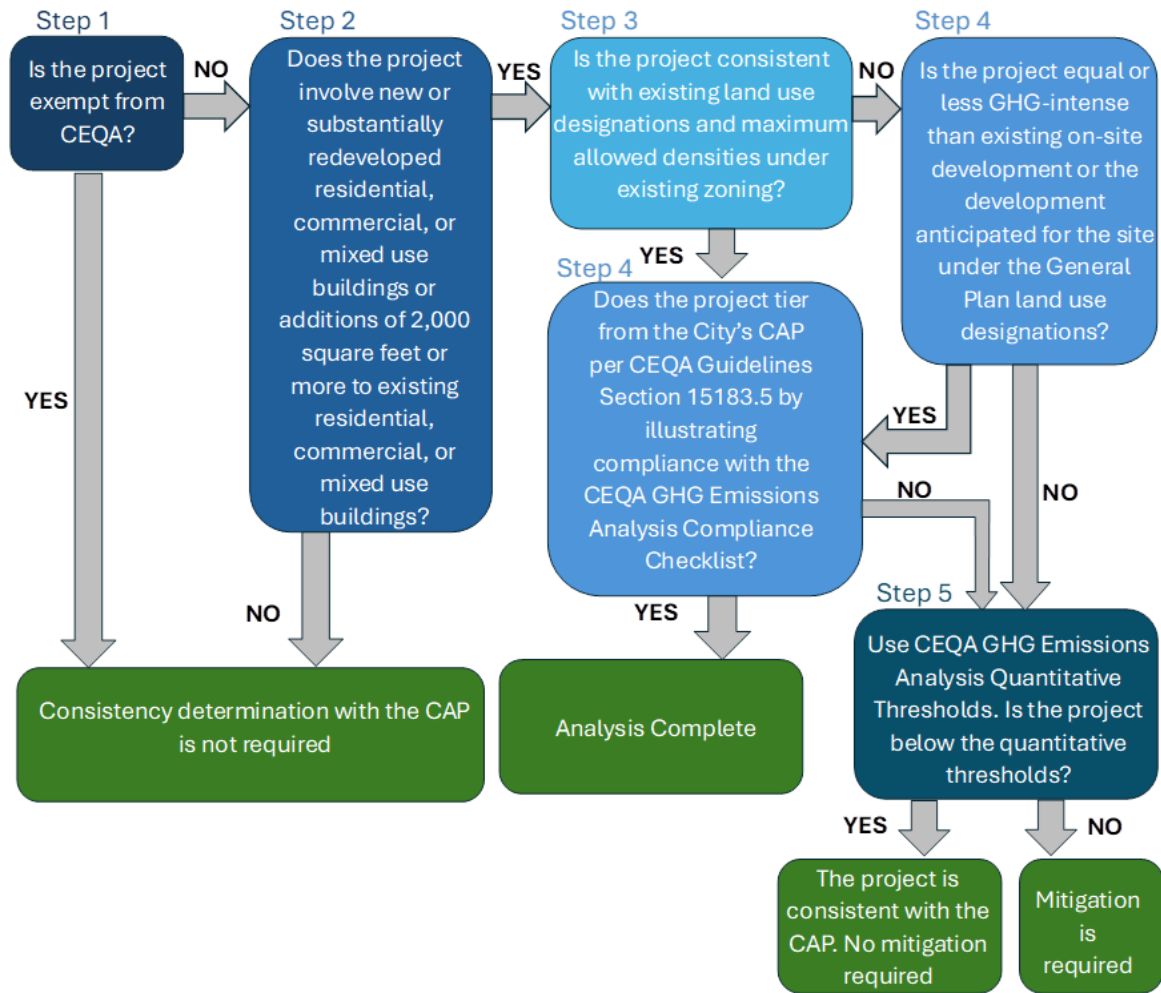
2 Determining Consistency with the CAP Update

Projects that are 1) not exempt from CEQA, and 2) consistent with the demographic forecasts and land use assumptions in the CAP Update can use the City's CEQA GHG Checklist to demonstrate consistency with the CAP Update measures and actions. If consistent, projects can tier from the environmental review contained in the CAP Update IS-ND. In doing so, these projects would result in less-than-significant GHG emissions and would not result in a cumulatively considerable GHG emissions impact. The following process (see .

Figure 1) shows how to demonstrate a project's consistency with the CAP Update's GHG emissions reduction plan and, thereby, tier from the IS-ND for the CAP Update. This approach is consistent with the recommendations of the AEP Climate Change Committee⁷ for tiering from qualified GHG reduction plans that demonstrate substantial progress toward meeting the next milestone statewide planning reduction target (i.e., a 40 percent reduction below 1990 levels by 2030 as set forth by SB 32).

⁷ Association of Environmental Professionals (AEP). 2015. Beyond 2020: The Challenge of Greenhouse Gas Reduction Planning by Local Governments in California. https://califaep.org/docs/AEP_White_Paper_Beyond_2020.pdf

Figure 1 Determining Consistency with the the CAP Update



The following sections provide guidance for each step to determine project consistency with the CAP Update.

2.1 Step 1: CEQA Exemption

Step 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA. If the project qualifies for an exemption, no further action is required. If the project does not qualify for an exemption, then the lead agency would move to Step 2. The State CEQA Statute and Guidelines define types of projects that may be exempt from environmental review. A project that is exempt from CEQA is not required to undertake a consistency determination with the CAP Update. Statutory exemptions are enacted by the State Legislature based on policy goals and apply regardless of whether the exempted project or class of projects may have environmental impacts. Statutory exemptions that do not require a CAP Update consistency determination include those in the State CEQA Guidelines, Sections 15194, 15195, 15196, and 15261-15285. Within the CEQA Statute, statutory exemptions that do not require a CAP Update consistency determination include, but are not limited to, Public Resources Code (PRC) Section 21080 et seq., Section 21159.20 et seq. for special housing exemptions, and Section 21155.1 for Senate Bill 375 transit priority projects. Categorical exemptions are granted to classes of projects that generally are considered not to have any potential impacts on the environment. Projects that meet criteria for an exemption under State CEQA Guidelines Sections 15301-15333 do not require a consistency determination with the CAP Update. Further, ministerial projects and categorical exemptions defined in the City CEQA Ordinance, Santa Barbara Municipal Code 22.100.070 do not require a consistency determination with the CAP Update. The State CEQA Guidelines also codify the “common sense” exemption. This exemption can be used for projects “[w]here it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.” Projects that meet criteria for an exemption under State CEQA Guidelines Section 15061[b][3]) do not require a consistency determination with the CAP Update and do not require completion of a CEQA GHG Checklist.

Please note projects subject to the following CEQA processes must proceed to Step 2:

1. Projects using the CEQA Streamlining process under CEQA Guidelines Section 15183, Projects Consistent with a Community Plan, General Plan, or Zoning.
2. Projects that require preparation of an Addenda to tier from a previously certified Environmental Impact Report or adopted Negative Declaration.
3. Projects that require preparation of an Initial Study or are not otherwise exempt from CEQA, including projects that require a Negative Declaration or Environmental Impact Report.

2.2 Step 2: New Development Project or Substantial Redevelopment Project

Step 2 consists of determining if the project involves new or substantially redeveloped residential, commercial, or mixed-use buildings, or additions of more than 2,000 square feet in building floor area to existing residential, commercial, or mixed-use buildings. If the project is considered one of the following criteria, then the project screening would continue to Step 3:

1. A new development project that includes a residential, commercial or mixed-use building(s),
or

2. A substantial redevelopment project that includes a residential, commercial or mixed-use building(s), or
3. An addition of over 2,000 square feet in building floor area for residential, commercial or mixed-use building(s).

If the project does not meet the above criteria, then the project can qualitatively be assumed to be consistent with the CAP Update without using the CEQA GHG Checklist and completion of a CEQA GHG Checklist is not required. Industrial uses that are not otherwise exempt from CEQA (Step 1) must conduct a project specific GHG quantitative analysis to determine significance and cannot streamline review with this checklist.

2.3 Step 3: Consistency with Demographic Forecasts and Land Use Assumptions

The demographic forecasts of the CAP Update are based on both the SBCAG demographic forecasts and the growth projected in the City's General Plan. If a project is consistent with the existing General Plan land use designation and maximum densities allowed by existing zoning as identified in the Santa Barbara General Plan and Santa Barbara Municipal Code and as allowed by state density bonus⁸, then the project is consistent with the business-as-usual demographic forecasts and land use assumptions of the CAP Update and can move on to Step 4. In such cases, the project's associated GHG emissions were accounted for in the GHG emissions forecasts included in the CAP Update and, therefore, are within the scope of this plan's analysis of communitywide GHG emissions. Accordingly, the analysis of the project's GHG emissions in its CEQA document should include a reference to the project's consistency with the existing General Plan land use designation and zoning, of the project site/area and should explain the aforementioned connection between the existing General Plan land use designation and the GHG emissions forecasts in the CAP Update. After this is completed, the lead agency can proceed to Step 4.

If a project is not consistent with the existing General Plan land use designations and densities allowed by zoning and the state, will require a zoning or general plan amendment, but would (1) result in equivalent or fewer GHG emissions as compared the development anticipated for the site under the City's existing General Plan and zoning⁹, then the project would still be within the demographic forecasts and land use assumptions of the CAP Update and can move on to Step 4. To provide substantial evidence for this determination of fewer GHG emissions, GHG emissions generated under existing General Plan land use buildout and the proposed project need to be quantified and included in the CEQA analysis. See Appendix C, *Quantifying GHG Emissions*, for guidance on quantifying GHG emissions for existing General Plan land use buildout and the proposed project. In this case, the analysis of the project's GHG emissions in its CEQA document should include a quantitative comparison of the proposed project's GHG emissions and GHG emissions generated by the development anticipated for the site under the City's existing General Plan land use and zoning designations. The analysis should clearly explain how the project's emissions with the proposed General Plan Land Use or zoning changes are equivalent or less than those generated by the development anticipated for the site under the existing General Plan land

⁸ Projects that use State Density Bonus Law retain consistency with the General Plan land use designation and are deemed consistent with the demographic forecasts and land use assumptions in the CAP Update.

⁹ Most considerable causes for equivalent or fewer GHG emissions include less VMT and lower per capita energy use. See Appendix C Quantifying GHG Emissions, Operational Emissions for more operational emissions sources that can be reduced. Proponent should provide rationale for this determination.

use and zoning designations (whichever is higher). After this is completed, the lead agency can proceed to Step 4.

If a project is not consistent with the existing General Plan land use or zoning of the project site/area, would require a general plan or zoning amendment, and would result in either new development of undeveloped land or redevelopment with higher GHG emissions than the development anticipated for the site under the City's existing General Plan land use and zoning designation, the project cannot use the CEQA GHG Checklist to tier from the adopted IS-ND for the CAP Update. Instead, the project's GHG emissions can be evaluated using the quantitative GHG thresholds described in Section 4, *Quantitative CEQA GHG Thresholds*, to evaluate the significance of the project's GHG emissions.

2.4 Step 4: Consistency with CEQA GHG Checklist

The City has prepared the CEQA GHG Checklist for projects to ensure they are consistent with the strategies of the CAP Update. The City can use the checklist to show that a project includes all applicable strategies of the CAP Update. Projects that use the CEQA GHG Checklist are not required to quantify reductions from the strategies included on the checklist, because the reductions from applicable strategies have already been quantified at a programmatic level in the CAP Update.

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3 CEQA GHG Checklist

The purpose of the CEQA GHG Checklist is to assist with determining project consistency with the CAP Update and provide a streamlined review process for proposed future development projects that are subject to discretionary review and trigger environmental review pursuant to CEQA. GHG reduction programs that are applicable to future development are summarized in the following CEQA GHG Checklist. This CEQA GHG Checklist identifies applicable regulations and monitoring and reporting required by those regulations.

This CEQA GHG Checklist contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP Update are achieved.

If a project is consistent with the applicable strategies on the CEQA GHG Checklist, then the project can tier from the programmatic GHG emissions environmental review included in the adopted IS-ND for the CAP Update pursuant to CEQA Guidelines Section 15183.5(b)(1). A project that is consistent with all applicable strategies of the CEQA GHG Checklist would result in less-than-significant GHG emissions and would not result in a cumulatively considerable impact related to GHG emissions and climate change.

Projects that are identified as not consistent with the CAP Update through the use of this CEQA GHG Checklist must prepare a project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions compared to the City's GHG emissions thresholds outlined in Section 4, *Quantitative CEQA GHG Thresholds*.

This CEQA GHG Checklist only applies to projects that require a consistency determination with the CAP under Steps 3 and 4 of Figure 1 (see also Sections 2.3 and 2.4).

This CEQA GHG Checklist may be periodically updated to incorporate new GHG reduction techniques, to comply with later amendments to the CAP Update, or to reflect changes in other sustainability-focused local, state, or federal laws, regulations, ordinances, and programs.

3.1 CEQA GHG Checklist Requirements

The CEQA GHG Checklist as depicted on the next two pages is required for all projects that are not otherwise exempt from CEQA and are considered new or substantially redeveloped residential, commercial, or mixed-use buildings, or additions of 2,000 square feet or more to residential, commercial, or mixed-use buildings, and proposed within the City limits. The CEQA GHG Checklist is designed to assist the City and applicant in identifying consistency with the CAP Update. However, it may be necessary to supplement the completed CEQA GHG Checklist with supporting materials, calculations, or certifications to demonstrate compliance with the CAP Update and other applicable sustainability-focused requirements. The completed CEQA GHG Checklist will be included as an appendix to the CEQA document.

General Project Information

Contact Information	
Project or Plan Name:	
Address:	
Applicant Name and Co.:	
Contact Phone:	Contact Email:
Was a consultant retained to complete this checklist? Yes <input type="checkbox"/> No <input type="checkbox"/>	
If Yes, complete the following:	
Consultant Name: _____	Contact Phone: _____
Company Name: _____	Contact Email: _____
Project Information	
What is the size of the project site or plan area (acres)?	
Gross: _____	
Net: _____	
Identify all applicable proposed land uses:	
<input type="checkbox"/> Residential (indicate # of single- dwelling units): _____	
<input type="checkbox"/> Residential (indicate # of multi-dwelling units): _____	
<input type="checkbox"/> Commercial (indicate total square footage, gross and net): _____	
<input type="checkbox"/> Municipal (indicate total square footage, gross and net): _____	
<input type="checkbox"/> Other (describe): _____	
Project Description	
This description should be consistent with the project description that will be used for the CEQA document. The description may be attached to the GHG Checklist if there are space constraints.	

Compliance Checklist Table

Checklist Applicability	
Step 1 – The planner has confirmed that the project is not exempt from CEQA.	If the project is exempt from CEQA, then this compliance checklist does not apply and no further GHG analysis is required.
Step 2 – The planner has confirmed that the project involves new or substantially redeveloped residential, commercial, or mixed-use buildings, or additions of more than 2,000 square feet to existing residential, commercial, or mixed-use buildings.	If the project involves preparation of a CEQA Initial Study, Negative Declaration, Environmental Impact Report, Section 15183 Streamlining Analysis, or EIR/ND Addenda; but does not include 1) new buildings, or 2) substantial redevelopment, or 3) additions of more than 2,000 square feet of floor area, then this compliance checklist does not apply and no further GHG analysis is required.

Section 1: Land Use Consistency			
Regulation	Requirements	Project/ Plan Compliance ¹	Required Explanation ²
General Plan	1a. Does the Project include a land use and/or zoning amendment? If “No”, proceed to Section 2 – CAP Strategies Consistency. If “Yes”, proceed to question 1b.	Yes <input type="checkbox"/> No <input type="checkbox"/>	_____ _____ _____
General Plan	1b. Does the land use and/or zoning amendment result in a more GHG-intensive project when compared to the existing conditions?	Yes <input type="checkbox"/> No <input type="checkbox"/>	_____ _____ _____
<p>¹ If “Yes ” to both questions 1a and 1b , the applicant must prepare a Project -specific analysis of GHG emissions, including quantification of existing and projected GHG emissions compared to City GHG emissions thresholds or other GHG emissions thresholds determined appropriate by the City and incorporation of the CAP Update measures in this CEQA GHG Checklist to the extent feasible.</p> <p>² Every question included in this checklist is required to be answered with explanation of either: 1) how it will be achieved, 2) why it will not be achieved, or 3) why it is not applicable.</p>			

City of Santa Barbara
Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis

Section 2: CAP Update Measures Consistency			
Regulation	Requirements	Project/Plan Compliance¹	Required Explanation²
Building Energy			
City CAP Update (Measure BE-4)	2. All Project Types - Building Electrification. Will the Project/Plan comply with CAP Update Measure BE-4 and be all-electric with no natural gas hookup?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A ³ <input type="checkbox"/>	_____ _____ _____
City CAP Update (Measure BE-7)	3. All Project Types- Carbon Free Electricity. Will the Project/Plan (whether all new construction, remodel, or combination thereof) retain Santa Barbara Clean Energy (SBCE) as the energy provider or otherwise utilize 100% carbon free electricity? ⁴	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A ³ <input type="checkbox"/>	_____ _____ _____
City CAP Update (Measure T-6 and T-7)	4. All Project Types - EV Charging Infrastructure. Will the Project/Plan (whether all new construction, remodel, or combination thereof) meet or exceed the requirements of the California Green Building Standards Code, Title 24, Part 11, (CALGreen) Tier II for EV charging infrastructure?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A ⁵ <input type="checkbox"/>	_____ _____ _____
City CAP Update (Measure T-8)	5. All Project Types - Off-Road Equipment Electrification. Will the Project/Plan (whether all new construction, remodel, or combination thereof) commit ⁴ to the use of electrified off-road landscaping equipment (e.g., mowers, chippers, tractors) for ongoing operations and maintenance?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A ⁶ <input type="checkbox"/>	_____ _____ _____
Transportation			
City CAP Update (Measure TR-2)	6. All Project Types Reduce VMT. Will the Project/Plan demonstrate a Vehicle Miles Traveled (VMT) reduction consistent with the City's CEQA Transportation Analysis Guidelines? ⁷	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A ⁸ <input type="checkbox"/>	_____ _____ _____
<p>¹ If "No", the applicant must prepare a Project/Plan-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions compared to City GHG emissions thresholds or other GHG emissions thresholds determined appropriate by the City and incorporation of the CAP Update measures in this CEQA GHG Checklist to the extent feasible.</p> <p>² Every question included in this checklist is required to be answered with explanation of either: 1) how it will be achieved, 2) why it will not be achieved, or 3) why it is not applicable.</p> <p>³ N/A applies to projects that do not consist of buildings that require energy usage.</p> <p>⁴ Compliance with this measure will be included in the project's Conditions of Approval.</p> <p>⁵ N/A applies to projects that do not require electric vehicle infrastructure.</p> <p>⁶ N/A applies to projects that do not consist of off-road landscaping equipment and do not require a landscape plan where maintenance would be required.</p> <p>⁷ Only projects screened out from VMT analysis or mitigated sufficiently to meet the City's reduction target can demonstrate consistency with the CAP Update through this checklist.</p> <p>⁸ N/A applies to projects that would not generate VMT.</p>			

4 Quantitative CEQA GHG Thresholds

If the CEQA GHG Checklist does not demonstrate conformance with the CAP Update, a project can be evaluated using quantitative CEQA GHG thresholds derived from the assumptions of the CAP Update. If that project's GHG emissions are at or below the applicable quantitative threshold and it has an initial operation year before 2030, the City can determine that the plan would result in a less-than-significant GHG emissions impact. A CAP-specific project can tier from the existing programmatic environmental review contained in the adopted programmatic IS-ND for the CAP Update. In doing so, such plans/projects would result in less-than-significant GHG emissions and would not result in a cumulatively considerable impact related to GHG emissions and climate change.

Projects with post-2030 operation will need to demonstrate how they would achieve net zero MT of CO₂e per year due to AB 1279 to be considered less-than-significant and to not result in a cumulatively considerable GHG emissions impact. Note that the CEQA GHG thresholds will need to be updated for consistency when new General Plan land use designations and amendments to the CAP Update are adopted. The following sections provide an explanation of the methodology used to calculate the quantitative GHG emissions thresholds and guidance on how to utilize the thresholds.

4.1 Thresholds Calculation Methodology

CEQA Guidelines Section 15064.4 does not establish a specific quantitative threshold of significance for evaluating GHG emissions associated with a proposed project. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, as long as the threshold chosen is supported by substantial evidence (CEQA Guidelines Section 15064.7[c]). The following methodology is consistent with guidance provided by the AEP Climate Change Committee in 2016 for establishing GHG emissions efficiency thresholds using the local jurisdictional GHG inventory and demographic forecasts.¹⁰

An efficiency threshold is a threshold expressed as a per-person metric (e.g., per resident, per employee, or per service person). Efficiency thresholds are calculated by dividing the allowable GHG emissions inventory in a selected calendar year by the residents, employees, or service population in that year. The efficiency threshold identifies the quantity of GHG emissions that can be generated on a per-person basis without significantly impacting the environment.

Locally appropriate, plan- and project-specific GHG emissions efficiency thresholds were derived from the GHG emissions forecasts calculated for the CAP Update. These thresholds were created to comply with CEQA and the CEQA Guidelines and interpretive GHG emissions analysis case law, which are summarized in Appendix D Regulatory and Legal Setting. The City of Santa Barbara GHG emissions efficiency thresholds were calculated using the emissions forecasts with all emissions sectors included, because plans and projects would generate vehicle trips and equipment use, consume energy and water, and produce wastewater and solid waste, thereby generating emissions

¹⁰ AEP. 2016. Final White Paper Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California. https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf.

in all categories. Efficiency thresholds were calculated for the year 2030 to provide GHG emissions thresholds for new development in line with the state’s milestone target for year 2030.

GHG emissions efficiency thresholds would be used during the CEQA review process for new residential, commercial, mixed-use plans and projects, and any other project that is subject to CEQA. Forecasted GHG emissions in the CAP Update were disaggregated into residential and non-residential development for the threshold year of 2030 to calculate thresholds specific to residential, non-residential, and mixed-use projects. Forecasted GHG emissions are sometimes also disaggregated between new and existing development for the threshold year. For the City of Santa Barbara, a GHG threshold disaggregated between new and existing development places a disproportionately high emphasis on GHG emissions reduction from existing development, given the CAP Update measures. This necessitated applying the CAP Update emissions reduction across both new development and existing development to produce per capita GHG thresholds for residential projects, non-residential projects, and mixed-use projects. The results of the disaggregation of the GHG emissions forecast are presented in Figure 2, which summarizes the total amount of GHG emissions expected to be generated by existing, new residential, and new non-residential development for threshold year 2030.

Figure 2 Allowable GHG Emissions from Existing and New Development in 2030

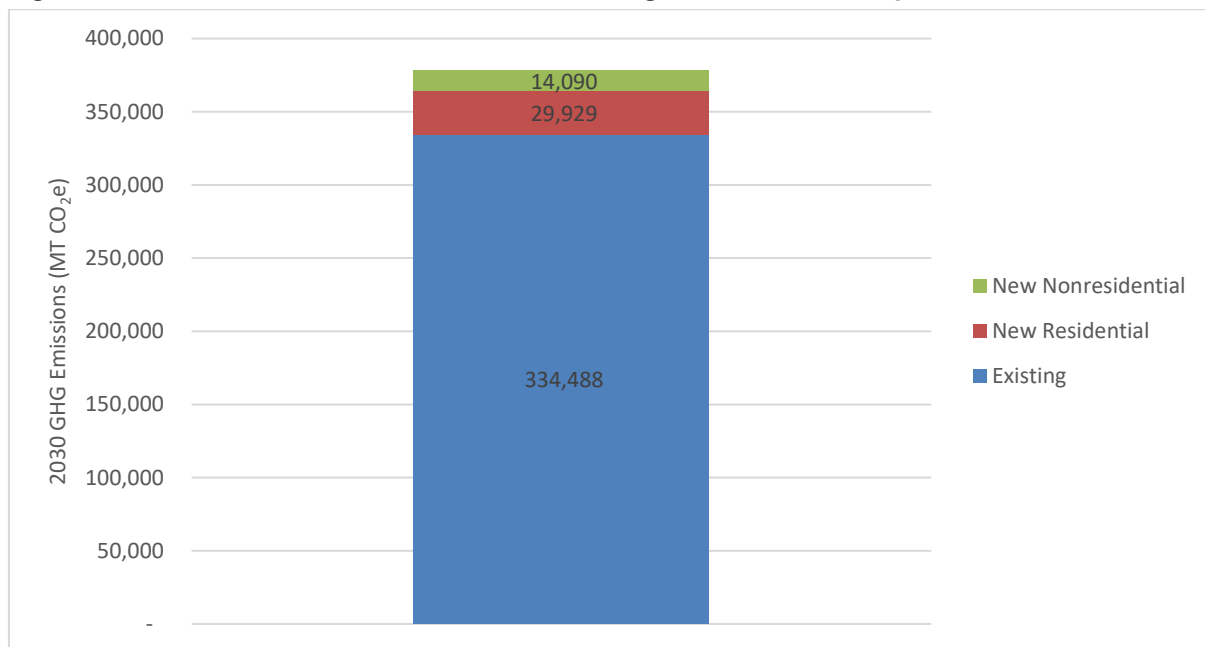


Table 2 summarizes the demographic projections for the City of Santa Barbara that were used in calculating GHG efficiency thresholds for the year 2030. As shown in the table, the numbers of residents, employees, and service persons are all anticipated to increase between 2019 and 2030.

Table 2 City of Santa Barbara Demographic Projections

Metric	2019 Estimate	2030 Forecast ²	Net Increase from New Development (2019-2030)
Residents	87,670	96,637	8,967
Employees	76,772	80,963	4,190
Service Population ¹	164,442	177,600	13,158

¹ The service population is equal to the residential population plus the number of employees.

² The 2019 Community GHG Emissions Inventory and 2030 Forecast generally aligns with the projections from SBCAG. Due to a small difference in methodologies, the 2023-2031 Housing Element uses a forecast of 98,600. Both projections are estimates of the future. However, the per capita emissions target adopted by the City of Santa Barbara will allow for alignment around the actual future population numbers, allowing for consistency across these plans.

Source: Santa Barbara, City of. 2023. *2019 Community GHG Emissions Inventory and 2030 GHG Emissions Forecast*.

Table 3 shows how the remaining GHG emissions for existing and new development after implementation of CAP Update measures are reagggregated to create communitywide emissions thresholds for 2030, using the demographic projections from Table 2. The resulting GHG thresholds are specified in Table 3 while the allowable 2030 GHG emissions are specified in Table 4.

Table 3 City of Santa Barbara 2030 CAP Update-Adjusted Emissions and Communitywide GHG Thresholds

	Residential (Existing & New)	Non-Residential (Existing & New)	Mixed-Use ¹ (Existing & New)
CAP Update-Adjusted 2030 Emissions (MT CO ₂ e)	210,684	167,823	378,507
Demographic Metric	96,637 residents	80,963 employees	177,600 service people ²
GHG Efficiency Threshold (MT CO ₂ e per demographic metric per year)	2.18 per resident	2.07 per employee	2.13 per service person ²

Notes: MT CO₂e = metric tons of carbon dioxide equivalent

¹It is not practical to disaggregate CAP Update-adjusted emissions forecasts into mixed-use, residential, and non-residential due to data constraints. The combined residential and non-residential emissions are used along with service population to calculate a mixed-use GHG threshold.

² The service population is equal to the residential population plus the number of employees.

Source: Appendix E CEQA GHG Thresholds Calculations; and Appendix F Justification for Thresholds.

4.2 Thresholds and Use

The GHG efficiency thresholds for residential, commercial, and mixed-use projects that have an operational year before 2030 are presented in Figure 3 and Table 4. If a project’s emissions do not exceed the applicable threshold, then it is considered consistent with the Santa Barbara CAP Update and its GHG emissions impacts (both project- and cumulative-level) would not result in a cumulatively considerable impact related to GHG emissions and would, therefore, be less than significant. If a project’s emissions exceed the applicable threshold, then mitigation measures must be identified, and GHG emissions reduction calculations included within the respective CEQA review document in order to reduce project GHG emissions to at or below the applicable threshold level. These thresholds are applicable to the following project types proposed in Santa Barbara:

- **Residential.** Generally, all residential uses. Zones may include, but are not limited to, the following: Residential Single Unit, Two-Unit Residential, Residential Multi-Unit, Residential Multi-Unit and Hotel, Mobile Home Park Overlay, Planned Unit Development, Priority Housing Overlay.
- **Nonresidential.** Generally, all commercial uses. Zones may include, but are not limited to, the following: Office Restricted, Office Medical, Commercial Restricted, Commercial General, Manufacturing Commercial , Light Manufacturing, Hotel and Related Commerce, Ocean Related Commercial, Ocean Oriented Light Manufacturing, Harbor Commercial, Park and Recreation, ACS Overlay – (Auto, Commercial, and Services), Research and Development.
- **Mixed-use.** A combination of at least one residential and at least one non-residential land use specified above. Zones may include any zone where both commercial and residential uses are allowed.

Figure 3 City of Santa Barbara GHG Efficiency Thresholds

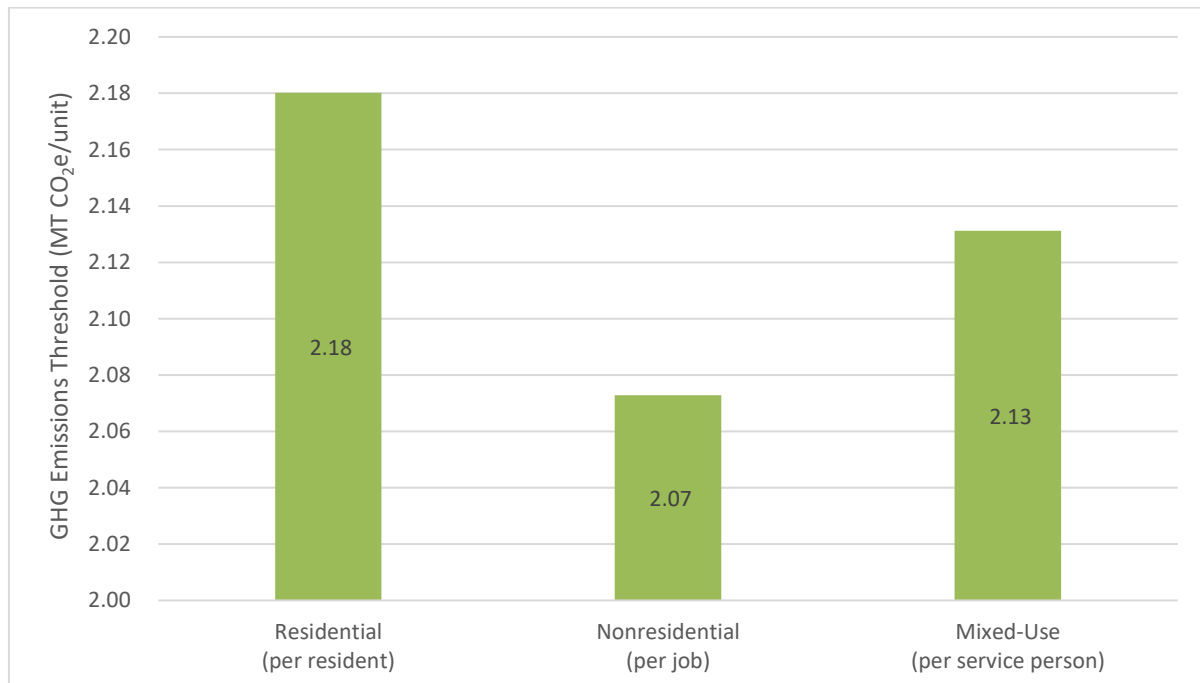


Table 4 City of Santa Barbara Locally Applicable Project CEQA GHG Emissions Thresholds

	2030 New Development		
	New Residential	New Non-Residential	New Mixed-Use ²
GHG Emissions Forecasted (new MT CO ₂ e) ¹	29,929	14,090	44,019
Demographic Metric	8,967 new residents	4,190 new employees	13,158 new service people ³
GHG Efficiency Threshold (MT CO ₂ e per demographic metric per year)	2.18 per resident	2.07 per employee	2.13 per service person ³

Notes: MT CO₂e = metric tons of carbon dioxide equivalent

¹ GHG Emissions Forecasted represent the new GHG emissions forecasted between 2019 and 2030. This also represents the allowable GHG emissions for each sector.

² GHG emissions from new mixed-use development would count against the total remaining GHG emissions budget for both new residential and new non-residential development rather than as a function of the number of new service people expected in 2030. This avoids double counting.

³ The service population is equal to the residential population plus the number of employees.

Source: Appendix F CEQA GHG Thresholds Calculations; and Appendix F Justification for Thresholds.

Typically, industrial uses that are subject to CEQA would increase jobs but also could increase GHG emissions in the City (such as manufacturing & processing, public facility, wholesaling, and other industrial uses) would not be able to utilize the GHG Efficiency Thresholds shown in Table 4 because 1) the City's GHG Inventory and Forecast does not account for industrial emissions and 2) these industrial projects may be subject to Santa Barbara County Air Pollution Control District (APCD) stationary source permitting or the State cap-and-trade program, or any combination of these uses. Some public works projects (such as facility upgrades and roadway improvement projects) that are subject to CEQA would also not be able to utilize the GHG Efficiency Thresholds because construction emissions¹¹ associated with those projects are not included in the City's GHG Inventory and Forecast. A different methodology and assessment would be necessary to evaluate GHG emissions impacts.

¹¹ Cumulative GHG emissions associated with construction from a project are generally orders of magnitude lower than the operational emissions from a project because construction emissions are generally short in duration compared to the project's overall lifetime, and thus can be assessed qualitatively as part of related CEQA GHG emissions analysis. However, some projects may have long construction periods or entail large quantities of cut and fill that could result in construction-related GHG emissions that may be considered significant. Thus, the City retains the discretion on a project-by-project basis to consider whether a project's construction-related GHG emissions could be cumulatively considerable and require more detailed quantitative CEQA GHG emissions analysis and respective mitigation.

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5 Moving into the Future

Full implementation of the CAP Update will reduce total communitywide GHG emissions by approximately 47 percent below 1990 levels by 2030 and 58 percent by 2035, which would leave a gap of approximately 297,689 MT CO₂e in 2035. This gap represents emissions that will need to be addressed with additional actions beyond those identified in the plan and laws, regulations, policies, programs, and ordinances set forth by the federal and state governments, regional agencies, and local partners. Consequently, the CAP Update includes monitoring and tracking mechanisms so the City can determine what additional actions may be necessary and when they should be employed to meet the City's carbon neutrality target.

Santa Barbara is committed to embracing that uncertainty, striving toward constant learning, engaging in systemic change using the tools and actions that local governments are uniquely suited to carry out, and positioning itself to take full advantage of future innovations, technologies, and policies and legislation that may be undertaken at the state and federal level. Technological innovation, clean-tech innovation, and changes to climate related policy and regulation occur rapidly. Several of the State's most successful environmental policy initiatives also had a gap between what was known at the time of adoption and eventual successful implementation. By committing to the ambitious target of carbon neutrality by 2035, Santa Barbara intends to catalyze innovation, invite resources from funding sources and partners, and provide climate leadership.

The CAP Update acknowledges that additional actions beyond those identified in the plan will be necessary to achieve carbon neutrality and, therefore, provides a mechanism for updating and adopting a new CAP Update every five to ten years (with regular assessment of progress) in order to incorporate new measures and innovative technologies that will further Santa Barbara toward meeting its goal of carbon neutrality. As the CAP is updated, the associated CEQA GHG Checklist will also be updated as needed to incorporate new measures and actions that discretionary development projects will need to incorporate, as applicable, to demonstrate consistency with the latest CAP. At the time at which the City identifies measures to achieve its carbon neutrality goal in totality, the City will adopt those measures in a public process following CEQA review, at which time that updated CAP will become a qualified GHG emission reduction plan for projects with post-2030 buildout years. However, the quantitative thresholds included in this guidance document will not need to be updated, because residential, non-residential, and mixed-use projects with post-2030 buildout years will need to achieve GHG emissions equivalent to zero MT CO₂e per year to demonstrate consistency with the CAP.

Finally, if future amendments or updates of the Santa Barbara Land Use Element occur, then such amendments or updates will be incorporated into future updates of the CAP Update to ensure that project applicants can continue to utilize the streamlining process, which is partly dependent on a project's consistency with the demographic forecasts and land use assumptions based on the General Plan Land Use Element to the greatest extent practicable.

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Appendix A

Climate Action Plan Summary

Climate Action Plan Summary

The following sections provide an overview of the CAP Update, including the 2019 communitywide GHG emissions inventory, the communitywide GHG emissions forecast, and the proposed GHG emission reduction strategy.

Communitywide GHG Emissions Inventories

The City has completed a communitywide GHG emissions inventory for the year 2019. The City's targets have been set based on the 2019 inventory. The City estimated 1990 emissions by back-casting the 2019 emissions to 1990 using the change in state emissions between the same time period as a proxy for change in the City. The 2019 inventory and 1990 estimate are summarized in Table 1. As shown therein, total communitywide GHG emissions declined by approximately 13 percent between 1990 and 2019.

Table 1 City of Santa Barbara 1990 and 2019 Communitywide GHG Emissions Levels

Sector	1990 ¹	2019	Percent Change from 1990 to 2019 (%)
Electricity (MT CO ₂ e)	N/A	115,442	N/A
Natural Gas (MT CO ₂ e)	N/A	134,068	N/A
Transportation (MT CO ₂ e)	N/A	317,966	N/A
Solid Waste (MT CO ₂ e)	N/A	52,977	N/A
Water & Wastewater (MT CO ₂ e)	N/A	1,657	N/A
Total GHG Emissions (MT CO₂e)	715,530	622,110	-13%

MT = metric tons; CO₂e = carbon dioxide equivalents

Note: Mass emissions are rounded to the nearest integer and per capita emissions are rounded to the nearest tenth.

¹ 1990 GHG emissions were estimated by back-casting Santa Barbara's total 2019 GHG emissions based on the change in the State's GHG emissions between 2019 and 1990. 1990 GHG emissions were not estimated at the individual sector level.

Source: Santa Barbara, City of. 2023. Santa Barbara 2019 Community GHG Inventory, Forecast, and Targets.

GHG Emission Reduction Strategy

The CAP Update includes a series of measures and actions that are intended to reduce communitywide GHG emissions per capita by at least 40 percent below 1990 per capita levels by 2030. This provides substantial progress toward meeting the City's longer-term carbon neutrality goal while also meeting the State's 2030 goal. The CAP Update acknowledges that additional actions beyond those identified in the plan will be necessary to achieve the long-term target of carbon neutrality. Therefore, the CAP Update provides a mechanism for tracking performance over time, reporting annual progress to the City Council, conducting inventory updates at minimum every three years, and adopting a new CAP Update by 2030 (with the ability to adjust as needed based on progress), in order to incorporate new strategies and technologies that will further the City toward meeting its long-term aspirational goal of carbon neutrality.

As part of the CAP Update process, the City has developed a set of measures reducing communitywide GHG emissions in all sectors to exceed the City's 2030 GHG emission reduction target and make substantial progress towards the City's goal for carbon neutrality. Each measure is

supported by a set of actions that provide a measurable GHG emissions reduction that is supported by substantial evidence. The City has also developed measures and supportive actions for offsetting GHG emissions through carbon sequestration. Measures and actions are organized according to the following hierarchy:

1. **Sectors.** Sectors define the GHG emissions category in which the GHG emissions reduction will take place and include Building Energy, Transportation, Water, Waste, and Carbon Sequestration.
2. **Measures.** Measures identify specific goals (i.e., activity data targets by 2030 and 2035) to address GHG emissions in each sector. A single measure generally addresses a subsector; for example, three strategies may be established under the Transportation sector to address active transportation, shared/public transportation, and single-passenger vehicles.
3. **Actions.** Actions identify the programs, policies, funding pathways, and other specific commitments that the City will implement. Each strategy contains a suite of actions, which together have been designed to accomplish the measure goal.

Table 2**Error! Reference source not found.** summarizes the GHG emissions reduction that are anticipated to be achieved by 2030 by the identified measures in the CAP Update and existing local programs (e.g. Santa Barbara Clean Energy [SBCE] and Santa Barbara’s ReSource Center waste management facility), in addition to state legislation and programs. As shown therein, implementation of state legislation and programs is expected to reduce 2030 total communitywide GHG emissions approximately 18 percent below 1990 emission levels. With current local programs, including continued enrollment in SBCE and the ReSource Center programs, 2030 total communitywide GHG emissions are further reduced by approximately 17 percent to 35 percent below 1990 levels. Implementation of the CAP Update measures would reduce 2030 total communitywide GHG emissions an additional 12 percent for a total reduction of approximately 47 percent below 1990 emission levels.

Table 2 City of Santa Barbara GHG Emissions Reductions by 2030

Source	Absolute Annual Emissions Reductions (MT of CO ₂ e)
1990 Baseline Emissions	715,530
Business-as-Usual (BAU) 2030 Emissions	698,596
State Laws/Programs	(112,176)
SBCE	(75,608)
ReSource Center	(44,690)
Buildings & Energy Strategies	(21,512)
Transportation Strategies	(63,081)
Waste Diversion Strategies ¹	(2,861)
Water & Wastewater Strategies	(1.72)
Natural Systems Strategies	(159)
Total Emissions Reduction (from BAU)	(320,088)
Remaining 2030 Emissions	378,507
Percent Reduction below 1990 Levels	(47%)

() denotes a negative number; numbers in table may not add to the total exactly due to rounding.

MT = metric tons; CO₂e = carbon dioxide equivalents

¹ Reductions listed here are those achieved in excess of SB 1383 compliance obligation for organic waste diversion and procurement requirements that have already been achieved with City enrollment at the ReSource Center beginning in 2021.

Source: City of Santa Barbara Climate Action Plan Update and GHG Emissions Reduction Measure Quantification and Evidence Appendix

GHG Emissions Forecast

Figure 1~~Error! Reference source not found.~~ and Table 3 summarize the communitywide GHG emissions forecast under four scenarios: 1) business-as-usual, 2) implementation of state laws and programs [State Legislative Adjusted Forecast], 3) State Legislative Adjusted Forecast in addition to continued enrollment in SBCE and use of the ReSource Center to meet SB 1383 compliance, and 4) forecasted reductions from implementation of the CAP Update measures and actions in addition to State laws and programs and current local programs (i.e., SBCE and ReSource Center)

As shown therein, under the business-as-usual scenario, total communitywide GHG emissions are forecasted to increase by approximately 18 percent between 2019 and 2035 based on economic and population growth. However, with implementation of state laws and programs, total communitywide GHG emissions would decline by approximately 14 percent between 2019 and 2035. With continued enrollment in existing programs, specifically SBCE and use of the ReSource Center, total communitywide GHG emissions in 2035 are forecasted to decline by an additional 11 percent for a total decline of 25 percent below 2019 levels. Furthermore, full implementation of the CAP Update alongside state laws and programs and continued enrollment in current local programs (e.g., SBCE and ReSource Center), total communitywide GHG emissions are anticipated to decline 52 percent below 2019 levels by 2035. This trajectory equates to a 47 percent below 1990 emission levels by 2030 and 58 percent below 1990 emission levels by 2035.¹²

¹² This represents significant progress towards the City's long-term goal of carbon neutrality by 2035. The City will rely on new measures in the form of regular CAP updates, new state legislation and new technological advances to achieve this target.

Figure 1 City of Santa Barbara GHG Emissions Forecast and GHG Emission Reduction Pathway, 2019 to 2045

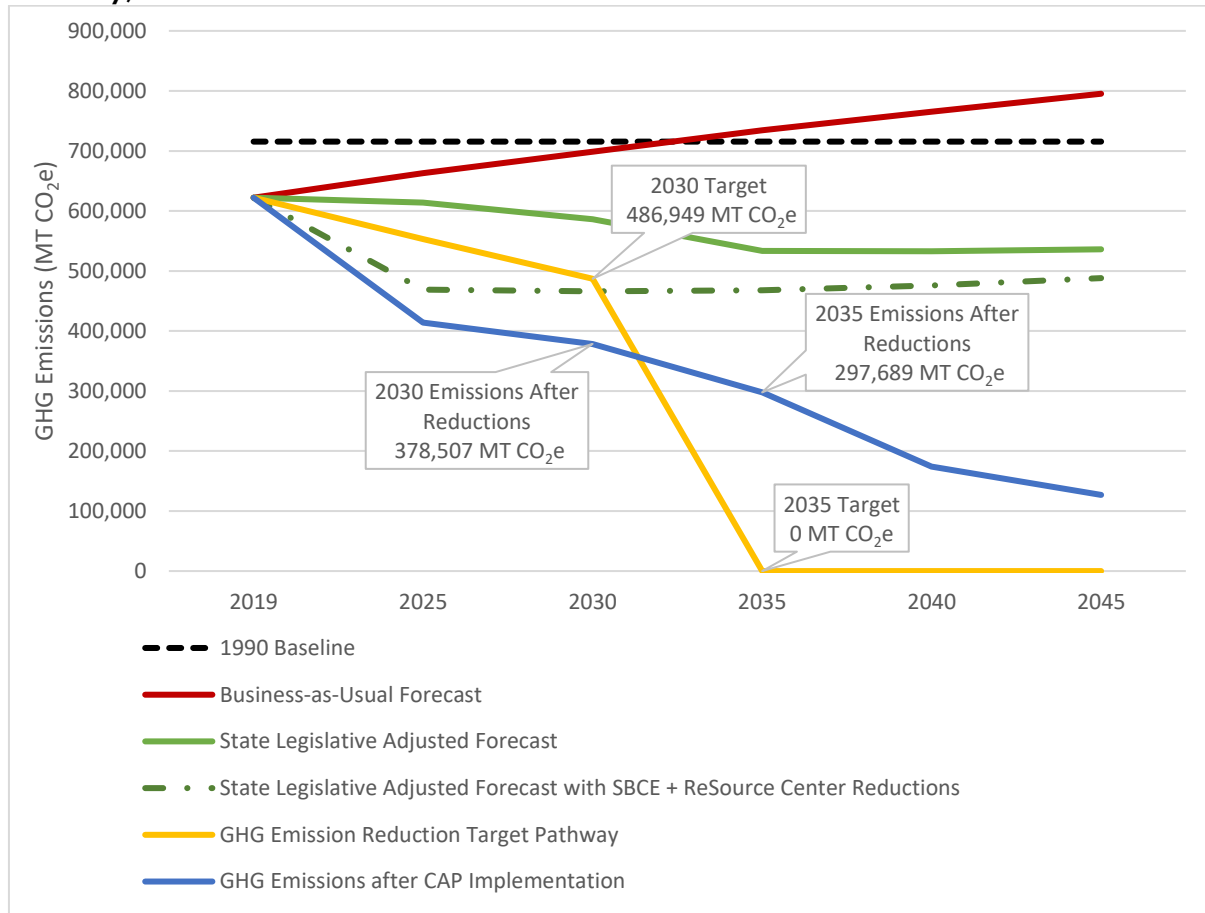


Table 3 City of Santa Barbara GHG Emissions Forecast Through 2045

Sector	2019 (MT of CO ₂ e)	2025 (MT of CO ₂ e)	2030 (MT of CO ₂ e)	2035 (MT of CO ₂ e)	2040 (MT of CO ₂ e)	2045 (MT of CO ₂ e)
Business-as-Usual GHG Emissions						
Electricity	115,442	119,973	123,748	127,524	130,031	132,431
Natural Gas	134,068	140,306	145,504	150,703	152,898	154,856
Transportation	317,966	345,687	370,338	395,247	420,077	444,944
Solid Waste	52,977	55,289	57,216	59,142	60,301	61,134
Water & Wastewater	1,657	1,730	1,790	1,850	1,887	1,913
Total	622,110	662,984	698,596	734,467	765,193	795,278
State Legislative Adjusted Forecast (GHG Emissions After Implementation of State Laws/Programs)						
Electricity	115,442	107,269	79,587	20,617	10,580	–
Natural Gas	134,068	139,975	144,898	149,822	151,959	153,869
Transportation	317,966	309,941	303,012	302,203	308,367	319,253
Solid Waste	52,977	55,289	57,216	59,142	60,301	61,134
Water & Wastewater	1,657	1,705	1,706	1,637	1,648	1,649
Total	622,110	614,180	586,420	533,421	532,854	535,905
GHG Emissions After Implementation of State Laws/Programs, SBCE, and ReSource Center						
Electricity	115,442	5,363	3,979	1,031	529	–
Natural Gas	134,068	139,975	144,898	149,822	151,959	153,869
Transportation	317,966	309,941	303,012	302,203	308,367	319,253
Solid Waste	52,977	12,119	12,526	12,933	13,198	13,399
Water & Wastewater	1,657	1,705	1,706	1,637	1,648	1,649
Total	622,110	469,104	466,122	467,625	475,700	488,170
GHG Emissions After Implementation of State Laws/Programs, SBCE, ReSource Center, and Santa Barbara CAP¹						
Electricity	115,442	5,363	3,979	1,031	529	–
Natural Gas	134,068	133,569	123,387	113,130	107,621	102,830
Transportation	317,966	261,244	239,931	175,033	66,395	24,455
Solid Waste	52,977	12,119	9,665	7,018	(1,877)	(1,885)
Water & Wastewater	1,657	1704.05	1704.65	1636.41	1647.15	1648.54
Carbon Sequestration	N/A	(18)	(159)	(159)	(159)	(159)
Total	622,110	413,982	378,507	297,689	174,156	126,890

() denotes a negative number

¹ The 2019 Santa Barbara GHG Inventory and Forecasts do not include carbon sequestration; however, the CAP Update has quantitative measures to increase carbon sequestration.

MT = metric tons; CO₂e = carbon dioxide equivalents

Source: Santa Barbara, City of. 2023. Santa Barbara Forecasts through 2045.

At this time, the State has codified a target of reducing emissions to 40 percent below 1990 emissions levels by 2030 (SB 32) and has developed the 2022 Climate Change Scoping Plan to demonstrate how the State will achieve the 2030 target and make substantial progress toward the 2045 goal of carbon neutrality established by AB 1279.

While state and regional regulations related to energy and transportation systems, along with the State’s Cap and Trade program, are designed to be set at limits to achieve most of the GHG emissions reductions needed to achieve the State’s long-term goals, local governments can do their

fair share toward meeting the State’s goals by siting and approving projects that accommodate planned population growth and projects that are GHG-efficient. The Association of Environmental Professional (AEP) Climate Change Committee recommends that CEQA GHG analyses evaluate project emissions in light of the trajectory of state climate change legislation and assess their “substantial progress” toward achieving long-term reduction targets identified in available plans and legislation.

The City has adopted a longer-term target of achieving carbon neutrality by 2035 and has proposed the CAP Update as a pathway to make progress toward this target. Implementation of the CAP Update, in addition to state laws and continued enrollment in local programs (e.g., SBCE and ReSource Center), would achieve an approximately 47 percent reduction in total communitywide GHG emissions below 1990 emission levels by 2030—to 378,507 MT CO₂e—and a 58 percent reduction below 1990 emission levels by 2035—to 297,689 MT CO₂e in 2035). Therefore, the City’s longer-term target of carbon neutrality and the associated CAP Update establish a trajectory that provides GHG emissions reductions equal to or greater than those required by SB 32 for 2030. Because SB 32 is considered an interim target toward meeting the State’s long-term goals, implementation of the CAP Update would make substantial progress toward meeting the State’s long-term goal. Avoiding interference with, and making substantial progress toward, these long-term state goals is important because these goals have been set at levels that achieve California’s fair share of international emissions reduction goals that will stabilize global climate change effects and avoid the adverse environmental consequences described in Appendix B Overview of GHG Emissions and Climate Change (AB 1279).

Appendix B

Overview of GHG Emissions and Climate Change

Overview of GHG Emissions and Climate Change

Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of Earth’s atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. The term “climate change” is often used interchangeably with the term “global warming,” but “climate change” is preferred to “global warming” because it helps convey other changes in addition to rising temperatures. The baseline against which these changes are measured originates from historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate changes continuously, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed substantial acceleration in the rate of warming during the past 150 years. The United Nations Intergovernmental Panel on Climate Change (IPCC) expressed that the rise and continued growth of atmospheric CO₂ concentrations is unequivocally due to human activities in the IPCC’s Sixth Assessment Report from 2021. Human influence has warmed the atmosphere, ocean, and land, which has led the climate to warm at an unprecedented rate in the last 2,000 years. It is estimated that between the period of 1850 through 2019, that a total of 2,390 gigatonnes of anthropogenic CO₂ was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07 degrees Celsius between the years 2010 through 2019.¹³ Furthermore, since the late 1700s, estimated concentrations of carbon dioxide (CO₂), methane (CH₄), nitrous oxides (N₂O) in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent, respectively, primarily due to human activity.¹⁴ Emissions resulting from human activities are thereby contributing to an average increase in Earth’s temperature.

Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. The gases widely seen as the principal contributors to human-induced climate change include CO₂, CH₄, N₂O, fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere, and natural processes, such as oceanic evaporation, largely determine its atmospheric concentrations.

GHGs are emitted by natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are usually by-products of fossil fuel combustion, and CH₄ results from off-gassing associated with agricultural practices and

¹³ Intergovernmental Panel on Climate Change (IPCC). 2021. Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)] Cambridge University Press. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf

¹⁴ United States Environmental Protection Agency (U.S. EPA). 2021. Climate Change Indicators: Atmospheric Concentrations of Greenhouse Gases. Last updated April 2021. <https://www.epa.gov/climate-indicators/climate-change-indicators-atmospheric-concentrations-greenhouse-gases>

landfills. Human-made GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and SF₆.¹⁵

Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO₂) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as “carbon dioxide equivalent” (CO₂e), which is the amount of GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, CH₄ has a GWP of 30, meaning its global warming effect is 30 times greater than CO₂ on a molecule per molecule basis.^{16,17}

The accumulation of GHGs in the atmosphere regulates the earth’s temperature. Without the natural heat-trapping effect of GHGs, the earth’s surface would be about 33 degrees Celsius (°C) cooler.¹⁸ However, since 1750, estimated concentrations of CO₂, CH₄, and N₂O in the atmosphere have increased by 36 percent, 148 percent, and 18 percent, respectively, primarily due to human activity.¹⁹ GHG emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, are believed to have elevated the concentration of these gases in the atmosphere beyond the level of concentrations that occur naturally.

Greenhouse Gas Emissions Inventories

Global Emissions Inventory

In 2015, worldwide anthropogenic GHG emissions totaled 47,000 MMT of CO₂e, which is a 43 percent increase from 1990 GHG levels. The largest source of GHG emissions were energy production and use (includes fuels used by vehicles and buildings), which accounted for 75 percent of the global GHG emissions. Agriculture uses and industrial processes contributed 12 percent and six percent, respectively. Waste sources contributed three percent. These sources account for approximately 96 percent.²⁰

15 U.S. EPA. 2021. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019. April 2021.

<https://www.epa.gov/system/files/documents/2022-02/us-ghg-inventory-2022-main-text.pdf>

16 The IPCC’s *Sixth Assessment Report* from 2021 determined that methane has a GWP of 30. However, the 2017 Climate Change Scoping Plan published by the California Air Resources Board uses a GWP of 25 for methane, consistent with the Intergovernmental Panel on Climate Change’s *Fourth Assessment Report* from 2007. Therefore, this analysis utilizes a GWP of 25.

17 IPCC. 2021. Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)] Cambridge University Press. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf

18 World Meteorological Organization. 2020. “Greenhouse Gases.” <https://public.wmo.int/en/our-mandate/focus-areas/environment/greenhouse%20gases>

19 Forster, P., V. Ramaswamy, P. Artaxo, T. Bernsten, R. Betts, D.W. Fahey, J. Haywood, J. Lean, D.C. Lowe, G. Myhre, J. Nganga, R. Prinn, G. Raga, M. Schulz and R. Van Dorland. 2007. Changes in Atmospheric Constituents and in Radiative Forcing. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. <https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-chapter2-1.pdf>

20 U.S. EPA. 2023. Climate Change Indicators: Global Greenhouse Gas Emissions. Available at: <https://www.epa.gov/climate-indicators/climate-change-indicators-global-greenhouse-gas-emissions>

United States Emissions Inventory

United States GHG emissions were 6,347.7 MMT of CO₂e in 2021 (or 5,593.5 MMT CO₂e after accounting for sequestration), a 6.8 percent increase from 2020 emissions. The increase from 2020 to 2021 was driven by an increase in CO₂ emissions from fossil fuel combustion which increased 7 percent relative to previous years and is primarily due to the economic rebounding after the COVID-19 pandemic. In 2020, the energy sector (including transportation) accounted for 81 percent of nationwide GHG emissions while agriculture, industrial and waste accounted for approximately 10 percent, 6 percent, and 3 percent respectively.²¹

California Emissions Inventory

Based on a review of the CARB California Greenhouse Gas Inventory for the years between 2000-2020, California produced 369.2 MMT of CO₂e in 2020, which is 35.3 MMT of CO₂e lower than 2019 levels. The 2019 to 2020 decrease in emissions is likely due in large part to the impacts of the COVID-19 pandemic. The major source of GHG emissions in California is the transportation sector, which comprises 37 percent of the state's total GHG emissions. The industrial sector is the second largest source, comprising 20 percent of the state's GHG emissions while electric power accounts for approximately 16 percent. The magnitude of California's total GHG emissions is due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions as compared to other states is its relatively mild climate. In 2016, the state of California achieved its 2020 GHG emission reduction target of reducing emissions to 1990 levels as emissions fell below 431 MMT of CO₂e.²² The annual 2030 statewide target emissions level is 260 MMT of CO₂e.²³

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past four decades has been warmer than all the previous decades in the instrumental record and the decade from 2011 through 2020 has been the warmest. The observed global mean surface temperature (GMST) for the decade from 2011 to 2020 was approximately 1.09°C (0.95°C to 1.20°C) higher than the average GMST over the period from 1850 to 1900. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition to these findings, the latest IPCC report states that "human-induced climate change is already affecting many weather and climate extremes in every region across the globe."²⁴ These climate change impacts include climate change

²¹ U.S. EPA. 2023. Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2021. Available at: <https://www.epa.gov/system/files/documents/2023-04/US-GHG-Inventory-2023-Main-Text.pdf>

²² CARB. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. Available at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>

²³ CARB. 2017. California's 2017 Climate Change Scoping Plan. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf

²⁴ IPCC. 2021. Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)] Cambridge University Press. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf

sea level rise, increased weather extremes, and substantial ice loss in the Arctic over the past three decades.

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 0.6 to 1.1°C higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include reduced water supply from snowpack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years.²⁵ In addition to statewide projections, *California's Fourth Climate Change Assessment* includes regional reports that summarize climate impacts and adaptation solutions for nine regions of the State and regionally-specific climate change case studies.²⁶ However, while there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. A summary follows of some of the potential effects that could be experienced in California as a result of climate change.

Hydrology and Sea Level Rise

Climate change could affect the intensity and frequency of storms and flooding.²⁷ Furthermore, climate change could induce substantial sea level rise in the coming century. Rising sea level increases the likelihood of and risk from flooding. The rate of increase of global mean sea levels between 1993 to 2020, observed by satellites, is approximately 3.3 millimeters per year, double the twentieth century trend of 1.6 millimeters per year.^{28,29} Global mean sea levels in 2013 were about 0.23 meter higher than those of 1880.³⁰ Sea levels are rising faster now than in the previous two millennia, and the rise will probably accelerate, even with robust GHG emission control measures. The most recent IPCC report predicts a mean sea level rise of 11 to 21.5 inches by 2100 under the lowest emissions scenario and a rise of 25 to 40 inches by 2100 under the very high emissions scenario.³¹

A rise in sea levels could erode 31 to 67 percent of California beaches and cause flooding of approximately 370 miles of coastal highways during 100-year storm events. This would also jeopardize California's water supply due to saltwater intrusion and induce groundwater flooding and/or exposure of buried infrastructure.³² Furthermore, increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

²⁵ California, State of. 2018. *California's Fourth Climate Change Assessment Statewide Summary Report*. August 27, 2018. https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf

²⁶ Ibid.

²⁷ Ibid.

²⁸ World Meteorological Organization. 2013. *A summary of current and climate change findings and figures: a WMO information note*. March 2013. https://library.wmo.int/opac/index.php?lvl=notice_display&id=15892#.Wt9-Z8gvzIU

²⁹ National Aeronautics and Space Administration. 2020. "Global Climate Change – Vital Signs of the Planet – Sea Level." <https://climate.nasa.gov/vital-signs/sea-level/>

³⁰ Ibid.

³¹ IPCC. 2021. *Climate Change 2021: The Physical Science Basis*. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)] Cambridge University Press. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf

³² California, State of. 2018. *California's Fourth Climate Change Assessment Statewide Summary Report*. August 27, 2018. https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf

Air Quality

Scientists project that the annual average maximum daily temperatures in California could rise by 2.4 to 3.2°C in the next 50 years and by 3.1 to 4.9°C in the next century.³³ Higher temperatures are conducive to air pollution formation, and rising temperatures could therefore result in worsened air quality in California. As a result, climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. In addition, as temperatures have increased in recent years, the area burned by wildfires throughout the State has increased, and wildfires have occurred at higher elevations in the Sierra Nevada Mountains.³⁴ If higher temperatures continue to be accompanied by an increase in the incidence and extent of large wildfires, air quality could worsen. Severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains could tend to temporarily clear the air of particulate pollution, which would effectively reduce the number of large wildfires and thereby ameliorate the pollution associated with them.³⁵

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future precipitation trends and water supplies in California. Year-to-year variability in statewide precipitation levels has increased since 1980, meaning that wet and dry precipitation extremes have become more common.³⁶ This uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The average early spring snowpack in the western U.S., including the Sierra Nevada Mountains, decreased by about 10 percent during the last century. During the same period, sea level rose over 0.15 meter along the central and southern California coasts.³⁷ The Sierra snowpack provides the majority of California's water supply as snow that accumulates during wet winters is released slowly during the dry months of spring and summer. A warmer climate is predicted to reduce the fraction of precipitation that falls as snow and the amount of snowfall at lower elevations, thereby reducing the total snowpack.³⁸ Projections indicate that average spring snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050.³⁹

³³ Ibid.

³⁴ Ibid.

³⁵ California Natural Resources Agency. 2009. 2009 California Climate Adaptation Strategy. March 2009. http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf

³⁶ California Department of Water Resources. 2018. Indicators of Climate Change in California. May 2018. <https://oehha.ca.gov/media/downloads/climate-change/reports/2018caindicatorsreportmay2018.pdf>

³⁷ California, State of. 2018. California's Fourth Climate Change Assessment Statewide Summary Report. August 27, 2018.

https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf

³⁸ Ibid.

³⁹ Ibid.

Agriculture

California has an over \$51 billion annual agricultural industry that produces over a third of the country's vegetables and three-quarters of the country's fruits and nuts.⁴⁰ Higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, certain regions of agricultural production could experience water shortages of up to 16 percent, which would increase water demand as hotter conditions lead to the loss of soil moisture. In addition, crop yield could be threatened by water-induced stress and extreme heat waves, and plants may be susceptible to new and changing pest and disease outbreaks (California Natural Resource Agency 2019). Temperature increases could also change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality.⁴¹

Ecosystems and Wildlife

Climate change and the potential resultant changes in weather patterns could have ecological effects on the global and local scales. Soil moisture is likely to decline in many regions as a result of higher temperatures, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: timing of ecological events; geographic distribution and range of species; species composition and the incidence of nonnative species within communities; and ecosystem processes, such as carbon cycling and storage.^{42,43}

⁴⁰ California Department of Food and Agriculture. 2022. California Agricultural Production Statistics. Available at: <https://www.cdffa.ca.gov/Statistics/>

⁴¹ California Climate Change Center (CCCC). 2006. Climate Scenarios for California.

⁴² Parmesan, C. August 2006. Ecological and Evolutionary Responses to Recent Climate Change.

⁴³ California, State of. 2018. California's Fourth Climate Change Assessment Statewide Summary Report. August 27, 2018.

https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf

Appendix C

Quantifying GHG Emissions

Quantifying GHG Emissions

There are a variety of analytical tools available to estimate project-level GHG emissions, including the California Emissions Estimator Model (CalEEMod),⁴⁴ which is a free, publicly available computer model developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with various air quality districts throughout the State. Alternative tools may be used to quantify emissions if they can be substantiated. In general, the most current version of CalEEMod should be used to calculate total emissions for discretionary development projects. The analysis should focus on carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), because these are the GHGs that most development projects would generate in the largest quantities. Fluorinated gases, such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluorides, should also be considered for the analysis. Emissions of all GHGs should be converted into their equivalent global warming potential in terms of CO₂ (CO₂e). Calculations should be based on the current methodologies recommended by the CAPCOA and the APCD.^{45, 46}

Construction GHG Emissions

Construction activities emit GHGs primarily through combustion of fuels (mostly diesel) in the engines of off-road construction equipment and in on-road construction vehicles and in the commute vehicles of the construction workers. Smaller amounts of GHGs are emitted indirectly through the energy required for water used for fugitive dust control and lighting for the construction activity. Every phase of the construction process, including demolition, grading, paving, and building, emits GHG emissions in volumes proportional to the quantity and type of construction equipment used. Heavier equipment typically emits more GHGs per hour than lighter equipment because of their engine design and greater fuel consumption.

The APCD recommends quantifying and disclosing construction related GHG emissions for informational purposes.⁴⁷ CalEEMod generates a default construction schedule and equipment list based on the plan-/project-specific information, including land use, project size, location, and construction timeline.⁴⁸ In general, if specific applicant-provided information is unknown, the default construction equipment list and phase lengths are the most appropriate inputs. However, if

⁴⁴ The most current available version of CalEEMod should be used. As of August 2023, CalEEMod version 2022.1 is the most current version and should be used to quantify project-level emissions.

⁴⁵ California Air Pollution Control Officers Association. 2008. *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA)*. January 2008.

⁴⁶ Santa Barbara APCD. 2021. Environmental Thresholds and Guidelines Manual. Accessed at https://www.sblafco.org/files/f2915ea5d/Information_Item_No_1__Attachment_B_Environmental_Thresholds_Amended_January_2021.pdf.

⁴⁷ Cumulative GHG emissions associated with construction from a land use development project are generally orders of magnitude lower than the operational emissions from a project because construction emissions are generally short in duration compared to the project's overall lifetime, and thus can be assessed qualitatively as part of related CEQA GHG emissions analysis. However, some projects may have long construction periods or entail large quantities of cut and fill that could result in construction-related GHG emissions that may be considered significant. Thus, the City retains the discretion on a project-by-project basis to consider whether a project's construction-related GHG emissions could be cumulatively considerable and require more detailed quantitative CEQA GHG emissions analysis and respective mitigation.

⁴⁸ CAPCOA. 2022. California Emissions Estimator Model User Guide: Version 2022.1. Prepared by ICF in collaboration with Sacramento Metropolitan Air Quality Management District, Fehr & Peers, STI, and Ramboll. <http://www.aqmd.gov/caleemod/user's-guide>.

more detailed site-specific equipment and phase information (i.e., data from the project applicant) is available, the model's default values can (and should) be overridden.⁴⁹

Operational GHG Emissions

CalEEMod estimates operational emissions of CO₂, N₂O, and CH₄ generated by area sources, energy use, vehicle trips (i.e., mobile sources), waste generation, and water use and conveyance. Operational emissions should be calculated for the year 2030, rather than the project buildout year, in order to provide an appropriate comparison of project emissions to the year 2030 threshold.

Area Source Emissions

Area sources include GHG emissions that would occur from the use of landscaping equipment, hearths, and woodstoves, which emit GHGs associated with the equipment's fuel combustion. The landscaping equipment emission values in CalEEMod are derived from CARB's Small Off-Road Engines Model v1.1 (SORE2020).⁵⁰ Emission rates for combustion of wood and natural gas for wood stoves and fireplaces are based on those published by the U.S. EPA. Typically, no adjustments to landscaping equipment inputs are necessary. The number of hearths and woodstoves should be adjusted in CalEEMod to reflect the project design.

Energy Use Emissions

GHGs are emitted on-site during the combustion of natural gas for cooking, space and water heating, and decorative uses and off-site during the generation of electricity from fossil fuels in power plants. CalEEMod estimates GHG emissions from energy use by multiplying average rates of residential and non-residential energy consumption by the quantities of residential units and non-residential square footage entered in the land use module to obtain total projected energy use. This value is then multiplied by electricity and natural gas GHG emission factors applicable to the project location and utility provider. Building energy use is typically divided into energy consumed by the built environment and energy consumed by uses that are independent of the building, such as plug-in appliances. Non-building energy use, or "plug-in energy use," can be further subdivided by specific end-use (refrigeration, cooking, office equipment, etc.). In California, Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting.

Electricity emissions are calculated by multiplying the energy use by the carbon intensity of the utility district per kilowatt hour.⁵¹ Projects would be served either by Santa Barbara Clean Energy [SBCE] or SCE. The specific energy intensity factors (i.e., the amount of CO₂, CH₄, and N₂O per kilowatt-hour) for the applicable utility should be used in the calculations of GHG emissions.

As of publication of this guidance document, the current iteration of Title 24 includes the 2022 Building Energy Efficiency Standards. In accordance with Section 150.1(b)14 of the 2022 Building Energy Efficiency Standards, all new residential uses three stories or less must install photovoltaic (PV) solar panels that generate an amount of electricity equal to the expected electricity usage. The calculation method contained in Section 150.1(b)14 of the 2022 Building Energy Efficiency Standards should be utilized to estimate the number of kilowatts of PV solar panels that would be required for a residential project three stories or less. In addition, modeling should account for any local

⁴⁹Ibid.

⁵⁰Ibid.

⁵¹Ibid.

regulations pertaining to mandatory solar provisions. Online resources can be used to determine the kilowatt-hours that would be generated per year by the required solar PV system.⁵² The energy reduction achieved by on-site PV solar panels should be included in CalEEMod. Future updates to Title 24 as they relate to the Building Energy Efficiency Standards should be incorporated into CalEEMod as applicable.

Mobile Source Emissions

CalEEMod quantifies mobile source emissions generated by vehicle trips associated with the proposed project. If available, project-specific trip generation rates or Vehicle Miles Travelled (VMT) data should be input in CalEEMod.

Water and Wastewater Emissions

The amount of water used, and the amount of wastewater generated by a project generate indirect GHG emissions. These emissions are a result of the energy used to supply, convey, and treat water and wastewater. In addition to the indirect GHG emissions associated with energy use, the wastewater treatment process itself can directly emit both CH₄ and N₂O.

CalEEMod calculates indoor residential water consumption based on per capita daily water use rates from the Residential End Uses of Water published by the Water Research Foundation in 2016. For non-residential land uses, indoor water use comes from the Pacific Institute's (2003) *Waste Not, Want Not: The Potential for Urban Water Conservation in California*.⁵³ Outdoor water use is based on the Maximum Applied Water Allowance Method established under the Model Water Efficient Landscape Ordinance. Wastewater generation is based on a reported percentage of total indoor water use.

Future updates to Title 24 as they relate to CALGreen water efficiency requirements should be incorporated into CalEEMod as applicable.

Solid Waste Emissions

The disposal of solid waste produces GHG emissions from the transportation of waste, anaerobic decomposition in landfills, and incineration. To calculate the GHG emissions generated by solid waste disposal, the total volume of solid waste is calculated using waste disposal rates identified by CalRecycle. The methods for quantifying GHG emissions from solid waste are based on the IPCC method, using the degradable organic content of waste. CEQA document preparers should contact the City's Public Works Department to obtain the City's most recent solid rate diversion rate to be included in the calculation of solid waste GHG emissions.

Project Design Features

CEQA document preparers should use the "Mitigation" tabs in CalEEMod to include project design features applicable to the project.⁵⁴ These features often include increased density, improved destination accessibility, proximity to transit, integration of below market rate housing, unbundling

⁵² Lane, Catherine. 2023. "How much electricity does a solar panel produce?" Last updated: June 13, 2023. <https://www.solarpowerrocks.com/solar-basics/how-much-electricity-does-a-solar-panel-produce/>.

⁵³ CAPCOA. 2022. California Emissions Estimator Model User Guide: Version 2022.1. Prepared by ICF in collaboration with Sacramento Metropolitan Air Quality Management District, Fehr & Peers, STI, and Ramboll. <http://www.aqmd.gov/caleemod/user's-guide>.

⁵⁴ "Mitigation" is a term of art for the modeling input and is not equivalent to mitigation measures that may apply to the CEQA impact analysis.

of parking costs, provision of transit subsidies, implementation of alternative work schedules, use of energy- and/or water-efficient appliances, use of reclaimed and/or grey water, and installation of water-efficient irrigation system. Users should consider the applicability of these features to the project and review the CAPCOA *Quantifying Greenhouse Gas Mitigation Measures* (2010) publication to ensure that the chosen features are relevant and feasible in light of the project.⁵⁵

Residents, Employees, and Service Populations

The quantitative thresholds presented in Section 4, Quantitative CEQA GHG Thresholds, are expressed in terms of per resident for residential projects, per employee for non-residential projects, and per service person for mixed-use projects. Estimates of the resident, employee, or service population for a project should be based on substantial evidence. Data provided by the applicant as well as the following resources may be utilized in estimating resident and employee populations:

- **Persons per Household.** Users should refer to the California Department of Finance website (<https://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/>) for the most recent estimate of persons per household in the City of Santa Barbara. This estimate can be multiplied by the number of proposed residential units to estimate a project's resident population.
- **Proposed Number of Beds.** For projects such as group homes, assisted living facilities, nursing homes, or similar uses, the number of beds can be used to determine the resident population.
- **United States Green Building Council.** The United States Green Building Council has published a summary of building area per employee by business type. These rates, which are expressed in terms of square feet per employee, can be utilized to estimate the number of employees a project would require. This document is included as Appendix G.

Modeling GHG Emissions from Existing Land Use

For a project that would result in a change in the plan area/project's site General Plan land use designation, emissions anticipated for the existing General Plan land use designation must be calculated in conjunction with emissions for the proposed project to demonstrate whether the project would be more or less GHG-intensive than development anticipated for the existing General Plan land use designation for the site. In this case, GHG emissions should be reported for both the existing and proposed scenarios. If there is a land use designation that allows multiple uses, the project could model the most intensive permitted use from the GHG perspective and compare the project to that as the baseline.

Emissions anticipated for the existing land use should be quantified using the methods described in *Construction Emissions*, and *Operational Emissions* with consistent assumptions between the two scenarios as applicable. Any emission reduction credits applied to the proposed project scenario that are related to state legislation/policies (e.g., the RPS, vehicle standards, Title 24) or the plan area/project site location (e.g., proximity to transit, destination accessibility, etc.) should also be applied to the existing scenario.

Emission reduction credits that are specific to the proposed project (e.g., use of recycled water, increased density, installation of energy and/or water-efficient appliances, integration of below market rate housing, etc.) should only be included for the proposed project scenario. In addition,

⁵⁵ CAPCOA. 2010. *Quantifying Greenhouse Gas Mitigation Measures*. August 2010. <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>.

care should be taken to identify any emission reduction credits that might be unique to the existing land use designation that would not apply to the proposed project. For example, if the existing land use designation allows for single-family residences and the proposed land use designation would allow for only commercial uses, then the existing scenario should include the emission reduction credit associated with the 2022 Building Energy Efficiency Standards requirements for PV solar panels on residential uses that are three stories or less whereas the proposed project scenario should not include this credit unless PV solar panels are included as a project design feature.

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Appendix D

Regulatory and Legal Setting

Regulatory and Legal Setting

The following regulations, executive orders, and case law pertain to the analysis of GHG emissions consistent with CEQA and the CEQA Guidelines.

Relevant CEQA Guidelines Sections

Pursuant to the requirements of SB 97, the California Natural Resources Agency has adopted amendments to the CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG emissions and climate change impacts.

Based on Appendix G of the CEQA Guidelines, impacts related to GHG emissions generated by a proposed project would be significant if the project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

The vast majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. As discussed in Appendix B, the adverse environmental impacts of cumulative GHG emissions, including sea level rise, increased average temperatures, more drought years, and more frequent and larger forest fires, are already occurring. As a result, cumulative impacts related to GHG emissions and climate change are significant. Therefore, per CEQA Guidelines Section 15064.4(b), the analysis of GHG emissions under CEQA typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines Section 15064[h][1]).

The following sections of the CEQA Guidelines pertain to the creation of significance thresholds and the analysis of a project's GHG emissions.

CEQA Guidelines Section 15064(b)

- (1) The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area.
- (2) Thresholds of significance, as defined in Section 15064.7(a), may assist lead agencies in determining whether a project may cause a significant impact. When using a threshold, the

lead agency should briefly explain how compliance with the threshold means that the project's impacts are less than significant. Compliance with the threshold does not relieve a lead agency of the obligation to consider substantial evidence indicating that the project's environmental effects may still be significant.⁵⁶

CEQA Guidelines Section 15064.4

- (a) The determination of the significance of GHG emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to
 - (1) Quantify GHG emissions resulting from a project; and/or
 - (2) Rely on a qualitative analysis or performance-based standards.
- (b) In determining the significance of a project's GHG emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. A lead agency should consider the following factors, among others, when determining the significance of impacts from GHG emissions on the environment:
 - (1) The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
 - (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
 - (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (see, e.g., section 15183.5[b]). Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an Environmental Impact Report (EIR) must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.
- (c) A lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a

⁵⁶ 2023 CEQA Guidelines. Available at: https://www.califaep.org/docs/CEQA_Handbook_2023_final.pdf

model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.⁵⁷

CEQA Guidelines Section 15064.7

- (a) A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant.
- (b) Each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects. Thresholds of significance to be adopted for general use as part of the lead agency’s environmental review process must be adopted by ordinance, resolution, rule, or regulation, and developed through a public review process and be supported by substantial evidence. Lead agencies may also use thresholds on a case-by-case basis as provided in Section 15064(b)(2).
- (c) When adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.
- (d) Using environmental standards as thresholds of significance promotes consistency in significance determinations and integrates environmental review with other environmental program planning and regulation. Any public agency may adopt or use an environmental standard as a threshold of significance. In adopting or using an environmental standard as a threshold of significance, a public agency shall explain how the particular requirements of that environmental standard reduce project impacts, including cumulative impacts, to a level that is less than significant, and why the environmental standard is relevant to the analysis of the project under consideration. For the purposes of this subdivision, an “environmental standard” is a rule of general application that is adopted by a public agency through a public review process and that is all the following:
 - (1) a quantitative, qualitative or performance requirement found in an ordinance, resolution, rule, regulation, order, plan or other environmental requirement;
 - (2) adopted for the purpose of environmental protection;
 - (3) addresses the environmental effect caused by the project; and,
 - (4) applies to the project under review.⁵⁸

CEQA Guidelines Section 15183.5

- (a) Lead agencies may analyze and mitigate the significant effects of GHG emissions at a programmatic level, such as in a general plan, a long-range development plan, or a separate plan to reduce GHG emissions. Later project-specific environmental documents may tier from and/or incorporate by reference that existing programmatic review. Project-specific environmental documents may rely on an EIR containing a programmatic analysis of GHG emissions as provided in section 15152 (tiering), 15167 (staged EIRs) 15168 (program EIRs),

⁵⁷ Ibid.

⁵⁸ Ibid.

15175–15179.5 (Master EIRs), 15182 (EIRs Prepared for Specific Plans), and 15183 (EIRs Prepared for General Plans, Community Plans, or Zoning).

- (b) Plans for the Reduction of GHG Emissions. Public agencies may choose to analyze and mitigate significant GHG emissions in a plan for the reduction of GHG emissions or similar document. A plan to reduce GHG emissions may be used in a cumulative impacts analysis as set forth below. Pursuant to sections 15064(h)(3) and 15130(d), a lead agency may determine that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances.

(1) Plan Elements. A plan for the reduction of GHG emissions should:

- (A) Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- (B) Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- (C) Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- (D) Specify 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;
- (E) Establish a mechanism to monitor the plan’s progress toward achieving the level and to require amendment if the plan is not achieving specified levels;
- (F) Be adopted in a public process following environmental review.

(2) Use with Later Activities. A plan for the reduction of GHG emissions, once adopted following certification of an EIR or adoption of an environmental document, may be used in the cumulative impacts analysis of later projects. An environmental document that relies on a GHG reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project. If there is substantial evidence that the effects of a particular project may be cumulatively considerable, notwithstanding the project’s compliance with the specified requirements in the plan for the reduction of GHG emissions, an EIR must be prepared for the project.

- (c) Special Situations. As provided in Public Resources Code sections 21155.2 and 21159.28, environmental documents for certain residential and mixed use projects, and transit priority projects, as defined in section 21155, that are consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in an applicable sustainable communities strategy or alternative planning strategy need not analyze global warming impacts resulting from cars and light duty trucks. A lead agency should consider whether such projects may result in GHG emissions resulting from other sources, however, consistent with these Guidelines.⁵⁹

⁵⁹ Ibid.

CEQA Guidelines Section 15126.4(c)

Consistent with section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of GHG emissions. Measures to mitigate the significant effects of GHG emissions may include, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;
- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F of the CEQA Guidelines;
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;
- (4) Measures that sequester GHGs;
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of GHG emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.⁶⁰

Relevant State and Regional GHG Reduction Targets

Executive Order S-03-05

On June 1, 2005, the governor issued EO S-03-05, which established a statewide goal of reducing GHG emissions to 1990 levels by 2020 and created the Climate Action Team. The 2020 GHG emission reduction target contained in EO S-03-05 was later codified by Assembly Bill (AB) 32.

Assembly Bill 32

California's major initiative for reducing GHG emissions is outlined in AB 32, the "California Global Warming Solutions Act of 2006," which was signed into law in 2006. AB 32 codifies the State's goal of reducing statewide GHG emissions to 1990 levels by 2020 and requires the California Air Resources Board (CARB) to prepare a Scoping Plan that outlines the main state strategies for reducing GHG emissions to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 limit of 427 million metric tons (MMT) of CO₂e. The Scoping Plan was approved by CARB on December 11, 2008, and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.⁶¹

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defined CARB's climate change priorities for the next five years and set the groundwork to

⁶⁰ Ibid.

⁶¹ CARB. 2008. *Climate Change Scoping Plan*. December 2008. https://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf.

reach post-2020 statewide goals. The update highlighted California’s progress toward meeting the “near-term” 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State’s longer-term GHG reduction strategies with other state policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use.⁶²

Senate Bill 32

On September 8, 2016, the governor signed SB 32 into law, extending AB 32 by requiring the statewide reduction of GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). In November 2022, CARB published California’s 2022 Scoping Plan for Achieving Carbon Neutrality (Third Update). This update extends the previous Scoping Plans and lays out a path to achieve carbon neutrality no later than 2045, as directed by AB 1279. The previous 2017 Scoping Plan lays out a technologically feasible and cost-effective path to achieve the 2030 GHG reduction target by leveraging existing programs such as the Renewables Portfolio Standard, Advanced Clean Cars, Low Carbon Fuel Standard, Short-Lived Climate Pollutant (SLCP) Reduction Strategy, Cap-and-Trade Program, and Mobile Source Strategy that includes strategies targeted to increase zero emission vehicle fleet penetration. The 2022 Scoping Plan looks toward the 2045 climate goals and the deeper GHG reductions needed to meet the State’s statutory carbon neutrality target specified in AB 1279 and EO B-55-18.⁶³

Senate Bill 375

SB 375, signed in August 2008, enhances the State’s ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPO’s Regional Transportation Plan (RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy categorized as “transit priority projects” would receive incentives to streamline CEQA processing.

On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. The Association of Bay Area Governments (ABAG) was assigned targets of a 7 percent reduction in GHGs from transportation sources by 2020 and a 15 percent reduction in GHGs from transportation sources by 2035. ABAG adopted the 2050 RTP (Plan Bay Area 2050) in October 2021, which includes the region’s SCS and meets the requirements of SB 375.⁶⁴

Assembly Bill 1279

AB 1279, signed in September 2022, builds upon EO B-55-18, which originally established California’s 2045 goal of carbon neutrality and tasked CARB with including a pathway toward the EO B-55-18 carbon neutrality goal in the 2022 Scoping Plan. AB 1279 codified the statewide carbon neutrality goal into a legally binding requirement for California to achieve carbon neutrality no later

⁶² CARB. 2014. *First Update to the Climate Change Scoping Plan*. May 15, 2014. Available at: https://ww3.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

⁶³ CARB. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. Available at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>

⁶⁴ Association of Bay Area Governments. October 2021. Plan Bay Area 2050.

than 2045 and ensure 85 percent⁶⁵ GHG emissions reduction under that goal. This goal is in addition to the existing statewide GHG emission reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

Senate Bill 100

Adopted in September 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State’s Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Senate Bill 1383

Adopted in September 2016, SB 1383 (Lara, Chapter 395, Statutes of 2016) requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. SB 1383 requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

SB 1383 also requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

Relevant GHG Emissions Analysis Case Law

Friends of Oroville v. City of Oroville (Case No. 070448)

The Third District Court of Appeal decision in the *Friends of Oroville v. City of Oroville* case was published on August 19, 2013. This decision evaluated the methodology used to analyze GHG emissions in an EIR prepared for a Wal-Mart Supercenter development project that included replacing an existing Wal-Mart store with a Wal-Mart Supercenter in Oroville in Butte County. The EIR used consistency with the AB 32 emissions reduction target as its significance threshold for evaluating the project’s GHG emissions and compared the magnitude of the proposed project’s emissions to statewide 2004 emission levels as part of the analysis. The Court found that EIR applied “a meaningless, relative number to determine insignificant impact” rather than evaluating the project’s emissions in light of the AB 32 emissions reduction target. The Court also found that the EIR “misapplied the [AB] 32 threshold-of-significance standard by [1] failing to calculate the GHG emissions for the existing Wal-Mart and [2] failing to quantitatively or qualitatively ascertain or estimate the effect of the Project’s mitigation measures on GHG emissions.” The Court determined that the EIR could and should have performed these quantifications to adequately evaluate the project’s GHG emissions using the AB 32 emissions reduction target.

⁶⁵ To achieve carbon neutrality, the remaining 15 percent of GHG emissions would be achieved through carbon capture and sequestration efforts.

Sierra Club v. County of San Diego (Case No. 37-2018-00043084-CU-TT-CTL)

The Fourth District Court of Appeal decision in the *Sierra Club v. County of San Diego* case was published on October 29, 2014. This decision evaluated the adequacy of the CAP Update prepared by the County of San Diego to satisfy Mitigation Measure CC-1.2 of the program EIR prepared for its 2011 General Plan. To reduce GHG emissions impacts of the 2011 General Plan to a less-than-significant level, Mitigation Measure CC-1.2 required the preparation of a CAP Update that would include “more detailed GHG emissions reduction targets and deadlines” and that would “achieve comprehensive and enforceable GHG emissions reduction of 17 percent (totaling 23,572 MT of CO₂e) from County operations from 2006 by 2020 and 9 percent reduction (totaling 479,717 MT of CO₂e) in community emissions from 2006 by 2020.” The Court found the CAP Update did not include enforceable and feasible GHG emission reduction measures that would achieve the necessary emissions reduction; therefore, the CAP Update did not meet the requirements of Mitigation Measure CC-1.2 and would not ensure that the mitigation measure would reduce GHG emissions to a less-than-significant impact. In addition, the Court found that the County failed to evaluate the environmental impacts of the CAP Update and its associated thresholds of significance under CEQA.

Center for Biological Diversity v. California Department of Fish and Wildlife (Case No. 217763)

The California Supreme Court’s decision in the *Center for Biological Diversity v. California Department of Fish and Wildlife* case was published on November 30, 2015. This decision evaluated the methodology used to analyze GHG emissions in an EIR prepared for the Newhall Ranch development project that included approximately 20,885 dwelling units with 58,000 residents on 12,000 acres of undeveloped land in Los Angeles County. The EIR used a business-as-usual approach to evaluate whether the project would be consistent with the AB 32 Scoping Plan. The Court found there was insufficient evidence in the record of that project to explain how a project that reduces its GHG emissions by the same percentage as the business-as-usual reduction identified for the State to meet its statewide targets supported a conclusion that project-level impacts were below the level of significance.

The California Supreme Court suggested regulatory consistency as a pathway to compliance by stating that a lead agency might assess consistency with the State’s GHG reduction goals by evaluating for compliance with regulations designed to reduce GHG emissions. This approach is consistent with CEQA Guidelines Section 15064.4(b), which provides that a determination of an impact is not cumulatively considerable to the extent to which the project complies with regulations or requirements implementing a statewide, regional, or local plan to reduce or mitigate GHG emissions. The Court also found that a lead agency may rely on numerical and efficiency-based thresholds of significance for GHG emissions, if supported by substantial evidence.

Golden Door Properties, LLC v. County of San Diego/Sierra Club, LLC v. County of San Diego (Case No. 072406)

The Fourth District Court of Appeal decision in the *Golden Door Properties, LLC v. County of San Diego* case (published on September 28, 2018) evaluated the County of San Diego’s 2016 Guidance Document’s GHG efficiency metric, which establishes a generally applicable threshold of significance for proposed projects. The Court held that the County of San Diego is barred from using its 2016 Guidance Document’s threshold of significance of 4.9 MT CO₂e per service person per year for GHG analysis. The Court stated that the document violated CEQA because it was not adopted formally by ordinance, rule, resolution, or regulation through a public review process per CEQA Guidelines

Section 15064.7(b). The Court also found that the threshold was not supported by substantial evidence that adequately explained how a service population threshold derived from statewide data could constitute an appropriate GHG metric to be used for all projects in unincorporated San Diego County. Nevertheless, lead agencies may make plan- or project-specific GHG emissions threshold determinations.

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Appendix E

CEQA GHG Threshold Calculations

CEQA GHG Threshold Calculations

1. Business-as-Usual Forecast Summary					
Forecast Scenario	Sector	Annual 2030 GHG Emissions (MT CO2e)			
		Existing (2019)	New (2030-2019)	Total (2030)	
Business-as-Usual	Residential Energy	99,387	10,612	109,999	Residential
	Nonresidential Energy	114,675	6,261	120,936	Nonresidential
	Commercial Onroad Transportation	10,000	576	10,576	Nonresidential
	Leakage and T&D Loss	34,709	2,735	37,444	Residential/Nonresidential
	Passenger Onroad Transportation	256,408	48,392	304,800	Residential/Nonresidential
	Bus Onroad Transportation	7,591	(245)	7,346	Residential/Nonresidential
	Electric Vehicles	738	136	874	Residential/Nonresidential
	Offroad Equipment	43,967	3,648	47,616	Residential/Nonresidential
	Water & Wastewater	1,657	133	1,790	Residential/Nonresidential
	Solid Waste	52,977	4,239	57,216	Residential/Nonresidential
-					

2. Demographics Forecast Summary				
Category	Sector	Annual 2030 Demographics		
		Existing (2019)	New (2030-2019)	Total (2030)
Demographics	Residents	87,670	8,967	96,637
	Jobs	76,772	4,190	80,963
	Service Population	164,442	13,158	177,600

3. Emissions Savings Summary - Legislative savings + CAP savings				
Category	Measure	2030 GHG Emissions (MT CO2e)		
		Residential	Nonresidential	Residential/ Nonresidential
State Legislation	Transportation Legislation	(4,270)	1,171	65,962
	California Green Building Code (Title 24)	2,470	1,210	65
	California RPS (SB 100)	15,555	28,205	1,806
Santa Barbara Clean Energy (SBCE)	SBCE Participation	25,523	46,279	3,806
CAP Update	BE-4 Expand NG Prohibition Ordinance for New Construction	5,869	2,049	-
	BE-5 Reduce Existing Residential NG Consumption	8,306	-	-
	BE-6 Reduce Commercial NG Consumption	-	5,288	-
	T-3 Active Transportation	-	-	952
	T-4 Public Transportation	-	-	3,547
	T-6 Passenger ZEVs	-	-	53,948
	T-7 Commercial ZEVs	-	1,777	-
	W-3 Reduce Potable Water Consumption	-	-	1.72
	W-4 Reduce Organic Waste	-	-	45,773
	CS-1 Increase Carbon Sequestration	-	-	159
CS-4 Apply Compost Annually	-	-	1,778	

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4. Allocate savings between existing/new and residential/nonresidential
 * Savings are allocated to existing and new using the existing, new, and total demographics breakdown in section 2 and based on the logic in the Allocation column below
 * Residential + Nonresidential savings are allocated to residential and nonresidential separately the population, job, and service population demographics breakdown in section 2

Category	Allocation between Existing and New	2030 Emissions (MT CO2e)			
		Existing		New	
		Residential	Nonresidential	Residential	Nonresidential
Business-as-Usual Forecast					
Business-as-Usual Forecast	See F4:F13	311,600	310,510	50,847	25,638
State Reductions					
Transportation Legislation	Both	28,688	29,624	2,934	1,617
California Green Building Code (Title 24)	New Only	-	-	2,515	1,231
California RPS (SB 100)	Both	15,004	27,526	1,535	1,502
Santa Barbara Clean Energy					
SBCE Participation	Both	25,034	45,529	2,561	2,485
CAP Reductions					
BE-4 Expand NG Prohibition Ordinance for New Constructi	New Only	-	-	5,869	2,049
BE-5 Reduce Existing Residential NG Consumption	Existing Only	8,306	-	-	-
BE-6 Reduce Commercial NG Consumption	Existing Only	-	5,288	-	-
T-3 Active Transportation	Both	470	412	48	22
T-4 Public Transportation	Both	1,751	1,533	179	84
T-6 Passenger ZEVs	Both	26,631	23,321	2,724	1,273
T-7 Commercial ZEVs	Both	-	1,685	-	92
T-8 Decarbonize Offroad Equipment	Both	1,410	1,235	144	67
W-3 Reduce Potable Water Consumption	Both	1	1	0	0
W-4 Reduce Organic Waste	Both	22,595	19,786	2,311	1,080
CS-1 Increase Carbon Sequestration	Both	79	69	8	4
CS-4 Apply Compost Annually	Both	878	769	90	42
CAP-Adjusted Forecast					
CAP-Adjusted Forecast	BAU Forecast - State Reductions - CAP Reductions	180,755	153,734	29,929	14,090

5. 2030 GHG Thresholds			
Category	2030 New Growth GHG Threshold	"Existing GHG Thresholds"	2030 Total Population - Per Capita Threshold
Residential (per resident)	3.34	2.06	2.18
Nonresidential (per job)	3.36	2.00	2.07
Mixed-Use (per service person)	3.35	2.03	2.13

6. Summary Table				
	Existing	New Residential	New Nonresidential	Total
Business-as-Usual Forecast	622,110	50,847	25,638	698,596
State Laws/Programs & SBCE Reductions	171,404	9,544	6,835	187,783
CAP Building Energy Measure Reductions	13,594	5,869	2,049	21,512
CAP Transportation Measures	58,448	3,095	1,538	63,081
CAP Water Measures	2	0	0	2
CAP Waste Measures	42,381	2,311	1,080	45,773
CAP Carbon Sequestration Measures	1,794	98	46	1,937
Total Emissions Reductions from Business-as-Usual	287,622	20,918	11,549	320,088
Remaining Total GHG Emissions	334,488	29,929	14,090	378,507

Appendix F

Justification for Thresholds

Justification for Thresholds

Per CEQA Guidelines Section 15064(b)(1), “the determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data.” In addition, CEQA Guidelines Section 15064(b)(2) states, “When using a threshold, the lead agency should briefly explain how compliance with the threshold means that the project’s impacts are less than significant.” Furthermore, CEQA Guidelines Section 15064.7(b) states “Thresholds of significance to be adopted for general use as part of the lead agency’s environmental review process must be adopted by ordinance, resolution, rule, or regulation, and developed through a public review process and be supported by substantial evidence.” Therefore, the key considerations when developing thresholds of significance are 1) the thresholds’ basis on scientific and factual data; 2) demonstration of how compliance with the thresholds reduces project impacts to a less-than-significant level; 3) support of the thresholds by substantial evidence; and 4) adoption of the thresholds by ordinance, resolution, rule, or regulation, and developed through a public review process. The following subsections address these four key considerations.

Basis of Scientific and Factual Data

As discussed in Appendix C Quantifying GHG Emissions, the quantitative thresholds were developed using data from the City’s 2019 communitywide GHG inventory and the GHG emissions forecasts for year 2030. The inventory and forecasts were developed by the City in compliance with all relevant protocols and guidance documents, including the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, the Global Protocol for Community Scale GHG Emissions, and the Intergovernmental Panel on Climate Change (IPCC) Guidelines for National GHG Inventories. Furthermore, the inventory and forecasts are based on locally appropriate data for the City of Santa Barbara provided by SBCAG, Southern California Edison (SCE), Southern California Gas (SoCalGas), Iteris, Inc., CARB, and the City of Santa Barbara.⁶⁶ Therefore, the GHG emission inventory and forecast data underlying the thresholds is both scientific and factual.

As discussed in Appendix A Climate Action Plan Summary, implementation of the Santa Barbara CAP Update will achieve a 47 percent reduction in total communitywide GHG emissions below 1990 emissions levels by 2030. Therefore, this local target is aligned with the State’s goal of a 40 percent emission reduction in 1990 levels by 2030 and makes substantial progress toward achieving the State’s long-term goal of carbon neutrality by 2045. The quantitative thresholds are tied directly to the level of GHG emissions anticipated for new development in the CAP Update for year 2030. As a result, because the CAP Update is consistent with the State’s 2030 GHG emission goal, the quantitative thresholds are also consistent with the state milestone GHG emission reduction goal for 2030. The State’s GHG emission reduction goals for 2030 and 2045 are set at the levels scientists say are necessary to meet the Paris Agreement goals to reduce GHG emissions and limit global temperature rise below two degrees Celsius by 2100 in order to avoid dangerous climate change (CARB 2017; EO B-55-18). Therefore, the City’s GHG emission reduction targets that inform the CAP Update and the associated quantitative thresholds are based on scientific and factual data on the

⁶⁶ Santa Barbara, City of. 2023. Community Greenhouse Gas Inventory, Forecast, and Target Analysis.

level of emissions reduction necessary to avoid a cumulatively considerable contribution to the cumulative impact of climate change.

Reduction of Project Impacts to a Less-than-Significant Level

The quantitative GHG thresholds shown in Appendix A Climate Action Plan Summary, are tied directly to the level of GHG emissions anticipated for new development in the CAP Update for year 2030. Therefore, the thresholds are consistent with the City's local GHG emission reduction target, which is consistent with the State's GHG emission reduction goals. Since the quantitative thresholds are set at the level necessary to ensure the City does not have a cumulatively considerable contribution to the cumulative impact of climate change, plans and projects with GHG emissions at or below the quantitative thresholds would also not have a cumulatively considerable contribution to the cumulative impacts of climate change, and project impacts would be less than significant.

Support of Substantial Evidence

Substantial evidence regarding the calculation of the quantitative GHG emissions thresholds is provided in Appendix E CEQA GHG Threshold Calculations. The following subsections provide additional evidence of how the GHG emissions thresholds are locally appropriate and plan- or project-specific and how the thresholds distinguish between existing and new development.

Use of Local Data

The quantitative thresholds were developed using the City's communitywide GHG emissions forecast for year 2030 and are therefore specific to the City of Santa Barbara. The thresholds are directly tied to the population and employment growth anticipated by SBCAG Connected 2050 projections, and in alignment with the Santa Barbara General Plan as well as to the City-specific GHG emission reduction measures that the City has proposed to reduce communitywide and per capita emissions. In addition, the magnitude of local GHG emission reduction achieved by state legislation/policies (i.e., vehicle fuel efficiency standards, the Renewable Portfolio Standard [RPS], and Title 24) was estimated based on City-specific growth and vehicle VMT forecasts. As a result, these locally appropriate thresholds directly address the concerns raised in the *Golden Door Properties, LLC v. County of San Diego/Sierra Club, LLC v. County of San Diego* (2018) case, because they are based on local GHG emissions data rather than statewide GHG emissions data.

Disaggregation of Existing versus New Development

For the City of Santa Barbara, a GHG threshold disaggregated between new and existing development places a disproportionately high emphasis on emissions reduction from existing development, given the proposed CAP Update measures. This necessitated applying the emissions reduction across both new development and existing development to produce per capita GHG thresholds. CAP-adjusted emissions for existing and new development were combined to create communitywide GHG emissions thresholds. This approach is more conservative than disaggregating by new versus existing development as it accounts for the relative ease for new development to be decarbonized and builds in some buffer for emissions reduction required of existing development to achieve CAP Update reductions. Therefore, these thresholds directly address the concerns raised in the *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) case regarding

the different rates of GHG emissions reduction anticipated for new development as compared to existing development in order to meet the specified GHG reduction target.

Selection of Sector-Specific Thresholds

The quantitative thresholds are separated into three categories – residential, non-residential, and mixed-use – which are intended to apply to the three main types of development projects in Santa Barbara. These thresholds were calculated by disaggregating the City’s business-as-usual GHG emissions forecasts for residential and non-residential development. The emissions reduction specific to residential and non-residential development achieved by state legislation/policies and the CAP Update were then subtracted from the business-as-usual forecast to determine “caps” of emissions for new residential and new non-residential development for year 2030. These emissions “caps” were then divided by the numbers of residents and employees forecast for the year 2030 to determine efficiency thresholds for residential and non-residential projects, respectively. For mixed-use development, the residential and non-residential emissions “caps” were summed, then divided by the service population forecast for 2030 to determine an efficiency threshold for mixed-use projects. As a result, these project-specific thresholds directly address the concerns raised in the *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) case, because they are specific to each development project type.

Adoption via Public Review Process

In compliance with CEQA Guidelines Section 15064.7(b), this guidance document and the quantitative thresholds contained herein was presented to the City Council for formal adoption via resolution through a public review process, which included an opportunity for public input. The public review process for this City of Santa Barbara Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis afforded the public to the ability to comment on the draft resolution item during a public meeting (i.e., City Council meeting) considering adoption of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions and CAP Update IS-ND. This process directly addresses the concerns raised in the *Golden Door Properties, LLC v. County of San Diego/Sierra Club, LLC v. County of San Diego* (2018) case regarding formal adoption of new CEQA thresholds and how lead agencies should afford the opportunity for public review and input prior to adoption and use.

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Appendix G

United States Green Building Council Building Area per Employee by Business Type Rates

United States Green Building Council Building Area per Employee by Business Type Rates⁶⁷

BUILDING AREA PER EMPLOYEE BY BUSINESS TYPE

Land-Use	ITE		USDOE Sq.Ft./ Employee	SANDAG Sq.Ft./ Employee
	Land-Use Code	Sq.Ft./ Employee		
Commercial Airport	21	224		
General Aviation Airport	22	392		
Truck Terminal	30	427		
General Light Industrial	110	463		
Heavy Industrial	120	549		
Industrial Park	130	500		
Manufacturing	140	535		
Warehousing	150	781	2114	
Elementary School	520	1250	1131	
High School	530	1587		
Hospital	610	372	486	
General Office - Suburbs	710	304		
Corporate HQ - Suburbs	714	260		
Single Tenant Office	715	295		
Medical-Dental Building	720	207		
U.S. Post Office	732	230		
Office Park	750	278		
Research & Development Center	760	405		
Business Park	770	332		249
Building Material - Lumber Store	812	806		
Specialty Retail Store	814	549		
Discount Store	815	654		
Hardware Store	816	1042		
Nursery-Garden Center	817	529		
Quality Restaurant (Sit Down)	831	134		
High Turnover (Sit Down)	832	100		
Fast Food w/o drive-thru	833	70		
Fast Food w/ drive-thru	834	92		
Grocery			938	
Lodging			1124	917
Bank				317
Office under 100,000 sq.ft.				228
Office over 100,000 sq.ft.				221
Neighborhood Retail				588
Community Retail				383

Sources:

- ITE -- Institute of Transportation Engineers
- USDOE -- U.S. Department of Energy
- SANDAG -- San Diego Assn of Governments

5/13/2008

⁶⁷ United States Green Building Council. 2008. "Building Area per Employee by Business Type." May 13, 2008.

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CITY OF SANTA BARBARA

FINAL NEGATIVE DECLARATION FOR THE CLIMATE ACTION PLAN UPDATE AND MASTER ENVIRONMENTAL ASSESSEMENT GUIDELINES FOR GREENHOUSE GAS EMISSION ANALYSIS

Pursuant to the State of California Public Resources Code and the "Guidelines for Implementation of the California Environmental Quality Act of 1970," as amended to date, this Draft Negative Declaration has been prepared for the following project:

PROJECT LOCATION: City of Santa Barbara

PROJECT PROPONENT: City of Santa Barbara Sustainability and Resilience Department

PROJECT DESCRIPTION: The Climate Action Plan Update (CAP Update) modernizes the City of Santa Barbara 2012 Climate Action Plan and provides a roadmap of specific actions to reduce greenhouse gas emissions and achieve City emission targets. The CAP Update also comprehensively analyzes and programmatically addresses the City's greenhouse impacts and is considered a qualified greenhouse gas emission reduction plan for the purpose of meeting the requirements of the California Environmental Quality Act (CEQA). The Master Environmental Assessment Guidelines for Greenhouse Gas Emission Analysis (Guidelines) outlines how future development projects and plans demonstrate consistency with the CAP Update in a streamlined manner with a checklist. The Guidelines also establish a greenhouse gas impact analysis methodology and threshold of significance for those limited projects or plans that are not able to demonstrate consistency with the CAP Update through the checklist and must undergo more thorough review to satisfy the requirements of CEQA.

NEGATIVE DECLARATION FINDING:

Based on the attached Initial Study prepared for the proposed project, it has been determined that the proposed project will not have a significant effect on the environment.

Melissa Hetrick

Melissa Hetrick
Resilience Program Supervisor
Sustainability and Resilience Department
City of Santa Barbara

3/19/24

Date



City of Santa Barbara Climate Action Plan Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis

Final Initial Study – Negative Declaration

prepared for

City of Santa Barbara

Department of Sustainability & Resilience

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May 2024



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Appendices

Appendix A	Sources, Health Effects, and Typical Controls Associated with Criteria Pollutants
Appendix B	Description of Greenhouse Gases of California Concern

Initial Study

1. Proposed Plan Title

City of Santa Barbara Climate Action Plan Update (CAP Update) and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis

2. Lead Agency/Plan Sponsor Contact

Lead Agency/Plan Sponsor

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3. Plan Location and Physical Setting

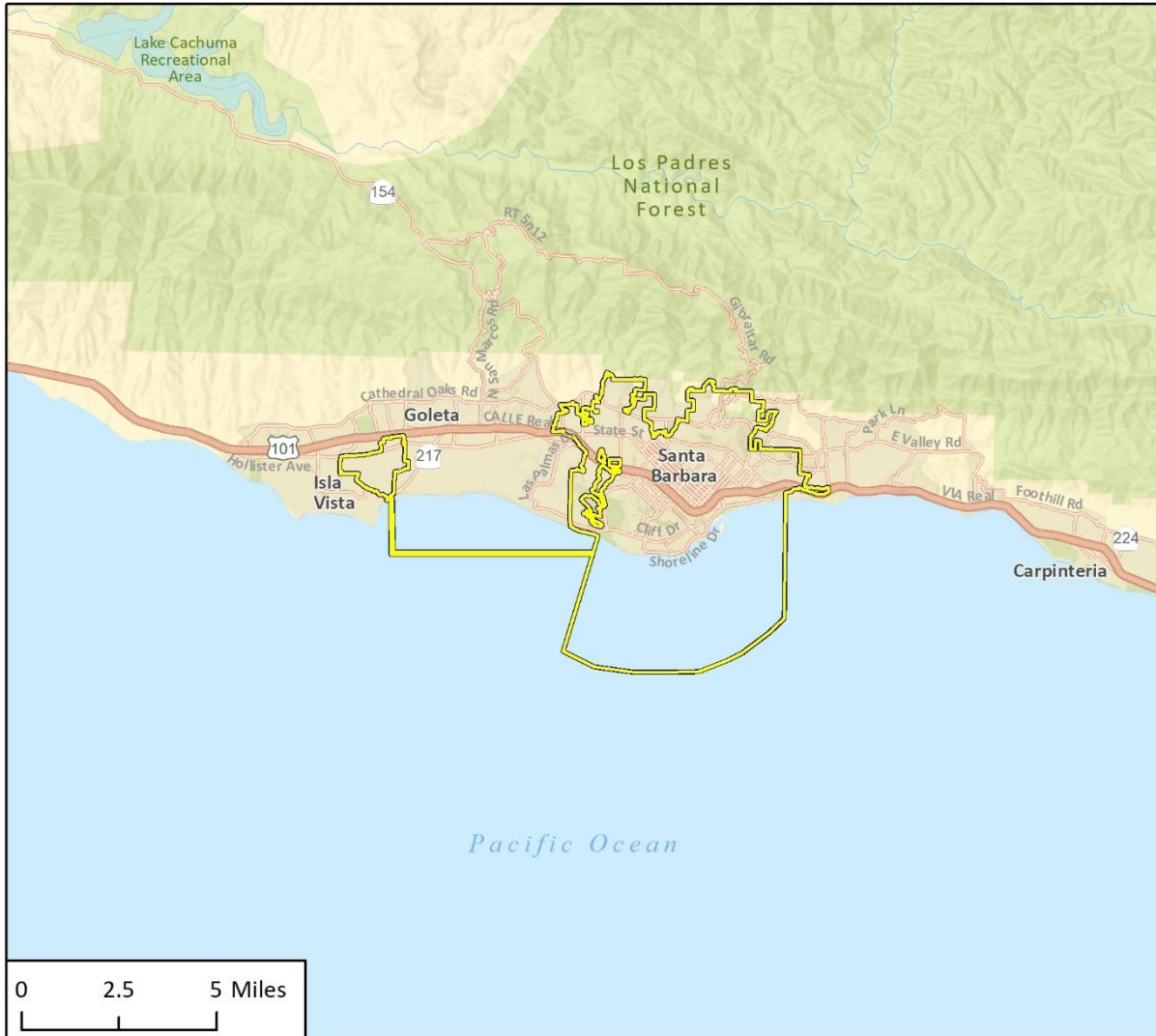
The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis apply to all areas within the City of Santa Barbara limits. Figure 1 shows the regional location, and Figure 2 shows the plan location. The plan location includes all of Santa Barbara's incorporated lands.

The City of Santa Barbara is located in the State of California on Santa Barbara County's South Coast; approximately 30 miles north of the city of Ventura and 75 miles south of the city of Santa Maria (Figure 2). Generally, the City encompasses approximately 12,636 acres (approximately 19.7 square miles) and extends from the Pacific Ocean on the south generally 3 to 5 miles north into the foothills of the Santa Ynez Mountains.



The City's boundaries span approximately five miles from the Coast Village Road commercial corridor adjacent to the unincorporated community of Montecito on the east, to Hope Ranch and eastern Goleta Valley on the west (Figure 2). The City limits also include the 970-acre Santa Barbara Airport, located in the Goleta area, approximately four miles west of the City proper.

City of Santa Barbara Climate Action Plan Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis

Figure 1 Regional Location



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Additional data provided by the County of Santa Barbara, 2021.

-  City of Santa Barbara
-  County of Santa Barbara

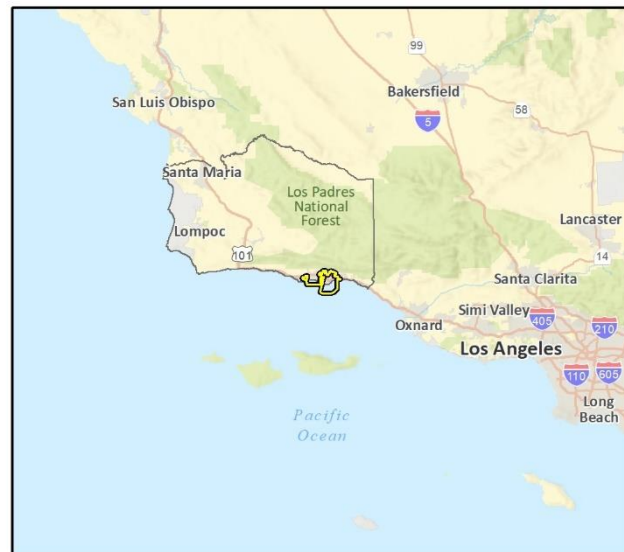
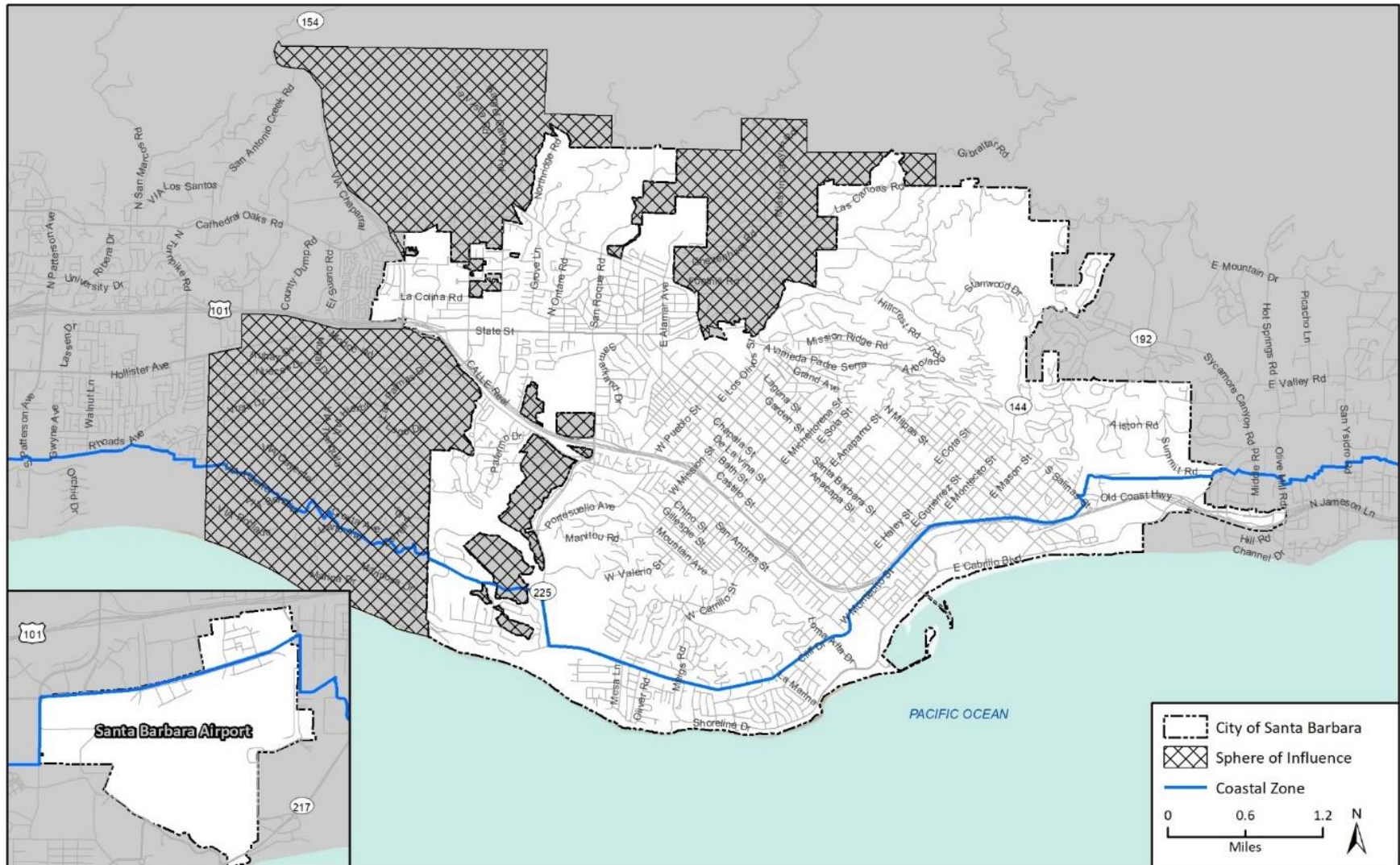


Fig 1 Regional Location

Figure 2 Plan Location



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Additional data provided by the County of Santa Barbara, 2021.

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The City of Santa Barbara is located on the Central Coast of California, between the Santa Ynez Mountains and the Pacific Ocean. The City has a mix of uses with a Mediterranean-style downtown area, suburbs, the Santa Barbara Airport, and many commercial uses such as fine dining and art. The downtown area is located adjacent to US-101, towards the southern part of the City, near Santa Barbara Harbor and Stearn's Wharf.

The City receives approximately 22 inches of rain annually, 283 sunny days per year, with a July high temperature of 81°F and a January low temperature of 47°F.¹² Similar to the rest of the Central California Coast, climate conditions in Santa Barbara remain mild due to the City's relativity to the Pacific Ocean.

4. Existing Setting

City of Santa Barbara Sustainability and GHG Reduction Efforts

The City of Santa Barbara has established actions related to increasing sustainability and reducing GHG emissions and the potential impacts of climate change. These actions are outlined in the City's various plans discussed below.

2035 Together to Zero Campaign

The Together to Zero Campaign encompasses the City of Santa Barbara's goal of reaching carbon neutrality by 2035 via various climate-related plans, such as the Climate Action Plan. It encourages balancing greenhouse gas emissions with removal strategies and developing bold climate action strategies focused on improved infrastructure, active transportation, energy decarbonization, building decarbonization, carbon removal, and transportation electrification.³

City of Santa Barbara 2012 Climate Action Plan

In September 2012, the City Council adopted the Climate Action Plan to address climate change issues to the year 2030, in accordance with the Santa Barbara General Plan and the California Global Warming Solutions Act (AB 32). The purposes of the Climate Action Plan include reducing the rate of carbon emissions generated within the Santa Barbara community and planning for climate change adaptation. The Plan includes emissions reduction targets for vehicle emissions and citywide emissions inventories in the city for the years 2020 and 2030. Also included in the Plan are emissions reduction strategies such as renewable energy measures, energy efficiency and green building measures, travel and land use measures, vegetation measures, waste reduction measures, and water conservation measures. Climate adaptation planning strategies noted in the Plan include emergency preparedness, wildfire, flooding, water quality, coastal vulnerability and adaptation planning, public services, biological resources, and local economies strategies.⁴

¹ Best Places. 2021. Climate in Santa Barbara, California. Available at: https://www.bestplaces.net/climate/city/california/santa_barbara. Accessed October 12, 2023.

² Cal-Adapt. 2023. Local Climate Snapshot for Santa Barbara, California. Available online at: <https://cal-adapt.org/tools/local-climate-change-snapshot>. Accessed November 2023.

³ Santa Barbara, City of. 2023. Sustainability and Resilience. Together to Zero. Available Online at: <https://sustainability.santabarbaraca.gov/together-to-zero/>. Accessed October 12, 2023.

⁴ Santa Barbara, City of. 2012. Climate Action Plan. Available online at: <https://santabarbaraca.gov/sites/default/files/documents/Services/Climate%20Action%20Plan/Final%20Santa%20Barbara%20Climate%20Action%20Plan%20%28September%202012%29.pdf>. Accessed October 12, 2023.

Strategic Energy Plan

The Santa Barbara City Council adopted the Strategic Energy Plan (SEP) on June 7, 2017, with a goal of 100 percent renewable electricity for the entire community by 2030 and an interim goal of 50 percent renewable electricity for municipal facilities by 2020. The Strategic Energy Plan presents a flexible pathway towards achieving these goals through a combination of strategic policy and program options focused on developing local renewable energy resources and bolstering local reliability and resilience. The SEP identifies five Program Areas with accompanying strategies for the City to prioritize for the successful implementation of the plan goals. These Program Areas include Energy Partnerships, Plans and Structures, Community Engagement Initiatives, Funding Sources and Financial Incentives, Municipal Development and Pilot Projects, and Administrative Policies and Procedures.⁵

City of Santa Barbara Municipal Green Building Policy

The Municipal Green Building Policy was adopted by the Santa Barbara City Council in September 2020 and is a revision to the City's 2008 Green Building policy, which encourages the construction of LEED Silver Buildings. The policy establishes ambitious energy efficiency targets and sets out to achieve Zero Net Carbon for new building construction and major renovations of all City-owned and occupied facilities to advance the City's sustainability goals and reduce greenhouse gas emissions. The policy states environmental performance requirements for new construction, major renovations, existing buildings, tenant improvements, and leased spaces. In addition, the plan details construction waste prevention, preservation, restoration, salvage, reuse, and recycling standards. The policy also establishes the Green Building Steering Committee to oversee and assist in advancing the sustainable performance of City construction projects. Finally, the policy establishes training, financing, technical assistance, reporting, and policy updates standards to ensure the successful implementation of the policy.⁶

2011 Plan Santa Barbara General Plan

The City's General Plan is focused on ensuring that the City becomes a more sustainable community to enhance natural and built environments, social equity, and economic vitality as climate change influences local resources and community needs. The five key policy drivers for the Plan are Economic and Fiscal Health, Historic and Community Character, Growth Management, Public and Community Health, and Energy and Climate Change. The Plan has set principles including Economy, Environment, and Equity to elaborate on the basic components of sustainability and reflect the key challenges for establishing a Sustainable Santa Barbara. Additionally, the Plan established the Adaptive Management Program to track progress toward achieving the plan's goals, objectives, and desired outcomes throughout the 20-year planning period.⁷ The City of Santa Barbara's General Plan also includes the 2023-2031 Housing Element, which provides the basis for housing and population forecasts for the GHG emissions throughout the City. This plan identifies Santa Barbara's housing needs, goals, and policies to produce affordable housing and sound community planning. The City of

⁵ Santa Barbara, City of. Strategic Energy Plan. 2017. Available online at: <https://santabarbaraca.gov/sites/default/files/documents/Public%20Works/Energy%20Programs/Strategic%20Energy%20Plan%20Overview.pdf>. Accessed October 12, 2023.

⁶ Santa Barbara, City of. Municipal Green Building Policy. 2020. Available online at: https://p7n920.a2cdn1.secureserver.net/wp-content/uploads/2021/11/Green-Building-Policy_Final.pdf. Accessed October 12, 2023.

⁷ Santa Barbara, City of. Plan Santa Barbara. 2011. Available online at: <https://santabarbaraca.gov/government/priorities-policies/general-plan/general-plan-elements-appendices>. Accessed October 12, 2023.

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Santa Barbara 2023-2031 Regional Housing Needs Allocation (RHNA) was utilized in projecting GHG emissions in the CAP Update.

Municipal Zero Emission Vehicle Acquisition Policy

The City of Santa Barbara adopted the Municipal Zero Emissions Vehicle Acquisition Policy in March 2023 to replace internal combustion engine vehicles in the city’s fleet with battery electric vehicles once these vehicles reach end of life. This policy aims to accelerate the rate of reduction of greenhouse gas emissions in the City, in accordance with the goals of the 2011 General Plan and the Together to Zero Campaign.⁸

Santa Barbara Pedestrian Master Plan

The Pedestrian Master Plan is derived from the 1997 City Circulation Element and was adopted by City Council on July 18, 2006. The main purpose of the Plan is to support the vision statement of the Circulation Element, which encourages alternative forms of transportation and mobility so that automobile use is not necessary. The Plan is broken into five main goals which seek to improve the pedestrian system, establish and enhance safe routes to school, protect and expand the Paseo system, create pedestrian environments that are attractive, functional and accessible, and encourage more people to walk. Overall, the Pedestrian Master Plan will help the City reach its GHG emissions reduction targets by supporting infrastructure to minimize automobile use throughout the city and encourage alternative forms of transportation.⁹

Regional Sustainability and GHG Reduction Efforts

In coordination with Santa Barbara County, the Santa Barbara County Association of Governments (SBCAG), the Southern California Association of Governments (SCAG), the State of California, and the Federal government, the City of Santa Barbara has committed to implementing regional and State policies related to GHG emissions reduction. As follows is a summary of the regional GHG emissions reduction efforts, which the City of Santa Barbara CAP Update is intended to be consistent with or exceed.

County of Santa Barbara 2010 Sustainability Action Plan

The County of Santa Barbara adopted the Sustainability Action Plan to take immediate, cost effective and coordinated steps to reduce the County’s collective GHG emissions. The Plan highlights numerous actions to lessen the emissions from government operations including increasing energy efficiency in vehicle fleets and buildings, demonstrating the use of clean, renewable energy sources, implementing vehicle transportation plans that reduce usage, encouraging waste reductions, and joining the Santa Barbara Southern California Edison (SCE) and Pacific Gas & Electric (PG&E) Partnerships. The Plan also includes an in-depth GHG emissions inventory for all government operations to identify and quantify the sources of emissions from the Santa Barbara County government operations.¹⁰

⁸ Santa Barbara, City of. Municipal Zero Emission Vehicle Acquisition Policy. 2023. Available online at: <https://sustainability.santabarbaraca.gov/together-to-zero/>. Accessed October 12, 2023.

⁹ Santa Barbara, City of. Pedestrian Master Plan. 2006. Available online at: <https://santabarbaraca.gov/government/departments/public-works/public-works-downtown-team/transportation-policy>. Accessed October 12, 2023.

¹⁰ Santa Barbara, County of. Sustainability Action Plan. 2020. Available online at: <https://content.civicplus.com/api/assets/655aa841-212f-4e39-baeb-db6485dfd466>. Accessed October 12, 2023.

Connected 2050 Regional Transportation Plan and Sustainable Communities Strategy

The Santa Barbara County Association of Governments (SBCAG) adopted the Connected 2050 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) in August 2021. This Plan was developed to explore the region's land use and travel patterns, account for the demographic growth that will create new demands on the land use and travel infrastructure and assist in achieving the State's greenhouse gas reduction targets. Additionally, Connected 2050 incorporates the region's first region-specific analysis of environmental justice indicators. The Plan has five goals that are centered around protecting and promoting a healthy environment, improving mobility and system reliability, ensuring socio-economic equity, improving health and safety, and achieving a prosperous economy.¹¹

State Sustainability and GHG Reduction Efforts

As follows is a summary of the State GHG emissions reduction efforts, which the City of Santa Barbara CAP Update is intended to be consistent with or exceed.

California Senate Bill 375

In 2008, Senate Bill 375 (SB 375) enhanced the State's ability to reach Assembly Bill (AB) 32 targets by directing CARB to develop regional GHG emissions reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the State's 18 major Metropolitan Planning Organizations (MPO) to prepare a sustainable community's strategy (SCS) that contains a growth strategy to meet such regional GHG emissions reduction targets for inclusion in the respective regional transportation plan (RTP).

California Executive Order S-3-05

In 2005, the California governor issued Executive Order (EO) S-3-05, which identifies Statewide GHG emissions reduction targets to achieve long-term climate stabilization as follows:

- Reduce GHG emissions to 1990 levels by 2020
- Reduce GHG emissions to 80 percent below 1990 levels by 2050

California Assembly Bill 32

In 2006, the California legislature signed AB 32 – the Global Warming Solutions Act – into law, requiring a reduction in Statewide GHG emissions to 1990 levels by 2020 and California Air Resources Board (CARB) preparation of a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 required CARB to adopt regulations to require reporting and verification of Statewide GHG emissions. Based on this guidance, CARB approved a 1990 Statewide GHG level and 2020 limit of 427 metric tons of carbon dioxide equivalent (MTCO₂e).

California Climate Change Scoping Plan (2008)

In 2008, CARB approved the original California Climate Change Scoping Plan, which included measures to address GHG emission reduction strategies related to energy efficiency, water use, and

¹¹ Santa Barbara County Association of Governments Connected 2050: Regional Transportation Plan and Sustainable Communities Strategy. 2021. Available online at: http://www.sbcag.org/uploads/2/4/5/4/24540302/connected_2050_final.pdf. Accessed October 12, 2023.

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recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted and implemented since approval of the Scoping Plan.

California Climate Change Scoping Plan Update (2022)

On September 8, 2016, the governor signed SB 32 into law, extending AB 32 by requiring the statewide reduction of GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). In November 2022, CARB approved the third update to the California Climate Change Scoping Plan. The 2022 Scoping Plan extends the previous Scoping Plans and lays out a path to achieve carbon neutrality no later than 2045, as directed by AB 1279. The previous 2017 Scoping Plan lays out a technologically feasible and cost-effective path to achieve the 2030 GHG reduction target by leveraging existing programs such as the Renewables Portfolio Standard, Advanced Clean Cars, Low Carbon Fuel Standard, Short-Lived Climate Pollutant (SLCP) Reduction Strategy, Cap-and-Trade Program, and Mobile Source Strategy that includes strategies targeted to increase zero emission vehicle fleet penetration. The 2022 Scoping Plan looks toward the 2045 climate goals and the deeper GHG reductions needed to meet the State’s statutory carbon neutrality target specified in AB 1279 and EO B-55-18. To accomplish this goal, significant focus is placed on accelerating the transition to zero-emissions vehicles, expanding renewable energy sources such as solar and wind, enhancing carbon sequestration on natural and working lands, and prioritizing environmental justice.¹²

California Executive Order B-55-18

In 2018, the California governor issued Executive Order B-55-18, which established a new Statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing Statewide GHG reduction targets established by SB 32.

California Senate Bill 32

In 2016, the California Governor signed SB 32 as a follow up to AB 32 – The California Global Warming Solutions Act of 2006, which required the state to reduce its GHG emissions to 1990 levels by 2020. SB-32 designates the California State Air Resources Board (CARB) as the state agency charged with monitoring and regulating sources of GHG emissions and to ensure the state’s GHG emissions are reduced to 40 percent below 1990 levels by 2030. To meet these standards, CARB is required to expand on or develop new regulations that are both technologically reasonable and cost-effective, while considering the state’s disadvantaged communities.

Assembly Bill 197, State Air Resources Board Greenhouse Gases Regulations

In 2016, the California legislature approved AB 197, a bill linked to SB 32, which increases legislature oversight over the CARB and directs CARB to prioritize disadvantaged communities in its climate change regulations, and to evaluate the cost-effectiveness of measures it considers. AB 197 requires the CARB to “protect the State’s most impacted and disadvantaged communities [and] consider the social costs of the emissions of greenhouse gases” when developing climate change programs. The bill also adds two new legislatively appointed non-voting members to the CARB, increasing the Legislature’s role in the CARB’s decisions.

¹² CARB. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. Available at: <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>. Accessed October 2023.

Senate Bill 350, Clean Energy and Pollution Reduction Act of 2015

In October 2015, SB 350 was signed into law, establishing new clean energy, clean air, and GHG reduction goals for 2030 and beyond. SB 350 codifies Governor Jerry Brown’s aggressive clean energy goals and establishes California’s 2030 GHG reduction target of 40 percent below 1990 levels. To achieve this goal, SB 350 increases California’s renewable electricity procurement goal from 33 percent by 2020 (legislation originally enacted in 2002) to 50 percent by 2030. Renewable resources include wind, solar, geothermal, wave, and small hydroelectric power. In addition, SB 350 requires the State to double Statewide energy efficiency savings in electricity and natural gas end-uses (i.e., residential and commercial) by 2030 from a base year of 2015.

Senate Bill 100, The 100% Clean Energy Act of 2018

In September 2018, Governor Brown signed SB 100, requiring that the State’s load serving entities (including energy utilities and community choice energy programs) must procure energy generated 100 percent from Renewables Portfolio Standard (RPS) for eligible renewable resources by 2045.

California Energy Efficiency Strategic Plan of 2008

In September 2008, the California Public Utilities Commission (CPUC) adopted California’s first Long Term Energy Efficiency Strategic Plan, presenting a single roadmap to achieve maximum energy savings across all major groups and sectors in California. The Strategic Plan was subsequently updated in January 2011 to include a lighting chapter. The Strategic Plan sets goals of all new residential construction and all new commercial construction in California to be zero net energy (ZNE) by 2020 and 2030, respectively. In 2018, the California Energy Commission voted to adopt a policy requiring all new homes in California to incorporate rooftop solar. This change went into effect in January 2020 with the adoption of the 2021 Title 24 Code and is a step towards the State achieving its goal of all residential new construction being ZNE by 2020. Additionally, the Strategic Plan sets goals of 50 percent of existing commercial buildings to be retrofitted to ZNE by 2030 and all new State buildings and major renovations to be ZNE by 2025.

Senate Bill 1275, Charge Ahead Initiative

In September 2014, Senate Bill 1275 was signed into law, establishing a State goal of one million zero-emissions and near-zero-emissions vehicles in service by 2020 and directing the Air Resources Board to develop a long-term funding plan to meet this goal. SB 1275 also established the Charge Ahead California Initiative requiring planning and reporting on vehicle incentive programs and increasing access to and benefits from zero-emissions vehicles for disadvantaged, low-income, and moderate-income communities and consumers.

Assembly Bill 1493, the Pavley Bill

AB 1493 (2002), California’s Advanced Clean Cars program (referred to as Pavley), requires CARB to develop and adopt regulations to achieve “the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles.” On June 30, 2009, US EPA granted the waiver of the Clean Air Act preemption to California for its GHG emission standards for motor vehicles beginning with the 2009 model year. Pavley I regulates model years from 2009 to 2016, and Pavley II, which is now referred to as “Low Emission Vehicle (LEV) III GHG”, regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs, and would provide major reductions in GHG emissions. By 2025, when

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the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels.

Senate Bill 97, CEQA Guidelines for Addressing GHG Emissions

The California Environmental Quality Act (CEQA) requires public agencies to review the environmental impacts of proposed projects, including General Plans, Specific Plans, and specific kinds of development projects. In February 2010, the California Office of Administrative Law approved the recommended amendments to the State CEQA Guidelines for addressing GHG emissions. The amendments were developed to provide guidance to public agencies regarding the analysis, mitigation, and effects of GHG emissions in draft CEQA documents.

5. Description of Plan

CAP Update

The CAP Update builds off and incorporates the climate protection programs noted above that the City has in place and will continue to reduce GHG emissions. Specifically, the CAP Update builds off the 2012 CAP, which was the City's first official qualified GHG reduction plan. The City has developed the CAP Update in order to achieve a number of objectives, including a demonstration of environmental leadership, compliance with State environmental initiatives, promotion of green jobs, and increased sustainable development.

The CAP Update addresses municipal and communitywide GHG emissions and includes a goal of reducing communitywide GHG emissions output by 378,507 metric tons of carbon dioxide equivalent (MT CO₂e) by 2030 (consistent with California Senate Bill 32 target for 2030). Additionally, the City of Santa Barbara has aspirational goals to achieve carbon neutrality by 2035, which is significantly more aggressive than the state's emissions reduction target of 40% below 1990 levels by 2030 (SB 32) and 85% below 1990 levels or net zero by 2045 (AB 1279).

The State of California uses 1990 as a reference year to remain consistent with Assembly Bill (AB) 32, which codified the State's 2020 GHG emissions target by directing CARB to reduce Statewide emissions to 1990 levels by 2020. However, cities and counties throughout California typically elect to use years later than 1990 as baseline years because of the increased reliability of recordkeeping from those years and the large amount of growth that has occurred since 1990. The City of Santa Barbara does not have a 1990 GHG inventory, and the targets developed by the City in the 2012 CAP were instead compared to a 2005-2008 baseline following guidance in the California Air Resources Board's (CARB) 2008 Climate Change Scoping Plan. This plan estimates 1990 emissions (also the 2020 target) as 15% below "current" (2005-2008) emissions.¹³ As such, the 2019 GHG inventory was established as the new baseline moving forward and emission levels were back-casted from this baseline to 1990 levels using the same proportion of increased GHG emissions at the state level from 1990 to the current level. Based on these back-casted calculations, the City of Santa Barbara emitted approximately 715,530 MT CO₂e in 1990.

In 2019, approximately 622,110 MT CO₂e were emitted in the City of Santa Barbara from the energy, transportation, solid waste, water, and municipal sectors. The municipal sector is a subset of the community emissions sectors, which consist of energy, transportation, solid waste, and water. The municipal sector is developed to establish metrics that allow the City to lead by example and reduce

¹³ Governor's Office of Planning and Research (OPR). 2017. General Plan Guidelines. Ch 8 Climate Change. P. 228. https://opr.ca.gov/docs/OPR_C8_final.pdf

emissions at the municipal level. The energy sector represents emissions that result from electricity and natural gas used in both private and public sector buildings and facilities. The transportation sector includes emissions from private, commercial, and fleet vehicles driven within the City as well as the emissions from transit vehicles, the City-owned fleet, and off-road equipment such as garden equipment and construction equipment. Emissions generated from water usage and wastewater generation are due to the indirect electricity used to distribute water and collect and treat wastewater. Burning fossil fuels associated with buildings/facility energy, vehicle use, and (transportation) use are the largest contributors of Santa Barbara GHG emissions. Table 1 includes total Santa Barbara (i.e., community and municipal) GHG emissions in 2019 by sector as well as percentage of total City emissions.

The majority of the GHG emission reductions from 1990 levels to 2019 levels occurred in the transportation and energy sectors through increased fuel efficiency and increased renewable energy procurement by Santa Barbara Clean Energy (SBCE). In 2021, the City of Santa Barbara began receiving carbon-free electricity through SBCE, resulting in significant decreases in electricity emissions to near zero in the short term ahead of SB 100 requirements. GHG reductions associated with switching to SBCE carbon-free electricity accounts for a reduction of 75,608 MT CO₂e in 2030 and 19,586 MT CO₂e in 2035. SBCE carbon-free energy also provides the foundation needed for the electrification of buildings and vehicles which are both main pathways for GHG emission reduction in this CAP Update.

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Table 1 City of Santa Barbara 2019 Communitywide GHG Emissions by Sector

Sector/Emission Source	GHG Emissions (MT CO₂e)	Percentage of Total
Natural Gas	134,068	22%
Residential Natural Gas	63,858	10%
Non-Residential Natural Gas	40,788	7%
Natural Gas Leakage	29,422	5%
Electricity	110,155	18%
Residential Electricity (EV adjusted)	35,529	6%
Non-Residential Electricity (EV adjusted)	73,888	12%
Electric Vehicles	738	<1%
Transportation	318,966	51%
Passenger On-Road Transportation	256,408	41%
Commercial On-Road Transportation	10,000	2%
Bus On-road Transportation	7,591	1%
Off-Road - Diesel	26,534	4%
Off-Road - Gasoline	15,078	2%
Off-Road Natural Gas (LPG)	2,355	<1%
Solid Waste²	52,977	9%
Solid Waste Generated/Disposal	52,977	9%
Water	1,658	<1%
Indirect Electricity from Imported Potable Water Supply	229	<1%
Wastewater Treatment Process and Fugitive Emissions	1,429	<1%
Cumulative Emissions	622,110	100%

Notes: MT CO₂e = Metric tons of carbon dioxide equivalent

¹ GHG emissions generated by electricity consumption involved in producing local groundwater supplies and the collection and treatment of wastewater are not added to the GHG emissions total to avoid double counting. The electricity consumption involved in these processes is already encompassed in non-residential electricity consumption in the energy sector.

² GHG emissions generated by the collection and transport of waste generated within the City are captured in the Commercial On-road Vehicle source in the Transportation sector.

As shown in Table 1, the largest sectors of GHG emissions are related to energy and transportation, followed by solid waste and water. The City is preparing the CAP Update to include measures and actions addressing communitywide and municipal GHG emissions. Per the CAP Update, the City of Santa Barbara is committed to an emissions reduction target of 40 percent below 1990 levels by 2030 (SB 32 target year) and reaching a longer-term goal of carbon neutrality by 2035. Table 2 summarizes the emissions reduction targets included in the CAP Update compared to the reductions proposed in the 2012 CAP. This 2030 GHG emissions goal is selected to be consistent with SB 32 and CEQA Guidelines § 15183.5 for a qualified GHG emissions reduction strategy as well as to be achievable by City-supported measures identified in the CAP Update. The CAP Update includes a business-as-usual (BAU) and adjusted forecast of GHG emissions that will enable the City to quantitatively estimate the emissions reductions needed to meet its goal.

Table 2 City of Santa Barbara GHG Emission Reduction Targets

Target Year	Reductions Compared to 1990 Levels	Reductions Compared to 1990 Baseline	Remaining Emissions Gap (MT CO ₂ e)
2020	Meet 1990 Levels	15%	Target Exceeded
2030	40%	47%	50,811

Achieving carbon neutrality will require significant changes to the technology and systems currently in place. The CAP Update 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 City 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 City of Santa Barbara will implement to close the remaining gap to achieve the carbon neutrality target. Table 3 includes a complete list of the measures and actions included in the CAP Update by strategy.

Table 3 City of Santa Barbara CAP Update Measures and Actions by Strategy

ID #	Measures and Actions
Building Energy Measures	
Measure BE-1	(Municipal) Decarbonize 50% of Municipal Buildings and Facilities by 2030 and all Remaining Municipal Facilities by 2035
Action BE-1.1	Develop a plan to electrify 50% of City-owned municipal buildings by 2030 and decarbonize 100% of municipal facilities by 2035. The plan will include an inventory of fossil fuel-powered municipal building equipment, low/zero-carbon technologies available for replacing the equipment (where available), and a short- and long-term schedule for completion. Address diesel generators and recent natural gas investments. Address feasibility concerns around community swimming pool decarbonization. Any buildings that are unable to be electrified due to technological infeasibility should be decarbonized with other technology.
Action BE-1.2	By 2030, develop an ordinance to require the installation of solar and/or energy storage backup power instead of diesel generators, where feasible.
Action BE-1.3	Implement the municipal building decarbonization plan developed under BE-1.1 to decarbonize 100% of municipal buildings by 2035 (any buildings that are unable to be electrified due to technological infeasibility shall be decarbonized with other technology).
Action BE-1.4	Develop and implement a plan for retrofitting all remaining streetlights, facility lighting, and traffic signals to LEDs by 2035.
Action BE-1.5	Leverage the grant writer position(s) in strategy A-2.2 to expand funding efforts for municipal decarbonization.
Action BE-1.6	Include, at the time of lease renewal, requirements for City-owned leased buildings and facilities to be all-electric.
Measure BE-2	(Municipal) Procure Carbon Free or 100% Renewable Electricity for Municipal Operations by 2030
Action BE-2.1	Require all municipal electrical accounts to remain in SBCE's 100% Green option and purchase carbon-free electricity.

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ID #	Measures and Actions
Measure BE-3	(Municipal) Increase Municipally Owned Distributed Renewable Energy Generation Throughout the City
Action BE-3.1	Implement all feasible microgrid projects at municipal facilities as identified by the 2017 Zero Net Energy study and re-evaluate viability of additional facilities.
Action BE-3.2	Conduct a feasibility study to understand the barriers of installing additional distributed energy resources such as solar and battery storage, or other renewable energy generation infrastructure, at municipal facilities. The City may need to re-evaluate plans for funding, energy storage capacity, and distributed energy resources to implement these projects. Focus municipal efforts around finding adequate space for energy storage and microgrid projects.
Measure BE-4	Expand Existing Natural Gas Prohibition Ordinance for New Construction
Action BE-4.1	In 2025 and every 3 years thereafter, revisit building ordinances to update the scope and exemptions to align with industry technology and maximize GHG reduction. Examples include requiring all major remodels (over 50% of building effected or an addition of over 50% of gross floor space) and removing exemptions in the all-electric building requirements. The building code cycle updates are processed in 2025, effective in 2026, and updated every 3 years.
Measure BE-5	Reduce Existing Residential Natural Gas Consumption by 10% Below 2019 Levels by 2030 and 17% Below 2019 Levels by 2035
Action BE-5.1	Adopt a time of renovation energy efficiency and electrification requirement by 2025, effective 2026. This ordinance could require replacement of HVAC systems, hot water heaters, and other appliances to be all electric and low hydrofluorocarbons (HFC) gas emitters or provide a checklist of cost-effective efficiency and electrification options for renovations to complete based on the scope of the project. Adopt an electrification ordinance for existing residential buildings by 2028, effective 2029, to be implemented through the building permit process, which bans expansion or reconnection of natural gas infrastructure.
Action BE-5.2	Complete an existing building electrification feasibility analysis in collaboration with UCSB or another research institution by 2025 to determine the upfront and on-bill costs associated with building electrification strategies. This information will be used to inform and support future ordinances addressing existing building electrification as well as the building electrification accelerator (BE-5.3). The study will include extensive community input and an equity analysis to ensure all people have affordable access to the health, comfort, economic, and resilience benefits of building electrification.
Action BE-5.3	Create a residential building electrification accelerator program to increase community access to building electrification resources. This program should include the provision and expansion of resources needed to support residents in electrifying their homes. For example, by providing rebates, enhanced funding for income-qualified homeowners, technical expertise, and contractor support.
Action BE-5.4	Identify opportunities for the strategic reduction of gas infrastructure within the City and develop a gas infrastructure pruning pilot program.
Action BE-5.5	Complete a low income and affordable housing electrification pilot project in collaboration with affordable housing owners, utilities, and the community. The pilot project will ensure that there is not an increase to energy bills for occupants of pilot buildings.
Action BE-5.6	Provide a rebate at time of sale for qualifying building electrification upgrades including panels, wiring, and heat pump appliances. Implement the rebate program by 2025.
Action BE-5.7	Improve the City's building electrification permit process through a comprehensive permitting compliance program that streamlines processes, reduces fees, provides permit and inspection checklists, shortens review times, and educates affected trades and staff, thus reducing barriers to electrification and unlocking available incentives.
Action BE-5.8	Conduct a feasibility study of a smart building market demand program, such as Recurve's <i>flexgrid</i> program. The study should include a pilot project that allows building owners to track the power generation and consumption of their retrofitted structures and work on making this a widely available and affordable option.

ID #	Measures and Actions
Action BE-5.9	Develop the program studied in BE-5.8 that allows building owners to track the power generation and consumption of their retrofitted structures to optimize energy management.
Action BE-5.10	Partner with ReCurve or similar entity to design and implement a market demand program that would pay energy users to save energy during times of peak demand, use energy more efficiently, and help balance the grid.
Action BE-5.11	Expand education programs directed at homeowners and renters on energy resource programs (examples include energy efficiency programs, demand response, and market demand programs).
Action BE-5.12	Promote residential energy disclosure legislation, requiring home energy score at time of all residential property sale or rental listings.
Action BE-5.13	Establish a program that provides targeted direct install services and cost share for specific electrification measures with multi-unit residential development owners. City to cover incremental cost in addition to an incremental electricity rate from SBCE.
Action BE-5.14	Develop and implement a multi-family residential property regulation by 2028 to promote phased building energy efficiency and decarbonization. The regulation would require periodic energy inspections and prescriptive energy efficiency and decarbonization points requirements from a standardized checklist, with required performance increasing over time.
Action BE-5.15	Develop an emergency hot water appliance program where the City provides residents with emergency natural gas hot water heaters within 24 hours of a request, with an agreement that the resident's gas-powered hot water heater will be replaced within 6 months with a heat pump water heater.
Action BE-5.16	Increase community awareness and understanding of tax benefits for residential building energy efficiency upgrades (Example: the Residential Energy Efficiency Property Tax Credit).
Action BE-5.17	Develop incentives for California Alternate Rates for Energy (CARE)/ Family Electric Rate Assistance (FERA) subsidized rate programs for low-income resident customers to increase energy assurance.
Action BE-5.18	Implement direct installation and/or incentive programs that facilitate the installation of combined solar and battery energy storage system installations on local area single family residential buildings. Target 120 installations by 2035.
Action BE-5.19	Adopt a natural gas end of flow date by 2040. ¹ Create public engagement and education campaigns around this action to give the community advanced notice as well as signify all progress being made to make this possible.
Measure BE-6	Reduce Commercial Natural Gas Consumption 10% Below 2019 Levels by 2030 and 18% Below 2019 Levels by 2035
Action BE-6.1	Based on the results of measure BE-5.2, the existing building electrification feasibility analysis, develop and adopt an ordinance for existing commercial buildings by 2025, effective 2026, that requires the replacement of fossil fuel building systems such as HVAC and Domestic Hot Water systems with heat pumps at time of renovation. Any buildings that are unable to be electrified due to technological infeasibility shall be decarbonized with other technology. Adopt an electrification ordinance for existing commercial buildings by 2028, effective 2029, to be implemented through the building permit process, which bans expansion or reconnection of natural gas infrastructure.
Action BE-6.2	Develop and implement a commercial and mixed-use building benchmarking program for commercial and multifamily buildings over 20,000 square feet by 2025, effective 2026. The program would include reporting electricity and natural gas usage (and any other energy source) data through energy star portfolio manager. It would establish monetary penalties for non-compliance. Residential portions of buildings that are part of a mixed-use development would be exempt. Create incentives for buildings not covered to encourage voluntary compliance.
Action BE-6.3	Develop and implement a building performance standard by 2028. The standard should identify a GHG emissions per square footage threshold for each commercial building type using the data collected under action BE-6.2. The program will start with larger commercial/multifamily residential buildings and decrease in size over time.

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ID #	Measures and Actions
Action BE-6.4	Re-evaluate building performance program every 3 years to gauge implementation progress and possible expansion to smaller sized buildings.
Action BE-6.5	Work collaboratively (via SBCE) with SCE to incentivize all-electric retrofits by combining rebate programs and financing mechanisms to create cost effective electrification packages. Prioritize small, and under-resourced population-owned businesses.
Action BE-6.6	<p>Expand education, outreach and engagement efforts relating to building electrification and energy resources, including these actions:</p> <ul style="list-style-type: none"> ▪ Partner with the Santa Barbara South Coast Chamber of Commerce to inform and facilitate electrification for commercial business owners. ▪ Conduct a survey of small businesses detailing obstacles and needed resources to inform equity considerations of the ordinance. ▪ Conduct engagement efforts to the commercial sector to identify ways the City can support commercial energy storage installations and neighborhood scale microgrid opportunities. ▪ Leverage the grant writer position(s) in strategy A-2.2 to facilitate funding opportunities for commercial business electrification by identifying and supporting grant opportunities available to the community, prioritizing small and under-resourced population community owned. ▪ Implement feedback provided during the community outreach process to small businesses and under-resourced population-owned businesses to address potential equity impacts of the building performance program.
Action BE-6.7	Track and require rental energy use disclosures at all commercial property over 10,000 SF. Require an ASHRAE (American Society of Heating, Refrigeration, and Air-Conditioning Engineers) level-1 audit for properties over 10,000 SF, and property over 20,000 SF requires an ASHRAE level-2 audit to be conducted and disclosed to the City, tenants, and potential buyers prior to sale and/or listing.
Action BE-6.8	Establish a decarbonization incentive rate pilot program that would charge SBCE customers a reduced marginal cost rate for installation of specific electrification measures. Target commercial kitchens/restaurants, Hotel/Motels, etc.
Action BE-6.9	Publicize tax breaks for commercial building energy efficiency upgrades. For example, Section 179D Deduction is a federal tax deduction that allows commercial building owners to deduct up to \$1.80 per square foot of the cost of qualifying energy-efficient upgrades made to their buildings, including HVAC systems, lighting, and building envelope improvements.
Action BE-6.10	Implement direct installation and/or incentive programs that facilitate the installation of combined solar and battery energy storage system installations on local area commercial buildings. Target 36 installations by 2035.
Action BE-6.11	Develop an emergency hot water appliance program where the City provides commercial residents with emergency natural gas hot water heaters within 24 hours of a request, with an agreement that the hot water heater will be replaced within 6 months with a heat pump.
Action BE-6.12	Create a commercial and mixed-use building electrification accelerator program to increase community access to building electrification resources. This program should include the provision and expansion of resources needed to support building electrification. For example, providing rebates, enhanced funding for income-qualified homeowners, technical expertise, and contractor support.
Measure BE-7 Increase the Impact of Santa Barbara Clean Energy (SBCE)	
Action BE-7.1	Adopt a reach code requiring all non-residential new construction and major remodels to include solar PV.
Action BE-7.2	Convert SCE direct access customers to SBCE through targeted programs, incentives, and engagement. Direct access customers purchase electricity from a competitive provider called an Electric Service Provider (ESP), instead of from a regulated electric utility like Southern California Edison (SCE).
Action BE-7.3	Develop targeted rate structures and other incentives for large commercial customers including demand response.

ID #	Measures and Actions
Action BE-7.4	Develop a local education program detailing incentives for electrification and promoting the benefits of opting in to SBCE's service, particularly for under-resourced populations.
Action BE-7.5	Maintain SBCE opt-out rates below 10%.
Action BE-7.6	Create innovative pilots for SBCE through local partnerships addressing technical, low-income, market, and policy barriers to progress the City's sustainability and resilience goals. Consider working with departments at UCSB like Technology and Management Program for innovative solutions that leverage technology, Engineering for data-driven solutions, and Environmental Science for cutting edge environmental research.
Action BE-7.7	Develop a Feed-In Tariff to increase and incentive distributed energy resources. Feed-In Tariffs allow eligible small-scale renewable energy generating sources to sell their energy back to the utility or major energy grid.
Transportation Measures	
Measure T-1	(Municipal) Continue to Develop and Implement the Municipal Transportation Demand Management (TDM) Program
Action T-1.1	Provide free or discounted access to public transit passes and the electric bicycle share program for all municipal employees and expand the WorkTRIP program to offer additional carbon-free or carbon-reduced modes of travel incentives.
Action T-1.2	Develop a hybrid remote work program policy that supports municipal office employees to work from home as feasible (including alternative work schedules where feasible). City to provide financial assistance to help offset costs associated with home office needs.
Action T-1.3	Provide cash incentives or paid time off for City employees to bike, walk, and carpool to work.
Action T-1.4	Conduct a detailed survey of City staff commute data annually including employee feedback to identify both major emission sources and potential gaps in planning.
Action T-1.5	Identify opportunities for accessing bike lockers and showers at municipal office buildings.
Measure T-2	(Municipal) Electrify or Otherwise Decarbonize the Municipal Fleet by 2035.
Action T-2.1	Complete and implement the City's Zero Emission Vehicle Acquisition Policy to convert fossil fuel municipal fleet vehicles, where feasible, to electric or otherwise decarbonize the fleet by 2035, including a short and long-term schedule for completion as well as potential for regional bulk procurement. Gain approval from City Council to allow discretionary electric vehicle purchases from different vendors.
Action T-2.2	Install additional zero emission vehicle chargers in municipal parking lots for fleet and employee use.
Action T-2.3	Procure biofuels (renewable diesel and biogas) to operate municipally owned on and off-road equipment with no existing opportunities for decarbonization. Re-evaluate decarbonization opportunities regularly to ensure biofuels are not being used for equipment that could otherwise be decarbonized.
Action T-2.4	Develop and adopt a purchasing policy for smaller equipment (e.g., landscaping equipment) that includes reviews and prioritization of emissions-free equipment each time equipment is purchased.
Measure T-3	Implement Programs that Enhance Access to Safe Active Transportation, such as Walking and Biking, to Increase Active Transportation Mode Share to 6% by 2030 and to 10% by 2035
Action T-3.1	Implement the City's Bicycle Master Plan and Pedestrian Master Plan goals and policies to enhance community access to safe active transportation options. Using these guiding documents, identify, design, and procure funding for projects that can forward the goals of the BMP and PMP, and create bike and pedestrian infrastructure that is safer, easier to use, and widely accessible for all community members.
Action T-3.2	Pursue funding and coordinate with existing streets maintenance programs to close gaps in the pedestrian and bike network, as identified in the Bicycle Master Plan, Pedestrian Master Plan, and Capital Improvement Program.

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Action T-3.3	Evaluate existing bike parking facilities and evaluate what improvements can be made to increase parking supply, reduce theft, and increase rider attraction. Include analysis of last mile limitations and hurdles and add bike parking near transit stops accordingly. Consider AB 2097 and expanding bike parking with private facilities when vehicle parking is limited.
Action T-3.4	Adopt the State’s Slow Streets Program and expand the City’s existing neighborhood traffic calming efforts with a focus on equity considerations for additional locations.
Action T-3.5	Engage MOVE SBC, SBCAG, MTD, Santa Barbara County Public Health Department, Cottage Hospital, school districts, local law enforcement, bike advocates, and community stakeholders to continue to identify and implement additional short-term and long-term bikeway and pedestrian infrastructure improvements, Vision Zero messaging and efforts, and general education regarding the safe utilization of our public active infrastructure.
Action T-3.6	Build new infrastructure to ensure there is equitable access to safe bike and pedestrian infrastructure in all areas of the city. Focus planning, development, and construction of active transportation infrastructure in regionally defined disadvantaged communities.
Action T-3.7	Evaluate amending the zoning ordinance to increase bike parking and types of bike parking facilities for land development projects.
Action T-3.8	Implement the recommended bike facilities outlined in the Santa Barbara Bicycle Master Plan to add 30 miles of bike ways to the City by 2030.
Action T-3.9	Implement Santa Barbara's Vision Zero Strategy to eliminate serious injuries and fatalities on City streets.
Action T-3.10	Leverage technology to track mode shifts to active transportation. Conduct an annual review of progress on implementation progress, data quality, and potential barriers to implementation. Once an effective tracking method is developed, the City shall aim to achieve 6% increase in active transportation mode share by 2030 and 10% by 2035.
Action T-3.11	Increase bike parking in nonresidential places like populated areas, City Parks, beaches, etc.
Action T-3.12	Accelerate the production and availability of affordable housing near urban centers by updating and adopting the Housing Element and Zoning Code to reduce vehicle miles traveled; by exploring alternative strategies to create and preserve affordable housing, such as co-ops, housing or land trusts; and by streamlining project review with objective design standards.
Measure T-4	Implement Programs to Encourage Public Transportation to Increase Public Transportation Mode Share to 7% by 2030 and to 8% by 2035
Action T-4.1	Explore alternative forms of public transit, such as micro transit and/or new electric shuttle routes, in areas with higher congestion and population densities. Micro transit is a type of on-demand, shared transportation service that typically operates with smaller vehicles, such as vans or mini-buses, and offers flexible routes and schedules.
Action T-4.2	Market and publicize public transportation improvements as they are planned and implemented in a variety of methods (social media, newspaper, radio, etc.) and languages to help facilitate use and success of improvement.
Action T-4.3	Partner with Santa Barbara MTD to determine transit priority projects and determine best potential locations for expansion and increased service.
Action T-4.4	Work with nonprofit and community stakeholders to enhance public transit opportunities.
Action T-4.5	Work with Santa Barbara MTD to ensure public transportation access and improvements are prioritized in low-income and high population density areas of the City.
Action T-4.6	Work with MTD to identify and implement pilot projects and infrastructure updates to make transit safer, more consistent, and more convenient.

ID #	Measures and Actions
Measure T-5	Support and Promote Regional Programs that Reduce the Use of Single Occupancy Vehicles
Action T-5.1	Continue to work with SBCAG to encourage employers to develop Transportation Demand Management (TDM) Plans for their employees. TDM plans should include incentives for employees to bike, walk, carpool, or take the bus to work and should be publicized on a website.
Action T-5.2	To enhance the Santa Barbara community's ability to telecommute, implement SBCAG's Broadband Regional Study to identify areas of the City that have limited access to broadband service due to infrastructure and financial limitations.
Action T-5.3	To enable telecommuting, leverage the grant writer position(s) in strategy A-2.2 to identify funding opportunities to bridge the broadband access gap in the City by helping to fund installation of infrastructure or subsidize broadband service for low-income households.
Action T-5.4	Provide active and alternative transportation resources across all businesses in the city prioritizing small, women owned, and minority owned businesses regardless of Transportation Demand Management Plan (TDM) membership.
Action T-5.5	Implement <i>2022 California Assembly Bill 2097 – Residential, Commercial, or Other Development Types: Parking Requirements</i> which prohibits the City from imposing minimum parking requirements on residential and commercial development, if located with ½ mile of public transit that is consistent with AB 2097.
Action T-5.6	In line with the General Plan, develop and implement a program to manage parking of single-occupancy vehicles. Utilize on street parking pricing for all downtown parking locations and use revenue to fund active transportation, public transportation projects, and neighborhood improvements. The program should address parking issues citywide and consider measures to prevent impacts to surrounding areas and coastal access. This analysis may include citywide use of parking permit programs and other measures.
Action T-5.7	Develop the Pilot Bike Share Program into a permanent and dependable bike share network that provides access to key destinations throughout the City, and work with regional partners to assess potential for a regional bike share system.
Action T-5.8	Coordinate with SBCAG and regional partners to update regional active transportation maps. Distribute active transportation maps and educational materials to various stakeholders. Prioritize education regarding digital mapping that is available on regularly used platforms like Google Maps.
Action T-5.9	Partner with the tourism and business sectors of the greater Santa Barbara County region to identify pathways to increase active transportation by tourists and employees.
Action T-5.10	Reduce driving of single occupancy vehicles through public education and engagement. Examine equity concerns around reducing single occupancy vehicles and ensure there are adequate resources available for alternative forms of transportation.
Action T-5.11	Explore options to address long distance commuter parking. For example, add a parking lot outside of the downtown area for long distance commuters and use mode share to bring these employees into the downtown area from the new parking lot, reducing parking congestion.
Measure T-6	Increase Zero-Emission Passenger Vehicle Use and Adoption to 30% by 2030 and 55% by 2035
Action T-6.1	In 2025 and every 3-years thereafter, amend the Municipal Code to require increased number of electric vehicle capable charging spaces in new construction and major redevelopment for commercial, mixed-use, and multi-family development.
Action T-6.2	In 2025 and every 3-years thereafter, revisit commercial and multi-family building ordinances to be updated and require large commercial (more than 10,000 square feet) and large multi-family (more than 20 units) building owners that are providing parking to install working electric vehicle chargers in 20% of parking spaces for existing buildings when undergoing a major remodel (over 50% of building effected or an addition of over 50% of gross floor space).
Action T-6.3	Add 1,788 (by 2030) and 3,536 (by 2035) new publicly accessible electric vehicle charging stations throughout the City and at City-owned facilities to support community EV charger access.
Action T-6.4	Support private development of EV charger installations by effectively streamlining City processes, such as expediting permitting, easing onerous regulations, develop a permitting design guide.

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ID #	Measures and Actions
Action T-6.5	Identify private sector partnerships and develop affordable, zero-emission vehicle car share programs to serve affordable housing and/or multi-unit developments with a priority to target under-resourced populations.
Measure T-7 Accelerate Zero-Emission Commercial Vehicle Use and Adoption to 26% by 2030 and 45% by 2035	
Action T-7.1	Develop and implement a City Zero Emission Vehicle Action Plan (ZEVAP) to identify policies to accelerate ZEV adoption community wide.
Action T-7.2	Identify and connect commercial vehicle owners, particularly those serving under-resourced communities, to resources that can incentivize vehicle electrification. This could include local tax breaks.
Action T-7.3	Provide information to the public on low-carbon fuel standards (LCSF) and how businesses can develop LCSF credits or other state and federal programs to help fund conversion of commercial fleets to zero emissions vehicles.
Action T-7.4	Create a small business truck buyback program to buyback trucks from local small businesses to upgrade to electric.
Measure T-8 Electrify or Otherwise Decarbonize 6% of Off-Road Equipment by 2030 and 20% by 2035¹	
Action T-8.1	Align with or exceed <i>2021 California Assembly Bill 134 – Air Pollution: Small Off-Road Engines</i> and expand enforcement of the ordinance that bans gas powered small offroad engines by 2024 (e.g., lawn and garden equipment). Provide income tiered incentives or buyback programs for burdened residents and businesses. Identify staffing needs for an enforcement and implementation tracking program run by the relevant City department.
Action T-8.2	Inform, educate, and support the transition of local employers to zero emission off-road equipment, including major construction companies, manufacturers, landscapers, and warehouse companies.
Action T-8.3	Investigate off-road equipment fleets in the City of Santa Barbara, identify fleets with highest decarbonization potential, and conduct engagement to under-resourced communities to understand how to support conversion.
Action T-8.4	Partner with Santa Barbara County Air Pollution Control District to expand rebate and incentive programs for upgrading off-road equipment to hybrids, biofuels, or fully electric.
Action T-8.5	Leverage the grant writer position(s) in strategy A-2.2 to source state funding to decarbonize off-road equipment as a result of Executive Order N-79-20 and State Climate Funding Package.
Action T-8.6	Develop a landscape equipment education and incentive program incentivizing motorized landscape equipment electrification (electric leaf blowers already required, but can get rolled into an education campaign) for hedge trimmers, etc.
Waste, Solid Waste, and Wastewater Measures	
Measure W-1 (Municipal) Increase Municipal Procurement of Recovered Organics Waste Products	
Action W-1.1	Require City agencies to procure and apply compost generated from municipal organic waste to the exterior of suitable facilities as part of their operations.
Action W-1.2	Increase signage for municipal buildings, parking, and sidewalk bins on accepted landfill, recyclable, and compostable materials.
Action W-1.3	Investigate opportunities for procuring recovered organic waste products within municipal facilities.
Measure W-2 (Municipal) Reduce Municipal Water Consumption	
Action W-2.1	Continue implementing City policies for water-conserving equipment upgrades and practices at City government facilities. Implement additional facility, landscape, and procedure improvements to further conserve water as identified and determined feasible.
Action W-2.2	Create a Green Community Infrastructure Program based on the Stormwater BMP Guidance Manual with upgraded public spaces, green parking lots, green alleys and increased green stormwater infrastructure on City facilities.

ID #	Measures and Actions
Measure W-3	Reduce Per Capita Potable Water Consumption 1.05% by 2030 and 1.58% by 2035
Action W-3.1	Implement all cost-effective measures identified in the Water Conservation Strategic Plan.
Action W-3.2	Leverage the grant writer position(s) in strategy A-2.2 to source funding for the Water Conservation Strategic Plan programs and rebates.
Action W-3.3	Educate the community through the Water Resources division of Public Works to understand available incentives, options, and programs to reduce per capita water use.
Action W-3.4	Expand public engagement campaigns to promote the available rebates through the City's Water Conservation Programs.
Action W-3.5	Utilize available enhanced water consumption data from the City's Automated Metering Infrastructure, along with the WaterSmart customer portal, to educate water customers about water use patterns and leak detection.
Action W-3.6	Leverage the grant writer position(s) in strategy A-2.2 to provide specialized rebate or other funding to low and medium incomes homes for installing laundry to landscape, rainwater catchment system, low-flow appliances, and fixing water leaks.
Measure W-4	Reduce Organic Waste 80% below 2014 levels by 2030 and 85% by 2035
Action W-4.1	<p>Meet the requirements of 2016 California Senate Bill 1383 to reduce organics in the waste stream by 80% below 2014 levels. Include existing activities of:</p> <ul style="list-style-type: none"> ▪ Pilot and evaluate emerging technologies like at source organic waste digestion to reduce organic waste by restaurants and other major food waste producers. ▪ Implement enforcement and fee for incorrectly sorted materials with sensitivity to shared collection. ▪ Increase bin signage across commercial and residential areas of acceptable landfill, recyclable, and compostable materials.
Action W-4.2	Create a templated training for businesses to educate their employees about circular economy-based practices annually by providing training resources and rebate program to fund employee time for training. Support lower-impact reusable and reduced packaging businesses.
Action W-4.3	Conduct targeted multicultural education and assistance campaigns to enhance reuse, ways to prolong the useful life of common materials and items, and sustainable purchasing practices.
Action W-4.4	Conduct a Bring Your Own (BYO) education and outreach training for the community on reusables and implementing more sustainable packaging into daily use. Provide resources of education on City website. Educate community on food scraps on resource center.
Action W-4.5	Conduct waste characterization studies every 4-5 years to inform programs and policies. Leverage study to understand the waste stream and create a plan to increase diversion and reduce contamination.
Action W-4.6	Collaborate with the County and Resource Conservation District to develop a regional compost trading program to provide farmers with compost to meet organic procurement target set by 2016 California Senate Bill 1383.
Action W-4.7	Establish regional consortium to plan and pursue funding for infrastructure beyond 2025 California Senate Bill 1383 targets.
Action W-4.8	Establish relationships with multi-unit property owners/managers to develop signage for their properties. Go door-to-door at each multi-unit unit yearly to provide supplies and education for proper sorting.
Action W-4.9	Conduct outreach campaign to low and medium -income residents educating them on issues related to abandoned waste and informing them on how to access bulky item and abandoned waste services at no cost.
Action W-4.10	Partner with the harbor, airport and other major Santa Barbara facilities to facilitate no single use plastic practices.

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Action W-4.11	Continue to provide different bin size options for green waste, recycling, and trash at different costs (smaller bins being cheaper options) and work towards discontinuing the use of larger waste containers as feasible.
Action W-4.12	Ban items without means of recycling or recycling markets, such as sale of polystyrene, produce bags, plastic packaging, straws, plastics #4-7, and mixed materials.
Action W-4.13	Implement pilot project for reusable restaurant to-go containers.
Action W-4.14	Explore opportunities to promote a "circular economy" among local manufacturers and industry. Build on existing AB 619 legislation to fund temporary or permanent food facility item reuse.
Action W-4.15	Partner with libraries and other existing facilities to market campaigns about waste reductions, reuse, and repair.
Action W-4.16	Partner with UCSB, ICLEI and other organizations to cost effectively evaluate and develop resources around consumption-based emissions. Utilize consumption-based emissions inventory to understand Santa Barbara's most carbon intensive consumption habits and emission reduction potential and promote closed-loop circular economy. Based on the results, create a plan to achieve the objective of zero growth of waste generation. Consider reusable diaper service, plant-based diets, etc.
Action W-4.17	Create a training/education program that is free and accessible to all residents and employees to learn about circular economy practices and diversion strategies and effects of overconsumption.
Carbon Sequestration	
Measure CS-1	Increase Carbon Sequestration by Maintaining Existing Trees and Natural Lands and by Planting 4,500 New Trees throughout the Community by 2030
Action CS-1.1	Continue to implement and expand the City's Urban Forest Management Plan to include goals for promoting street tree health, enhancing resiliency, increasing the environmental benefits and co-benefits resulting from street trees and shading, community engagement around the urban forest. Include activity to promote street tree health and maintaining existing trees through partnerships with the community and local non-profits.
Action CS-1.2	Continue to look for opportunities to increase carbon sequestration via land acquisitions and tree protections in alignment with the City's Open Space, Parks and Recreation Element.
Action CS-1.3	Implement the City's Community Wildfire Protection Plan to reduce fire risk and carbon loss due to wildfires by conducting vegetation management throughout the City. Ensure that vegetation management projects minimize full removal of vegetation or conversion of land cover type from a higher carbon sequestration land cover (shrubs and trees) to a lower carbon sequestration land cover type (annual grasses).
Action CS-1.4	Develop a Citywide, or participate in a regional, carbon sequestration analysis and plan to explore opportunities to increase sequestration in the City.
Action CS-1.5	Implement the City of Santa Barbara's Creek Tree Program to assist private creekside landowners with improving wildlife habitat along creeks in Santa Barbara through the protection and planting of native trees. Develop a wildlife habitat install program where the City provides carbon sequestering plants and creek trees and removes non-natives as feasible for appropriate creekside properties. Prioritize low-income areas for implementation of the Creek Tree Program and keep an updated publicly accessible page on the City website with important information about the program.
Action CS-1.6	Update tree canopy coverage data within the City to measure the change in coverage over time as it relates to sequestration as part of the next Urban Forest Management Plan update.
Action CS-1.7	Invest and participate in regional development of local carbon off-set program in partnership with the County and/or Central Coast Regional Collaborative.
Action CS-1.8	Prioritize low-income areas of the City with less existing tree canopy for tree plantings and increase shading in gathering spaces.

ID #	Measures and Actions
Measure CS-2	Explore New Carbon Sequestration and Carbon Capture Opportunities
Action CS-2.1	Create an organizational body (internally within the City or through a partnership like with UCSB or the Santa Barbara Botanical Garden) to lead program development and research for facilitating emergent carbon sequestration and carbon capture plans relevant to the City.
Action CS-2.2	Pilot and promote carbon sequestering construction materials like low-carbon concrete and mass timber.
Action CS-2.3	Work with local architects, construction trades, and workforce development organizations to expand industry knowledge and adoption of carbon sequestering building materials and techniques.
Action CS-2.4	Conduct a feasibility study to explore carbon capture and storage opportunities for the community.
Action CS-2.5	Initiate a study partnering with local academic institutions and the ReSource Center to identify and research ways to create a circular economy around organic waste and increasing edible food rescue.
Action CS-2.6	Conduct a feasibility study to explore repurposing biosolids into biochar locally and replacing conventional fertilizer through Public Works.
Action CS-2.7	Invest in the existing kelp farming efforts by studying regional environmental impacts and sequestration potential through a partnership with UCSB.
Action CS-2.8	Partner with furniture, home renovation, and construction companies to promote sustainable and locally harvested timber to reduce embodied carbon from transit of construction materials and reduce the price premium of emerging timber uses.
Action CS-2.9	Leverage the grant writer position(s) in strategy A-2.2 to expand funding for the carbon sequestration program.
Action CS-2.10	If there are localized co-benefits to any sequestration projects focus development, when possible, to benefit historically adversely impacted under-resourced communities.
Measure CS-3	Maintain and Expand Existing Restoration Projects to Sequester Carbon through a 25-acre Net Increase in Restored Land Areas by 2030
Action CS-3.1	Develop a Citywide restoration plan in partnership with the Creeks Division, Parks and Recreation, and Public Works to achieve target net increases in restored land area and waterways. Prioritize implementation of restoration projects in disadvantaged communities. Facilitate community outreach through surveys and public meetings on ways to best restore lands and waterways within the City as well as identify additional priority areas.
Action CS-3.2	Should parcels be identified for potential rezoning from their existing state to a park or open space, consider the following: <ol style="list-style-type: none"> 1) provide flexible solutions for developing urban parks in infill areas where traditional neighborhood and community parks are not feasible; 2) aim to achieve the greatest carbon sequestration possible, given constraints around use and amenities to be included. Use and amenities are determined by Parks and Recreation staff through a community process; and 3) selection of parcels be made with an aim to serve underserved communities.
Action CS-3.3	Expand Creeks Division volunteering programs to help maintain creek restoration projects. Coordinate projects with Parks and Recreation and Sustainability and Resilience Departments.
Action CS-3.4	Facilitate annual reporting as part of the urban forestry, wildfire prevention, and Citywide restoration efforts by developing and maintaining existing projects to gauge progress over time and identify any gaps related to ongoing projects. Incorporate GHG reduction calculations into this monitoring plan.
Action CS-3.5	Leverage the grant writer position(s) in strategy A-2.2 to pursue funding for restoration activities with a focus on projects that have not reached completion due to funding constraints.
Action CS-3.6	Include long term maintenance in restoration planning and implementation by partnering with the community and local organizations to assist in maintenance activities. Include continued maintenance and expansion of Creeks Division projects of the Upper Las Positas Creek, Mission Creek, Palermo Open Space, Arroyo Burro, and the Andree Clark Bird Refuge.

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ID #	Measures and Actions
Measure CS-4	Increase Carbon Sequestration by Applying 0.08 tons of Compost per Capita Annually in the Community through 2030 and 2035
Action CS-4.1	Enforce compliance with 2016 California Senate Bill 1383 and aim to exceed the baseline requirement by establishing a minimum level of compost application per year on applicable/appropriate land throughout the City including City-owned land twice that of SB 1383 requirements.
Action CS-4.2	Identify additional locations within the City to apply compost and provide household incentives for small-scale implementation.
Action CS-4.3	Maintain procurement policies to comply with SB 1383 requirements for jurisdictions to purchase recovered organic waste products.
Action CS-4.4	Work with the ReSource Center to provide residents, businesses, and developers with educational material on where compost can be acquired and how it can be used (i.e., landscaping).
Action CS-4.5	Collaborate with Santa Barbara Community College, UC Santa Barbara, local schools, and Public Works to identify opportunities to apply compost to landscaping.
Measure CS-5	Reduce GHG Emissions of Residential and Commercial Building Materials 20% by 2030 and 40% by 2035 in Line with AB 2446
Action CS-5.1	Conduct a feasibility study on carbon capture technologies to locally produce calcium carbonate (low carbon concrete) creating sequestration via construction materials. Determine viability within the City and project demand.
Action CS-5.2	Partner with UCSB to pilot a building specific embodied carbon reduction project for planned construction.
Action CS-5.3	Develop a strategic construction and procurement plan to promote construction projects that use alternative materials to reduce embodied carbon. Include scoring criteria in City request for proposals for construction projects that identify resilience features such as water and energy efficiency, reduced urban heat, and decrease the embodied carbon in line with AB 2446.
Community Climate Potential	
Measure CP-1	Encourage Community Innovation and Empower the Local Green Economy through Investment in a Green Technology Workforce
Action CP-1.1	Create a Green Technology incubator in partnership with UCSB to determine technological advancement research into clean power, built environment advancement, and carbon sequestration.
Action CP-1.2	Leverage the grant writer position(s) in strategy A-2.2 to source funding for the Green Technology incubator through involvement of venture capitalist and private equity firms.
Action CP-1.3	Facilitate workforce training by partnering with local academic institutions to offer scholarships for students pursuing climate trades.
Action CP-1.4	Partner with Santa Barbara Community College and/or UCSB to develop a clean energy technology certificate program.
Action CP-1.5	Leverage the grant writer position(s) in strategy A-2.2 to establish an Innovation Bootcamp with funding from SBCE to encourage forward thinking sustainability and resilience ideas and pilots. The Innovation Bootcamp will be tiered based on stages.
Action CP-1.6	Create a climate innovation competition for local area students where the prize is a scholarship or grant.
Source: Santa Barbara, City of. 2023. CAP Update.	

The measures included in the CAP Update combined with statewide legislation and initiatives and regional transportation programs will enable the City to meet its emissions reduction target of 40 percent below 1990 levels by 2030. Table 4 shows the contribution of the statewide initiatives along with the measures included in the CAP Update. The City needs to achieve a reduction of 211,647 MT CO₂e by 2030 to meet its goal. The estimated GHG reductions accounted for in the CAP Update combined with the GHG reductions from State and SBCE Initiatives total 320,089 MT CO₂e by 2030.

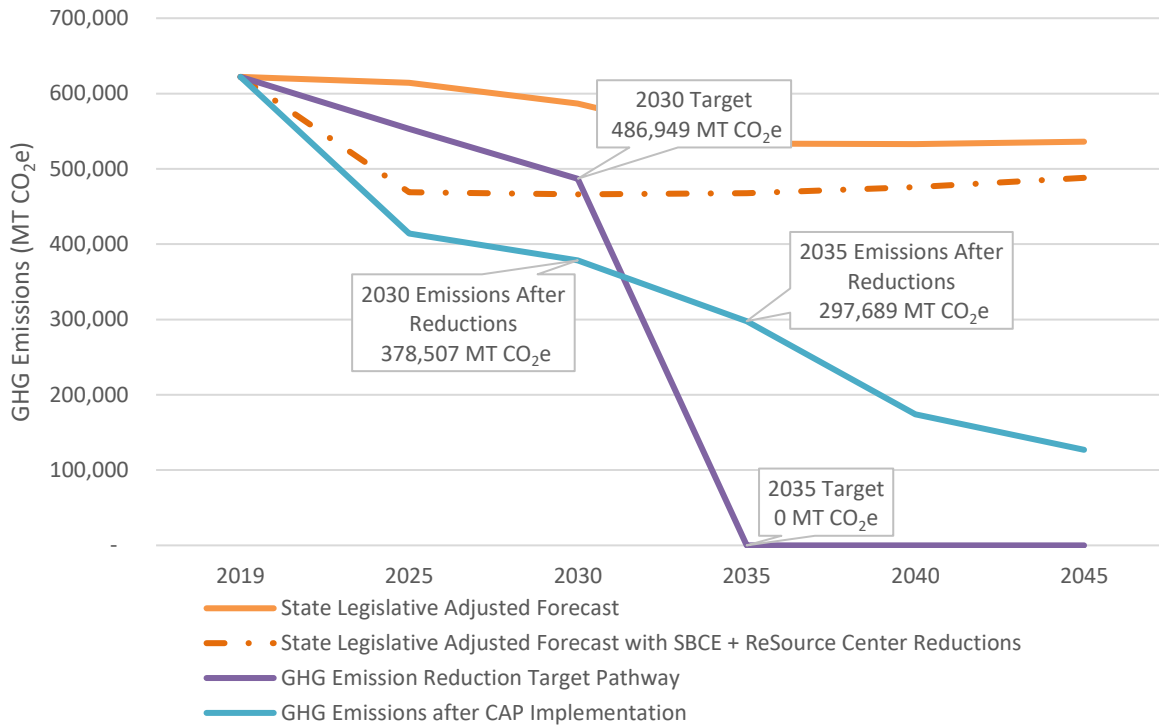
Table 4 City of Santa Barbara 2030 GHG Reduction Target by Sector

State Initiative	Sector	2030 Reduction in City Emissions (MTCO ₂ e)
Advanced Clean Cars Program, Pavley Standards, Zero Emissions Vehicles Program, Clean Transit)	On-road Transportation	63,081
SB 1383	Water, Solid Waste, and Wastewater	45,733
Title 24	Residential/Non-residential Electricity and Natural Gas	13,594
A. Total State Initiative and SBCE Emissions Reductions		187,784
B. Total City CAP Update Emissions Reductions		132,305
C. Total Expected Emissions Reductions (A+B)		320,089
D. City of Santa Barbara Emissions Reduction Requirement		211,647
E. Meets/exceeds State Goals? (C > D)		Yes

Source: Santa Barbara, City of. 2023. CAP Update.

Table 4 and Figure 3 illustrate how the BAU emissions are estimated to increase, thus widening the emissions reductions needed by 2030. Figure 3 also shows emissions reductions expected from State level actions as well as the reductions needed to reach the City of Santa Barbara emissions target.

Figure 3 City of Santa Barbara Future GHG Emissions Projection and Reduction Target



Source: Santa Barbara, City of. 2021. Santa Barbara CAP.

Table 5 City of Santa Barbara Future GHG Emissions Projection and Reduction Target

Description	Emissions (MTCO ₂ e)
1990 Emissions	715,530
2019 Emissions	622,110
2030 BAU Emissions	698,596
2030 Adjusted Forecast	510,812
2030 Target Emissions (49% below 1990 levels)	486,949
2030 Required Reduction from Measures	132,305

Source: Santa Barbara, City of. 2023. Draft CAP Update

Implementation of the measures listed in Table 3 could result in physical changes to the environment that could potentially have a significant impact on the environment. While individual projects resulting from these measures have not been identified for the purposes of this document, the types of actions that could result from realization of the measures are taken into account in considering potential environmental impacts that could occur through implementation of the CAP Update. For example, projects or actions requiring ministerial approval, such as installation of electric vehicle charging stations and supporting infrastructure, new bicycle or pedestrian facilities, and solar photovoltaic (PV), may introduce physical changes related to the temporary presence and operation of construction vehicles and equipment during installation of required facilities and the long-term presence of new facilities such as bike and pedestrian facilities, solar arrays, and electric vehicle charging stations, which could alter pedestrian and vehicular traffic patterns.

Additionally, electrification retrofits may change the physical environment through the need for upgraded service and electrical panels, branch circuit upgrades, and installation of condensate drains to facilitate the installation of electric heat pumps for water and space heating. The associated construction impacts and the physical changes these upgrades and additions would entail are dependent on the year of building construction and location of electrical and service panels and plumbing for connection of condensate drains, which in some cases may include modifications to the interior and/or exterior of buildings for wiring and panel replacement, and minor excavation for connection of drainage to sewer systems. Projects implemented in support of the CAP Update would be reviewed for consistency with the General Plan, other applicable regulatory land use actions, and would be subject to any required environmental assessment that would be completed prior to approval of any project. Future plans or projects would be subject to environmental review under CEQA, and individual impact analyses will identify required plan- or project-specific mitigation measures where applicable.

Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis

In 2007, SB 97 acknowledged that climate change is an environmental issue that requires analysis in CEQA documents, and in 2010 the California Natural Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines gave lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. Specifically, Section 15183.5(b)(1)A-G of Title 14 of the California Code of Regulations was amended to state that a qualified GHG Reduction Plan may be used for tiering and streamlining the analysis of GHG emissions in subsequent CEQA project evaluation, provided that the GHG Reduction Plan does the following:

- Quantifies GHG emissions both existing and projected over a specific period of time, resulting from activities within a defined geographical area
- Establishes a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable
- Identifies and analyzes the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area
- Specifies 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
- Establishes a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels
- Be adopted in a public process following environmental review

Therefore, the City proposes to also adopt a quantitative efficiency threshold for use in evaluating whether a plan or project's GHG emissions would result in a potentially significant environmental impact under CEQA for plans or projects with pre-2030 buildout or initial operation years. The CEQA Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would be applied to plans or projects that cannot tier from the environmental analysis for the City's CAP Update (as contained in this IS/ND) because the plan or project would not be consistent with the General Plan land use and zoning designations for the project site and would result in greater GHG

City of Santa Barbara Climate Action Plan Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis

emissions than existing on-site development, or the plan or project would not be consistent with the CEQA GHG Emissions Analysis Compliance Checklist.

The threshold is set at the level of GHG emissions that new development would need to achieve to be consistent with the CAP Update's communitywide emissions reduction target of 40 percent below 1990 emissions levels by 2030. The efficiency threshold, listed below, is expressed in terms of MT CO₂e per service person¹⁴ and is applicable to plans or projects with pre-2030 buildout or initial operational years:

- 2.13 MT CO₂e per service person¹⁵

Efficiency thresholds for beyond 2030 would be established later in conjunction with subsequent CAP Updates. Plans or projects that do not tier from the City CAP Update IS/ND that would generate GHG emissions in excess of these thresholds would result in a potentially significant impact on the environment related to GHG emissions and climate change. Mitigation measures would be required to be identified to reduce potentially significant impacts resulting from such plans or projects. Plans or projects that are unable to reduce GHG emissions below these thresholds through implementation of identified mitigation measures would result in a significant and unavoidable environmental impact. The Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis provides guidance during CEQA review and does not propose development or changes to land use and zoning. Thus, implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not have direct construction or operational impacts.

General Plan Designation and Zoning

The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would be implemented throughout the City and would occur in all Santa Barbara General Plan designations and zoning designations. The plan would not alter any existing designations.

6. Cumulative Projects Scenario

For purposes of CEQA cumulative impacts analysis of the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis, the cumulative projects scenario is the total projected population growth, and the anticipated cumulative development to accommodate that growth, for Santa Barbara in 2030. Population and employment-based growth factors use the most recent SBCAG 2050 Connected - Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) demographic forecasts.¹⁶ Household based growth factors similarly use SBCAG 2020 RTP/SCS forecast; however, these are adjusted to account for the 6th Cycle Regional Housing Needs Assessment (RHNA) allocation of housing needs for the City of Santa Barbara between 2023 and 2031. As such, the number of households in the SBCAG region is expected to grow by 8,274 units between 2019 and 2030.¹⁷ As outlined in the CAP, the population included in the CAP is different from the population included in the Housing Element because the Department

¹⁴The service population is equal to the residential population plus the number of jobs.

¹⁵Santa Barbara, City of. 2023. CAP Update.

¹⁶Santa Barbara County Association of Governments. 2020. 2050 Connected Regional Transportation Plan/Sustainable Communities Strategy. <https://www.sbcag.org/wp-content/uploads/2023/09/Connected-2050-Final.pdf>. Accessed October 2023.

¹⁷Santa Barbara County Association of Governments. 2021. Regional Housing Needs Allocation Plan 6th Cycle 2023-2031. https://www.sbcag.org/wp-content/uploads/2023/08/final_rhna_plan.pdf. Accessed October 2023.

of Housing and Community Development (HCD)¹⁸ recommends that each jurisdiction create a buffer in the housing element inventory of at least 15 to 30 percent more capacity than required to ensure that sufficient capacity exists in the housing element to accommodate the Regional Housing Need Allocation throughout the planning period. Including a buffer in the CAP could result in an overly conservative emissions reduction forecast and target because these scenarios are in part calculated based on future population scenarios.

7. Required Approvals

City of Santa Barbara

Required approvals include:

- Adoption of the CAP Update and CEQA Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis Initial Study-Negative Declaration
- Adoption of the CAP Update
- Adoption of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis

Although individual plans or projects may be implemented later under the umbrella of the CAP Update, each individual plan or project would be subject to separate environmental review under CEQA.

Other Public Agencies

The City of Santa Barbara has sole approval authority over the CAP Update. There are no other public agencies whose approval is required.

¹⁸ HCD. June 10, 2020. Housing Element Site Inventory Guidebook Government Code Section 65583.2. https://www.hcd.ca.gov/community-development/housing-element/docs/sites_inventory_memo_final06102020.pdf

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Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is “Potentially Significant” or “Less than Significant with Mitigation Incorporated” as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology and Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials |
| <input type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Wildfire | <input type="checkbox"/> Mandatory Findings of Significance |

Determination

Based on this initial evaluation:

- I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- I find that the proposed project **MAY** have a “potentially significant impact” or “less than significant with mitigation incorporated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

- I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed Name

Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
--	--------------------------------	--	------------------------------	-----------

Except as provided in Public Resources Code Section 21099, would the project:

a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project have a substantial adverse effect on a scenic vista?*
- b. *Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

As described in Plan Location and Physical Setting, the City of Santa Barbara is located on Santa Barbara County’s South Coast, and the city’s limits extend into the Pacific Ocean. The majority of Santa Barbara is developed with the densest development and largest buildings located within the City’s downtown area. The primary arterial roadways in the City include U.S. Highway 101 (U.S. 101), U.S. Highway 192 (U.S. 192), and State Route 154 (SR 154). Views south of U.S. 101 include beaches, coastal bluffs, and the Mesa. North of U.S. 101, downtown cityscape of Santa Barbara, and the Santa Ynez Mountains and surrounding foothills, with single-unit residential development scattered in the Riviera on the lower elevations, provide a backdrop for the City. East of the City limits, Santa Barbara abuts the wooded, semi-rural community of Montecito, while to the west, suburban residential, commercial, and agricultural uses comprise Hope Ranch and the Goleta Valley.

The City's 2010 Program Environmental Impact Report for the General Plan Update (General Plan EIR) identifies ridgelines and foothills; ocean, beach and harbor; and substantial Open Space Areas as Important Visual Resources.¹⁹ Surrounding steep hillsides, peaks, and rocky outcrops of the Santa Ynez Mountains contribute to the scenic quality of the City. Parks located in the foothills, such as Parma and Skofield Parks, support miles of scenic trails and provide views of the Pacific Ocean and City. Three creek systems, the Sycamore, Mission, and Arroyo Burro, provide natural corridors that contrast with existing urban development. Large groves of mature sycamore and oak trees along the Sycamore and Mission Creeks provide contrast with developed areas of the City, and woodlands along the Arroyo Burro Creek are important natural features in the San Roque, Hitchcock, and Hidden Valley neighborhoods. In addition, the City contains approximately 35,000 street trees, more than 9,000 public trees in developed parks and landscaped areas of public facilities, and around 30,000 trees within City-managed open spaces.²⁰ These trees soften the appearance of buildings, roads, and parking lots which provide visual contrast to building masses in addition to pleasant scenery for residents, employees, and tourists. The City's tree inventory contains 456 different varieties of trees.²¹ These include specimen trees which are identified by the City's Parks and Recreation Commission to be of high value because of their type, size, and/or age.

Santa Barbara's shoreline extends approximately seven miles from Montecito on the east to Hope Ranch on the west and includes beaches, some with existing residential and commercial developments. Public beaches and waterfront and blufftop parks allow for public access to the area's natural scenery, including wide, sandy beaches and steep coastal bluffs. The waterfront of Santa Barbara provides panoramic ocean and mountain views with single-story structures along the waterfront, allowing for views of the ocean and mountains. The line of palm trees within Chase Palm Park contributes to the scenic character of the area.

Sweeping views of the City are available within certain neighborhoods and on certain public streets that are elevated within the foothills. The Riviera and Eucalyptus Hill neighborhoods, and the north side of the Mesa and TV Hill, offer views of the City, Pacific Ocean, and surrounding hillsides. Roads located within the foothills, such as Alameda Padre Serra and Mountain Drive, provide views of downtown and the Pacific Ocean.

Views from downtown Santa Barbara are characterized by foreground views of the urban environment, including buildings, roads, sidewalks, street trees, and parking areas. The downtown streetscape includes a street grid with short blocks and active transportation facilities (sidewalks/bicycle lanes). The architecture, scattered parks, and parking lots provide a sense of openness through the downtown area. Views of the Santa Ynez Mountains, hillsides, and the Rivera occur intermittently throughout the downtown urban core, primarily along roadways, intersections, and across larger parking lots and lower buildings. These views are interrupted by taller buildings and street trees. Open spaces, such as Plaza De la Guerra, the municipal Santa Barbara Golf Club, and Alameda Park, provide public mountain views. Surrounding views can also be seen from the upper stories of buildings such as the County Courthouse and on top of parking garages. Notable

¹⁹ Santa Barbara, City of. 2010. Program Environmental Impact Report for the Plan Santa Barbara General Plan Update. September 2010. <https://www.santabarbaraca.gov/services/planning/plan.asp>. Accessed October 27, 2023.

²⁰ Santa Barbara, City of. 2022. Trees and Urban Forestry. <https://sbparksandrec.santabarbaraca.gov/programs-services/trees-and-urban-forestry#:~:text=The%20City%20of%20Santa%20Barbara%20Urban%20Forestry%20Program%2C,and%20around%2030%2C000%20trees%20within%20City-managed%20open%20spaces>. Accessed October 27, 2023.

²¹ Santa Barbara, City of. 2014. Urban Forest Management Plan. <https://santabarbaraca.gov/sites/default/files/documents/Parks%20%26%20Recreation/Urban%20Forestry/Urban%20Forest%20Management%20Plan.pdf>. Accessed October 27, 2023.

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structures, such as the County Courthouse and Main Post Office contribute to the visual character of downtown Santa Barbara.

According to the California Scenic Highway System, there is one officially designated scenic highway (SR 154) and one eligible scenic highway (U.S. 101) in the City.²² The California Scenic Highway Program preserves and protects scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to these scenic highways. The City's General Plan Circulation Element contains the Scenic Highways Element which provides planning, design and maintenance standards for roads within the City including Cabrillo Boulevard, and Sycamore Canyon Road. The City of Santa Barbara Coastal Land Use Plan (Coastal LUP) identifies the segment of U.S. 101 within the Coastal Zone as providing a distinct visual gateway to the City with its landscaping, views of the mountains and ocean, and unique highway structures.²³ U.S. 101 enters the City's Coastal Zone at Mission Creek and extends to Olive Mill Road). In addition, the Coastal LUP recognizes Cabrillo Boulevard and Shoreline Drive for their visual qualities such the ability to view the Santa Barbara Channel and shoreline.²⁴

The City's General Plan contains several goals and policies related to aesthetics and visual resources within the Land Use Element, Circulation Element, and Environmental Resources Element. The Land Use Element guides the physical and socioeconomic character of the City through environmental protection, growth management, community design, and neighborhoods. Land Use Element Goal LG-12 aims to strengthen and enhance design and development review standards and process to enhance community character, promote affordable housing, and strive towards community sustainability principles. The inclusion of design guidelines ensures that proposed development would not preclude preservation of visual assets; and building standards, including setbacks, height, and floor area ratios. Current Santa Barbara design guidelines include the Architectural Board of Review Guidelines, Chapala Street Guidelines, El Pueblo Viejo District Guidelines, Haley-Milpas Design Guidelines, Lower Riviera Special Design District Guidelines, Outdoor Lighting Design Guidelines, and more.²⁵

The Circulation Element contains the Scenic Highways Element which provides goals for development, establishment, and protection of scenic highways. Within the City, State Route (SR) 154 is the only officially designated scenic highway and U.S. 101 is eligible for official designation. An eligible State highway becomes officially designated only if the local government takes steps to pursue nomination of an eligible route. The Scenic Highways Element contain goals for potential State Scenic Highways (Cabrillo Boulevard [no longer a State Highway] and Sycamore Canyon Road (SR 144), Stanwood Drive (SR 192), Mission Ridge Road, (SR 192) Mountain Drive) and Potential City Scenic Routes (Shoreline Drive), including landscaping the public right-of-way, and the establishment of architectural controls and setbacks.²⁶

²² California Department of Transportation (Caltrans). 2018. California State Scenic Highway System Map. <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>. Accessed October 2023.

²³ Santa Barbara, City of. 2019. Local Coastal Program. <https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=202908>. Accessed October 2023.

²⁴ Santa Barbara, City of. 2019. Local Coastal Program. <https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=202908>. Accessed October 2023.

²⁵ Santa Barbara, City of. 2011. Land Use Element. <https://www.santabarbaraca.gov/sites/default/files/documents/General%20Plan/General%20Plan/Land%20Use%20Element%2A.pdf>. Accessed October 2023.

²⁶ Santa Barbara, City of. 2011. Circulation Element. <https://santabarbaraca.gov/sites/default/files/documents/General%20Plan/General%20Plan/Circulation%20Element%2A%20%28include%20Scenic%20Highways%29.pdf>. Accessed October 2023.

The Environmental Resources Element, which includes the 1979 Conservation Element, addresses visual resources, including hillsides, shorelines, trees, and open space throughout the City. The Conservation Element's Scenic Resources Map specifically designates scenic resources as:

- Riparian/Creekside open space resources;
- Hillsides (slope of 30% or greater);
- Shoreline; and
- Open Space (including Douglas Family Preserve, Montecito Golf Course, Andree Clark Bird Refuge, Clark Estate, Child's Estate, and the "Kim Nursery" property on the westside).

These resources are mapped in the City as Visual Unique, Visual Hillside, and Visual Shoreline, derived from the City's MEA Visual Resources map.

The Environmental Resources/Conservation Element incorporates goals and policies which intend to maintain the scenic character of the City. Implemented policies limit the alteration of natural topography and vegetation on hillsides, protect trees, limit the obstruction of scenic view corridors, and prevent degradation of riparian environments.²⁷ CAP measures and actions serve as high-level guidance policies that would adhere to existing City design guidelines, minimizing impacts to scenic views and aesthetics.

Projects implemented in support of the CAP Update would be required to adhere to City development regulations and General Plan policies to retain character of the City and minimize environmental impacts. In addition, projects implemented in support of the CAP Update would be reviewed for consistency with the General Plan, other applicable regulatory land use actions, and would be subject to any required environmental assessment that would be completed prior to approval of any project. Additionally, all CAP measures that may result in potential visual changes will be subject to City review to ensure consistency with current City design guidelines. Although some projects may result in short-term changes related to ongoing construction, facilities upgrades, and transportation improvements, these changes would undergo City review to ensure adequate timeline and aesthetic approach to minimize any potential visual changes. Such measures that might result in short-term visual changes include Measure BE-1, Measure T-3, and Measure CS-1. These measures include updating existing infrastructure to improve building electrification, biking and walking infrastructure, and planting more trees throughout the City. As such, the CAP Update would not result in adverse impacts related to scenic vistas, viewing corridors, or scenic roadways within the City. Furthermore, due to intervening development typical of an urban setting, proposed projects included in the CAP Update would not likely be visible from the scenic vistas or resources. Thus, scenic resources such as trees, rock outcroppings, and historic buildings would not be damaged within a scenic highway. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to scenic vistas and related to scenic resources within scenic highways.

LESS-THAN-SIGNIFICANT IMPACT

- c. *Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those experienced*

²⁷ Santa Barbara, City of. 2011. Environmental Resources Element. <https://santabarbaraca.gov/sites/default/files/documents/General%20Plan/General%20Plan/Environmental%20Resources%20Element%20%28includes%20Noise%2A%20and%20Conservation%2A%29.pdf>. Accessed October 2023.

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from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The character of the City of Santa Barbara is generally urbanized. Per CEQA Guidelines Section 15387, the City of Santa Barbara is an “urbanized area” because it is a city with a population of 50,000 or more. Distinct architectural styles, such as the California Adobe, Monterey Revival, and Spanish Colonial Revival are central to the City’s visual character. ²⁸

Under Public Resources Code Section 21099, aesthetic and parking impacts resulting from new developments within a transit priority zone are exempt from being considered significant under CEQA for any project that would be considered residential development, mixed-use development, or an employment center. According to the California Public Resources Code Section 21099(a)(7), a transit priority area means an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program.

The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would include requirements for new development, such as all-electric building requirements. While these policies would influence development, they would not alter the visual character of portions of Santa Barbara, for example they would not cause changes to building heights that would surpass the City’s zoning and Charter height limits, and massing.. New development forecasted in accordance with the CAP Update would be subject to development standards and design guidelines in the zoning ordinance.. Thus, all projects would be subject to the maximum allowable height established in the City Charter.

Projects subject to the objective standards, such as building retrofits and active transportation infrastructure, would still require consistency with City design standards and could require design board approval per the City Charter but their review would be limited to confirming that projects comply with the objective standards. Project applicants who opt-in to using the objective design and development standards would still be required to abide by other applicable objective Municipal Code standards, which include height, outdoor lighting, specific architectural styles for projects within Landmark District and Historic District overlay zones, and landscaping materials.

If a project falls within a transit priority area it would still be subject to these City policies, as Public Resources Code Section 21099 does not alter or limit the ability of the City to enforce local design ordinances. Mandatory compliance with existing review procedures, policies, guidelines, and design standards would ensure that reasonably foreseeable development under the CAP Update would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, or conflict with applicable zoning and other regulations governing scenic quality. Therefore, this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Glare is a common occurrence in the City, primarily due to the high number of days per year with direct sunlight and the highly urbanized nature of the City. Daytime glare can result from sunlight reflecting off glass, other structural fixtures of buildings, and windshields of parked and moving

²⁸ Santa Barbara, City of. 2010. Program Environmental Impact Report for the Plan Santa Barbara General Plan Update. <https://www.santabarbaraca.gov/services/planning/plan.asp>. Accessed October 2023.

vehicles within the roadways in the City. Development forecasted in accordance with the CAP Update would be required to comply with the provisions of the City Municipal Code, including Section 30.180.070, which states that no use shall be operated such that significant, direct glare, incidental to the operation of the use is visible beyond the boundaries of the lot where the use is located. Title 30 and Title 22 state that any project involving exterior lighting with apparent potential to create significant glare on neighboring parcels is required to undergo a noticed design review hearing.²⁹ Section 22.75.060 sets standards to control nuisance lighting and glare in and adjacent to residential zones through enforcement measures applied by the Community Development Department. Such measures could include the preparation and implementation of a professional lighting plan, control through the use of vegetation, or use of appropriate shielding. Reasonably foreseeable development under the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not create a new source of substantial light or glare which would adversely affect surrounding areas or important public day or nighttime views in the area. Therefore, potential light and glare impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. Cumulative impacts related to scenic resources, visual character, and increased light and glare would generally be site-specific, and cumulative projects are not anticipated to contribute to cumulative aesthetic impacts with adherence to the City's Municipal Code and General Plan policies. Because of the developed nature of Santa Barbara, future infrastructure projects such as building electrification and active transportation infrastructure under the CAP Update, in combination with other cumulative projects, would not adversely impact the visual character of the City because they would comply with existing design standards and ordinances. Future development in the City, that this CAP update would influence, would be required to comply with the City's objective design standards and be reviewed against applicable General Plan policies and City's design standards and guidelines for design quality and compatibility with adjacent land uses. Furthermore, as a guidance document, the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in cumulative impacts. Therefore, implementation of the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant cumulative impact related to aesthetics.

LESS-THAN-SIGNIFICANT IMPACT

²⁹ Santa Barbara, City of. 2022. Santa Barbara Municipal Code. https://library.qcode.us/lib/santa_barbara_ca/pub/municipal_code. Accessed October 2023.

2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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Would the project:

<p>a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>b. Conflict with existing zoning for agricultural use or a Williamson Act contract?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>d. Result in the loss of forest land or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a. *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

or

b. *Would the project conflict with existing zoning for agricultural use or a Williamson Act contract*

The City of Santa Barbara does not contain farmland or lands used for agricultural purposes.³⁰ Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas

³⁰ Santa Barbara, City of. 2011. Santa Barbara 2011 General Plan. <https://santabarbaraca.gov/sites/default/files/documents/General%20Plan/General%20Plan/Introduction.pdf> . Accessed October 24, 2023.

Emissions Analysis would result in no impact related to degradation of agricultural resources or conversion of agricultural land to non-agriculture uses, nor would there be a conflict with existing zoning or general plan land use designations.

NO IMPACT

c. *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

or

d. *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

The City does not contain forest or timberland resources. Additionally, Measure CS-1 facilitates the implementation and expansion of the Urban Forest Management Plan and seeks to plant and maintain 4,500 net new trees by the year 2030. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in no impact related to degradation of forestry resources or conversion of forest land to non-forest uses, nor would there be a conflict with existing zoning or General Plan land use designations.

NO IMPACT

e. *Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?*

See impact discussions above under Topics 2a through 2d. The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in other changes to the existing environment which, due to their location or nature, would result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

NO IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. The City does not contain farmland or lands used for agricultural purposes. Additionally, the City does not contain forest or timberland resources. Cumulative projects are not anticipated to contribute to cumulative forestry impacts with adherence to General Plan policies. In addition, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not involve land use or zoning changes that could result in cumulative impacts related to conversion or loss of farmland or forest land. Therefore, implementation of the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in no cumulative impact related to agricultural and forestry resources.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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Would the project:

a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The City of Santa Barbara is located in the South Central Coast Air Basin (SCCAB), which includes San Luis Obispo, Santa Barbara, and Ventura counties. The Santa Barbara County portion of the SCCAB is under the jurisdiction of the Santa Barbara County Air Pollution Control District (SBCAPCD).

Geographic features that influence Santa Barbara’s air quality include the Santa Barbara Channel (Pacific Ocean) to the south, and the east-west trending Santa Ynez Mountains to the north, with elevations up to 4,707 feet. The regional climate in the SCCAB is Mediterranean and is characterized by warm summers and mild winters with relatively dry weather. The annual precipitation is 22 inches on average, with most (95 percent) occurring during the rainy season, which generally spans October through April. The warmest month is August, and the coolest month is January.^{31,32}

As the local air quality management agency, SBCAPCD is required to monitor air pollutant levels to ensure that State and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether or not the standards are met or exceeded, the South Central Coast Air Basin is classified as being in “attainment” or “nonattainment.” Under State law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-attainment. The Santa Barbara County portion of SBCAPCD is in non-attainment for the California Ambient Air Quality Standards (CAAQS) for ozone standards and PM₁₀ (particulate matter up to 10 microns in size).³³

³¹ Western Regional Climate Center. 2016. Recent Climate in the West. <https://www.wrcc.dri.edu>. Accessed October 2023.

³² Cal-Adapt. 2023. Local Climate Snapshot for Santa Barbara, California. Available online at: <https://cal-adapt.org/tools/local-climate-change-snapshot>. Accessed November 2023.

³³ California Air Resources Board (CARB). 2022. Top 4 summary: Select Pollutant, Years, & Area. <https://www.arb.ca.gov/adam/topfour/topfour1.php>. Accessed October 2023.

Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. The *2001 Clean Air Plan* (2002) was the first plan prepared by SBCAPCD and established specific planning requirements to maintain the state one-hour ozone standard. In 2006, CARB revised the CAAQS and added an 8-hour average to the ozone standard. Both components of the standard must now be met before CARB can designate an area to be in attainment. The current *2022 Ozone Plan* was adopted by SBCAPCD in December 2022 and is the tenth update to the *2001 Clean Air Plan*. The *2022 Ozone Plan* addresses SBCAPCD's progress toward attaining the federal and state ozone standard. As with prior updates, the 2022 update includes an evaluation of feasible reduction measures for stationary sources and considers numerous factors such as technology advancements, efficiency measures, cost-effectiveness, and the successful implementation of measures at other California air districts. All of the control measures that were found to be feasible in prior ozone plan updates have been implemented.³⁴

The evaluation of whether a project would conflict with or obstruct implementation of the applicable air quality plan is based on the project's consistency with the land use and population forecasts that underlie the air pollutant emissions forecasts contained in the plan. Therefore, consistency with the 2022 Ozone Plan is based on whether the population growth accommodated by the CAP Update was accounted for in SBCAG's Regional Growth Forecast. In addition, in order to be consistent with the 2022 Ozone Plan, projects involving earthmoving activities must implement SBCAPCD's standard dust control measures.

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would have no impact on population growth associated with the CAP Update and would not result in construction or operational impacts. Additionally, the CAP Update would not involve land use or zoning changes but would rather promote infrastructure development and redevelopment. Implementation of proposed measures would be beneficial by helping Santa Barbara meet applicable air quality plan goals and generally reducing sensitive receptor exposure to pollutant concentrations. Although the purpose and intended effect of the CAP Update is to reduce GHG emissions generated in the City to help reduce the effects of climate change, many of its measures and supporting actions would also reduce criteria pollutant (i.e., air quality) emissions.

The energy- and transportation-related measures mentioned in Figure 3 would reduce air quality emissions as well as GHG emissions. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would have a less-than-significant impact related to a conflict with or obstruction of the applicable air quality plan.

LESS-THAN-SIGNIFICANT IMPACT

- b. *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to an increase of criteria pollutants. The CAP Update would not involve land use or zoning changes but would instead promote infrastructure development and redevelopment. As a policy document, the CAP Update

³⁴ Santa Barbara County Air Pollution Control District. 2022. Ozone Plan <https://www.ourair.org/wp-content/uploads/2022-Ozone-Plan.pdf>. Accessed October 2023.

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would not result in impacts related to criteria pollutants. However, implementation of the following measures may promote infrastructure development and redevelopment.

Measure BE-1 promotes the decarbonization of 50% of municipal buildings, Measure BE-4 promotes the expansion of the existing Natural Gas Prohibition Ordinance for new construction, Measure BE-5 promotes reducing residential natural gas consumption, and Measure B-6 promotes reducing commercial natural gas consumption. Measure T-1 involves the development and implementation of the Municipal Transportation Demand Management (TDM) Program, which aims to increase free-of-charge access to public transit and the electric bike share program in the City. Additionally, the TDM Program aims to provide cash incentives for city-employees to bike, walk, or carpool to work while Measure T-3 aims to implement programs to enhance access to safe active transportation. Measure T-4 encourages the implementation of programs to increase public transportation mode share via public transit improvements, education, increased access, and creating pilot projects. Measure T-7 aims to accelerate zero-emission commercial vehicle use and adoption to 26% by 2030 and Measure T-8 aims to electrify or decarbonize 6% of Off-Road equipment by 2030. Furthermore, Measure CS-1 facilitates the expansion of the City's Urban Forest Management Plan and requires planting and maintaining 4,500 net new trees by the year 2030. Construction-related air quality impacts are generally associated with fugitive dust (PM₁₀ and PM_{2.5}) and exhaust emissions from heavy construction vehicles and soil-hauling trucks, in addition to Reactive Organic Gas (ROG) that would be released during architectural coatings drying. However, future projects or plans would be reviewed for consistency with SBCAPCD air quality regulations and other applicable local, State, and Federal regulations. Once project details and locations are known, they would be subject to environmental review under CEQA, and individual impact analyses will identify required plan or project-specific mitigation measures where applicable. Additionally, the projects included in the measures and actions would not typically warrant substantial construction emissions due to their minimal scale, keeping their emissions below construction thresholds for review under CEQA. Such projects might include implementing building retrofits to increase building electrification, increasing bike lane access, and building further walking paths to encourage alternative transportation. Thus, construction associated with implementation of the CAP Update would result in a less-than-significant impact related to net increase of criteria pollutants.

With respect to operational emissions, many measures would have the secondary benefit of reducing criteria pollutant emissions. Measures included in the CAP Update aim to increase citywide renewable energy use, promote electric vehicles, reduce building natural gas use, reduce on-road gasoline fuel use, and reduce vehicle miles traveled. Implementation of such measures would be beneficial by helping Santa Barbara meet applicable air quality plan goals. In addition, projects implemented in support of the CAP Update would be reviewed for consistency with the General Plan, and other applicable regulatory land use actions, and would be subject to any required environmental assessment that would be completed prior to approval of any project. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to criteria pollutant emissions.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to exposure of sensitive receptors to substantial pollutant concentrations. Implementation of the following measures may promote infrastructure development and redevelopment.

Measure BE-1 promotes the decarbonization of 50% of municipal buildings, Measure BE-4 promotes the expansion of the existing Natural Gas Prohibition Ordinance for new construction, Measure BE-5 promotes reducing residential natural gas consumption, and Measure B-6 promotes reducing commercial natural gas consumption. Measure T-1 involves the development and implementation of the Municipal Transportation Demand Management (TDM) Program, which aims to increase free-of-charge access to public transit and the electric bike share program in the City. Measure T-4 encourages the implementation of programs to increase public transportation mode share via public transit improvements, education, increased access, and creating pilot projects. Measure T-7 aims to accelerate zero-emission commercial vehicle use and adoption to 26% by 2030 and Measure T-8 aims to electrify or decarbonize 6% of Off-Road equipment by 2030. Furthermore, Measure CS-1 facilitates the expansion of the City's Urban Forest Management Plan and requires planting and maintaining 4,500 net new trees by the year 2030.

Construction-related air quality impacts are generally associated with fugitive dust (PM₁₀ and PM_{2.5}) and exhaust emissions from heavy construction vehicles and soil hauling trucks, in addition to ROG that would be released during the drying phase upon application of architectural coatings. While the CAP Update could result in some construction-related impacts from toxic air contaminants and exposure to sensitive receptors, projects included in the CAP Update would be reviewed for consistency to comply with SBCAPCD air quality regulations and other applicable local, State, and federal regulations once project details and locations are known because future plans or projects would be subject to environmental review under CEQA, and individual impact analyses will identify required plan- or project-specific mitigation measures where applicable. If the project is exempt from these regulations, it would not need to undergo this review. Thus, the construction associated with implementation of the CAP Update would not result in substantial emissions of toxic air contaminants and exposure to sensitive receptors. No operational toxic air contaminant emissions are anticipated with implementation of the CAP Update. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would have a less-than-significant impact related to exposure of sensitive receptors to toxic air contaminants.

LESS-THAN-SIGNIFICANT IMPACT

- d. *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

The CARB 2005 Air Quality Land Use Handbook: A Community Health Perspective provides guidance for odor standards by identifying land uses associated with odor complaints, which include: sewage treatment plants, landfills, recycling facilities, waste transfer stations, petroleum refineries, biomass operations, auto body shops, coating operations, fiberglass manufacturing, foundries, rendering plants, and livestock operations.³⁵ Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not have construction or operational impacts related to odors. Measure W-1 aims to increase municipal procurement of recovered organic waste products and promotes participation in recycling and organic waste programs. As such, the CAP Update could result in minor odors related to compost. However, green waste collection bins and compost application are not identified on the list of "Sources of Odor Complaints" (Table 1-4) as provided in the CARB Air Quality Land Use Handbook and would not be anticipated to result in other emissions, such as those leading to odors, adversely affecting a

³⁵ California Air Resources Control Board (CARB). 2005. Air Quality and Land Use Handbook: A Community Health Perspective. <https://ww3.arb.ca.gov/ch/handbook.pdf>. Accessed October 2023.

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substantial number of people. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not facilitate development that could create adverse odors, and there would be a less-than-significant impact related to odors exposure.

LESS-THAN-SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. Implementation of the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would have a less than significant contribution related to potential cumulative air quality impacts within the air basin and on sensitive receptors within the City of Santa Barbara, given that the CAP Update would result in Citywide reduction of GHG emissions, energy use, single-occupancy vehicle travel, water use, and waste generation. As such, implementation of the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in adverse impacts related to contribution of criteria pollutants to the air basin, exposure of sensitive receptors to toxic air contaminants, or odors. Therefore, implementation of the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant cumulative impact related to air quality.

LESS-THAN-SIGNIFICANT IMPACT

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4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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Would the project:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Santa Barbara is a primarily urbanized community with creek corridors, beaches, parks and recreational and open spaces incorporated throughout the City including riparian habitats, wetlands, and coastal habitats. The City's Municipal Code Titles 14, 15, 22,28, and 30, the Local Coastal Program, and the General Plan Environmental Resources Element incorporate goals, policies, and measures to protect biological resources, such as trees, plant habitats, and wildlife.

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not have construction or operational impacts related to habitat modification. The CAP Update would not involve land use or zoning changes but would instead promote infrastructure development and redevelopment. As a policy document, the CAP Update would not directly result in impacts related to wildlife species identified as candidate, sensitive, or special status. However, implementation of the following CAP Update measures may promote infrastructure development and redevelopment and may result in impacts to species through habitat modification for purposes of infrastructure installation.

Measure BE-1 promotes the decarbonization of 50% of municipal buildings via retrofitting of existing infrastructure. As retrofitting would occur within the building, it would not impact species via habitat modification. Measure BE-3 promotes increasing municipally owned distributed renewable energy generation throughout the City, including sourcing new space for energy storage projects, which could impact habitat via infrastructure installation. Measure B-6 promotes reducing commercial natural gas consumption and electrifying existing commercial and mixed-use buildings, which could involve building retrofits within the building envelope and would not impact nearby habitat. Measure T-1 involves the development and implementation of the Municipal Transportation Demand Management (TDM) Program, which aims to increase free-of-charge access to public transit and the electric bike share program in the City. Additionally, the TDM Program aims to provide cash incentives for city-employees to bike, walk, or carpool to work while Measure T-3 aims to implement programs to enhance access to safe active transportation. These measures involve building enhanced walking and biking infrastructure throughout the city, which could impact sensitive species via habitat modification and infrastructure installation.

Future related projects would be required to undergo environmental review, including assessment and mitigation incorporation once project details and locations are known. The measures included in the CAP Update would not conflict with the Municipal Code or goals/policies of the General Plan Environmental Resources Element but rather would be consistent with and promote those plans. As such, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis itself would not have a substantial adverse effect on special-status wildlife species either directly through individual take or indirectly through species habitat modification. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to special-status wildlife species.

LESS-THAN-SIGNIFICANT IMPACT

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- b. *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*
- c. *Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not have construction or operational impacts related to riparian or other special habitats. The CAP Update would not involve land use or zoning changes but would instead promote infrastructure development and redevelopment. As a policy document, the CAP Update could result in impacts related to habitat whether riparian, wetland, or other sensitive natural community. According to the General Plan Sustainable Resource Use Implementation Measures, new buildings and other elements of the built environment must be designed to enhance the wildlife corridor network, preserve existing trees within identified wildlife corridors, install and maintain appropriate native landscaping, minimize disturbance to existing biological resources, increase riparian habitat within the City, site new development outside of riparian woodlands to the extent feasible, and comply with creek setback standards.³⁶

Measure BE-1 promotes the decarbonization of 50% of municipal buildings via retrofitting of existing infrastructure. As retrofitting would occur within the building, it would not impact species via habitat modification. Measure BE-3 promotes increasing municipally owned distributed renewable energy generation throughout the City, including sourcing new space for energy storage projects, which could impact habitat via infrastructure installation. Measure B-6 promotes reducing commercial natural gas consumption and electrifying existing commercial and mixed-use buildings, which could involve building retrofits within the building envelope and would not impact nearby habitat. Measure T-1 involves the development and implementation of the Municipal Transportation Demand Management (TDM) Program, which aims to increase free-of-charge access to public transit and the electric bike share program in the City. Additionally, the TDM Program aims to provide cash incentives for city-employees to bike, walk, or carpool to work while Measure T-3 aims to implement programs to enhance access to safe active transportation. These measures involve building enhanced walking and biking infrastructure throughout the city, which could impact sensitive species via habitat modification and infrastructure installation.

Future related projects would be required to undergo environmental review, including assessment and mitigation incorporation once project details and locations are known. Projects would be reviewed for consistency with applicable local, regional, and State regulations once project details and locations are known. These measures and actions would not conflict with the Municipal Code or objectives and policies of the General Plan but would rather be consistent with and promote those plans. As such, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not have a substantial adverse effect on riparian habitat or sensitive natural community, such as wetlands. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would have a less-than-significant impact related to sensitive natural plant communities.

LESS-THAN-SIGNIFICANT IMPACT

³⁶ Santa Barbara, City of. 2011. General Plan. Environmental Resources Element. <https://santabarbaraca.gov/sites/default/files/documents/General%20Plan/General%20Plan/Environmental%20Resources%20Element%20%28includes%20Noise%2A%20and%20Conservation%2A%29.pdf>. Accessed October 2023.

- d. *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Migration corridors in the City exist primarily within the riparian corridors which provide nearly continuous pathways of native and natural vegetation used by wildlife species to move between open foothill lands and larger urban open spaces. Upland migration corridors such as oak woodland, eucalyptus groves, and coastal sage scrub provide migratory bird habitat in the City. Mission Creek, Sycamore Creek, and Arroyo Burro provide spawning and rearing habitat for southern steelhead, and habitat for tidewater goby.³⁷ These corridors can be bordered on either side by urban land uses which could act as potential barriers to movement. Potentially significant effects on wildlife movement would occur if temporary disturbance during construction or permanent new residential development would result in the fragmentation or degradation of wildlife corridors or nursery sites.

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not have construction or operational impacts related to interference with species movement. The CAP Update would not involve land use or zoning changes but would instead promote infrastructure development and redevelopment. As a policy document, the CAP Update would not result in impacts related to interference with species movement. However, implementation of the following CAP Update measures may promote infrastructure development and redevelopment.

Measure BE-1 promotes the decarbonization of 50% of municipal buildings, Measure BE-4 promotes the expansion of the existing Natural Gas Prohibition Ordinance for new construction, Measure BE-5 promotes reducing residential natural gas consumption, and Measure B-6 promotes reducing commercial natural gas consumption. Measure T-1 involves the development and implementation of the Municipal Transportation Demand Management (TDM) Program, which aims to increase free-of-charge access to public transit and the electric bike share program in the City. Additionally, the TDM Program aims to provide cash incentives for city-employees to bike, walk, or carpool to work while Measure T-3 aims to implement programs to enhance access to safe active transportation. Measure T-4 encourages the implementation of programs to increase public transportation mode share via public transit improvements, education, increased access, and creating pilot projects. Measure T-7 aims to accelerate zero-emission commercial vehicle use and adoption to 26% by 2030 and Measure T-8 aims to electrify or decarbonize 6% of Off-Road equipment by 2030. Furthermore, Measure CS-1 facilitates the expansion of the City's Urban Forest Management Plan and requires planting and maintaining 4,500 net new trees by the year 2030.

Future related projects would be required to undergo environmental review, including assessment and mitigation incorporation once project details and locations are known. These CAP Update measures and supporting actions do not conflict with the Municipal Code or objectives and policies of the General Plan and instead are consistent with and promote those plans. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to interference with species movement.

LESS-THAN-SIGNIFICANT IMPACT

³⁷ Santa Barbara, City of. 2010. Program Environmental impact Report for the Plan Santa Barbara General Plan Update. <https://santabarbaraca.gov/sites/default/files/documents/General%20Plan/Certified%20Final%20Program%20Environmental%20Impact%20Report/Volume%20I.pdf>. Accessed October 2023.

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- e. *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Santa Barbara is a primarily urbanized community with parks and recreational and open spaces incorporated throughout the City including riparian habitats, wetlands, and coastal habitats. The City's Municipal Code Titles 14, 15, 22,28, and 30, the Local Coastal Program, and the General Plan Environmental Resources Element incorporate goals, policies, and measures to protect biological resources, such as trees, plant habitats, and wildlife. Chapter 15.20 of the City's Municipal Code details the Street Tree Ordinance, including regulations for planting, conformity with the Master Street Tree Plan, maintenance, permitting, removal, and more.³⁸

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not have construction or operational impacts related to biological resources. The CAP Update does not involve land use or zoning changes but would rather promote infrastructure development and redevelopment. The purpose and intended effect of the CAP Update is to reduce GHG emissions generated within the Santa Barbara community, including related to City municipal operations, to help reduce the effects of climate change. Implementation of proposed measures and actions would be beneficial by helping Santa Barbara meet applicable local policies and ordinances for protecting natural and biological resources. The CAP Update would not conflict with or obstruct implementation of the applicable policies for preserving biological resources and would not affect the City's ability to attain goals and policies that protect biological resources. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related consistency with local biological resources protection policies.

LESS-THAN-SIGNIFICANT IMPACT

- f. *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

The City of Santa Barbara is not located within any approved local, regional, or State Habitat Conservation Plan or Natural Community Conservation Plan.³⁹ Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not conflict with any applicable conservation plan.

NO IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. Implementation of cumulative projects could result in impacts to biological resources during infrastructure and building construction. The CAP Update would promote infrastructure development and redevelopment. However, infrastructure development or redevelopment resulting from implementation of the CAP Update would be required to comply with applicable General Plan policies and State and federal regulatory requirements regarding avoidance of special wildlife species and habitat. Furthermore, as a guidance document, the Master

³⁸ Santa Barbara, City of. Municipal Code Title 15 Recreation, Beaches, and Parks. https://library.qcode.us/lib/santa_barbara_ca/pub/municipal_code/item/title_15-chapter_15_20?view=all

³⁹ California Department of Fish and Wildlife (CDFW). 2022. California Natural Diversity Database. <https://apps.wildlife.ca.gov/bios/?tool=cnddbQuick>. Accessed October 2023.

Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in cumulative impacts. Therefore, implementation of the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant cumulative impact related to biological resources.

LESS-THAN-SIGNIFICANT IMPACT

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5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*

The City has put forth preservation regulations through the Historic Resources Element of the General Plan outlining overarching goals and policies aimed toward preserving and protecting Santa Barbara’s historic, cultural, and tribal cultural resources.⁴⁰ Additionally, Santa Barbara has 17 properties listed under the National Register of Historic Places, including Andalucia Building, Santa Barbara Mission, Santa Barbara Presidio, and Virginia Hotel.⁴¹

The City’s Historic Preservation Ordinance and Historic Resources Element contain a regulatory framework that provide protections against the demolition of City-designated landmarks and structures of merit and establish procedures for proposed development that has the potential to affect designated historic resources. The City Architectural Historian maintains and updates the Historic Resources Inventory, which lists qualifying historic structures over 50 years old that are not currently designated as Landmarks, Structures of Merit, or contributing to a Historic District Overlay Zone. Any structure over 50 years old must be evaluated prior to any addition, alteration, or demolition to determine if the structure qualifies as a historic resource as per CEQA requirements. Pursuant to the City’s Municipal Code, these resources are also defined as historic resources and subject to the same local regulations as designated historical resources. Projects that would alter these eligible historical resources, as determined by the City Architectural Historian and/or Historic Landmarks Commission, would be subject to project-specific environmental review whereby adverse effects to historical resources would be minimized.

⁴⁰ Santa Barbara, City of. 2012. General Plan Historic Resources Element. <https://santabarbaraca.gov/sites/default/files/documents/General%20Plan/General%20Plan/Historic%20Resources%20Element.pdf>. Accessed October 2023.

⁴¹ National Parks Service. National Register Database and Research. <https://www.nps.gov/subjects/nationalregister/database-research.htm> Accessed October 2023.

Under existing regulations, individual projects are reviewed by the City for consistency with the Historic Preservation Ordinance. The Historic Landmarks Commission reviews projects that may have a significant effect on character-defining features of a historic resource.

Existing City policies and regulatory processes provide an extensive framework for preservation of the integrity of important historic resources and historic and landmark districts. Application of Municipal Code provisions would minimize potential impacts on the character of the City's historic resources and districts. The City's MEA Guidelines for Archaeological Resources establish procedures for the evaluation and protection of archaeological resources and sites, consistent with the CEQA Statute and Guidelines. In addition, Municipal Code Chapter 22.12 provides standard conditions in the event of unanticipated discovery of archaeological resources. Through imposition of standard conditions, survey requirements, and procedures for unanticipated discovery, the City ensures impacts to archaeological resources are minimized for discretionary development applications.

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to historical resources. The CAP Update would not involve land use or zoning changes. Rather the CAP Update would promote infrastructure development and redevelopment.

The CAP Update would not involve land use or zoning changes but would promote building energy retrofits as well as infrastructure development and redevelopment that would be complimentary to existing development. Projects in Santa Barbara would be required to comply with the Historic Preservation Ordinance and Historic Resources Element.

Implementation of the following measures may promote infrastructure development and redevelopment, which could potentially impact known and unknown historical resources within the city. Measure BE-1 promotes the decarbonization of 50% of municipal buildings, Measure BE-4 promotes the expansion of the existing Natural Gas Prohibition Ordinance for new construction, Measure BE-5 promotes reducing residential natural gas consumption, and Measure B-6 promotes reducing commercial natural gas consumption. These building measures regulate new and existing development, such as requiring all-electric buildings or building retrofits. Typically building electrification is completed in a manner that doesn't impact the building's character that qualifies it as a historical resource. Measure T-1 involves the development and implementation of the Municipal Transportation Demand Management (TDM) Program, which aims to increase free-of-charge access to public transit and the electric bike share program in the City. Additionally, the TDM Program aims to provide cash incentives for city-employees to bike, walk, or carpool to work while Measure T-3 aims to implement programs to enhance access to safe active transportation. Measure T-4 encourages the implementation of programs to increase public transportation mode share via public transit improvements, education, increased access, and creating pilot projects. These alternative transportation measures involve the addition of alternative transportation routes, bike lanes, and pedestrian and cyclist safety measures. The construction of alternative transportation infrastructure may occur at or near a historical site.

The physical changes these upgrades and additions would entail are dependent on the year of building construction and location of electrical and service panels and plumbing for connection of condensate drains, which in some cases may include modifications to the interior and/or exterior of buildings for wiring and panel replacement and minor excavation for connection of drainage to sewer systems. However, it is anticipated that retrofit activities would avoid alterations to the historic materials and distinguishing character (e.g., overall shape of the building, its materials,

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craftsmanship, decorative details, interior spaces and features, and aspects of its site and environment) of identified historic resources and, if warranted, be reviewed by the Historic Landmarks Commission. As such, implementation of the CAP Update would not conflict with or obstruct the City's ability to comply with applicable historical resources preservation policies. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to historical resources.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

The Santa Barbara region was favorable to Native American settlement and the City contains known archaeological sites and areas of archaeological sensitivity. There is the potential to encounter previously unidentified archaeological resources on sites that may be developed with residential uses under the CAP Update. While the City is largely developed with few vacant parcels, undeveloped properties have a higher probability of containing previously unidentified archaeological resources given the probable lack of previous ground-disturbing activities on these properties. However, ground disturbance into native (previously undisturbed) soils on any development site could encounter previously undiscovered prehistoric or historic-period resources. The potential exists for archaeological resources to occur below the ground surface throughout Santa Barbara, which may be disturbed and damaged by grading and excavation activities associated with new housing development.

The City's MEA Guidelines for Archaeological Resources establish procedures for the evaluation and protection of archaeological resources and sites, consistent with the CEQA Statute and Guidelines. In addition, Municipal Code Chapter 22.12 provides standard conditions in the event of unanticipated discovery of archaeological resources. Through imposition of standard conditions, survey requirements, and procedures for unanticipated discovery, the City ensures impacts to archaeological resources are minimized for discretionary development applications.

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not have construction or operational impacts related to archaeological resources.

The CAP Update would not involve land use or zoning changes but would promote building energy retrofits as well as infrastructure development and redevelopment.

Measure BE-1 promotes the decarbonization of 50% of municipal buildings, Measure BE-4 promotes the expansion of the existing Natural Gas Prohibition Ordinance for new construction, Measure BE-5 promotes reducing residential natural gas consumption, and Measure B-6 promotes reducing commercial natural gas consumption. These building measures promote the development of new infrastructure, such as building retrofits and increasing the electric grid in the city. Thus, the development involved in these measures could impact potential historical resources within the city. Measure T-1 involves the development and implementation of the Municipal Transportation Demand Management (TDM) Program, which aims to increase free-of-charge access to public transit and the electric bike share program in the City. Additionally, the TDM Program aims to provide cash incentives for city-employees to bike, walk, or carpool to work while Measure T-3 aims to implement programs to enhance access to safe active transportation. Measure T-4 encourages the implementation of programs to increase public transportation mode share via public transit improvements, education, increased access, and creating pilot projects. These alternative transportation measures involve the addition of alternative transportation routes and bike lanes.

The construction involved in these projects may interfere with potential historical sites. Measure T-7 aims to accelerate zero-emission commercial vehicle use and adoption to 26% by 2030 and Measure T-8 aims to electrify or decarbonize 6% of Off-Road equipment by 2030. Furthermore, Measure CS-1 facilitates the expansion of the City's Urban Forest Management Plan and requires planting and maintaining 4,500 net new trees by the year 2030.

As a policy document, the CAP Update would not directly result in impacts related to archaeological resources. Implementation of the CAP Update measures and supporting actions may promote infrastructure development and redevelopment that could result in an impact on these resources during construction. Future related projects would be required to undergo environmental review, including assessment and mitigation incorporation once project details and locations are known. The CAP Update would not conflict with or obstruct the applicable policies for preserving archeological resources and would not affect the City's ability to attain goals and policies that protect archeological resources. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to archaeological resources.

LESS-THAN-SIGNIFICANT IMPACT

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

Human burials outside of formal cemeteries can occur in prehistoric archaeological contexts. Excavations during construction activities could have the potential to disturb these resources, which could include Native American burial sites. Although it is unlikely that human remains are present, development forecasted in accordance with the CAP Update has at least the possibility of uncovering previously unidentified human remains.

Human burials, in addition to being potential archaeological resources, have specific provisions for treatment in PRC Section 5097. The California Health and Safety Code (Section 7050.5, 7051, and 7054) has specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains, and protect them from disturbance, vandalism, or destruction. They also include established procedures to be implemented if Native American skeletal remains are discovered. PRC Section 5097.98 also addresses the disposition of Native American burials, protects such remains, and established the NAHC to resolve any related disputes.

All development projects are subject to State of California Health and Safety Code Section 7050.5 which states that, if human remains are unearthed, no further disturbance can occur until the County Coroner has made the necessary findings as to the origin and disposition of the remains pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the County Coroner has 24 hours to notify the NAHC, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site and make recommendations to the landowner within 48 hours of being granted access.

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not have construction or operational impacts related to human remains. The CAP Update would not involve land use or zoning changes. Rather the CAP Update would promote infrastructure development and redevelopment that could have an impact on these resources during construction. Therefore, development forecasted in accordance with the CAP Update and

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Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would have less-than-significant impacts on human remains.

LESS-THAN-SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. There is the possibility of encountering buried archaeological deposits and human remains throughout Santa Barbara. Implementation of the cumulative projects would include infrastructure and building development that could have an impact on cultural resources during construction. Impacts to historic and archaeological resources are generally site-specific.

Accordingly, as required under applicable laws and regulations, potential impacts associated with cumulative developments would be addressed on a case-by-case basis. No known cultural resources would be removed, modified, or otherwise affected by the implementation of the CAP Update. In addition, future projects in Santa Barbara, including those associated with implementation of the CAP Update, would be required to comply with the Historic Preservation Ordinance and Historic Resources Element, with the main purpose of recognizing, preserving, and protecting historic resources in the interest of the health, prosperity, social and cultural enrichment, and general welfare of the people. Furthermore, as a guidance document, the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in cumulative impacts. Therefore, implementation of the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant cumulative impact related to cultural resources.

LESS-THAN-SIGNIFICANT IMPACT

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City of Santa Barbara

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6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

California is one of the lowest per-capita energy users in the United States, ranked 48th in the nation, due to its energy efficiency programs and mild climate.⁴² California consumed 285,488 gigawatt-hours (GWh) of electricity and 2,137,920 cubic feet of natural gas in 2018.^{43,44,45} The single largest end-use sector for energy consumption in California is transportation (39.1 percent), followed by industry (23.5 percent), commercial (18.3 percent), and residential (18.3 percent).⁴⁶ Adopted in 2018, SB 100 accelerates the State’s Renewable Portfolio Standards Program, codified in the Public Utilities Act, by requiring electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

The City of Santa Barbara has demonstrated its commitment to energy efficiency and renewable energy. Southern California Edison (SCE) delivers electricity to Santa Barbara, procured by Santa Barbara Clean Energy. At a minimum, energy procured through Santa Barbara Clean Energy provides 50 percent carbon-free energy, and buildings are automatically opted-in to the Santa Barbara Clean Energy system.⁴⁷ As such, development forecasted in accordance with the CAP Update would utilize a minimum of 50 percent carbon-free energy, which is more carbon-free energy than what is currently collectively served by California investor-owned utilities (36 percent) and assists in

⁴² United States Energy Information Administration (USEIA). 2018. California Profile Overview. <<https://www.eia.gov/state/?sid=CA>> Accessed October 2023.

⁴³ California Energy Commission (CEC). 2021. 2018 Total System Electric Generation. <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2019-total-system-electric-generation/2018>. Accessed October 2023.

⁴⁴ California Energy Commission (CEC). 2021. Environmental Health and Equity Impacts from Climate Change and Mitigation Policies in California: A Review of the Literature. Accessed October 2023.

⁴⁵ USEIA. 2018. Natural Gas Consumption by End Use. https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm . Accessed October 2023.

⁴⁶ USEIA. 2018. California Profile Overview. <https://www.eia.gov/state/?sid=CA> . Accessed October 2023.

⁴⁷ Santa Barbara Clean Energy. 2022. Services and Incentives. <https://www.sbcleanenergy.com/services-incentives>. Accessed October 2023.

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reaching the Renewable Portfolio Standards goal of 60 percent renewable energy retail sales by 2030.⁴⁸ The City has also completed a total (i.e., community and municipal) GHG emissions inventory for 2019, which is summarized in Table 1. The largest sectors of GHG emissions are related to energy and transportation, followed by solid waste and water. According to the California Energy Commission (CEC), Santa Barbara County consumed approximately 2,804 GWh in 2022.⁴⁹

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to wasteful consumption of energy resources. The CAP Update is a policy document containing climate action measures and supporting actions to reduce Santa Barbara GHG emissions. The CAP Update would not involve land use or zoning changes but would promote infrastructure development and redevelopment. Furthermore, the purpose and intended effect of the CAP Update is to reduce GHG emissions generated in the City to help reduce the effects of climate change, including those emissions generated by energy demand and supply. The CAP Update encourages electrification, use of renewable energy, and energy efficiency in existing residential and commercial building stock as well as proposed new residential and commercial buildings.

Measures BE-1 through BE-7 propose the expansion of decarbonization and electrification efforts for municipal buildings and construction as well as increasing the impact of Santa Barbara Clean Energy (SBCE) throughout the City. In addition, Measure T-8 focuses on electrifying Off-Road Equipment used in construction and other maintenance to ensure compliance with Assembly Bill 1346. As such, the CAP Update would not result in the use of non-renewable resources in a wasteful or inefficient manner. Therefore, the CAP Update would result in a less-than-significant impact related to the wasteful, inefficient, or unnecessary consumption of energy. Rather, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would assist in reducing use of non-renewable energy resources.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

New development forecasted in accordance with the CAP Update would be subject to the energy conservation requirements of the California Energy Code (Title 24, Part 6 of the California Code of Regulations, California's Energy Efficiency Standards for Residential and Nonresidential Buildings) and the California Green Building Standards Code (Title 24, Part 11 of the California Code of Regulations). Thus, the CAP Update would not conflict with adopted renewable energy or energy conservation plans. The Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to consistency with a State or local renewable energy plan. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to consistency with State and local renewable energy and energy efficiency plans. Rather, the CAP Update would be consistent with State and local plans for renewable energy and energy efficiency.

⁴⁸ California Public Utilities Commission. 2022. CCA Regulatory Information – List of Registered CCA's – Community Choice Aggregators. <https://www.cpuc.ca.gov/consumer-support/consumer-programs-and-services/electrical-energy-and-energy-efficiency/community-choice-aggregation-and-direct-access/-cca-regulatory-information>. Accessed October 2023.

⁴⁹ California Energy Commission. 2016. Electricity Consumption by County. <<http://ecdms.energy.ca.gov/elecbycounty.aspx>>. Accessed October 2023.

Thus, the CAP Update would revise but would not conflict with adopted renewable energy or energy conservation plans. Therefore, the CAP Update would result in a less-than-significant impact related to consistency with State and local renewable energy and energy efficiency plans. Rather, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would be consistent with State and local plans for renewable energy and energy efficiency.

LESS-THAN-SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. Implementation of the CAP Update would result in reducing use of non-renewable energy resources across the community and in particular with remodels and new construction. As such, construction of cumulative projects within the City could result in temporary energy consumption impacts. However, the energy used would not be wasteful and would comply with all applicable requirements. Furthermore, as a guidance document, the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in cumulative impacts. Therefore, implementation of the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis and GHG Emission Thresholds would result in a less-than-significant cumulative impact related to energy.

LESS-THAN-SIGNIFICANT IMPACT

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7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
▪ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
▪ Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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- a. *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*
- *rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;*
 - *strong seismic ground shaking;*
 - *seismic-related ground failure, including liquefaction; or*
 - *landslides?*

The City of Santa Barbara, as with the majority of the state of California, is susceptible to seismic activity. Established in the Alquist-Priolo Earthquake Fault Zoning Act, Alquist-Priolo earthquake fault zones are regulatory zones compiled by the California Geological Survey which designate the surface traces of active faults in California.⁵⁰ For the purposes of the Alquist-Priolo Earthquake Fault Zoning Act, an active fault is defined as a fault that has ruptured in the past 11,000 years.⁵¹ There are no Alquist-Priolo earthquake fault zones that partially or fully intersect the City.⁵² The nearest Alquist-Priolo earthquake fault zone is the Red Mountain Fault – South Strand, located approximately 12.6 miles southeast of the City.⁵³ As such, development setback regulations pertaining to the Alquist-Priolo Earthquake Fault Zoning Act do not apply. However, several documented faults do exist within the City that could indicate near-surface faulting and surface warps; these faults have not been thoroughly evaluated for fault activity. For development projects on or near fault zones on the City geologic map, geological and geotechnical evaluations may be required during the permitting process. Incorporation of project-specific measures such as fault hazard avoidance, setbacks, and structural engineering solutions to accommodate acceptable levels of discrete movement and surface warping, would not result in significant environmental impacts.

According to the City’s Map Analysis and Printing System, high liquefaction potential exists at the Santa Barbara Airport and at the southeastern portion of the City abutting a stretch of coast from Leadbetter Beach to East Beach and extending northwest into the downtown area.⁵⁴ Proposed development located in areas of high liquefaction potential (identified in the City’s Map Analysis and Printing System) may require a geotechnical report during the permitting process.⁵⁵ Geotechnical reports identify liquefaction potential and provide recommendations to minimize the potential for impacts associated with liquefaction to occur. Municipal Code, Chapter 22.04, lists the adoptions of California Codes by reference, which includes CBC and subsequent measures such as requiring site-specific geotechnical investigations and incorporating site specific recommendations regarding suitability and foundation design. Compliance with the Municipal Code and CBC requirements would

⁵⁰ California Department of Conservation (DOC). 2019. Alquist-Priolo Earthquake Fault Zones. <https://www.conservation.ca.gov/cgs/alquist-priolo> Accessed October 2023.

⁵¹ California Department of Conservation (DOC). 2019. Alquist-Priolo Earthquake Fault Zones. <https://www.conservation.ca.gov/cgs/alquist-priolo> Accessed October 2023.

⁵² California Department of Conservation. 2021. Earthquake Zones of Required Investigation. September 23, 2021. <https://maps.conservation.ca.gov/cgs/EQZApp/app/> . October 2023.

⁵³ California Department of Conservation. 2021. Earthquake Zones of Required Investigation. September 23, 2021. <https://maps.conservation.ca.gov/cgs/EQZApp/app/> . Accessed October 2023.

⁵⁴ Santa Barbara, City of. 2010. Program Environmental Impact Report for the Plan Santa Barbara General Plan Update. September 2010. <https://www.santabarbaraca.gov/services/planning/plan.asp>. Accessed October 2023.

⁵⁵ Santa Barbara, City of. 2022. Environmental Review Universal Screening Tool. <https://santabarbaraca.gov/sites/default/files/documents/Services/Planning%20Handouts%20-%20updated/Environmental%20Screening%20Guide.pdf>. Accessed October 2023.

ensure current engineering practices and standards are followed, reducing impacts related to adverse effects from liquefaction risk.

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to 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. The CAP Update is a policy document containing climate measures and supporting actions to reduce GHG emissions and is consistent with the Santa Barbara General Plan and other regional regulations. The CAP Update does not propose habitable development that could result in exposure of people or structures to potential substantial adverse 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, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in less-than-significant impact related to seismic- and landslide-related hazards.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to substantial loss of topsoil. The CAP Update would not involve land use or zoning changes, but it would promote infrastructure development and redevelopment. As a policy document, the CAP Update would not directly require ground-disturbing activities. However, implementation of the following measures may promote infrastructure development and redevelopment. Measure BE-1 promotes the decarbonization of 50% of municipal buildings, Measure BE-4 promotes the expansion of the existing Natural Gas Prohibition Ordinance for new construction, Measure BE-5 promotes reducing residential natural gas consumption, and Measure B-6 promotes reducing commercial natural gas consumption. These building measures involve regulating new infrastructure and electrification retrofits. To implement these retrofits, associated construction could interfere with soils around existing and new developments. Similarly, the following transportation measures involve the creation of new bike and walking lanes throughout the city. This construction could also result in the loss of topsoil around construction sites and contribute to erosion. Measure T-1 involves the development and implementation of the Municipal Transportation Demand Management (TDM) Program, which aims to increase free-of-charge access to public transit and the electric bike share program in the City. Additionally, the TDM Program aims to provide cash incentives for city-employees to bike, walk, or carpool to work while Measure T-3 aims to implement programs to enhance access to safe active transportation. Measure T-4 encourages the implementation of programs to increase public transportation mode share via public transit improvements, education, increased access, and creating pilot projects. Furthermore, Measure CS-1 facilitates the expansion of the City's Urban Forest Management Plan and requires planting and maintaining 4,500 net new trees by the year 2030. Increasing the urban forest via the planting of trees could result in soil erosion or loss of topsoil, as workers may need to disturb current soil to plant the trees. Although this soil disturbance may occur throughout the City as trees are planted, these effects will likely be temporary and will return to normal once the trees are planted.

The physical changes these installations and enhancements would entail are dependent on the location of construction for the electric vehicle charging connections, active transportation pathways, and trees/green spaces, which in some cases may include minor temporary excavation.

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As such, the CAP Update could result in construction-related soil erosion and topsoil loss impacts associated with such installations and plantings. However, projects would be reviewed for consistency with Santa Barbara General Plan policies and other local and State geology and soils regulations prior to final siting and construction. Further, compliance with existing regulations, including California Building Code requirements, City-issued permit requirements, and construction general permit requirements, would minimize potential cumulative seismic and geologic impacts. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to soil erosion, loss of topsoil, and the presence of unstable soils.

LESS-THAN-SIGNIFICANT IMPACT

- c. *Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*
- d. *Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to project location on expansive soil. Additionally, the CAP Update is a policy document containing measures that are consistent with the General Plan. Some of the proposed measures of CAP Update would support construction projects, such as electric vehicle charging station construction. However, the City's Building and Safety Division would determine which projects would be required to conduct geotechnical studies based on the scope of the development and adhere to related recommendations prior to final siting and construction that would reduce impacts. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to risks associated with location on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse as well as expansive soils.

LESS-THAN-SIGNIFICANT IMPACT

- e. *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not involve the development of habitable structures and, thus, no use of septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur related to soil capability support of alternative wastewater disposal systems.

NO IMPACT

- f. *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to paleontological resources. The CAP Update would not involve land use or zoning changes. Rather the CAP Update

would promote infrastructure development and redevelopment. As a policy document, the CAP Update would not directly result in impacts related to paleontological resources or unique geologic features. However, implementation of the following CAP Update measures and supporting actions may promote infrastructure development and redevelopment.

Measure BE-1 promotes the decarbonization of 50% of municipal buildings, Measure BE-4 promotes the expansion of the existing Natural Gas Prohibition Ordinance for new construction, Measure BE-5 promotes reducing residential natural gas consumption, and Measure B-6 promotes reducing commercial natural gas consumption. Measure T-1 involves the development and implementation of the Municipal Transportation Demand Management (TDM) Program, which aims to increase free-of-charge access to public transit and the electric bike share program in the City. Additionally, the TDM Program aims to provide cash incentives for city-employees to bike, walk, or carpool to work while Measure T-3 aims to implement programs to enhance access to safe active transportation. Measure T-4 encourages the implementation of programs to increase public transportation mode share via public transit improvements, education, increased access, and creating pilot projects. Measure T-7 aims to accelerate zero-emission commercial vehicle use and adoption to 26% by 2030 and Measure T-8 aims to electrify or decarbonize 6% of Off-Road equipment by 2030. Furthermore, Measure CS-1 facilitates the expansion of the City's Urban Forest Management Plan and requires planting and maintaining 4,500 net new trees by the year 2030. However, geotechnical and design guideline studies would be required for future projects, in addition to adherence with related recommendations prior to final siting and construction. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to paleontological resources or unique geologic features.

LESS-THAN-SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. Cumulative projects could expose additional people and property to seismic and geologic hazards that are present in the region. The magnitude of geologic hazards for individual projects, including those associated with implementation of the CAP Update, would depend upon the location, type, and size of development and the specific hazards associated with individual sites. Specific geologic hazards associated with individual project sites would be limited to those sites without affecting other areas. Similarly, potential impacts to paleontological resources associated with each individual site would be limited to that site without affecting other areas, and impacts related to these resources would be minimized on a case-by-case basis. Compliance with existing regulations, including California Building Code requirements, City-issued permit requirements, and construction general permit requirements, would minimize potential cumulative seismic and geologic impacts. Seismic and geologic hazards would be addressed on a case-by-case basis and would not result in cumulative impacts. Furthermore, as a guidance document, the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in cumulative impacts. Therefore, implementation of the CAP Update and GHG Emission Threshold would result in a less-than-significant cumulative impact related to geology and soils.

LESS-THAN-SIGNIFICANT IMPACT

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8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a. *Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*

The greenhouse effect is a natural occurrence that helps regulate the temperature of the Earth. The majority of radiation from the Sun hits Earth’s surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping into space and re-radiate it in all directions. This process is essential to support life on Earth because it warms the planet by approximately 60°F. Emissions from human activities since the beginning of the industrial revolution (approximately 270 years ago) have been adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat and contribute to an average increase in Earth’s temperature. Global warming is the observed increase in the average temperature of the Earth’s surface, and climate change is the resultant change in wind patterns, precipitation, and storms over an extended period.

GHGs produced by human activities include CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorinated compound (PFC), and sulfur hexafluoride (SF₆). Combustion of fossil fuels (gasoline, natural gas, and coal), deforestation, and decomposition of waste release carbon into the atmosphere that had been locked underground and stored in oil, gas, and other hydrocarbon deposits or in the biomass of surface vegetation. Since 1750, estimated concentrations of CO₂, CH₄, and N₂O in the atmosphere have increased by over 36 percent, 148 percent, and 18 percent respectively, primarily due to human activity. Emissions of GHGs affect the atmosphere directly by changing its chemical composition.

Changes to the land surface also indirectly affect the atmosphere by changing the way in which Earth absorbs gases from the atmosphere. Potential impacts in California due to climate change include sea level rise, more extreme-heat days and high-ozone days, larger and more frequent forest fires, and more drought years.⁵⁶ Although GHG emissions do not typically cause direct health

⁵⁶ California Energy Commission (CEC). 2009. Environmental Health and Equity Impacts from Climate Change and Mitigation Policies in California: A Review of the Literature. Accessed October 2023.

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impacts at a local level, GHG emissions can result in indirect health impacts by contributing to climate change, which can have public health implications. The primary public health impacts of climate change include the following:⁵⁷

- Increased incidences of hospitalization and deaths due to increased incidences of extreme heat events
- Increased incidences of health impacts related to ground-level ozone pollution due to increased average temperatures that facilitate ozone formation
- Increased incidences of respiratory illnesses from wildfire smoke due to increased incidences of wildfires
- Increased vector-borne diseases due to the growing extent of warm climates
- Increased stress and mental trauma due to extreme events and disasters, economic disruptions, and residential displacement

The City of Santa Barbara has completed a total Santa Barbara (i.e., community and municipal) GHG emissions inventory for the year 2019, which is summarized in Table 1. The largest sectors of GHG emissions are related to energy and transportation, followed by solid waste and water. The measures and actions address municipal and communitywide GHG emissions. Per the CAP Update, the City of Santa Barbara is committed to an emissions reduction target of 40 percent below 1990 levels by 2030 (SB 32 target year) and reaching a longer-term goal of carbon neutrality by 2035. Table 2 summarizes the emission reduction targets included in the CAP Update compared to the reductions proposed in the 2012 CAP. This 2030 GHG emissions goal is selected to be consistent with SB 32 and CEQA Guidelines § 15183.5 for a qualified GHG emissions reduction strategy as well as to be achievable by City-supported measures identified in the CAP Update. The CAP Update includes a business-as-usual (BAU) and adjusted forecast of GHG emissions that will enable the City to estimate the amount of emissions reductions needed to meet its goal.

The CAP Update includes measures to increase use of zero-emission vehicles; increase use of public, active, and shared transportation; reduce water consumption and waste generation; increase recycling and composting; and increase tree planting. Table 3 includes a complete list of measures and descriptions of respective supporting actions included in this CAP Update. The measures included in the CAP Update combined with Statewide legislation and initiatives and regional transportation programs will enable the City to meet its emissions reduction target of 40 percent below 1990 levels by 2030 (SB 32 target year) and its carbon neutral goal by 2035. Table 5 shows the contribution of the Statewide initiatives along with the measures and actions. The City needs to achieve 132,305 MT CO₂e of GHG emissions reductions by 2030 to meet its goal. The total estimated GHG reductions accounted for in the CAP Update total 320,089 MT CO₂e by 2030.

Figure 3 and Table 5 illustrate how the BAU emissions are estimated to increase, thus widening the emissions reductions needed by 2030. Figure 3 also shows emissions reductions expected from State level actions as well as the reductions needed to reach the Santa Barbara emissions target. The measures and supporting action combined with Statewide legislation and initiatives and Countywide transportation programs will enable the City of Santa Barbara to meet its 2030 emissions reduction target.

The CAP Update includes a list of measures intended to reduce Santa Barbara GHG emissions. Implementation of the CAP Update would result in the reduction of community and municipal

⁵⁷ California Natural Resources Energy. 2018. California's Fourth Climate Change Assessment Statewide Summary Report. <<http://www.climateassessment.ca.gov/state/>>. Accessed October 2023.

operational GHG emissions, while only generating temporary GHG emissions during construction of infrastructure development and redevelopment such as electric vehicle charging stations, bicycle paths, et cetera. Additionally, the CAP Update would serve as a pathway to reduce GHG emissions and introduce other beneficial environmental and sustainability effects. These benefits include reduction in building energy consumption and vehicle miles traveled (and thus air pollution), water consumption, and solid waste generation. The Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would establish GHG emissions targets and analysis methodologies that are enforced during CEQA review with the intention of reducing GHG emissions associated with construction and operation of future projects and plans in the City. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to generation of GHG emissions.

LESS-THAN-SIGNIFICANT IMPACT

- b. *Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis are policy-level documents that set strategies to reduce GHG emissions within the City in an effort to also comply with State regulations. As discussed under Topic 8a above, the CAP Update includes measures and actions to reduce City GHG emissions from forecasted levels by approximately 132,035 MT CO₂e by 2030. The purpose of the CAP Update is to meet Santa Barbara's proportionate fair share of the Statewide GHG emissions reduction target set by AB 32 and SB 32 and work toward the State's longer-term target of carbon neutrality identified in Executive Order B-55-18. The CAP Update would not conflict with any applicable GHG reduction plans, including the California Climate Change Scoping Plan and the California Climate Change Scoping Plan Updates. For example, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis specifically include policies and a locally appropriate quantitative threshold consistent with Statewide per-capita goals, as recommended by the 2022 Scoping Plan. The CAP Update identifies how the City would achieve consistency with the Statewide GHG emissions limit.

The Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would establish GHG emissions targets and analysis methodologies that are enforced during CEQA review with the intention of reducing GHG emissions associated with construction and operation of future projects and plans in the City. The CAP Update would serve as a pathway to reduce GHG emissions and introduce other beneficial environmental and sustainability effects. These benefits include reduction in building energy consumption and vehicle miles traveled (and thus air pollution), water consumption, and solid waste generation. Therefore, the CAP Update and GHG Emission Threshold would result in a less-than-significant impact related to consistency with applicable GHG emissions reduction plans, policies, and regulations.

LESS-THAN-SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. Analyses of GHG emissions and climate change are cumulative in nature, as they affect the accumulation of GHG emissions in the atmosphere. Cumulative projects that exceed the thresholds discussed above would have a significant impact related to GHG emissions and climate change, both individually and cumulatively. The CAP Update creates a GHG emissions reduction strategy (consistent with Section 15183.5 of the CEQA Guidelines) for the City of Santa Barbara. The

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CAP Update includes a series of strategies, measures, and actions that are intended to reduce communitywide GHG emissions by approximately 40 percent below 1990 levels by 2030, which provides substantial progress toward meeting the City carbon neutrality goal by 2035, while meeting State goals. The CAP Update acknowledges that additional actions beyond those identified in the plan will be necessary to achieve carbon neutrality and, therefore, provides a mechanism for updating and adopting a new plan triennially in order to incorporate new measures and technologies that will further the City toward meeting its goal of carbon neutrality. As such, the CAP Update would result in the reduction of GHG emissions rather than generating GHG emissions. Furthermore, as a guidance document, the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in cumulative impacts. Rather, the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would establish GHG emissions targets and analysis methodologies that are enforced during CEQA review with the intention of reducing GHG emissions associated with construction and operation of cumulative buildout.

LESS-THAN-SIGNIFICANT IMPACT

9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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- a. *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*
- b. *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to creating a significant hazard. The CAP Update is a policy document containing actions and supporting measures to reduce GHG emissions. The proposed CAP Update does not involve identified site-specific development, nor would it facilitate new development. Implementation of the CAP Update measures and supporting actions would not involve the routine transport, use, or disposal of hazardous materials and would not create reasonably foreseeable upset and/or accidental conditions involving the release of hazardous materials into the environment.

Implementation of some of the CAP Update measures and actions, such as the installation of bicycle facilities, energy retrofits, and electric vehicle charging stations, may involve the use and transport of fuels, lubricating fluids, and solvents, among other activities. These types of materials are not considered acutely hazardous, and all storage, handling, and disposal of these materials are regulated by the California Department of Toxic Substances Control (CDTSC), United States Environmental Protection Agency (USEPA), Occupational Safety & Health Administration (OSHA), and Los Angeles County Department of Public Health - Environmental Health Division. Additionally, future development would be subject to review by the City for compliance with the General Plan and Municipal Code and would also be required to comply with applicable local, State, and Federal regulations. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to creating a significant hazard.

LESS-THAN-SIGNIFICANT IMPACT

- c. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to handling hazardous materials. The CAP Update is a policy document containing measures and actions to reduce GHG emissions. The proposed CAP Update does not include site-specific proposals and development, nor would it emit or handle hazardous materials. Implementing some measures and actions may require future development or improvements, such as bike paths, solar panels, electric vehicle charging stations, battery storage, or building improvements related to electrification. However, projects would be reviewed for consistency with the General Plan and Municipal Code and applicable local, State, and federal regulations. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to handling of hazardous materials in proximity to an existing or proposed school.

LESS-THAN-SIGNIFICANT IMPACT

- d. *Would the project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to project site location on a site listed on a hazardous material site. The CAP Update is a policy document containing measures and supporting actions to reduce GHG emissions. The CAP Update does not include site-specific proposals and development, but implementation of the measures and actions could result in projects that may be located on listed hazardous materials site. However, future projects would be reviewed for consistency with the General Plan and Municipal Code and would be required to comply with applicable local, State, and federal regulations. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to location on a listed hazardous materials site.

LESS-THAN-SIGNIFICANT IMPACT

- e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

The City operates the Santa Barbara Airport, located in the Goleta area, approximately four miles west of the City proper. The Airport property is within the City’s jurisdiction, and City-designated land use and zoning patterns apply to the approximate 950-acre property. Airport zoning, defined by Title 29 of the City of Santa Barbara Municipal Code, provides restrictions for residential development.^{58 59}

The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis are policy documents and implementation of which would not increase airport activity or otherwise increase potential exposure to aircraft-related hazards. Additionally, projects associated with the CAP Update would undergo project-level CEQA review. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in less-than-significant impact related to risks associated with location proximate to a public airport.

LESS THAN SIGNIFICANT IMPACT

- f. *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Construction activities associated with development forecasted in accordance with the Building Energy and Transportation Measures included in the CAP Update could interfere with adopted emergency response or evacuations plans as a result of temporary construction activities within rights-of-way, which could impede emergency access. Any 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).⁶⁰ The Manual requires the creation and approval of temporary traffic control plans to be used for facilitating road users through a work zone. Adherence to the requirements of the Manual for all construction activity would minimize potential impacts associated with the impairment or physical interference of an adopted emergency response plan or evacuation procedures for State

⁵⁸ Santa Barbara, City of. 2021. Santa Barbara Municipal Code. <https://qcode.us/codes/santabarbara/>. Accessed October 2023.

⁵⁹ Santa Barbara, City of. 2003. Coastal Plan Component 9: Airport. <https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?BlobID=16924>. Accessed October 2023.

⁶⁰ California Department of Transportation (Caltrans). 2021. California Manual on Uniform Traffic Control Devices. 2014 Edition Revision 6. <https://dot.ca.gov/-/media/dot-media/programs/safety-programs/documents/ca-mutcd/rev6/camutcd2014-rev6.pdf>. Accessed October 2023.

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highways. Future development forecasted in accordance with the CAP Update will be reviewed by the Santa Barbara City Fire Department to ensure consistency with emergency access requirements. Infrastructural improvements that involve work in the public right-of-way would be subject to applicable City requirements to ensure appropriate traffic control, pursuant to the Santa Barbara Municipal Code Chapter 10.55. Additionally, as part of standard development procedures in the City, development plans must be submitted to the City's Community Development Department for review and approval to ensure that all new development would have adequate emergency access and escape routes in compliance with existing City and Fire Department regulations pursuant to the regulations as set forth by the CWPP.

The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis are policy documents intended to reduce GHG emissions. The proposed CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis do not involve site-specific development. Any new development associated with the CAP would be subject to adherence to the Manual, review by the Santa Barbara City Fire Department, and/or Municipal Code Chapter 10.55 ensuring adequate emergency access requirements are met and construction would not interfere with adopted emergency plans. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in less-than-significant impact related to impairment or interference with implementation of an emergency response or evacuation plan.

LESS THAN SIGNIFICANT IMPACT

- g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?*

The CAP Update is a policy-level document that does not propose specific or other physical changes such as habitable development that could be put at risk in the case of a wildfire, nor does it grant entitlements for development that would have the potential to directly cause wildfire. Rather, the CAP Update would aim to reduce natural gas infrastructure that poses wildfire risk if damaged during seismic events and to underground new or restructured electric power lines that pose wildfire risk if damaged during high-wind events. Thus, the CAP Update and Emissions Threshold would result in less-than-significant impact related to wildfire.

LESS THAN SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. Hazards and hazardous materials impacts are typically site specific in nature. Cumulative projects, including the CAP Update, are not anticipated to contribute to cumulative hazards and hazardous materials impacts with adherence to applicable General Plan policies, applicable regional and County regulations, and applicable State and Federal regulatory requirements. Furthermore, as a guidance document, the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in cumulative impacts. Therefore, implementation of the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant cumulative impact related to hazards and hazardous materials.

LESS-THAN-SIGNIFICANT IMPACT

10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunamis, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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- a. *Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to water quality standards. The CAP Update is a policy document containing measures and actions intended to reduce GHG emissions in the City. Future projects would be reviewed for consistency with local and State regulations, including the implementation of stormwater pollution prevention plans (SWPPPs). As such, the CAP Update's related infrastructure changes would not utilize or alter water supply or result in new or different wastewater discharge. Additionally, projects would be small in scale and would not typically warrant substantial adverse construction impacts related to surface or groundwater quality, thus maintaining impact levels below CEQA thresholds. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less than significant related to surface or groundwater water quality in Santa Barbara.

LESS THAN SIGNIFICANT IMPACT

- b. *Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to groundwater supplies. The CAP Update is a policy document containing measures and supporting actions that are consistent with the City's General Plan. In addition, implementation of the CAP Update actions related to infrastructure development and redevelopment would not substantially degrade groundwater quality or groundwater recharge. As a result, no adverse impacts related to groundwater supplies or resources would occur.

Measure CS-1 facilitates the expansion of the City's Urban Forest Management Plan and requires planting and maintaining 4,500 net new trees by the year 2030. Encouragement of tree planting would increase the amount of pervious areas in the City, thus increasing groundwater recharge. As such, implementing the CAP Update would have a beneficial effect related to local groundwater recharge as well as support groundwater management in Santa Barbara. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less than significant impact related to impedance of sustainable groundwater management in the Santa Barbara local Groundwater Basins.

LESS THAN SIGNIFICANT IMPACT

- c. *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*
- i. *result in substantial erosion or siltation on- or off-site;*
 - ii. *substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;*
 - iii. *create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;*
or
 - iv. *impede or redirect flood flows?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to alterations in polluted runoff. Implementation of the following CAP Update measures and supporting actions may promote infrastructure development and redevelopment. Measure BE-1 promotes the decarbonization of 50% of municipal buildings, Measure BE-4 promotes the expansion of the existing Natural Gas Prohibition Ordinance for new construction, Measure BE-5 promotes reducing residential natural gas consumption, and Measure B-6 promotes reducing commercial natural gas consumption. Measure T-1 involves the development and implementation of the Municipal Transportation Demand Management (TDM) Program, which aims to increase free-of-charge access to public transit and the electric bike share program in the City. Additionally, the TDM Program aims to provide cash incentives for city-employees to bike, walk, or carpool to work while Measure T-3 aims to implement programs to enhance access to safe active transportation. Measure T-4 encourages the implementation of programs to increase public transportation mode share via public transit improvements, education, increased access, and creating pilot projects. Measure T-7 aims to accelerate zero-emission commercial vehicle use and adoption to 26% by 2030 and Measure T-8 aims to electrify or decarbonize 6% of Off-Road equipment by 2030. Furthermore, Measure CS-1 facilitates the expansion of the City's Urban Forest Management Plan and requires planting and maintaining 4,500 net new trees by the year 2030.

Projects would be required to undergo environmental review, including assessment and mitigation incorporation, including the implementation of a SWPPP and compliance with applicable local, State, and Federal regulations once project details and locations are known. Further, CAP Update-related infrastructure changes would be designed to not result in substantial additional erosion or runoff. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to drainage flows and polluted runoff.

LESS-THAN-SIGNIFICANT IMPACT

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d. *In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?*

As described by the Santa Barbara Tsunami Response Plan, parts of the City are designated as tsunami inundation zones including the waterfront area extending into the downtown area and the Santa Barbara Airport.⁶¹ Portions of the City are within the 100- and 500-year flood zones defined by Federal Emergency Management Agency (FEMA).⁶²

Pursuant to the City's Floodplain Management Ordinance, proposed development located in FEMA Flood Hazard Zones requires a base flood elevation determination from the Building and Safety Division.⁶³ New development forecasted in accordance with the CAP Update that takes place within a special flood hazard zone would be required to obtain a flood development permit granted by the Floodplain Administrator for the City of Santa Barbara, pursuant to the City of Santa Barbara Municipal Code Section 22.24.110.⁶⁴ The Floodplain Administrator grants the permit on the condition that all permit requirements in Chapter 22.24 have been met, including standards for floor elevations, elevations in areas of shallow flooding, elevation or floodproofing of nonresidential structures, wet floodproofing standards, floodway encroachments, and coastal development standards.⁶⁵ All development in a special flood hazard zone is required to abide by these standards. As a result, implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis and CAP Update would not conflict with floodway or floodplain regulations and this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

e. *Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to obstruction of a water quality control plan. The CAP Update measures would not include direct extraction of groundwater and would rather encourage water savings through conservation. The CAP Update would not interfere with or obstruct implementation of water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less than significant impact related to consistency with a water quality control plan or sustainable groundwater management plan.

LESS THAN SIGNIFICANT IMPACT

⁶¹ Santa Barbara, City of. 2012. Tsunami Response Plan. <https://santabarbaraca.gov/sites/default/files/documents/Fire/City%20Emergency%20Plan/2012%20Tsunami%20Response%20Plan.pdf>. Accessed October 2023.

⁶² Santa Barbara, City of. 2018. City Flood Zones. <https://www.santabarbaraca.gov/services/home/floodzones.asp>. Accessed October 2023.

⁶³ Santa Barbara, City of. 2022. Environmental Review Universal Screening Tool. <https://santabarbaraca.gov/sites/default/files/documents/Services/Planning%20Handouts%20-%20updated/Environmental%20Screening%20Guide.pdf>. Accessed October 2023.

⁶⁴ Santa Barbara, City of. 2021. Santa Barbara Municipal Code. <https://qcode.us/codes/santabarbaraca/>. Accessed October 2023.

⁶⁵ Santa Barbara, City of. 2021. Santa Barbara Municipal Code. <https://qcode.us/codes/santabarbaraca/>. Accessed October 2023.

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. Cumulative projects, including the CAP Update, are not anticipated to contribute to cumulative hydrology and water quality impacts with adherence to applicable General Plan policies and other applicable City policies, as well as applicable State and federal regulatory requirements. Implementation of the CAP Update would not contribute to an increase in growth and development in Santa Barbara but could result in infrastructure development or redevelopment projects, including renewable energy facilities and alternative transportation thoroughfares. As such, implementation of the CAP Update and other cumulative projects could have incremental impacts related to hydrology and water quality, with potential minor alterations to existing drainage patterns in the City. However, cumulative projects would comply with applicable local, State, and Federal regulations related to hydrology and water quality. Therefore, implementation of the CAP Update would result in a less-than-significant cumulative impact related to hydrology and water quality.

LESS-THAN-SIGNIFICANT IMPACT

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11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a. Would the project physically divide an established community?

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to division of an established community. The CAP Update is a policy document containing measures and actions that are consistent with the Santa Barbara General Plan and does not include specific development projects that would divide an established community. Measure T-1 involves developing and implementing a Municipal Transportation Demand Management Program, Measure T-3 involves enhancing access to safe active transportation, such as walking or biking, Measure T-4 involves implementing programs to encourage public transportation, and Measure T-5 supports and promotes the reduction of single occupancy vehicles. These measures are aimed at decreasing vehicle miles traveled and increasing active transportation within the City. Such measures and supporting actions would help to increase connectivity within the Santa Barbara community. Therefore, the CAP Update would result in no impact related to the division of an established community.

NO IMPACT

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in impacts related to conflict with a land use plan. The CAP Update is a policy document containing measures and actions that are consistent with the Santa Barbara General Plan and that are designed to reduce adverse environmental impacts associated with climate change. Nonetheless, implementing the CAP Update would require some modification of existing policies, including developing and implementing new programs, and projects, or modifying existing ones. For example, Measures BE-1, BE-2, T-1, T-2, T-3, T-4, T-5, T-6, T-7, W-1, and CS-1 call for the adoption of new codes/ordinances related to building electrification, solar and electric vehicle charging infrastructure installation, natural gas ban, organic waste collection and recovery, and shade trees.

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The physical changes these upgrades and additions would entail are dependent on the year of building construction and location of electrical and service panels and plumbing for connection of condensate drains, which in some cases may include modifications to the interior and/or exterior of buildings for wiring and panel replacement and minor excavation for connection of drainage to sewer systems. In order to implement these measures and the supporting actions, the City Municipal Code, General 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 and active transportation, the measures would result in greater avoidance or reduction of environmental effects. Therefore, the CAP Update and GHG Emission Thresholds would result in less-than-significant impact related to consistency with current land use plans or policies.

LESS THAN SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. The CAP Update is a policy document containing measures and actions that are consistent with the City's General Plan. Nonetheless, implementing the CAP Update would require some modification of existing policies and ordinances, including developing and implementing new programs, and projects, or modifying existing ones. The proposed policy changes are consistent with the intent of the goals and policies established within the City General Plan and Zoning Regulations and would not cumulatively contribute to population growth or the loss of housing. Cumulative projects, including the CAP Update, would be required to adhere to City development regulations and General Plan policies to retain land use character and minimize environmental impacts. Any CAP Update projects would be reviewed for consistency with the General Plan and other applicable regulatory land use actions prior to approval. Furthermore, as a guidance document, the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in cumulative impacts. Therefore, implementation of the CAP Update would result in a less-than-significant cumulative impact related to land use.

LESS-THAN-SIGNIFICANT IMPACT

12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*
- b. *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

The California Geological Survey’s (CGS) *Updated Mineral Land Classification Map for Concrete-Grade Aggregates in the San Luis Obispo-Santa Barbara Production-Consumption Region, California – South Half* map indicates that the City is within Mineral Resources Zones-1 (MRZ) and MRZ -3 (CGS 2011). MRZ-1 designations indicate areas containing little or no mineral deposits and MRZ-3 designations indicate deposits identified but require further evaluation. The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not facilitate infrastructure development projects within the City that could result in the loss of availability of known mineral resources. Therefore, the CAP Update would result in no impact related to mineral resource.

NO IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis do not include components capable of limiting or extracting known mineral resources. The City of Santa Barbara does not operate mineral extraction facilities and development forecasted in accordance with the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not be located on an area where important mineral resources are present. Therefore, the CAP Update and Master Environmental Assessment

City of Santa Barbara

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Guidelines for Greenhouse Gas Emissions Analysis would not result in the loss of a locally important mineral resource recovery site and would have no cumulative impact related to mineral resources.

NO IMPACT

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13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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Would the project result in:

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

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 (dB) using the A-weighted sound pressure level (dBA). 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 Environmental Resources Element of the City's General Plan, which incorporates the 1979 Noise Element, is intended to identify sources of noise and provide goals, objectives, and policies that ensure that noise from various sources, including transportation and stationary sources, does not create an unacceptable noise environment. The City has adopted land use compatibility standards for use in assessing the compatibility of various land use types with noise levels. The noise environment in Santa Barbara is predominantly characterized by transportation sources: vehicles, freight and passenger trains, and aircraft overflights. Vehicle noise affects large areas of the City along major transportation corridors, particularly communities near U.S. Route 101 (U.S. 101), which generates noise levels at or above 70 dBA Ldn generally extending out between 250 and 300 feet from the corridor. Major roadways that generate noise between 65-69 dBA Ldn include Upper State Street, Las Positas Road, and Cabrillo Boulevard, whereas roadways that generate noise between 60-64 dBA Ldn include those within the City's Downtown and Mesa neighborhoods. Freight and passenger train operations intermittently generate high noise levels often exceeding 100 dBA at 100 feet from the track centerline. For instance, portions of U.S. 101 noise overlap that associated with the Union Pacific Railroad (UPRR), which intermittently increases noise exposure at communities near these portions of the corridor. Aircraft overflights also intermittently create higher noise levels citywide. However, the nearest airport is Santa Barbara Airport, which is within the City limits but located in the Goleta area approximately four miles west of City proper. The airport's 65 dBA CNEL noise contour extends approximately 3,000 feet east of the airport which does not reach City proper, located adjacent to La Cumbre Country Club.⁶⁶

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to excessive noise levels. The CAP Update is a policy document containing programs that are consistent with the General Plan. Some of the measures and actions included in the CAP Update would support construction projects, such as electric vehicle charging station construction that may result in a temporary increase in noise levels. However, future projects identified as measures/actions in the CAP Update would be reviewed for consistency with the General Plan Environmental Resources Element and the City's noise ordinance, found in Municipal Code Title 9 Chapter 16, and would be required to comply with applicable local, State, and Federal regulations.⁶⁷

The City of Santa Barbara General Plan identifies noise-sensitive land uses and noise sources and policies to provide for the protection of the community from the adverse effects of excessive noise. The CAP Update encompasses a suite of GHG-reduction opportunities that affect the transportation sector. For example, Measure T-1 involves developing and implementing a Municipal Transportation Demand Management Program, Measure T-3 involves enhancing access to safe active transportation, such as walking or biking, Measure T-4 involves implementing programs to encourage public transportation, and Measure T-5 supports and promotes the reduction of single occupancy vehicles. These measures would not only reduce vehicle miles traveled but also reduce traffic-related noise in Santa Barbara. Therefore, the CAP Update and Master Environmental

⁶⁶ Santa Barbara, City of. 2010. Program Environmental Impact Report for the Plan Santa Barbara General Plan Update. [https://santabarbaraca.gov/sites/default/files/documents/General Plan/Certified Final Program Environmental Impact Report/Volume I.pdf](https://santabarbaraca.gov/sites/default/files/documents/General%20Plan/Certified%20Final%20Program%20Environmental%20Impact%20Report/Vol%20I.pdf). Accessed October 2023.

⁶⁷ Santa Barbara, City of. 2020. Municipal Code Chapter 9.16. Noise. https://library.qcode.us/lib/santa_barbara_ca/pub/municipal_code/item/title_9-chapter_9_16. Accessed October 2023

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Assessment Guidelines for Greenhouse Gas Emissions Analysis would not generate excessive noise levels and, therefore, would result in a less-than-significant impact related to noise exposure.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

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.⁶⁸ Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern of vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration amplitudes are usually expressed in peak particle velocity (PPV) or Root Mean Square (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings.⁶⁹ Vibration significance ranges from approximately 50 vibration decibels (VdB), which is the typical background vibration-velocity level, to 100 VdB, the general threshold where minor damage can occur in fragile buildings.⁷⁰ The general human response to different levels of groundborne vibration velocity levels is described in Table 6.

Table 6 Human Response to Different Levels of Groundborne Vibration

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day

VdB = vibration decibels
 Source: Federal Transit Administration. Transit Noise and Vibration Impact Assessment Manual. 2018.⁷¹

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to groundborne vibration. The CAP Update is a policy document containing measures that are consistent with the General Plan. Some of the measures and actions would support construction projects, such as electric

⁶⁸ California Department of Transportation (Caltrans). 2013. Transportation and Construction Vibration Guidance Manual (CT-HWANP-RT-13-069.25.3). <http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf>. Accessed October 2023.

⁶⁹ Federal Highway Administration (FHWA). 2006. Highway Construction Noise Handbook. (FHWAHEP-06-015; DOT-VNTSC-FHWA-06-02). <http://www.fhwa.dot.gov/environment/construction_noise/handbook>. Accessed October 2023.

⁷⁰ Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment Manual. <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf>. Accessed October 2023.

⁷¹ Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment Manual. <https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf>. Accessed October 2023.

vehicle charging station construction that may result in a temporary increase in groundborne vibration. However, future projects would be subject to review by the City for compliance with the General Plan and Municipal Code and would be required to comply with applicable local, State, and Federal regulations. Additionally, due to the small scale of the projects included in the measures and actions, major ground disturbing equipment is unlikely to be used, thus minimizing instances of groundborne vibration. Therefore, the CAP would result in a less-than-significant impact related to groundborne vibration.

LESS-THAN-SIGNIFICANT IMPACT

- c. *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

The Santa Barbara Airport's 65 dBA CNEL noise contour extends approximately 3,000 feet to the east of the airport; however, the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis and the CAP Update do not propose new residential uses within this noise contour. Therefore, any development that would occur immediately surrounding the Santa Barbara Airport is outside of the scope of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis and the CAP Update, and no residential development would be located within the Airport's 65 CNEL noise contour. Although aircraft overflights have the potential to expose people residing or working in the City to aircraft noise, this intermittent and temporary noise disturbance is present under existing conditions. Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in noise exposure impacts related to airports, airstrips, or helicopters. The CAP Update does not propose land use or zoning changes related to airports, airstrips, or heliports, nor does it include development that would increase exposure to excessive noise levels associated with operation of airports, airstrips, or heliports. and implementation of the GHG Emissions. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis impacts related to aviation-related noise exposure would be less-than-significant.

LESS THAN SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth Santa Barbara (96,637 persons) in 2030. The CAP Update is a policy document containing measures and actions that are consistent with the City of Santa Barbara General Plan. Some of the measures would support construction projects, such as electric vehicle charging station construction, which may result in a temporary increase in groundborne vibration or noise levels. However, cumulative projects, including the CAP Update, would be subject to review by the City for compliance with the General Plan and Municipal Code and would be required to comply with applicable State and federal regulations. Additionally, the CAP Update encompasses a suite of GHG-reduction opportunities that would decrease traffic and traffic-related noise. As such, implementation of the CAP Update would not generate excessive groundborne vibration or noise levels. Therefore, the CAP Update would result in a less-than-significant cumulative impact related to noise.

LESS-THAN-SIGNIFICANT IMPACT

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14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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Would the project:

a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a. *Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

or

b. *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to substantial unplanned population growth. Likewise, the CAP Update does not include measures or actions that would increase the population or induce additional population growth that would displace people or housing. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in no impact related to population and housing.

NO IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. Cumulative projects, including the CAP Update, are not anticipated to displace people or housing nor induce substantial unplanned population growth in the City. Specifically, the CAP Update would not contribute to person or housing displacement in the City of Santa Barbara nor result in population growth beyond that already assumed and planned for in the General Plan. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in no cumulative impact related to population and housing.

NO IMPACT

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15 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

▪ Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a. *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered facilities, or the need for new or physically altered facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for:*

- *Fire protection;*
- *Police protection;*
- *Schools;*
- *Parks; or*
- *Other public facilities?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to public services. The CAP Update is a policy document containing measures and actions that are consistent with the Santa Barbara General Plan. Implementation of the CAP Update would not result in increases in population or induce additional population growth. As such, the CAP Update 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. Furthermore, future projects identified as measures/actions in the CAP Update would be reviewed for consistency with the City of Santa Barbara General Plan and other applicable local and State regulations.

Nonetheless, implementing the CAP Update would require some modification of existing policies, including developing and implementing new programs and projects, or modifying existing ones. The CAP Update is designed to reduce adverse environmental impacts associated with climate change. While modifications of existing policies are needed, the measures and actions included in the CAP Update would not result in increases in population or induce additional population growth that would result in the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in no impact related to public services in terms of need for the construction of new or altered governmental facilities.

NO IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. Implementation of cumulative projects, including the CAP Update, would not result in increases in population or induce additional population growth beyond that assumed under the City of Santa Barbara General Plan. Therefore, implementation of the CAP Update would not result in substantial cumulative need to expand public services facilities. Therefore, the CAP Update would result in no cumulative impact related to public services.

NO IMPACT

16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*
- b. *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

Recreational amenities in Santa Barbara include approximately 1,827 acres of park land comprised of passive parks, neighborhood parks, community parks, regional parks, beach parks, open space parks, and sports fields.⁷² Many of these parks include indoor and outdoor facilities that provide or host adult classes, aquatics, camps, outdoor picnics, weddings, photo shoots, and special events. City Parks and Recreation charges use fees that fund Parks staff and maintenance crews to ensure the facilities do not deteriorate.

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to neighborhood or regional parks. The CAP Update is a policy document containing programs that are consistent with the Santa Barbara General Plan. Additionally, the CAP Update would not result in substantial population growth or direct land use changes. As such, implementation of the CAP Update would not result in a substantial physical deterioration of parks or other recreational facilities or result in the need to expand recreational facilities. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in no impact related to the need for construction of new or altered recreational facilities.

NO IMPACT

⁷² Santa Barbara, City of. 2022. Resources Inventory. <https://sbparksandrec.santabarbaraca.gov/sites/default/files/documents/Parks%20%26%20Recreation/Parks%20%26%20Recreation/Parks%20and%20Recreation%20Resources%20Inventory.pdf>. Accessed October 2023.

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. Implementation of cumulative projects, including the CAP Update, would not result in increases in population or induce additional population growth beyond that assumed under the General Plan. In addition, the CAP Update would not result in population growth or direct land use change. Therefore, implementation of the CAP Update would not result in substantial cumulative physical deterioration of parks or other recreational facilities or result in the cumulative need to expand recreational facilities. Therefore, implementation of the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in no cumulative impact related to recreation.

NO IMPACT

17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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Would the project:

a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*
- b. *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

Transportation issues are addressed in adopted City, County, State and federal plans, policies and regulations. Within the City, primary responsibility for these issues is addressed in the City’s General Plan and Municipal Code as administered by the City’s Public Works and Community Development Departments. In 2011, the City Council adopted Plan Santa Barbara, which included a readoption of the 1997 Circulation Element and new 2011 Circulation Element policies. The comprehensive goal and vision of the 2011 Circulation Element is: “While sustaining or increasing economic vitality and quality of life, Santa Barbara should be a city in which alternative forms of transportation and mobility are so available and attractive that use of an automobile is a choice, not a necessity.” Supporting transportation planning documents include the Pedestrian Master Plan (2006), Bicycle Master Plan (2016) and Vision Zero Strategy (2018), which aims to eliminate all severe injuries and fatalities on the City’s road network. There are also neighborhood specific transportation management plans (NTMP) focusing on neighborhood livability by improving the active transportation network. Examples of neighborhood plans include Eastside NTMP (2013), Westside and Lower West NTMP (2020), Cliff Drive Vision Zero Planning Effort (2022) and Milpas Street Corridor (2020/2022).

The City embraces a policy direction to make Santa Barbara a place where bicycling and walking are encouraged and fostered, and where safety, education and facilities are provided as an ongoing part of transportation and recreational planning and programs. While allowing people to circulate without cars is an emphasis of the Circulation Element, another emphasis is getting people to share

rides and reduce the number of vehicular trips. The CAP transportation measures are consistent with the Circulation Element, which includes several policies regarding alternative forms of transportation. Such policies include themes such as reducing dependence on automobiles, improving pedestrian and bicycle use, enhancing alternative transportation services and infrastructure, achieving equality of convenience among transportation options, developing urban design standards that facilitate alternative transportation, increasing regional transit services, designating a Bicycle Coordinator, expanding Transportation Demand Management programs, and educating residents on alternative forms of transportation.

In addition, SBCAG is required by State and federal law to prepare, update, and adopt a Regional Transportation Plan (RTP) every four years. The most recent update to the RTP was completed by SBCAG in 2021 (Connected 2050) and sets forth long-range transportation planning goal describing how the region will meet its transportation needs for the 30-year period from 2020 to 2050. Connected 2050 provides a collective vision for the region's future that balances transportation and housing needs with social, economic, and environmental goals. Connected 2050 helps guide future planning efforts and policy decisions that affect transportation, including its relationship with housing and land use, with the goal to reduce regional greenhouse gas emissions. Connected 2050 is based, in part, on SBCAG's Regional Growth Forecast which projects population and employment data to 2050. SBCAG designates RHNA allocations based on the Regional Growth Forecast.

Connected 2050 includes five goal areas – Environment, Mobility & System Reliability, Equity, Health & Safety, and Prosperous Economy – with respective policies to meet each goal areas, which are expected to result in significant benefits to the region, not only with respect to transportation and mobility, but also economic activity, safety, and social equity. Policies in Connected 2050 applicable to the CAP Update address land use, circulation, alternative transportation, affordable housing, and safe roads and highways.

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to conflict with a program, plan, ordinance, or policy addressing the transportation circulation system. The CAP Update is a policy document containing measures and actions that are consistent with the City General Plan Circulation Element, with many that are aimed at facilitating the implementation of the local transportation programs and improvements.

Implementation of some of the measures and actions included in the CAP Update may require future infrastructure development or improvements, such as bike paths and lockers. However, projects would be subject to review by the City for compliance with the General Plan and be required to comply with applicable local, State, and Federal regulations. Additionally, the projects included in the measures and actions support decreasing vehicle miles traveled by encouraging alternative forms of transportation and the development of related infrastructure, thus reducing total GHG emissions from transportation throughout the City. This reduction in vehicle miles traveled supports the City's 2021 updated Environmental Thresholds and Guidance Manual, which provides guidelines and standards for vehicle miles traveled for residential, employment, and retail projects.⁷³ Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in less-than-significant impact related to consistency with plans addressing the transportation circulation system.

⁷³ Santa Barbara, County of. Planning and Development. Environmental Thresholds and Guidelines Manual. 2021. <https://cosantabarbara.app.box.com/s/vtxutffe2n52jme97lgmV66os7pp3lm5>. Accessed 2024.

LESS-THAN-SIGNIFICANT IMPACT

- c. *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?*
- d. *Would the project result in inadequate emergency access?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to risk associated with transportation design or features. The CAP Update is a policy document containing measures and supporting actions that are consistent with the City General Plan and would not facilitate development beyond that allowed under the General Plan. The CAP measures and supporting actions included in Table 3 would promote active transportation, ridership, and sustainable transportation practices within the community to enhance bicycle, pedestrian, and transit connectivity. The development of alternative transportation infrastructure would occur in a manner that complies with existing city guidelines and ordinances and would not be designed or developed in a way that increase hazards or cause inadequate emergency access.

The CAP Update does not include measures and actions that would substantially increase transportation hazards due to a design feature or incompatible land uses. Furthermore, projects would be reviewed for consistency with the Santa Barbara General Plan and other applicable local and State regulations. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to transportation hazards and emergency access.

LESS-THAN-SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. The CAP Update is a policy document containing measures and actions that are consistent with the City's General Plan, and, similar to the other cumulative projects, the CAP Update does not propose development beyond that anticipated under the General Plan that would require transportation facilities. The measures and actions included in the CAP Update promote alternative modes of transportation and reduction of the amount of vehicle miles traveled throughout the City. In addition, the CAP Update measures and actions would not conflict with the objectives and policies of the General Plan but would rather be consistent with and promote those plans. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant cumulative impact related to transportation.

LESS-THAN-SIGNIFICANT IMPACT

18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or 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:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a. 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 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

- a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is 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)?*
- b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is 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?*

The Santa Barbara region was favorable to Native American settlement and the City contains known archaeological sites and areas of archaeological sensitivity. There is the potential to encounter previously unidentified archaeological resources on sites that may be developed with residential uses under the CAP Update. While the City is largely developed with few vacant parcels, undeveloped properties have a higher probability of containing previously unidentified archaeological resources given the probable lack of previous ground-disturbing activities on these properties. However, ground disturbance into native (previously undisturbed) soils on any development site could encounter previously undiscovered prehistoric or historic-period resources. The potential exists for tribal cultural resources to occur below the ground surface throughout Santa

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Barbara, which may be disturbed and damaged by grading and excavation activities associated with new housing development.

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not have construction or operational impacts related to archaeological resources. The CAP Update would not involve land use or zoning changes but would promote building energy retrofits as well as infrastructure development and redevelopment. For example, Measure BE-1 promotes the decarbonization of 50% of municipal buildings, Measure BE-4 promotes the expansion of the existing Natural Gas Prohibition Ordinance for new construction, Measure BE-5 promotes reducing residential natural gas consumption, and Measure B-6 promotes reducing commercial natural gas consumption. Measure T-1 involves the development and implementation of the Municipal Transportation Demand Management (TDM) Program, which aims to increase free-of-charge access to public transit and the electric bike share program in the City. Additionally, the TDM Program aims to provide cash incentives for city-employees to bike, walk, or carpool to work while Measure T-3 aims to implement programs to enhance access to safe active transportation. Measure T-4 encourages the implementation of programs to increase public transportation mode share via public transit improvements, education, increased access, and creating pilot projects. Measure T-7 aims to accelerate zero-emission commercial vehicle use and adoption to 26% by 2030 and Measure T-8 aims to electrify or decarbonize 6% of Off-Road equipment by 2030. Furthermore, Measure CS-1 facilitates the expansion of the City's Urban Forest Management Plan and requires planting and maintaining 4,500 net new trees by the year 2030. The physical changes these installations and enhancements would entail are dependent on the location of construction for the electric vehicle charging connections and active transportation.

Implementation of these measures could impact unknown tribal cultural resources during construction that involves below-grade activities. However, projects would be required to comply with the City's Historic Preservation Ordinance and Historic Resources Element that require the identification and preservation of sites and structures of architectural, historical, archaeological, and cultural significance. This includes sites, structures, and areas that are associated with tribal cultural activities or persons that contribute to the cultural character of artifacts. As such, tribal cultural resources would be protected upon discovery and, thus, impacts would be reduced to a minimal level. Additionally, future related projects would be required to undergo environmental review, including assessment and mitigation incorporation once project details and locations are known. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to tribal cultural resources.

On May 10, 2023, the City requested from the Native American Heritage Commission an updated Local Government Tribal Consultation List. On May 11, 2023, that list was provided by the NACH. On May 23, 2023, the City notified the listed tribes pursuant to SB 52 and SB 18 informing them about the City's intent to develop a Climate Action Plan and CEQA negative declaration and inquiring if they wished to enter into a consultation process. On May 24, 2023, the Santa Ynez Band of Chumash Indians responded that they would like to have a formal consultation. City staff met with representatives of the tribe on June 22, 2023, and while the representatives didn't have any particular concern with the CAP at that time, they requested to be kept informed with the draft CAP and ND was released. On June 27, 2023, the Northern Chumash Tribal Council requested to engage in consultation. On September 26, 2023, City staff met with a representative of the Northern Chumash Tribal Council who asked several questions about the project and asked to be kept on the notification list for the Draft CAP and ND.

LESS-THAN-SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. Cumulative projects could increase the potential for adverse effects to unknown tribal cultural resources in the City. Impacts to tribal cultural resources are site-specific; accordingly, as required under applicable laws and regulations, potential impacts associated with cumulative developments would be addressed on a case-by-case basis as cumulative project details and locations become known. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant cumulative impact related to tribal cultural resources.

LESS-THAN-SIGNIFICANT IMPACT

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19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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Would the project:

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a. *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not have direct construction or operational impacts related to utilities and service systems. The CAP Update is a policy document aimed at reducing water and energy consumption and related GHG emissions throughout the City of Santa Barbara and does not include site-specific infrastructure designs or project proposals. Implementing the CAP Update would not result in an increase in population and housing nor would it facilitate growth beyond that anticipated by the

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General Plan. As such, implementing the CAP Update would not create new demand related to water, wastewater, stormwater drainage, electric power, natural gas power, or telecommunications utilities.

However, projects resulting from implementation of the CAP Update could include redevelopment and/or restructuring of electricity and natural gas power facilities and infrastructure. Measure BE-1 promotes the decarbonization of 50% of municipal buildings and Measure BE-4 promotes the expansion of the existing Natural Gas Prohibition Ordinance for new construction. Measure T-1 involves the development and implementation of the Municipal Transportation Demand Management (TDM) Program, which aims to increase free-of-charge access to public transit and the electric bike share program in the City. Measure T-7 aims to accelerate zero-emission commercial vehicle use and adoption to 26% by 2030 and Measure T-8 aims to electrify or decarbonize 6% of Off-Road equipment by 2030. Furthermore, Measure CS-1 facilitates the expansion of the City's Urban Forest Management Plan and requires planting and maintaining 4,500 net new trees by the year 2030. Therefore, the cumulative impact related to new demand related to water, wastewater, stormwater drainage, electric power, natural gas power, or telecommunications utilities would be less-than-significant. Impacts on demand for water, wastewater, stormwater drainage, electric power, natural gas power, or telecommunications utilities are detailed below.

Water Supply Facilities/Infrastructure

The City's water supplies are managed pursuant to the Enhanced Urban Water Management Plan (EUWMP). The service area for the City water system includes most areas within the City's limits aside from the Santa Barbara Airport which is served by the Goleta Water District and the Coast Village Road and Westmont Road areas which are served by Montecito Water District⁷⁴. The City also serves selected areas outside of the City limits, including the unincorporated areas of Mission Canyon and Barker Pass⁷⁵. The majority of the City's potable water is treated at the Cater Water Treatment Plant (WTP) which has a capacity of 37 million gallons per day (MGD) and is used to provide water treatment for the Montecito Water District and Carpinteria Valley Water District.⁷⁶ The City's potable water distribution system consist of approximately 312 miles of distribution main, 15 balancing reservoirs, 15 pumping stations, and nine production wells. The water system is supported by approximately 70 employees within the City's Public Works Department, Water Resources Division.⁷⁷The City water supply is obtained from a diverse water supply portfolio which includes the following⁷⁸:

⁷⁴ Santa Barbara, City of. 2021. 2020 Enhanced Urban Water Management Plan. <https://santabarbaraca.gov/sites/default/files/documents/Public%20Works/Water%20Vision/Final%202020%20Enhanced%20Urban%20Water%20Management%20Plan.pdf>. Accessed October 2023.

⁷⁵ Santa Barbara, City of. 2021. 2020 Enhanced Urban Water Management Plan. <https://santabarbaraca.gov/sites/default/files/documents/Public%20Works/Water%20Vision/Final%202020%20Enhanced%20Urban%20Water%20Management%20Plan.pdf>. Accessed October 2023.

⁷⁶ Santa Barbara, City of. 2021. 2020 Enhanced Urban Water Management Plan. <https://santabarbaraca.gov/sites/default/files/documents/Public%20Works/Water%20Vision/Final%202020%20Enhanced%20Urban%20Water%20Management%20Plan.pdf>. Accessed October 2023.

⁷⁷ Santa Barbara, City of. 2021. 2020 Enhanced Urban Water Management Plan. <https://santabarbaraca.gov/sites/default/files/documents/Public%20Works/Water%20Vision/Final%202020%20Enhanced%20Urban%20Water%20Management%20Plan.pdf>. Accessed October 2023.

⁷⁸ Santa Barbara, City of. 2021. 2020 Enhanced Urban Water Management Plan. <https://santabarbaraca.gov/sites/default/files/documents/Public%20Works/Water%20Vision/Final%202020%20Enhanced%20Urban%20Water%20Management%20Plan.pdf>. Accessed October 2023.

- **Lake Cachuma.** The U.S. Bureau of Reclamation constructed Lake Cachuma and Bradbury Dam in the early 1950s. The City's share of the annual yield is 8,277 acre-feet per year (AFY). Water is delivered for treatment at Cater Water Treatment Plant (WTP) via the Tecolote Tunnel and South Coast Conduit. The City can store allocated Cachuma water in Lake Cachuma for the following year, allowing the City to use other available supplies and build up reserves of Cachuma supplies.
- **Gibraltar Reservoir.** The City has pre-1914⁷⁹ appropriative water rights to divert water from the Santa Ynez River. Construction of Gibraltar Dam was completed in 1920. The reservoir had an initial storage capacity of 15,793 acre-feet (AF). As of 2020, siltation has reduced the reservoir capacity to 4,559 AF. Water from the reservoir is conveyed through Mission Tunnel for treatment at Cater WTP.
- **Devil's Canyon Diversion.** The City has pre-1914 appropriative water rights to divert water from Devil's Canyon Creek and maintains a small diversion weir on Devil's Canyon Creek below Gibraltar Dam, which diverts water from Devil's Canyon Creek into Mission Tunnel.
- **Mission Tunnel Infiltration.** Mission Tunnel is 3.7 miles long and conveys water from Gibraltar Reservoir through the Santa Ynez Mountains to the City. Infiltration through cracks and fissures into the tunnel from watersheds on both sides of the mountains contributes to the City's water supply. Infiltration to Mission Tunnel is dependent on rainfall.
- **State Water Project.** The City is entitled to request up to 3,300 AFY from the State Water Project (SWP). The water is conveyed to Lake Cachuma from SWP facilities in the Central Valley via the Central Coast Branch of the California Aqueduct. Once in Lake Cachuma, the water is conveyed along with Cachuma Project water, via the Tecolote Tunnel, to Cater WTP for treatment and distribution.
- **Supplemental Water.** The SWP pipeline provides the City with the ability to convey supplemental water purchases to augment drought-year supplies. During the recent drought, the City purchased water from other SWP water contractors.
- **Desalination.** The Charles E. Meyer Desalination Plant was reactivated in 2017 in response to the recent drought. The plant can provide 3.0 million gallons per day (MGD) of supply, equivalent to 3,125 AFY at 93% of production capacity. The City maintains permits to provide a desalination supply of up to 10,000 AFY.
- **Groundwater.** The City pumps groundwater from the Foothill Basin and the Santa Barbara Basin, which is subdivided into two water-storage basins: Storage Unit 1, and Storage Unit 3. Storage Unit 1 underlies downtown Santa Barbara, covering approximately seven square miles. Storage Unit 3 lies to the southwest of Storage Unit 1 and covers approximately 2.5 square miles. Foothill Basin and Storage Unit 1 are used to supply the potable water system. Storage Unit 3 is used only to supplement the recycled water system, if needed.
- **Recycled Water.** Recycled water is produced at the El Estero Water Resource Center (WRC) for distribution to the recycled water system for irrigation of large landscapes and toilet flushing at a handful of public locations. The City upgraded the recycled water treatment system in 2015.

The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in new land uses that would contribute to an increase in water use compared to existing conditions or require relocation or construction of new water infrastructure.

⁷⁹ California courts have clarified since 1914 the only way a new water right is acquired is to receive a water right permit from the State Water Resources Control Board. However, some jurisdictions have pre-1914 appropriative water rights which are valid today and do not require a water right permit.

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Additionally, Measures W-2 and W-3 support the reduction of City-wide water consumption through the creation of the Green Community Infrastructure Program and the expansion of the City's Water Conservation Program. Therefore, no impact related to the need for construction or expansion of water supply facilities and infrastructure would occur.

Wastewater Treatment Facilities/Infrastructure

The City operates a wastewater/stormwater collection system consisting of 255 miles of sewer pipe and seven lift stations which convey water to the El Estero WRC. El Estero WRC also provides recycled water from its tertiary treatment plant to irrigate parks, school grounds, golf courses, and other large landscapes.^{80,81} Approximately four dry tons of biosolids are produced every day at El Estero WRC which are composted and used at farms and parks as a nutrient-rich soil amendment. Gas generated in the treatment process is converted to electricity to offset approximately 50 percent of the electricity needs at El Estero WRC.⁸² The circularity of the El Estero WRC is aligned with the CAP Update measures, specifically Measure W-1 and W-4, which include increasing the application of recycled water and compost throughout the city. The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not require relocation or construction of new wastewater collection or treatment infrastructure. Therefore, no impact related to the need for construction or expansion of wastewater treatment facilities and infrastructure would occur.

Stormwater Drainage Facilities/Infrastructure

Stormwater within the City that does not infiltrate into the ground becomes surface runoff, which flows into surface waterways or is channeled into the City's storm drain system which conveys rainwater into creeks and the Pacific Ocean.⁸³ The Creeks Division of the City's Sustainability & Resiliency Department is responsible for the water quality management of stormwater drainage systems within the City. The Public Works Department is responsible for owning and maintaining City owned or street storm drains. Discharges from the City's storm drain system into the ocean and creeks are permitted under the State Water Resources Control Board's National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), Order No. 2013-0001-DWQ.^{84,85}

Construction of infrastructure development and redevelopment could result in erosion and potential redirect of flood flows or drainage patterns. However, implementation of proposed actions would not include infrastructure changes that would result in additional sources of polluted

⁸⁰ Santa Barbara, City of. 2022. El Estero Water Resource Center. <https://santabarbaraca.gov/government/departments/public-works/water-resources/wastewater-system/el-estero-water-resource>. Accessed October 2023.

⁸¹ Santa Barbara, City of. 2021. 2020 Enhanced Urban Water Management Plan. <https://santabarbaraca.gov/sites/default/files/documents/Public%20Works/Water%20Vision/Final%202020%20Enhanced%20Urban%20Water%20Management%20Plan.pdf>. Accessed October 2023.

⁸² Santa Barbara, City of. 2022. El Estero Water Resource Center. <https://santabarbaraca.gov/government/departments/public-works/water-resources/wastewater-system/el-estero-water-resource>. Accessed October 2023.

⁸³ Santa Barbara, City of. 2022. Wastewater Collection System. <https://santabarbaraca.gov/government/departments/public-works/water-resources/wastewater-system/wastewater-collection-system>. Accessed October 2023.

⁸⁴ City of Santa Barbara Parks & Recreation. 2022. Storm Water Management Program (SWMP). <https://sbparksandrec.santabarbaraca.gov/programs-services/creek-and-ocean-water-quality/water-quality-improvement/storm-water-management>. Accessed October 2023.

⁸⁵ State Water Resources Control Board (SWRCB). 2013. National Pollutant Discharge Elimination System (NPDES) General Permit for Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). February 5, 2013. https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/remediated_phase2ms4permit_v2.pdf. Accessed October 2023.

runoff. Additionally, future related projects would be required to undergo environmental review, including assessment and mitigation incorporation once project details and locations are known. As a result, no negative impacts related to polluted runoff would occur. Therefore, implementing the CAP Update would have no effect on polluted runoff. As such, implementation of the CAP Update would not require a Stormwater Pollution Prevention Plan (SWPPP). Therefore, no impact related to the need for construction or expansion of stormwater drainage facilities and infrastructure would occur.

Electric Power Facilities/Infrastructure

Measures BE-5 and BE-6 propose reducing residential and commercial natural gas consumption by 10% below 2019 levels by 2030 and incorporating electrification accelerator programs for these buildings. In addition, the installation of new electric vehicle charging stations would involve the construction of new electric power facilities and infrastructure and could also involve the relocation of existing electric power infrastructure and transmission lines. The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would serve as a pathway to reduce GHG emissions and other beneficial environmental and sustainability effects. These benefits include a reduction in energy consumption. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to construction, expansion, or relocation of electric power facilities and infrastructure.

Natural Gas Power Facilities/Infrastructure

The CAP Update would not involve new land uses that require new or additional natural gas service. However, implementation of the CAP Update could involve the relocation or removal of existing natural gas facilities and infrastructure. The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would serve as a pathway to reduce GHG emissions and other beneficial environmental and sustainability effects. These benefits include a reduction in energy consumption. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to removal of natural gas power facilities and infrastructure.

Telecommunications Facilities/Infrastructure

The proposal plan would not involve new land uses that would require telecommunications infrastructure and is not anticipated to involve the relocation of existing telecommunications facilities. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less than significant impact related to the need for construction or expansion of telecommunication facilities and infrastructure.

LESS THAN SIGNIFICANT IMPACT

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- b. *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*
- c. *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to water supplies. The CAP Update is a policy-level document that does not include site-specific infrastructure designs or project proposals, nor does it grant entitlements for development that would have the potential to increase demand for water supply or other utility services. Implementing the CAP Update would include no new residential construction and would have no effect on water demand and wastewater treatment demand. Thus, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in no impact related to water supply and wastewater treatment.

NO IMPACT

- d. *Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*
- e. *Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

Solid waste collection services in the City are provided by the City's franchised waste hauler, MarBorg Industries.⁸⁶ Solid waste is hauled to the County-owned South Coast Recycling and Transfer Station located at 4430 Calle Real between the cities of Goleta and Santa Barbara. The South Coast Recycling and Transfer Station acts as a consolidation point for waste. The County separates recyclable materials from non-recyclable materials and transfers the non-recyclable materials to the Tajiguas Landfill. The South Coast Recycling and Transfer facility is permitted to process up to 550 tons per day of solid waste.⁸⁷ The Tajiguas Landfill has a maximum permitted daily throughput of 1,500 tons per day and a remaining capacity of approximately 4,336,335 cubic yards. The Tajiguas Landfill is scheduled for closure January 1, 2036.⁸⁸ In addition, the Tajiguas landfill includes the County of Santa Barbara's ReSource Center with a Materials Recovery Facility (MRF) and anaerobic digester. The MRF separates any excess recyclable and organic material delivered to Tajiguas. Organic materials are processed in the anaerobic digester. The ReSource Center converts organics for use in soil.^{89 90}

Construction and demolition waste is primarily disposed of at local construction and demolition recycling facilities. These include MarBorg Construction and Demolition Recycling Facility, Lash

⁸⁶ Santa Barbara, City of. 2022. Trash & Recycling. <https://santabarbaraca.gov/services/utilities/trash-recycling>. Accessed October 2023.

⁸⁷ California Department of Resources, Recycling, and Recovery (CalRecycle). 2022. South Coast Recycling & Transfer Station (42-AA-0014). <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1251?siteID=3282>. Accessed October 2023.

⁸⁸ California Department of Resources, Recycling, and Recovery (CalRecycle). 2022. Tajiguas Res Rec Proj & Sanitary LF (42-AA-0015). <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1252?siteID=3283>. Accessed October 2023.

⁸⁹ Santa Barbara, City of. 2022. Foodscraps Composting. <https://santabarbaraca.gov/services/utilities/trash-recycling/collection-types/foodscraps-composting>. Accessed October 2023.

⁹⁰ Santa Barbara, County of. 2022. ReSource Center. https://lessismore.org/material_categories/9-trrp/. Accessed November 2022.

Construction, and Granite Construction.⁹¹ Recyclables, metal and glass, antifreeze, oil, and e-waste are accepted at multiple drop-off facilities including the Downtown Recycling Center, the Goleta Recycling Center, Santa Barbara Iron & Metal Recyclers, M & M Scrap Metals, and the Community Household Hazardous Waste Collection Center at the University of California Santa Barbara.⁹²

A food scraps collection service was implemented by the City in 2009 for the business sector, and has over 200 participating businesses including coffee shops, restaurants, hotels, as well as schools and multi-unit apartment buildings. Food scraps are hauled by MarBorg Industries to the South Coast Recycling and Transfer Station and then transferred to the ReSource Center.

Implementation of the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in construction or operational impacts related to solid waste. The CAP Update would not involve new land uses that require new or additional solid waste collection service. The CAP Update includes Measure W-4, which aims to decrease the amount of organic waste in the waste stream, as well as educate stakeholders and collaborate with the County to decrease the use and purchase of non-recyclables and enhance sustainable purchasing practices. Thus, the CAP Update would not facilitate development and would decrease solid waste collection and disposal demand. Additionally, because the CAP is a policy document that would not facilitate growth beyond that anticipated by the General Plan, it would not generate solid waste in excess of State or local standards. Additionally, should any potential increases in waste occur due to retrofit infrastructure development, it would be in compliance with state law. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less than significant impact related to solid waste.

LESS THAN SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth Santa Barbara (96,637 persons) in 2030. Cumulative projects within the City could result in increases in population and additional use of or need for utilities and service systems. While implementation of the CAP Update and related infrastructure projects would not result in increases in population or induce additional population growth that would require additional use of existing City utilities or service systems, implementation of new or replacement energy or transportation infrastructure under the CAP Update could result in less-than-significant cumulative utility construction impacts. Therefore, implementation of the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant cumulative impact related to utilities and service systems.

LESS-THAN-SIGNIFICANT IMPACT

⁹¹ Santa Barbara, City of. 2022. Drop-Off Locations (Self Haul). <https://santabarbaraca.gov/services/utilities/trash-recycling/drop-locations-self-haul>. Accessed October 2023.

⁹² Santa Barbara, City of. 2022. Drop-Off Locations (Self Haul). <https://santabarbaraca.gov/services/utilities/trash-recycling/drop-locations-self-haul>. Accessed October 2023.

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20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a. Substantially impair an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

- a. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*
- b. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*
- c. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, 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?*
- d. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

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The City includes State designated Very High Fire Hazard Severity Zones in the northeast and northwest portions of the City and local designated High Fire Hazard Areas mainly in areas with land use designations of open space, hillside low density residential, and low density residential, as well as a small portion of land designated medium density residential.⁹³

The City completed an update to the Community Wildfire Protection Plan (CWPP) in 2021, aimed at mitigating wildland fire impacts. CWPP Policy 7.9 requires the City of Santa Barbara's Fire Department to conduct a detailed evacuation study which addresses increased residential density on roadway capacities and evacuation capabilities.⁹⁴ The City's Annex to the County's Multi-Jurisdictional Hazard Mitigation Plan (2023) includes a high priority project to combine the CWPP and 2014 Evacuation procedures analysis, identify roads that do not meet Fire Department standards, and conduct a detailed evacuation study.

As part of standard development procedures in the City, development plans must be submitted to the City's Community Development Department for review and approval to ensure that new development has adequate emergency access and escape routes in compliance with existing City and Fire Department regulations. The CAP Update would not introduce new features or policies that would preclude implementation of or alter these policies or procedures. Therefore, implementation of the CAP Update would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and this impact would be less than significant.

The CAP Update is a policy-level document that does not propose specific or other physical changes such as habitable development that could be put at risk in the case of a wildfire, nor does it grant entitlements for development that would have the potential to directly cause wildfire. Rather, the CAP aims to reduce natural gas infrastructure that poses wildfire risk if damaged during seismic events and to underground new or restructured electric power lines that pose wildfire risk if damaged during high-wind events. Thus, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in less-than-significant impact related to wildfire.

LESS THAN SIGNIFICANT IMPACT

Cumulative Impacts

The cumulative projects scenario is total projected population growth for Santa Barbara (96,637 persons) in 2030. The CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis do not include new habitable development that could be at risk from wildfire, nor does it grant entitlements for development that would have the potential to cause wildfire. Thus, the CAP Update and the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in less-than-significant cumulative impact related to wildfire.

LESS THAN SIGNIFICANT IMPACT

⁹³ California Department of Forestry and Fire Protection (CAL FIRE). 2008. Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE. September 2, 2008. https://osfm.fire.ca.gov/media/5929/santa_barbara.pdf. Accessed October 2023.

⁹⁴ Santa Barbara, City of. 2021. Community Wildfire Protection Plan. February 2021. https://cwpp.santabarbaraca.gov/wp-content/uploads/2021/03/SB-CWPP-Final_Feb-2021_OPT_signed.pdf. Accessed October 2023.

21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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Does the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <p>a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p>b. Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <p>c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a. *Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

The intent of the CAP Update is to reduce GHG emissions from the Santa Barbara community and municipal operations through implementation of measures and corresponding actions. The measures and supporting actions are consistent with the 2011 Santa Barbara General Plan and encourage residents, businesses, and the City to reduce energy, fuel use, water use, vehicle miles traveled, and solid waste generation and the associated GHG emissions. The CAP Update would not facilitate development that would eliminate or threaten wildlife habitats or eliminate important examples of the major periods of California history or prehistory. Furthermore, as a guidance

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document, the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in significant biological and cultural resources impacts. Therefore, as discussed in more detail in Section 4, *Biological Resources*, and Section 5, *Cultural Resources*, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in a less-than-significant impact related to biological and cultural resources.

LESS-THAN-SIGNIFICANT IMPACT

- b. *Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

Implementation of the CAP Update would result in a cumulatively beneficial reduction of GHG emissions across the City. In addition, as discussed throughout the respective cumulative impacts discussions within this document, the CAP Update would not result in significant cumulative impacts. Rather, implementation of the CAP Update would be consistent with General Plan policies aimed at reducing emissions of GHGs and air pollutants, reducing vehicle miles traveled, reducing energy and water supply demands on utilities, and decreasing solid waste generation. Furthermore, as a guidance document, the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in cumulative impacts. Therefore, the CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would result in an overall less-than-significant cumulative impact related to all CEQA topics addressed within this document.

LESS-THAN-SIGNIFICANT IMPACT

- c. *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

The CAP Update would not result in adverse effects on human beings. Rather, as discussed throughout this document, the CAP Update would serve as a pathway to reduce GHG emissions and other positive environmental and sustainability effects. These benefits include reduction in non-renewable building energy consumption and vehicle miles traveled (and thus air pollution), in transportation-related GHG emissions, energy and water consumption, and solid waste generation. However, as discussed in more detail in Section 3, *Air Quality*, Section 13, *Noise*, and Section 17, *Transportation*, the CAP Update could cause temporary construction impacts related to transportation, air quality, and noise that could, in turn, affect human beings but would not result in a substantial adverse environmental effect. Furthermore, as a guidance document, the Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis would not result in cumulative impacts. Therefore, the CAP Update would result in a less-than-significant impact related to potential for adverse effects on human beings.

LESS-THAN-SIGNIFICANT IMPACT

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List of Preparers

Rincon prepared this CAP Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis Initial Study-Negative Declaration under contract to the City of Santa Barbara. Persons involved in data gathering, environmental impact analysis, quality review, graphics preparation, and document formatting include the following.

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Appendix A

Sources, Health Effects, and Typical Controls Associated with Criteria Pollutants

Sources, Health Effects, and Typical Controls Associated with Criteria Pollutants

Pollutant	Sources	Health Effects	Typical Controls
Ozone (O ₃)	Formed when reactive organic gases (ROG) and nitrogen oxides react in the presence of sunlight. ROG sources include any source that burns fuels (e.g., gasoline, natural gas, wood, oil); solvents; petroleum processing and storage.	Breathing difficulties, lung tissue damage, vegetation damage, damage to rubber and some plastics.	Reduce motor vehicle reactive organic gas (ROG) and nitrogen oxide (NO _x) emissions through emission standards, reformulated fuels, inspections programs, and reduced vehicle use. Limit ROG emissions from commercial operations, gasoline refueling facilities, and consumer products. Limit ROG and NO _x emissions from industrial sources such as power plants and manufacturing facilities.
Carbon monoxide (CO)	Any source that burns fuel such as automobiles, trucks, heavy construction and farming equipment, residential heating.	Chest pain in heart patients, headaches, reduced mental alertness.	Control motor vehicle and industrial emissions. Use oxygenated gasoline during winter months. Conserve energy.
Nitrogen dioxide (NO ₂)	See Carbon Monoxide.	Lung irritation and damage. Reacts in the atmosphere to form ozone and acid rain.	Control motor vehicle and industrial combustion emissions. Conserve energy.
Sulfur dioxide (SO ₂)	Coal or oil burning power plants and industries, refineries, diesel engines.	Increases lung disease and breathing problems for asthmatics. Reacts in the atmosphere to form acid rain.	Reduce use of high sulfur fuels (e.g., use low sulfur reformulated diesel or natural gas). Conserve energy.
Respirable particulate matter (PM ₁₀)	Road dust, windblown dust, agriculture and construction, fireplaces. Also formed from other pollutants (NO _x , SO _x , organics).	Increased respiratory disease, lung damage, cancer, premature death, reduced visibility, surface soiling.	Control dust sources, industrial particulate emissions, woodburning stoves and fireplaces. Reduce secondary pollutants which react to form PM ₁₀ . Conserve energy.
Fine particulate matter (PM _{2.5})	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning. Also formed from reaction of other pollutants (NO _x , SO _x , organics, and NH ₃).	Increases respiratory disease, lung damage, cancer, and premature death, reduced visibility, surface soiling. Particles can aggravate heart diseases such as congestive heart failure and coronary artery disease.	Reduce combustion emissions from motor vehicles, equipment, industries, and agricultural and residential burning. Precursor controls, like those for ozone, reduce fine particle formation in the atmosphere.
Lead	Metal smelters, resource recovery, leaded gasoline, deterioration of lead paint.	Learning disabilities, brain and kidney damage. Control metal smelters.	No lead in gasoline or paint.
Sulfur Dioxide (SO ₂)	Coal or oil burning power plants and industries, refineries, diesel engines.	Increases lung disease and breathing problems for asthmatics. Reacts in the atmosphere to form acid rain.	Reduce use of high sulfur fuels (e.g., use low sulfur reformulated diesel or natural gas). Conserve energy.
Sulfates	Produced by reaction in the air of SO ₂ , (see SO ₂ sources), a component of acid rain.	Breathing difficulties, aggravates asthma, reduced visibility.	See SO ₂

City of Santa Barbara Climate Action Plan Update and Master Environmental Assessment Guidelines for Greenhouse Gas Emissions Analysis

Pollutant	Sources	Health Effects	Typical Controls
Hydrogen Sulfide	Geothermal power plants, petroleum production and refining, sewer gas.	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations).	Control emissions from geothermal power plants, petroleum production and refining, sewers, and sewage treatment plants.
Visibility Reducing Particulates	See PM _{2.5}	Reduced visibility (e.g., obscures mountains and other scenery), reduced airport safety.	See PM _{2.5}
Vinyl Chloride	Exhaust gases from factories that manufacture or process vinyl chloride (construction, packaging, and transportation industries).	Central nervous system effects (e.g., dizziness, drowsiness, headaches), kidney irritation, liver damage, liver cancer.	Control emissions from plants that manufacture or process vinyl chloride, installation of monitoring systems.
Toxic Air Contaminant (TAC)	Combustion engines (stationary and mobile), diesel combustion, storage and use of TAC-containing substances (i.e., gasoline, lead smelting, etc.)	Depends on TAC, but may include cancer, mutagenic and/or teratogenic effects, other acute or chronic health effects.	Toxic Best Available Control Technologies (T-BACT), limit emissions from known sources.

Source: Compiled by Rincon Consultants, Inc. in September 2020

Appendix B

Description of Greenhouse Gases of California Concern

Description of Greenhouse Gases of California Concern

Greenhouse Gas	Physical Description and Properties	Global Warming Potential (100 years)	Atmospheric Residence Lifetime (years)	Sources
Carbon dioxide (CO ₂)	Odorless, colorless, natural gas.	1	50–200	Burning coal, oil, natural gas, and wood; decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; oceanic evaporation; volcanic outgassing; cement production; land use changes
Methane (CH ₄)	Flammable gas and is the main component of natural gas.	28	12	Geological deposits (natural gas fields) extraction; landfills; fermentation of manure; and decay of organic matter
Nitrous oxide (N ₂ O)	Nitrous oxide (laughing gas) is a colorless GHG.	298	114	Microbial processes in soil and water; fuel combustion; industrial processes
Chloro-fluoro-carbons (CFCs)	Nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (level of air at the Earth's surface); formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms.	3,800–8,100	45–640	Refrigerants aerosol propellants; cleaning solvents
Hydro-fluoro-carbons (HFCs)	Synthetic human-made chemicals used as a substitute for CFCs and contain carbon, chlorine, and at least one hydrogen atom.	140 to 11,700	1–50,000	Automobile air conditioners; refrigerants
Per-fluoro-carbons (PFCs)	Stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface.	6,500 to 9,200	10,000–50,000	Primary aluminum production; semiconductor manufacturing
Sulfur hexafluoride (SF ₆)	Human-made, inorganic, odorless, colorless, and nontoxic, nonflammable gas.	22,800	3,200	Electrical power transmission equipment insulation; magnesium industry, semiconductor manufacturing; a tracer gas
Nitrogen trifluoride (NF ₃)	Inorganic, is used as a replacement for PFCs, and is a powerful oxidizing agent.	17,200	740	Electronics manufacture for semiconductors and liquid crystal displays

Source: Compiled by Rincon Consultants, Inc. in September 2020

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Public Comments Received on 2024 Climate Action Plan
(March 22 – April 24, 2024)

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Zero Emission Vehicles

“Green Transportation,” in the present context, most likely means the replacement of internal-combustion engines by bringing back electric vehicles (EVs). To say that an EV is a zero-emission vehicle is not at all valid. All an EV does is to move the emissions from the tailpipe to the power plant. Also, if forty percent of the electricity generated in the U.S. is from coal-fired plants, it follows that forty percent of the EVs on the road are coal-powered.

Energy Losses with Electric Vehicles

Running a gasoline car involves burning gas in the internal combustion engine and converting thermal energy to mechanical energy. That’s it. Charging an electric car’s battery from the grid and driving the car involves burning fossil fuels at the power station and converting thermal energy to mechanical energy. This is only moderately more efficient in a power station than gasoline cars. Then, losses begin. Converting the mechanical energy of the turbine into electrical energy in the generator involves generator losses. Converting medium voltage from the generator into high transmission voltage involves transformer losses. Transmitting the power along the high voltage lines involves transmission losses. Stepping down the voltage in several substations involves transformer losses again. In a home charging station, converting 220-volt AC power into DC for car charging again involves conversion losses. A chemical process in the battery that is being charged heats the battery, involving charging losses. Running the car’s electrical motors from the battery requires inverter losses to generate electricity for traction motors and motor losses. When a driver needs heat in the cab, heating a gasoline car in winter involves redirecting waste heat (hot antifreeze) from the engine into the cabin heater, thus not requiring additional fuel. Heating an electric car requires a resistance heater or a heat pump, needing to consume more energy from the grid, eventually, with all the above conversion losses included. Overall, an electric vehicle is a less efficient way to turn a quantity of fossil fuel into rotation at the wheels and is causing even more pollution.

Batteries for Electric Vehicles

A topic deserving its own discussion is that of batteries. A typical EV battery weighs one thousand pounds. It contains 25 pounds of lithium, 60 pounds of nickel, 44 pounds of manganese, 30 pounds cobalt, 200 pounds of copper, and 400 pounds of aluminum, steel, and plastic. Inside are over 6,000 individual lithium-ion cells. All these toxic components come from mining. For instance, to manufacture each EV auto battery, you must process 25,000 pounds of brine for the lithium, 30,000 pounds of ore for the cobalt, 5,000 pounds of ore for the nickel, and 25,000 pounds of ore for copper. All told, you dig up 500,000 pounds of the earth’s crust for just one battery. 68 percent of the world’s cobalt, a significant part of a battery, comes from the Congo. Their mines have no pollution controls, and they employ children who die from handling this toxic material. Should we factor in these diseased kids as part of the cost of driving an electric car?

Electric Vehicle Wear and Tear

An interesting problem that I once read about is that, according to tire shops, electric cars are going through tires faster than gas powered vehicles of the same size and over the same driving distances. It turns out that the constant torque generated by the electric motor drives against the tread all the time, compared with the power fluctuations associated with driving a gas vehicle. The tire stores are seeing tires ordinarily rated for 60,000-miles wearing out in only 30,000 miles.

California's Electric Vehicle Mandate

Returning to the situation in California, the state has a mandate to bring back the electric car that really amounts to a ban on poor people buying cars. The cheapest electric car costs about \$30,000, not counting the cost of battery failures. The average cost is about \$54,000. The state's average income is about \$34,000. Most of California's population cannot afford electric cars, even with the subsidies included. The raw material costs for an average electric car are about \$8,000, compared with \$3,600 for a gasoline-powered car. Car ownership offers mobility and independence. What this mandate really does is to force the working class and middle class to leave the state. California's electric grid cannot be supported if the entire state's population is using electric cars, especially with the state's power coming from unreliable and inefficient wind turbines and solar panels. Finally, California has a big problem with wildfires. With an electric car, evacuation from the fire zone may be impossible during a power failure. This could be a death sentence.

Electric appliances are a waste of energy. First, you must generate electricity at the power plant by burning fossil fuels. Any process that converts combustion heat into mechanical work is typically only about 30 percent efficient. The rest of the energy is rejected as heat. The electricity is then converted back into heat in the buildings. Instead, just bring natural gas directly into the building through pipes and convert it into heat by burning it in stoves, water heaters, and dryers. This has worked just fine for most of us for many years, and natural gas burns very cleanly.

Bob Bugiada
333 First Street, Apt K-211
Seal Beach, CA 90740
To see my LinkedIn profile, [Ctrl-click Here](#) Solar Activity

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The greatest influence on climate has always been, and will always continue to be, the sun. Sunspots have a significant effect. There are several telescopes atop Mt. Wilson, near Los Angeles, dedicated to the study of sunspots. For overly simplified examples, just notice how much warmer it is during the day than it is at night, and how warmer it is during the summer than it is during the winter.

Water Vapor

Humidity also has a significant impact on temperature. Water vapor is the predominant greenhouse gas, which absorbs and re-emits energy into the atmosphere. The molecule's thermal and optical properties also make it so. It can have concentration as high as 25,000 parts per million (ppm), which is two and a half percent. During the summers in dry cities, like Los Angeles, temperatures drop significantly at night. In humid cities, like New York, the temperature is often high and uncomfortable all night. Also, cloudy nights are usually warmer than clear nights.

Carbon Dioxide

Carbon dioxide, on the other hand, is a trace gas. It is currently only about 400 ppm, or 0.04 percent, of the atmospheric mixture. It is not a pollutant. It is produced when animals exhale and by chemical reactions such as combustion of fossil fuels. Green plants use it in photosynthesis to make oxygen for us to breathe. It is essential to all life on Earth. The optimal carbon dioxide level in a commercial greenhouse is 1,100 to 1,500 ppm. There is a strong correlation between the concentration of carbon dioxide in the atmosphere and the degree of forestation, but the correlation between carbon dioxide and temperatures is very weak. If anything, historical temperatures LEAD carbon dioxide concentrations. There is an equilibrium, known as Henry's Law, between the carbon dioxide concentration in the atmosphere and the carbon dioxide dissolved in ocean water. Warmer water drives carbon dioxide from the ocean into the atmosphere. Sources of heat are the tremendous number of undersea volcanoes. It is estimated that a 1-degree Celsius temperature rise in the ocean increases the atmospheric carbon dioxide concentration by about seven percent. Historically, carbon dioxide levels and temperature fluctuations occurred when human beings did not even exist on the planet. The concentration of carbon dioxide has exceeded 1,000 ppm many times. Why weren't the "tipping points" that they constantly warn us about ever triggered? The amount of carbon dioxide produced from human activities is easy to calculate, easy to measure, and therefore easy to tax. There is no peer-reviewed study that proves that carbon dioxide controls climate, or even that Man is the cause.

Carbon Dioxide versus Water Vapor

The estimate of the percentage of atmospheric carbon dioxide that is caused by human activity is 0.03. Multiplying that by 0.04 percent gives 0.0012 percent. Compare that with the 2.5 percent of the atmosphere that is water vapor. The ratio of the percentages of water vapor to carbon dioxide is greater than 2,000. It's hard to believe that a small percentage change in carbon dioxide is affecting the climate much. Sadly, the various climate accords and protocols completely discount the effect of water vapor. Maybe it's because water vapor is nearly impossible to control.

Other Greenhouse Gases

Methane is even lower in concentration in the atmosphere at about 1.7 ppm. It isn't even worthy of consideration, and discussions of the digestive characteristics of cows are laughable. Nitrous oxide is lower still at about 314 parts per BILLION. Efforts to curb the use of nitrogen fertilizers are dangerous and can lead to food shortages and mass starvation. Even lower is the concentration of chlorofluorocarbons at about one part per billion, yet we all must buy more expensive and exotic refrigerants each time we recharge our car's air conditioners.

Combustion of Fossil Fuels

If burning fossil fuels is the culprit that many say it is, then there would be a commensurate reduction of oxygen, which is necessary for combustion, in the air. That has not happened. Often overlooked is the effect of large volcanic eruptions, which can cause tremendous climate disruptions worldwide. The sulfur dioxide and other aerosols flung into the upper atmosphere cool the planet by blocking out the sun, as shown by ice-core samples and tree rings.

Arctic Ice

Retreating glaciers are often pointed to as "proof" of human-induced global warming by those predicting climate catastrophe. Though the planet IS warming, and glaciers ARE retreating, the beneficial warmth began more than 300 years ago. That was long before emissions of carbon dioxide could have caused any temperature increases. Although our current warming trend began in the late 1600s, the glacial retreat wasn't started until the early 1800s. That is because it took 100-plus years for the warming to cause more summer melting than winter accumulation. A highlight of many Alaskan cruises, Glacier Bay is often pointed to as a warning of our "sins of emission." However, retreat of this glacier began in the late 1700s and had retreated some 50 miles before significant additions of carbon dioxide in the mid-20th century. There have been only about ten miles of retreat since. Glacial facts simply do not support the theory that carbon dioxide is the primary cause of modern warming.

Historical Trends

One thing constant about temperature is that it is never constant. The planet has altered between very cold periods (glacials) and warm periods (interglacials). The glacial-interglacial cycles are controlled by changes in the Earth's tilt and the shape of its orbit. The earth was warmer in the past. The Vikings, during the Medieval Warm Period, would never have been able to reach North America today with their flimsy wooden boats, as they did a thousand years ago. The Romans, during the Roman Climate Optimum, grew wine grapes in England. Receding glaciers have revealed underlying ancient forests. We are now emerging from the Little Ice Age, which lasted for about five hundred years and only ended in about 1850. Remember that painting of George Washington crossing the Delaware River with chunks of ice floating in the water? That horrifically cold period is known as the Maunder Minimum.

Scare Tactics

All the climate scaremongering over the past several decades has amounted to nothing more than false predictions. There are no trends showing recent upticks in tropical cyclones, droughts, river floods, or tornadoes. Sea levels have barely risen an inch a decade since 1880. Arctic sea ice may be down, but Antarctic ice is up. The polar bear population is up.

Energy Policies of the U.S. and Other Nations

While the US and the West are proceeding down a path of less energy and more dependence, other nations, like China and India, are building hundreds of coal-fired power plants and embracing energy independence.

Carbon Capture and Storage

The best ways to “capture,” or sequester, carbon is to make things out of it, as with timber plantations and growing food crops. Even more absurd is the “storage” part. Store it for what? Even worse is “decarbonization,” since carbon compounds are the life blood of the economy.

Warming versus Cooling

Let’s not overlook that cold weather causes more deaths than warm weather. Warmer times are better for plants, animals, and people. Warming makes possible an abundance of food and frees the population from its preoccupation with daily survival to do other things, thus leading to cultural development. Bad things happen during cold periods, bringing severe hardship and death.

Consensus

The “science” is NOT settled. Consensus is not science, especially when the consensus is within a very insular group of mostly academics, self-proclaimed environmentalists, and government types.

Bob Bugiada

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The City of SB's Climate Action Plan is commendable in scale and ambition but will be difficult, if not impossible, to meet if the City and its leadership is unprepared to demonstrate real political courage on certain fundamental issues.

I continue to be disillusioned and disheartened by the City's approach to addressing the biggest share of our GHG emissions, transportation.

For too long we have prioritized an archaic model of mobility, one which focuses primarily on the use of private automobiles (electric or otherwise). Not to discount the countless hours and resources that have gone into the development of the "Bicycle Master Plan," but the results, even if fully realized, will be nothing more than tweaks around the edges. A system that does not encourage and enable trips by bicycle for eight and eighty year olds alike will only result in the bravest of citizens electing to ride instead of drive, thereby leaving a 42% reduction in transportation GHG reductions out of reach.

Even if we move the entire fleet of cars in SB to electric, we will not achieve the dual goal of "Promote use of safe, equitable, zero emission transportation options to reduce pollution and urban congestion today and for future generations."

The Bicycle Master Plan is a fine representation of incrementalism, but the City's CAP is too bold, too ambitious, too time sensitive to allow for an incrementalist approach. The reliance on "bike lanes" represented by a painted line on the ground will not get people out of their cars and onto a bike, because paint is not infrastructure!

Only a fully integrated network of protected bicycle infrastructure connected throughout the City's core and to its periphery will achieve real transformation. You can look for examples to almost any city in the Netherlands, e.g. Amsterdam, Utrecht, Haarlem, etc., Copenhagen, and even cities like Paris and Barcelona for those making the necessary changes to prioritize cycling over driving. Changes which require serious political courage to enact decisions like removing parking spaces and spending the necessary resources to build protected infrastructure. And to those that say "but we're not the Netherlands or Copenhagen," my response is "YOU'RE 100% CORRECT."

Santa Barbara is far better positioned to achieve ridership levels that exceed places located in the very northernmost latitudes of Europe.

If there are two things I ask you take away from this rant it is this:

Paint is not infrastructure

Design a system for eight and eighty years olds alike

These are the two maxim's to live by when considering bicycle infrastructure, with maybe the third being "if you build it, they will come."

Cars, whether they are electric or fossil fuel powered, are no good to anyone when streets are flooded, roads washed away, drought has parched the earth and hills are ablaze. The time for tough decisions is now before it is too late.

I haven't even mentioned the social justice and equity implications of a transportation system designed around people rather than cars, nor the community health benefits. I'll save that for another day.

Happy to discuss further anytime.

Blake Stok

Director of Sustainability, Thai Union North America

240.543.0994

*all views represented are my own.

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Dear City of Santa Barbara,

I'm re-submitting this letter as a final version as there was a typo in my previous email. Pardon the oversight (multitasking!).

* * *

Thank you for the incredible commitment to progress on climate and for the open invitation for suggestions and feedback.

Our nonprofit, Zero Foodprint, leads collaborations with the state and regional governments like Sonoma County to scale agricultural climate solutions (letters attached).

While the City of Santa Barbara contains a very modest amount of working lands within city limits, it has an outsized potential to set a world changing precedent on working lands sequestration. As written, the current CAP radically forsakes responsibility for food consumption. SB represents ~20% of Santa Barbara County's population, despite containing almost 0% of county farmland. A proper accounting would include taking responsibility for the potential sequestration on 20% of Santa Barbara's working lands, or about 140,000 acres.

Or, if considering scope 3 emissions from the consumption of food, and nationwide proportionality (~2.7 acres of agriculture per US resident--894.3m acres for 331.9m citizens), Santa Barbara's 87,533 residents could assume responsibility for 236,000 acres of agricultural production.

But this comment is not about moral responsibility or carbon accounting. It's about community solutions-potential.

Because of the presence of an amazing regenerative agriculture and carbon sequestration community (White Buffalo Land Trust, The Greater Santa Barbare Resource Conservation District, UCSB/Bren School of Environment, etc. there are already local leaders and clear guidance. Attached is a report from UCSB outlining the potential for Santa Barbara County lands to sequestr 200,000 metric tons of CO₂e.

A simple, very nominal and completely optional (opt-out) 1% fee at restaurants could finance transformative, place-based climate solutions with myriad co-benefits, while also making customers feel great about their purchases. Moreover, the sequestration funded by that ~\$5,800,000 per year from a 1% restaurant fee would count towards Santa Barbara's targets as part of regional insetting and could be reflected in CA's SB27. And the funds generated can also meet Santa Barbara's SB1383 requirements to procure ~4300 tons (city) or 20,000 tons (cities + county) of compost, per year (an otherwise unfunded mandate).

Such a fee could meet the SB1383 requirement entirely and utilize every ton of compost on working lands sequestration projects by covering the last mile (freight and spreading). CARB and CDFA endorsed organizations like mine, Zero Foodprint, are standing by to operationalize both the optional funds collection and compost procurement and application at no cost (administrative fees could be paid from within the proceeds).

For the purpose of the plan, I suggest adding an item:

"conduct a feasibility study around a regional carbon sequestration program funded by optional fees in food, beverage and tourism."

In case it's useful, I also have ordinances already drafted through a collaboration with the Natural Resources Defense Council.

We are already leading (nascent) collaborations with Boulder County and hold contracts with 17 jurisdictions to manage portions of their SB1383 procurement.

We'd love to present our work and assist the region with transformative change to improve resilience, water conservation and prosperity. We are also part of this \$5M CDFR grant and would love to bring some of the resources to your region to kick off a collaboration.

All the best,

Anthony

-

Hello,

My name is Patrick Wayand, I'm a cybersecurity professional, outdoor enthusiast, environmental advocate, volunteer, and SB community member.

From what I can tell city leadership has made extremely important decisions about our future and I am so happy about this. I'd like to aid in these efforts with my comments below.

Carbon neutrality can come in 3 ways. Reduction, retainment, and removal.. the 3 R's.

I love the temperate climate that SB has to offer, this lends so well to using bikes as a main method of transportation. Riding bikes can fall under the first R and I ride my bike everywhere I can and would love to see an improvement in the bike lanes and infrastructure that make getting around easy. This means timing traffic lights in a way that is more friendly to bikers, making biking safer for cyclists and creating even more projects to increase bikeability. Recent projects have left bikeability about the same as before, it's still difficult to navigate and still dangerous. I urge SB to invest more heavily in this aspect of Reduction, especially given that 40%+ of emissions come from single occupancy vehicles. My insight here is that, instead of diminishing returns, increasing bikeability projects will have exponential returns as more citizens turn towards biking as a primary mode of transportation given advantageous infrastructure is put in place.

A close second to bikeability is in the enforcement of the ban on gas leaf blowers. I have lived in 4 different neighborhoods in SB now and have noticed that there is 0 enforcement on this law. <https://www.ourair.org/leaf-blowers/>

SB is doing an amazing job with the second R, retainment, if you've ever been up on the riviera overlooking Santa Barbara, or enjoying a picnic at Franscheshi park, then you know that SB is mostly green! Please keep doing what you're doing here. For the third R, removal, or sequestration, it looks like there are numerous avenues to explore, but I want to highlight the issue on point CS-2.7. This point is in regard to using kelp forests for carbon sequestration.

I would like to make it known that the Fish Reef Project, who I volunteer for, has already conducted research on the subject and has a solution for kelp reforestation. Please consider adding this Local 501(c)(3) as an important part of the SB CAP. Large amounts of carbon can be sequestered through our access to an amazing coastline.

One last add-on to the above, I absolutely love grabbing my produce from the Santa Barbara Farmers Market. It is well known that soil health plays a big role in carbon sequestration. Please consider partnering with local farms to educate on and initiate sustainable and renewable farming practices that lead to strong populations of bacteria and fungi in the soil. These types of farming practices can allow the soil to sequester even more carbon than the trees!

Respectfully,

Patrick

-

Hello,

We trust that the city and county will access and support the Sea Cave True Blue Carbon Bank operated by local NGO Fish Reef Project. Their Sea Cave reefs already have verified existing carbon sequestration science, carbon project validation, registrations and a fully functional crediting system on the international carbon registry. The Sea Cave True Blue Carbon Bank will allow for expansion of the Goleta Kelp Reef while helping the city and county meet its blue carbon needs. Blue Carbon needs are the portion of a regular carbon footprint that in any way touches or impacts the ocean or aquatic systems including: dredge, offshore energy, pipelines, sewage, vessel operations from law enforcement, pile driving, coastal run-off from development, non source point pollution, allowing cruise ships to anchor etc. Typically 15-20% of all carbon budgets should be offset with blue carbon when available

Best regards,

Chris Goldblatt-CEO

written 100% by a human- NO AI used in this email



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Hello,

I've lived in Santa Barbara for 28 years, plus seven in Noleta.

I have two main comments on the plan:

1. This is a jargon-filled document. It's perhaps fine for staff use, but it is hard for the average person to understand. This creates more separation between the government and the citizens. Please produce a readable (and much shorter) companion document for public consumption!

2. The writers have clearly bought into certain energy-related concepts that have arisen mostly in the last several years, and this seems to be the driving force behind most of this document. Sustainability needs to include more social-centered themes; this document focuses mainly on "energy" issues, instead of building community in more human ways, including food production.

I will add that I do not agree with the need to "take drastic actions for the climate." There are many contradictory scientific studies that oppose the big "save the planet" push. Yes, I am a trained scientist myself and I can see there is a strong special-interest-heavy push that will only make the rich richer and not actually help the rest of us or the planet. Please reconsider relying on the UN's opinion regarding the climate!

Please let me know that you have received this input.

Sincerely, Rich

Rich Moser

rich@transcendentalastrology.com

(805) 845-4805

-

Please make all buses electric. In addition please plant all medians with low water ground cover rather than having workers with large gas trucks and equipment come every month with to weed.

Thank you. Leila Thomas 2304 state street Sent from my iPhone. Please pardon any typos.

leila thomas 303.717.0254

-

This CO2 Global Warming governmental campaign, both local & national, is based on contrived, faulty scientific data, manipulated by certain governmental entities to achieve political goals that have nothing to do with science.

Lynn D. Brown, P.E.
Orange County, CA

-

Congratulations on your new City Department! It looks like it's thoughtfully organized.

I don't see anywhere on your site about addressing gas powered gardening equipment. Is it somewhere I don't see?

I'm aware of the ordinance requiring electric leaf blowers in residential areas, although there are more gas blowers everywhere than ever. Electric blowers are a rarity anymore. Any plan for promoting electric blowers and all other equipment for that matter.

Is there a pamphlet explaining the ordinance and the benefits of electric equipment that I can pick up and hand out to the gardeners around my neighborhood? They don't seem to care at all and since there is no enforcement, what's the point?

Any thoughts about promoting this ordinance, perhaps with water billing letter/e-mails?, anything? If you don't have a pamphlet at this time any plans to make one? Perhaps by Earth Day so you can have them available at your booth.

thanks

Gina

-

Section 4 Building Energy Measures: I don't see anything in the plan about measures to reduce building energy use. Reducing building energy use should be a first step, because then less electrification is needed. Electrifying a building that is wasting energy, even if it's electrical, is somewhat counterproductive. Retrocommissioning is a proven and cost-effective method to reduce building energy use in existing buildings by identifying and correcting issues that are causing unnecessary energy use. This is especially true for more complex buildings and/or buildings that have a building automation system. I recommend evaluating all existing buildings and implementing retrocommissioning at least in the largest buildings, complex buildings and buildings equipped with a building automation system.

I support closure of the Diablo Canyon nuclear plant as soon as possible.

Twenty years is much too long to keep it running.

The plant is known to sit on a fault line and is a target in a potential enemy or terrorist attack.

Not to mention the dangerous byproducts produced by its operation.

Marina Lenney

In affiliation with the Nuclear Age Peace Foundation, Santa Barbara

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Forgive me for not jumping on the bandwagon with the rest of you, but there is no way that anything we do in Santa Barbara will make the slightest difference in the coming ice age, the climate catastrophe, or global warming.

The world has gone MAD over theories and computer predictions and “adjusted” data. The politicians have found a new way to control us and spend a lot of money with no results. Al Gore predicted an ice-free arctic by 10 years ago – didn’t happen. Polar bears should be extinct by now – but there are actually more.

You guys worry about sea level rise. The ocean has been rising at 2mm (1 inch every 12 years) for thousands of years. We normally survive high tides of over 80 inches. Why worry?

Your high-paid rule writers with their big words talk of “equity”, but are singling out some neighborhoods over others. Is that equity?

You want everything to be powered with electricity, but the current grid will not handle that especially with the additional power that we’re going to have to generate to cover the demand. You want to only use “clean” electricity. The price of electricity is set akin to a pit in the stock market, hourly and every 5 minutes. If more cities want only “clean” the price will go up.

Look at Germany. They are very serious about climate change. They are shutting down industries. Their electric price is going up, and they are even considering banning driving on weekends. They switched from burning coal and natural gas to burning wood from American forests because it is “renewable”.

Look at England – outlawing coal and gas heaters and requiring heat pumps. It is not going well.

Let’s forget this garbage, reassign the rule writers to somewhere they can do some good, and let us get on with our lives.

Fred Sanford

Santa Barbara

805-680-8384



-

Hello

I think that stopping container ships from coming into the channel would be a very good start. They pollute and kill whales. They should not be allowed in this sensitive Marine environment.

The same with the cruise ships. The money gained from this is not worth the damage these ships cause, especially from effluents, trash and other vehicles sightseeing tours.

Please stop these ships immediately.

Stop using round up spraying the environment in city or county areas. Promote the planting of more native plants such as milkweed for monarchs. As well as planting trees which are citrus or other edible fruit trees (including loquat and native elderberries) instead of these strange ugly trees being planted on our city streets. Stop the use of glue traps. Stop building things that block our Mountain and ocean Views.

We used to have a lot of apartments and houses here in sb but now they are all being turned into rental housing and more hotels are being built. Nothing three stories high should be built. The multi use buildings use too many Hvac's and not enough solar they are loud and destroy the night peace.

Who are these new city planners? Where so they come from and why are things being done like the sola street closures and chopping down perfectly good trees happening without anyone knowing?

There is too much traffic in sb, and visitors should need to leave their vehicles in a special lot where they can then use electric vehicles or bikes to get where they need to go. The new lanes on the freeway have allowed so much constant traffic on the 101 that the noise is disruptive to all areas of SB .

Train travel should be promoted instead of cruise ships and more automobile traffic.

Marborg needs to make less noise., their truck should convert to electric and their bins should be made from rubber. They cause too much noise to residents in the wee hours of every morning, This is S B not NYC.

Thank you

Gina Comin

-

I think that government should work on goals that make everyone's lives better. California has among the highest taxes in the nation. We also have among the highest home prices, highest homelessness, highest poverty and the most potholes.

I live in western Goleta where our main road, Cathedral Oaks, isn't even accessible anymore to get on the 101. It feels like a third-world country.

I want my tax dollars spent on IMPROVEMENTS! Not mythical "climate action."

I'm not a scientist but let me ask you this... you are pushing for "net zero emissions" ... what is the cost benefit analysis on that??? What about Santa Barbara's "climate" don't you like and how will you change "OUR climate" and at what cost? Are you hoping and wishing for our Santa Barbara climate to get hotter? colder? drier or wetter? Please provide details not generalizations like "climate alarmists predict ..." How will "climate action" change the climate in the jurisdiction in which you were elected and serve? Santa Barbara County. And in what manner should I expect "climate change" results? Are there studies showing less climate change somewhere based on the actions you are proposing? Where has this actually worked?

And do you believe forcing people to buy expensive electric cars or to ride dangerous bikes around in the next 10 years is going to improve Santa Barbara's "climate."? Will it affect Santa Barbara's climate in the LEAST?

I'm all for clean air and water. But changing the "climate" that is already among the world's best seems foolhardy and counterproductive.

Please fix the roads!

Sincerely,

Nicole Coulter

Goleta Taxpayer

Get Outlook for iOS

-

It is useless to spend time, energy, and money on a CAP. There is nothing that Santa Barbara City can do about climate change that will make any noticeable difference.

I oppose the CAP.

Jed A. Hendrickson, CM, FAICA

Santa Barbara Monumental Co. Inc.

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Santa Barbara, CA 93103

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I understand that serious researchers have shown CO₂ extraction from the air is inherently so expensive, inefficient and potentially damaging to underground aquifers, as to be impractical. Apparently it's been promoted by the fossil fuel industry to show they're "doing something". Don't let us fall for this con job and waste our money on it.

Thank you for your attention,

James Shelton

Santa Barbara

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Dear Board members:

Good environmental policy comes from good science. No one argues for living in a polluted world, but the costs must be justified by the benefits. And CO2 is not the boogeyman that the media makes it out to be. It's plant food. At just over 400ppm it represents 0.04% of our air. This is close to the lowest level it's been in geologic history. If it drops below 150ppm all advanced plant life dies. The greatest greenhouse gas (90%) is water vapor. That's why it's cold at night in the desert because there's no water vapor to retain the heat in the air. CO2 represents 6% of greenhouse gases. Earth temperatures are driven by planetary and solar movement cycles.

Before you spend millions trying to reduce the levels of plant food in the air by some minuscule amount, consider the other good projects that money could be used for (For instance converting los Banõs pool to hydrogen peroxide instead of chlorine disinfectant).

Source: Gregory Wrightstone 'Inconvenient Facts'

Also, all major advances in human history have occurred during warm periods. It lengthens growing cycles and leads to more food production.

Keep warm,

To whom it may concern,

Dr. Hesu Whitten
Founder, Whitten Method



-

I want to first thank you and your team for the hard work that's gone into drafting the CAP!

I work for a national nonprofit working to reduce food loss and waste, so while I'm providing comment as a resident of the City, this feedback is informed by my work in the space. I'm therefore focusing comments on the Water, Wastewater, and Solid Waste strategy.

W 4.5: I'd recommend increasing the frequency of the waste characterization studies, although I know they tend to be extremely expensive and time-consuming. Particularly in the California context where jurisdictions are rapidly instituting programs to comply with SB 1383, a cadence of 4-5 years will not capture change in a time frame that aligns with the hoped-for behavior change. Particularly for food waste, where embodied emissions are highly dependent on the type of food, accurate emissions projections will require characterization studies that capture both the percent of total waste that is food AND the percent of food in waste that falls into categories like meat/dairy vs. grains/produce.

W 4.1.a: We've been hearing that some restaurants and other foodservice organizations are installing what they call "digesters" but are really just machines that grind up food scraps into a slurry that are then transported to a landfill or discharged into the sewer. At high enough volume, this could present problems in terms of FOG buildup in sewer lines and oxygen demand at wastewater treatment plants - more pertinently, this pathway is not in line with EPA's recently updated Wasted Food Scale, which puts sewer at the bottom along with landfill and incineration in terms of least preferred destinations for organic waste. I would encourage planners and regulators to ensure that the technology implemented to "reduce waste" truly does so by recovering value from organic materials.

General feedback on actions under the organic waste measure: I would reorder the activities to fall more in line with the Wasted Food Scale mentioned above, so that opportunities to reduce organic waste are prioritized according to a Prevention>Recovery>Recycling hierarchy. Indeed, while composting and anaerobic digestion are valuable approaches to recapturing the nutrient and carbon content of organic material, they are now considered "waste" destinations per EPA's food waste reduction goal. ReFED modeling indicates that over 90% of lifecycle emissions from food surplus are accrued during supply chain stages before the point where the food becomes "waste" - highlighting the importance of preventing food from exiting the human supply chain in the first place. So as important as it is to provide support and investment in recycling infrastructure and programs, I encourage the City to consider actions they can take that would target waste generation upstream. The Zero Food Waste Coalition has assembled a state toolkit with some recommended measures, with Sections 5 and 6 particularly addressing prevention opportunities.

Thank you for your time and consideration,

Minerva Ringland

Climate Manager, ReFED

She/Her/Hers (Why I use pronouns)

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As a member of the Santa Barbara Community, I am personally committed to the Together to Zero CAP to reduce our carbon emissions and achieve carbon neutrality by 2035.

As a mother, a grandmother, a member of the Climate Reality Project, and an environmental activist, I consider it crucial that we as a community do everything we can to ensure that the elements that contribute to climate change, including transportation, fossil fuel emissions, methane emissions, landfill emissions, among other detrimental contributors to the degradation of our climate, be reduced as far as possible, as soon as possible.

For these reasons, I support the CAP and hope it will be passed and executed in our region.

Thank you for your attention to this matter.

Rachel (Rochelle) Altman

1383 Sycamore Canyon Road

Santa Barbara, CA 93108

