City of Hollister

CLIMATE ACTION PLAN

Public Review Draft | July 2024

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City of Hollister

CLIMATE ACTION PLAN

Public Review Draft

July 2024

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LIST OF ACRONYMS AND ABBREVIATIONS

°F: degrees Fahrenheit

3CE: Central Coast Community Energy

AB: Assembly Bill

AMBAG: Association of Monterey Bay Area Governments

CAP: Climate Action Plan

CAPCOA: California Air Pollution Control Officers Association

CARB: California Air Resources Board

CCA: community choice aggregation

CCES: Central Coast Energy Services

CEC: California Energy Commission

CEQA: California Environmental Quality Act

CH_4: methane

CO_2: carbon dioxide

CO_2e: carbon dioxide equivalent

DOE: United States Department of Energy

EV: electric vehicle

GHG: greenhouse gas

IPCC: Intergovernmental Panel on Climate Change

JPA: joint powers authority

kWh: kilowatt-hours

LCFS: Low Carbon Fuel Standard

MBARD: Monterey Bay Air Resources District

$MTCO_2e$: metric tons of carbon dioxide equivalent

N_2O: nitrous oxide

OPR: California Governor's Office of Planning and Research

PG&E: Pacific Gas and Electric Company

PSPS: Public Safety Power Shutoff

PV: photovoltaic

RDWWTP: Regional Domestic Wastewater Treatment Plant

RPS: Renewables Portfolio Standard

SB: Senate Bill

SBCWD: San Benito County Water District

SOI: sphere of influence

US EPA: Unites States Environmental Protection Agency

VMT: vehicle miles traveled

WUI: wildland urban interface

ZEV: zero-emissions vehicle

EXECUTIVE SUMMARY

Photo credit: Kent Rossi

The 2024 Climate Action Plan (CAP) is Hollister's strategic plan to reduce greenhouse gas (GHG) emissions and to adapt to changing climate conditions. The CAP allows the City of Hollister's decision makers, staff, and community to understand the sources and magnitude of local GHG emissions and the impacts of climate change on the community, prioritize steps to achieve long-term GHG emissions reduction targets, and increase resilience.

As part of the CAP, the City assessed GHG emissions both within city limits and inside the City's Sphere of Influence (SOI). This combined area, known as the CAP Study Area, represents the potential expanded area of the city boundary if all growth areas are annexed and incorporated into the City of Hollister as anticipated by the Hollister 2040 General Plan.

GREENHOUSE GAS EMISSIONS REDUCTION TARGETS

The State of California has adopted two regulatory GHG reduction targets. Senate Bill (SB) 32 (2016) requires that the State reduce GHG emissions 40 percent below 1990 levels by 2030. Assembly Bill (AB) 1279 (2022) requires California to reduce GHG emissions 85 percent below 1990 levels and to achieve net carbon neutrality by 2045. Although the State does not have an adopted GHG reduction target for 2040, a 2040 target of 64 percent below 1990 levels is consistent with the State's planned GHG reduction trends. GHG emissions targets for the CAP Study Area are shown in Table ES-1.

Table ES-1 GHG Emissions Targets in CAP Study Area ($MTCO_2e$)

Target	2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$
Reduction Targets	125,990 (40 percent below 1990 levels)	75,990 (64 percent below 1990 levels)	31,500 (85 percent below 1990 levels)

Greenhouse Gas Inventory and Forecast

A GHG inventory is a summary of the GHG emissions generated by activities that take place within a community, and a GHG forecast shows projected future GHG emissions without implementation of any GHG reduction measures. The GHG emissions inventories and the GHG forecast lay the groundwork for the CAP, which seeks to align the City's GHG reduction efforts with State reduction targets. The CAP contains GHG inventories for the years 2005 and 2019. These inventories assess emissions produced by transportation, residential and nonresidential energy use, off-road equipment, solid waste, water and wastewater, agriculture, and land use, including development and sequestration.

As seen in **Table ES-2**, GHG emissions within Hollister city limits declined by about 4 percent between 2005 and 2019. In 2005, the City of Hollister emitted 247,030 metric tons of carbon dioxide equivalent ($MTCO_2e$). In 2005, transportation was the largest emitter (45 percent of emissions), followed by nonresidential energy (22 percent). In 2019, the City of Hollister emitted 236,760 $MTCO_2e$. Transportation remained the largest emitter, accounting for 59 percent of emissions.

In 2019, GHG emissions in the Study Area were 244,750 $MTCO_2e$, as shown in **Table ES-3.** A GHG emissions forecast uses estimates of future community populations and job growth to predict how emissions would grow over time if no action is taken at the federal, state, local, or regional level to reduce them. The CAP includes a GHG forecast for the calendar years 2030, 2040, and 2045 for the CAP Study Area, consistent with the Hollister 2040 General Plan Update. As shown in **Table ES-3**, Hollister's CAP Study Area GHG emissions are expected to increase by 93 percent between 2019 and 2045 if no action is taken to reduce emissions.

Table ES-2 Hollister City Limits GHG Emissions, 2005 and 2019

Sector	2005 Inventory $MTCO_2e$	2005 Proportion of Total	2019 Inventory $MTCO_2e$	2019 Proportion of Total
Transportation	110,040	45%	140,350	59%
Nonresidential energy	55,120	22%	11,150	5%
Residential energy	36,210	15%	24,240	10%
Off-road equipment	32,310	13%	43,690	18%
Solid waste	11,330	5%	17,930	8%
Water and wastewater	2,320	1%	1,040	Less than 1%
Agriculture	400	Less than 1%	320	Less than 1%
Land use and sequestration	-2,300	-1%	-2,460	-1%
Development activities	1,600	Less than 1%	500	Less than 1%
Total Annual MTCO2e	247,030	100%	236,760	100%

Table ES-3 GHG Emissions within CAP Study Area by Sector, 2019-2045

Sector	2019* $MTCO_2e$	2030* $MTCO_2e$	2040* $MTCO_2e$	2045* $MTCO_2e$	Percentage Change, 2019 to 2045
Transportation	145,080	241,980	273,520	289,320	99%
Nonresidential energy	11,380	15,940	18,770	20,180	77%
Residential energy	25,580	36,780	44,720	48,690	90%
Off-road equipment	45,580	63,540	76,290	82,550	81%
Solid waste	18,660	25,910	30,780	33,220	78%
Water and wastewater	1,080	1,500	1,7920	1,930	78%
Agriculture	1,120	620	0	0	-100%
Land use and sequestration	-2,960	-4,010	-5,930	-5,930	100%
Development activities	-770	270	2,090	3,010	-491%
Total	**244,750**	**382,520**	**442,030**	**472,970**	**93%**

* Data shown for 2019 are the inventory of community-wide GHG emissions. The data shown for 2030, 2040, and 2045 are GHG emission forecasts based on projections from the 2019 inventory.

Greenhouse Gas Reduction Strategies

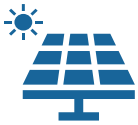
This CAP accounts for GHG emissions reductions anticipated from the City's existing climate policies and programs, as well as actions already and soon-to-be implemented at the state level. As shown in **Table ES-4**, with the implementation of existing State and local actions, the CAP Study Area's GHG emissions are projected to be at 274,000 $MTCO_2e$ by 2030, 273,290 by 2040, and 282,340 by 2045.

Table ES-4 Hollister CAP Study Area GHG Emission Reductions from State, Regional, and Local Activities, 2019 to 2045

GHG Emissions	2019 $MTCO_2e$	2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Percentage Change 2019 to 2045
Forecasted emissions without State actions	244,750	382,520	442,030	472,970	93%
Reductions from Renewables Portfolio Standard		320	750	1,440	
Renewable natural gas		3,200	9,700	12,300	
Reductions from Clean Car standards		45,930	81,450	91,220	
Reductions from Title 24		5,090	12,430	16,540	
Reductions from LCFS (off-road only)		47,020	56,560	61,090	
Reductions from Senate Bill 1383		6,100	7,250	7,820	
Reductions from all State actions		107,660	168,130	190,410	
Emissions with State actions	244,750	274,860	273,910	282,560	15%
3CE renewable energy portfolio		610	400	0	
Emissions reductions from existing local actions		610	400	0	
Emissions with State and local actions (excludes CAP)	244,750	274,000	273,290	282,340	15%

While implementation of existing State and local actions will bring the city closer to meeting its GHG emission targets, these actions are insufficient on their own. Thus, the CAP identifies future strategies that will help the community meet its long-term emissions reductions targets. The 33 strategies, listed in **Table ES-5,** are organized by eight goals, one for each key topic area:

Sustainable Energy and Resilience
Reduced energy use through use of energy-efficient appliances, lighting, and materials in our homes, businesses, and City facilities.



Carbon-Free Energy
Existing and new buildings, facilities, and operations are resilient and powered by carbon-free electricity or other low carbon, clean energy sources

Transportation
A connected and efficient transportation network that provides equitable access to low carbon motorized and GHG-free nonmotorized mobility options.

Off-road Equipment
Hollister encourages residents, businesses, and industries to electrify off-road equipment when feasible.

Solid Waste
Hollister residents, businesses, and visitors minimize waste sent to the landfill.

Water and Wastewater
The community maintains a sustainable supply of drinking water and efficient indoor and outdoor water use in homes, businesses, and operations.

Natural Resources and Agriculture
Preserve and expand natural resources and agricultural land.

Governance and Leadership
Work with regional partners to implement the CAP and take actions to increase community resilience against climate hazards.

Table ES-5 GHG Reduction Strategies

Strategy by Sector	
Sustainable Energy and Resilience	
1	Municipal energy efficiency and conservation
2	Sustainable community-wide building standards
3	Residential energy efficiency and conservation
4	Nonresidential energy conservation and efficiency
Carbon-Free Energy	
5	Onsite solar energy for new development
6	Municipal renewable and carbon-free energy
7	Community-wide renewable, carbon-free, and resilient energy systems
8	Electrification
9	Building code updates and incentives for electrification of new buildings
Transportation	
10	Vehicle miles traveled
11	Active transportation infrastructure
12	Safe Routes to Schools
13	Transit access
14	Electric vehicles (EVs)
15	Low carbon municipal vehicles, school buses, and transit options
16	Creation of an EV car sharing program
Off-road equipment	
17	Electrification of construction and landscaping equipment
Solid Waste	
18	Reduce community-wide waste generation
19	Recycling and composting education
20	Methane capture at landfills
Water and Wastewater	
21	Reduce community-wide water use
22	Reduce municipal water use and increase recycling efforts
23	Methane capture for wastewater treatment facilities

Strategy by Sector	
Natural Resources and Agriculture	
24	Natural resources and open space
25	Tree planting and preservation
26	Green infrastructure
27	Local food systems
28	Sustainable agriculture and carbon sequestration
Governance and Leadership	
29	Regional cooperation
30	Community resilience resources
31	Safety for outdoor workers
32	Green jobs
33	Climate change awareness and education

Implementing the CAP will require City leadership to put the strategies in the CAP into effect and report progress. To ensure that the implementation process is efficient and transparent, this CAP includes a work plan that identifies responsible departments, partners, and time frames associated with each strategy. Implementation strategies are shown in Table ES-6.

Table ES-6 List of Implementation Strategies

CAP Implementation Strategies	
1	Program Development and Staffing
2	Monitor and Report Progress Toward Climate Action Plan Target Achievement on an Annual Basis.
3	Continue Collaborative Partnership with Agencies and Community Groups that Support Climate Action Plan Implementation.
4	Secure Necessary Funding to Implement the Climate Action Plan.
5	Continue to Update the Baseline Emissions Inventory and Community Climate Action Plan Every Five Years.
6	Maintain and Update the Community Climate Action Plan to Allow for Greater Resilience.

Community-wide GHG Emissions Reduction

In conjunction with existing local and State programs, CAP strategies provide a path to reduce the CAP Study Area's (city limits and SOI) GHG emissions to 202,3030 $MTCO_2e$ by 2030, 93,890 by 2040, and 31,110 $MTCO_2e$ by 2045, as shown in **Table ES-7.** The CAP Study Area has the potential to exceed the City's reduction target of 85 percent below 1990 levels by 2045.

Table ES-7 Progress to GHG Emissions Targets in CAP Study Area

GHG Emissions	2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$
Reduction targets	125,990 (40 percent below 1990 levels)	75,990 (64 percent below 1990 levels)	31,500 (85 percent below 1990 levels)
Forecasted emissions without actions (business-as-usual)	382,520	442,030	472,970
Forecasted emissions with State actions and 3CE	274,000	273,290	282,340
Emissions with State Actions, 3CE, and CAP	**202,030**	**93,890**	**31,100**
Target achieved?	No	No	**Yes**
Gap to target	76,040	17,900	**-390**

This CAP allows Hollister to achieve a level of GHG reduction consistent with the State's long-term reduction targets. The performance standards associated with the strategies that achieve these reductions are in line with the modeling prepared for the State's 2022 Climate Change Scoping Plan and provide a demonstrable path to meeting the 2045 GHG reduction target without significantly exceeding the statewide modeling assumptions.

The CAP does not quantitatively demonstrate net-carbon neutrality, as the State has not yet provided guidance for how local governments can do so. However, this CAP supports a path to net-carbon neutrality by providing strategies to increase carbon sequestration and commits to a reduction of GHG emissions to at least 85 percent below 1990 levels by 2045. This CAP does not achieve the State's shorter-term 2030 target, as quantitatively modeling that level of reduction would require establishing and rapidly accelerating programs at a level that is not feasible. However, it does enable Hollister to make significant and meaningful reductions in community GHG emissions in the short-term and accelerate reductions in the long-term.

It is likely that in future years, new policies and regulations, new technologies, changes in personal and economic behaviors and preferences, and other factors will reduce Hollister's GHG emissions. However, these reductions cannot be accurately forecasted at this time. Future updates to this CAP will be able to better assess merging trends and unexpected changes and include them in the GHG reduction strategy as appropriate.

1. INTRODUCTION

Photo credit: Michael Grzan.

PURPOSE OF THE CLIMATE ACTION PLAN

The Hollister Climate Action Plan (CAP) serves as the strategic plan for how the City of Hollister will reduce greenhouse gas (GHG) emissions and foster a more sustainable community through 2045 and beyond. The City prepared this CAP concurrently with the comprehensive update of the City's General Plan, which ensured consistency between the two plans and allowed the City to conduct simultaneous community outreach and engagement for both planning efforts. The CAP is consistent with the community vision, goals, and policies presented in the General Plan. This CAP describes the causes and impacts of climate change in Hollister, assesses the community's existing and projected future GHG emissions, and establishes GHG reduction strategies and an associated implementation plan.

Climate action planning brings together decision makers, community members, and stakeholders to better understand what climate change means to the community, identify the sources and magnitude of local GHG emissions from different sectors, establish GHG reduction goals, and develop a pathway for reducing local GHG emissions and adapting to changing climate hazards for a more sustainable future. Local climate action planning focuses on activities that cities can directly control or influence, like land use planning, transportation options, infrastructure improvements, open space management, and other activities. The primary purpose of this CAP is to reduce the amount of GHG emissions released into the atmosphere to meet regulatory emission targets and help lessen the impacts of climate change, also known as climate mitigation. In addition to reducing emissions, climate mitigation strategies often yield numerous social, economic, and ecological co-benefits that enhance quality of life. These benefits may include a healthier and more robust economy, cost savings from lower energy and resource use, improved public health, and greater community equity, among many others.

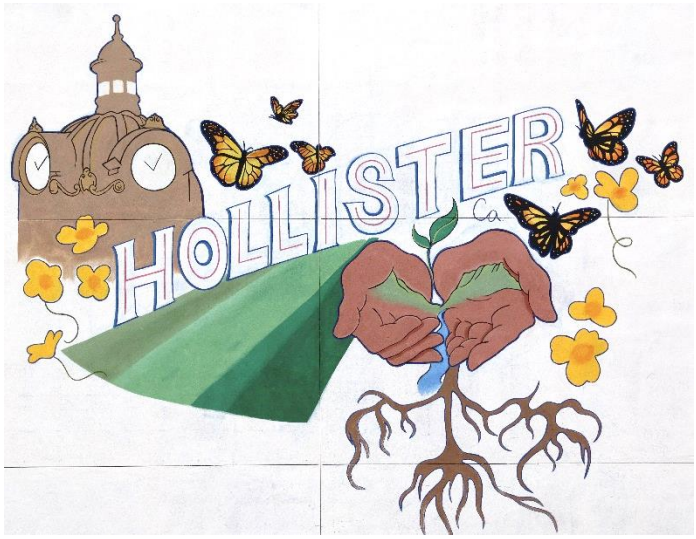


Photo credit: Jacquelyn Scimeca

As part of the CAP, the City assessed GHG emissions both within city limits and inside the City's Sphere of Influence (SOI). This combined area, known as the CAP Study Area and shown in **Figure 1**, represents the potential expanded area of the city boundary if all growth areas are annexed and incorporated into the City of Hollister as anticipated by the Hollister 2040 General Plan.

Under the CEQA Guidelines for Plans for the Reduction of Greenhouse Gas Emissions (California Code of Regulations Section 15183.5)[1] development and implementation of CAPs and other strategic plans to reduce GHG emissions can streamline the environmental review process for new development projects subject to CEQA. If a CAP meets the State criteria, including identification of measures and performance standards to meet GHG reduction targets, projects that are consistent with the GHG emission reduction approach in the CAP could be determined to have a less-than-significant impact on GHG emissions, reducing the need for additional analyses or mitigation measures. CAPs that may be used this way are referred to as Qualified GHG Reduction Strategies or Plans. This CAP is consistent with the State CEQA Guidelines and has been reviewed as part of the General Plan Environmental Impact Report. The details of this benefit are further described in the State of California Regulations and Guidance section.

Relationship to Hollister 2040 General Plan

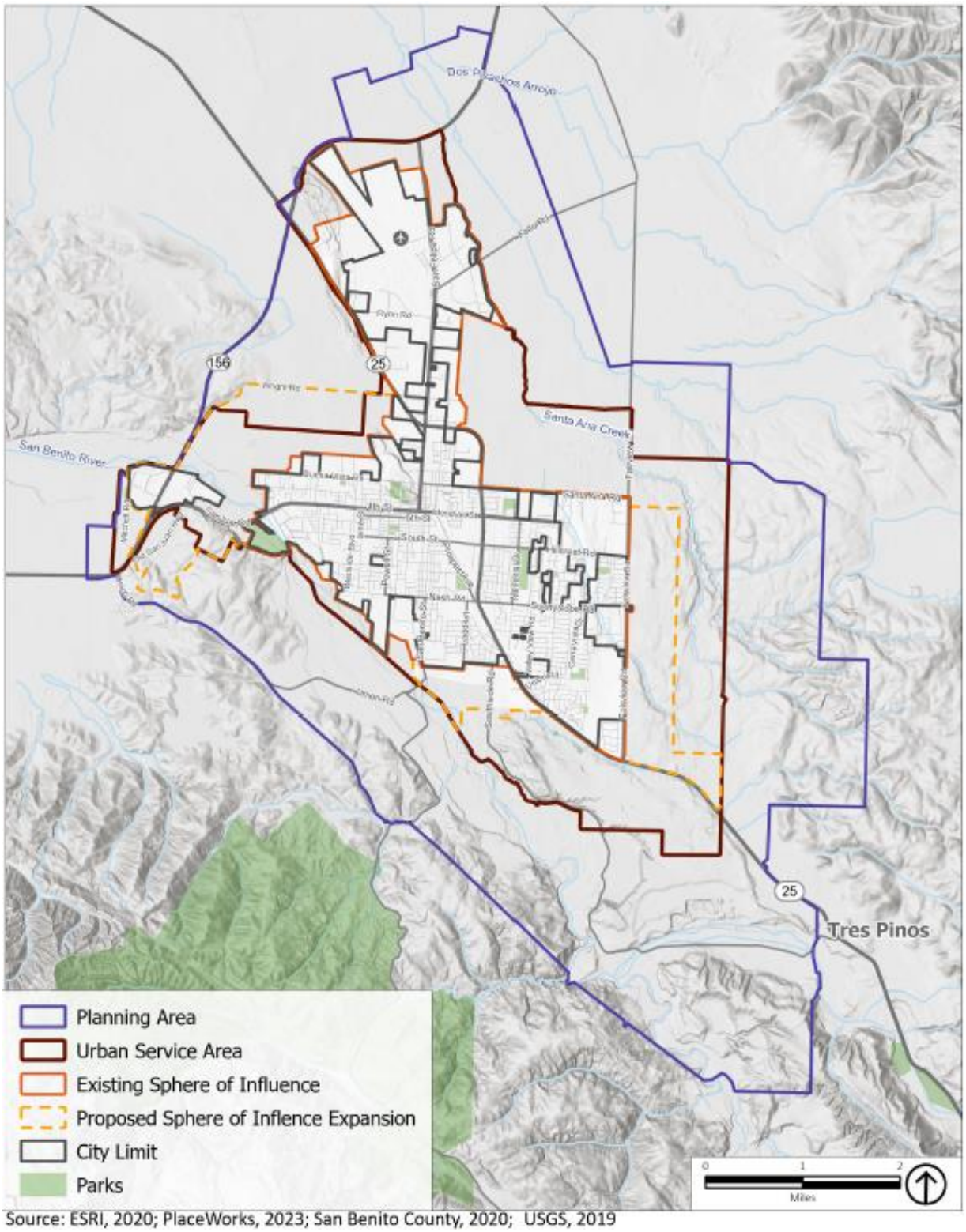
This CAP is consistent with Hollister's General Plan Update, which establishes the community's vision for the future of Hollister and serves as a blueprint for decisions affecting land use, housing, transportation, operations management, and other topics regarding public services in Hollister over the next 20 years. The Hollister 2040 General Plan Update is a comprehensive long-range planning document that contains community-wide goals and policies regarding land use, housing, open space, circulation, economic development, public services, infrastructure, emergency preparedness, and community health, among other topics.

Several Hollister 2040 General Plan Update goals and policies are relevant to climate change. Environmental justice policies address inequities in the built environment in compliance with SB 1000, approved in 2016. SB 1000 requires local governments to identify disadvantaged communities and address environmental justice in the General Plan Update through policies that aim to reduce health risks in disadvantaged communities, promote inclusive civic engagement in the planning process, and prioritize improvements that address the needs of disadvantaged communities.[2] The Hollister 2040 General Plan Update identifies goals, policies, and objectives that reduce health risks caused by environmental pollution and reduce disparities in access to amenities, prioritizing improvements in disadvantaged communities most affected.

[1] 2024 CEQA Guidelines are available online: https://www.califaep.org/statute_and_guidelines.php.

[2] California State Senate. 2016, September 24. Senate Bill No. 1000. California Legislative Information. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1000.

Figure 1 CAP Study Area



Source: ESRI, 2020; PlaceWorks, 2023; San Benito County, 2020; USGS, 2019

The General Plan **Health and Safety Element** addresses public safety concerns related to the natural and built environment. The Health and Safety Element provides information about risks from natural and human-made hazards and includes goals, policies, and actions designed to protect the community and its property from hazards. In accordance with SB 379 (2015), the Health and Safety Element includes a vulnerability assessment that identifies the unique risks to the community caused by climate change and informs policies to address those vulnerabilities.[3]

Other Hollister 2040 General Plan Update elements include policies and actions that affect GHG emission reduction and resilience:

The **Land Use Element** encourages infill development, mixed-use development, and development around transit to reduce vehicle miles traveled (VMT) and associated transportation emissions.

The **Open Space and Agriculture Element** encourages preservation of parks, natural lands, and agricultural land, which can help to mitigate the heat-island effect, support ecosystem services, and increase local carbon sequestration.

The **Natural Resources and Conservation Element** encourages water and energy conservation, green infrastructure, and restoration of key wildlife habitats, which can help improve air and water quality, support biodiversity, and mitigate climate change impacts. Nature-based solutions, such as wetland and riparian restoration projects, can protect against flooding and managing oak woodland habitats can protect against damaging wildfires.

Each of these elements plays a role in enhancing Hollister's resilience and sustainability. The Hollister 2040 General Plan Update references this plan, recognizing the City's climate action planning efforts must be updated on a more regular basis than the General Plan to be responsive to changing regulations, guidance, technology, best practices, and science.

Plan Contents

The following chapters summarize the community's GHG emissions and introduce strategies to reduce emissions, adapt to changing conditions, and promote sustainability.

- This chapter, **Chapter 1**, introduces climate planning and context for the CAP, including an overview of the city and region's climate change work to date, and the relationship between the CAP and State and regional planning efforts.
- **Chapter 2** describes climate change and primary climate change impacts and hazards in Hollister.
- **Chapter 3,** GHG Emissions in Hollister, contains several sections:
  - The **Community-Wide GHG Inventory** summarizes and analyzes GHG inventory results for 2005 and 2019 and shows how emissions in the city boundary, SOI, and CAP Study Area have changed over time.
  - The **CAP Study Area GHG Forecasts** section presents the results of the GHG emissions forecasts for the city boundary, SOI, and CAP Study Area for 2030, 2040, and 2045.
- **Chapter 4, GHG Emission Reduction Strategy,** has four sections in addition to Background and Summary sections:
  - The **GHG Emissions Reduction Targets** section explains the GHG emission reductions needed for Hollister to meet the State's emission reduction targets.

[3] California State Senate. 2015, October 8. Senate Bill No. 379. California Legislative Information. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160SB379.

- The **Achieving the Targets: Existing and New Reduction Strategies** section outlines the existing and new local and State initiatives that are expected to reduce Hollister's future GHG emissions and move the community closer to achieving its targets.
- The **Achieving the Targets: Existing Local Actions to Reduce GHG Emissions** section describes various regional and local initiatives that help further reduce Hollister's community-wide GHG emissions.
- The **Achieving the Targets: New GHG Emission Reduction Strategies** section outlines the strategies that show a viable path for Hollister to reach its established GHG emission reduction targets. This section charts progress toward reaching State emissions reduction targets and presents goals, strategies, and actions for Hollister to achieve its local GHG emissions targets.

- **Chapter 5, CAP Implementation Strategy**, describes the implementation details for the strategies in the CAP and a potential approach to putting these strategies into effect.
- **Appendix A** provides details on the community-wide inventory sector, State GHG emission reductions, and technical data for existing and planned activities.
- **Appendix B** provides detailed information about climate regulations in California that guide local climate action planning and sustainability programs.

Sustainability in Hollister and the Region

This is Hollister's first CAP. As Hollister develops its sustainability programs, the City will continue to collaborate with regional partners to improve sustainability in the region, including with neighboring jurisdictions, San Benito County, and the Association of Monterey Bay Area Governments (AMBAG).[4]

As part of its Energy Watch Program, which was active between 2006 and 2020, AMBAG provided funding and technical assistance to help its 21 jurisdictions achieve sustainability goals and reduce GHG emissions in an equitable and economical manner. During the program, AMBAG conducted energy audits for 220 municipal facilities in the Monterey Bay area and helped fund renewable energy projects that generated more than 110 million kilowatt-hours (kWh) per year, equivalent to 15 million dollars of savings in utility costs. AMBAG also worked closely with some jurisdictions to create reports and Energy Action Strategies, which provided an analysis of annual energy consumption patterns alongside conservation initiatives that are feasible and appropriate for each jurisdiction. Currently, AMBAG is focused on providing technical assistance to

CENTRAL COAST COMMUNITY ENERGY (3CE)

3CE began operation as the region's Community Choice Aggregation program in 2016, serving as the default electricity provider for all communities in San Benito County as well as many other communities in the Monterey Bay and Central Coast region. 3CE provides two choices for electricity: 3Cchoice (a mix of renewable and non-renewable sources) and 3Cprime (a 100%-renewable option). As a public agency, 3CE sells power at a lower price than PG&E, resulting in economic benefits for Hollister residents and businesses, supporting the local economy. 3CE also dedicated millions of dollars to local energy programs such as solar power for low-income families and installation of electric vehicle charging stations.

[4] AMBAG is the regional Joint Powers Authority (JPA) covering Monterey, Santa Cruz, and San Benito Counties. AMBAG performs metropolitan-level transportation planning for the region, including transportation demand modeling, regional housing assessments, and population and employment forecasts. AMBAG also provided climate action planning support on a regional and local scale through its Energy Watch Program.

support climate action planning in the Monterey Bay region, including using a standardized approach to prepare community-wide GHG inventories for all member jurisdictions, including Hollister. Results of Hollister's community-wide GHG inventory are discussed in **Chapter 3**. Additionally, AMBAG staff provides resources and opportunities for peer learning to member jurisdictions who are working to develop, adopt, and implement CAPs.

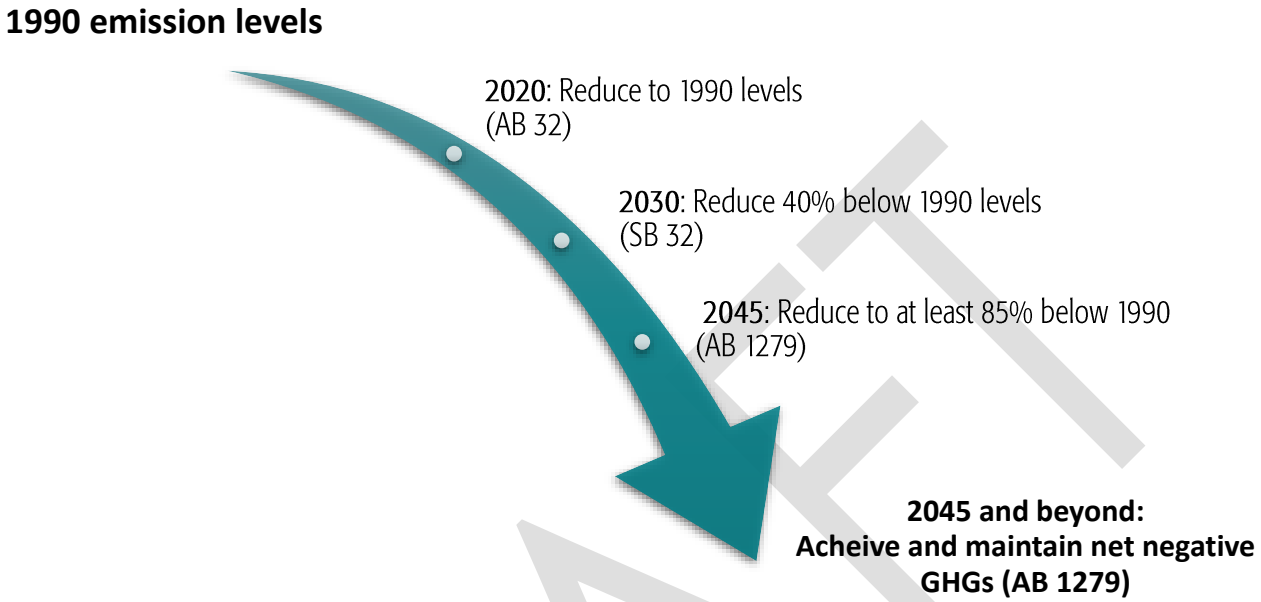
Hollister is already taking action to increase local clean energy supply options for residents, businesses, and City operations by participating in the Central Coast Community Energy (3CE) program. Residents and businesses in 3CE's service area, including Hollister, are automatically enrolled in 3CE's 3Cchoice program, which is distributed to customers through Pacific Gas and Electric Company's (PG&E's) existing grid infrastructure. 3CE has committed to accelerating the deployment of renewable energy to their power mix to supply 60 percent of electricity from eligible renewable sources by the end of 2025 and 100 percent of electricity from eligible renewable sources by the end of 2030. In 2022, there were 3,470 locations that have installed solar photovoltaic (PV) systems in Hollister, mostly on residential buildings. These facilities generate an estimated 44.5 million kWh annually.

Hollister has a year-round downtown farmer's market (managed by the Hollister Downtown Association), supports technical assistance to promote green business practices (through the San Benito County Green Business Program) and has 31 publicly accessible electric vehicle (EV) charging stations.

State of California Regulations and Guidance

California law first directly addressed climate change in 1988, when Assembly Bill (AB) 4420 directed State agencies to prepare a GHG inventory and study the impacts of climate change. Since then, California has adopted several laws to assess climate change, analyze GHG emissions and their effects, reduce emissions, identify climate change impacts, and prepare for the impacts of climate change. **Figure 2** shows the State's major GHG reduction targets. This section briefly summarizes the key State and regional climate change legislation, guidance, and actions that set specific GHG emissions reductions targets, with which this plan is required to comply. **Appendix B** provides more details of applicable State climate change legislation and guidance.

Figure 2 California's GHG Reduction Targets



- **Executive Order S-03-05 and Assembly Bill 32 (California Global Warming Solutions Act of 2006).** In 2005, former Governor Schwarzenegger issued Executive Order S-03-05, which established the first statewide GHG reduction goals for California and directed the State to: reduce emissions to 2000 levels by 2010, reduce emissions to 1990 levels by 2020, and reduce emissions 80 percent below 1990 levels by 2045. In 2006, Governor Schwarzenegger signed AB 32, the Global Warming Solutions Act of 2006. AB 32 codified the 2020 reduction goal, requiring California to reduce statewide GHG emissions to 1990 levels by 2020.
- **Executive Order B-30-15 and Senate Bill 32.** In 2015, former Governor Jerry Brown signed Executive Order B-30-15, which directed State agencies to take several steps to reduce statewide GHG emissions and adapt to changing climate conditions. One section of this executive order set a GHG reduction goal for the State of 40 percent below 1990 levels by 2030. In 2016, the Legislature passed, and the governor signed SB 32, which codified the 2030 GHG reduction goal into law.
- **Executive Order B-55-18 and Assembly Bill 1279.** In 2018, Governor Brown issued Executive Order B-55-18, which established an additional statewide goal of achieving carbon neutrality (no net GHG emissions) by 2045. Under this goal, any GHGs that are emitted by California must be fully offset by other activities by 2045. In September 2022, Governor Newsom signed AB 1279, the California Climate Crisis Act, which requires the State to achieve net-zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter. The bill also requires California to reduce statewide GHG emissions by at least 85 percent compared to 1990 levels and directs the California Air Resources Board (CARB) to work with relevant State agencies to achieve these goals.

Climate Change Scoping Plan

The Climate Change Scoping Plan (Scoping Plan) was first adopted by CARB in 2008. It lays out the State's plan to reduce GHG emissions in accordance with adopted targets, including direct regulations, alternate compliance mechanisms, incentives, voluntary actions, and market-based approaches like a cap-and-trade program. CARB updated the Scoping Plan in 2014 and 2017 to reflect new State targets and additional opportunities for GHG emission reduction.

In December 2022, CARB adopted a third update to the Scoping Plan. Core strategies outlined in the 2022 Scoping Plan include:

- Transitioning to zero-emission vehicles (ZEVs) and near-ZEV technologies.
- Continued investment in renewables, such as solar, wind, and other types of renewable energy.
- Greater use of low carbon fuels.
- Integrated land conservation and development strategies.
- Coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases).
- Integrated land use planning to support livable, transit-connected communities and conserve agricultural and other lands.
- Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutant and toxic air contaminant emissions limits on a broad spectrum of industrial sources.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires many proposed development projects to conduct an environmental review that identifies how the project may impact the environment, including changes to GHG emissions. CEQA Guidelines require local governments to use adopted plans for reducing GHG emissions to address the cumulative impacts of individual future projects on GHG emissions (see CEQA Guidelines Section 15183.5(b)(1)).

Consistent with CEQA Guidelines, lead agencies may use adopted GHG reduction plans, such as a CAP, to assess the cumulative impacts of projects on climate change at a programmatic level. If the adopted plan is consistent with CEQA Guidelines Section 15183.5, the analysis and GHG reduction efforts in the plan may be applied to individual projects, meaning that the projects would not have to conduct separate GHG analyses and project-specific environmental documents may tier from and/or incorporate by reference the existing programmatic review. Projects that have cumulative impacts on GHG emissions may still need to prepare a separate GHG analysis and environmental review.

After adoption, the City may use the CAP to assess the cumulative impacts of projects on climate change at a programmatic level. The GHG reduction efforts in the CAP may be applied to the individual projects, meaning that the projects would not have to conduct a separate GHG analysis, and project-specific environmental documents may tier from and/or incorporate by reference the existing programmatic review. A project-specific environmental document that relies on the Hollister CAP for its GHG impacts analysis must show consistency with the CAP, identify specific GHG reduction strategies from the Hollister CAP that are applicable to the project, and demonstrate how the project will implement these strategies. Project applicants and City staff will identify specific strategies applicable to each project during project review. If applicable strategies are not otherwise binding and enforceable, they must be incorporated as mitigation strategies for the project.

This CAP meets the requirements in the CEQA Guidelines that allow it to be applied to individual projects by:

- Quantifying emissions, both existing and projected over a specified period, resulting from activities within a defined geographic area, as discussed in Chapter 3.
- Establishing a level, based on substantial evidence, below which the contribution of emissions from activities covered by the plan would not be cumulatively considerable. A CAP seeking to be a Qualified GHG Reduction Strategy must have a GHG emission reduction target or targets that substantially reduce GHG emissions, can be feasibly achieved, and can be reasonably tracked and reported over time. Chapter 3 of this CAP identifies the State's GHG reduction targets, which are:
  - Reduce emissions to 40 percent below 1990 levels by 2030.
  - Reduce emissions to 85 percent below 1990 levels by 2045.
  - Supporting net carbon neutrality by 2045.
- Identifying and analyzing the emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specifying GHG reduction strategies or a group of strategies, including performance standards that, if implemented on a project-by-project basis, substantial evidence demonstrates they would collectively achieve the specified emissions level.
- Establishing a mechanism to monitor the plan's progress toward achieving specific levels and to require amendment if the plan is not achieving those levels.
- Including an environmental review of the Hollister CAP. The Hollister CAP is evaluated by the Hollister 2040 General Plan Environmental Impact Report.

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2. CLIMATE CHANGE IN HOLLISTER

Photo credit: Valera Key

CLIMATE SCIENCE AND CLIMATE CHANGE IMPACTS

What is Climate Change?

Climate refers to the long-term average of weather conditions, such as temperature and precipitation. While it is normal for Earth's climate system to experience gradual shifts in these average conditions, human activity is causing global climate change at a much faster pace than in the past. These activities, predominantly the burning of fossil fuels, such as coal, petroleum, and natural gas, emit heat-trapping gases called greenhouse gases (GHGs) that build up in the atmosphere. As GHG levels increase, Earth's atmosphere traps more heat, triggering changes in the global climate system that may have serious and potentially catastrophic impacts on people, community assets, and natural systems.

GHGs are naturally occurring gases, such as water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), that absorb heat radiated from the Earth's surface.

The heat-trapping effect of GHGs is known as the "greenhouse effect" because the Earth's atmosphere acts like a greenhouse, warming the planet in much the same way that an ordinary greenhouse warms the air inside its glass walls. However, human activities are exerting a major and growing influence on the climate by increasing concentrations of GHGs in the atmosphere, especially by the burning of fossil fuels, such as coal, petroleum, and natural gas. As GHG concentrations increase, more heat is trapped in the atmosphere, increasing global temperatures, and causing changes to Earth's climate system.

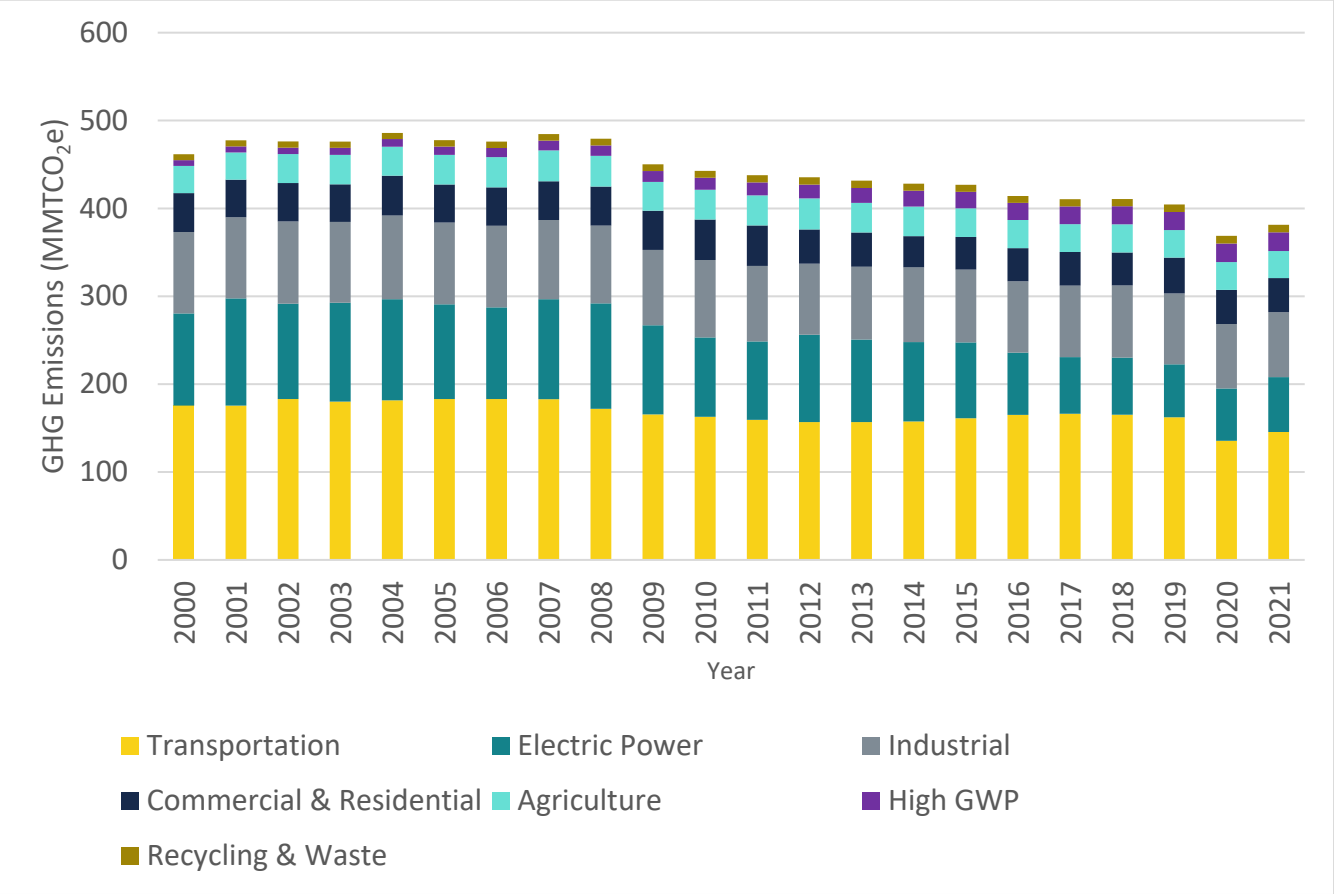
The largest contributing sectors of human-created GHG emissions in the United States are from energy production and transportation, due to reliance on fossil fuel-burning power plants and vehicles. Emissions are also generated by waste decomposition; by industrial, commercial, and residential land uses; and from agriculture, among other activities.

According to the most recent Intergovernmental Panel on Climate Change (IPCC) projections, average 2021–2040 temperatures are likely to be 2.16 degrees Fahrenheit (°F) to 3.2°F warmer than 1986–2005 average temperatures, and potentially over 10.26°F warmer by 2100 under the highest emissions scenario. If this increase in concentration of GHG emissions continues, this is expected to lead to further changes in the global climate system and pose even greater risks than those currently seen.

The State of California began implementing measures to reduce GHGs in 1988. As shown in **Figure 3,** statewide emissions have generally gradually declined since 2000, from a high of 486 MMTCO2e of GHG emissions in 2004 to a low of 369 MMTCO2e in 2020. Notably, the State reached its 2020 emissions reduction goal of 1990 levels in 2016, four years ahead of schedule. However, significant progress is still needed to achieve the State's goal of carbon neutrality by 2045.

Local and State reductions in emissions will not be immediately reflected as corresponding declines in atmospheric concentrations of GHGs. Global carbon dioxide concentrations have increased by about 30 percent over the past six decades. Similarly, atmospheric levels of other greenhouse gases (methane, nitrous oxide, and certain fluorinated gases) continue to increase.

Figure 3 California GHG Emissions, 2000 through 2020 ($MMTCO_2e$)



Source: California Air Resources Board (CARB), 2024. "2000-2021 GHG Inventory." *Current California GHG Emission Inventory Data*. Accessed April 2024. https://ww2.arb.ca.gov/ghg-inventory-data.

Climate Change Impacts in Hollister

Climate change is already having dire impacts on communities around the world. Past years have broken records for extreme heat globally, communities have experienced devastating floods, wildfires, drought, and storms with significant consequences for public health, safety, and economic well-being. Increasingly, communities are experiencing unprecedented and often unpredictable extreme events that are connected to or caused by climate change. Scientists expect climate change to increase the frequency and severity of several climate hazards that can affect Hollister, which include flooding, extreme heat, drought, and wildfire. Without aggressive action to reduce emissions to mitigate the worst effects, and immediate measures to adapt to a changing climate, these hazards will become more deadly and destructive. This section describes how climate change could affect Hollister in the short- and long-term future.

This CAP is one of several City plans and initiatives to reduce community-wide risks from natural hazards and increase resilience. It integrates and is consistent with several planning and emergency preparedness documents, recognizing that natural hazards will continue to occur and likely worsen due to climate change.

- The General Plan provides a long-term vision for development and operations in the city. The Health and Safety Element focuses on natural and human-caused hazards and provides a range of policies and programs to address risks associated with those hazards.
- The Vulnerability Assessment Report, prepared for the Health and Safety Element update, evaluates how people and key community assets (such as buildings, infrastructure, and economic systems) may be affected by climate change hazards and the degree to which they are vulnerable.
- The Local Hazard Mitigation Plan (LHMP) is a short-term planning document that provides a detailed overview of hazards in the city and a set of specific hazard mitigation strategies with an implementation timeline of five years.
- The Emergency Operations Plan (EOP) is the City and County's internal plan for emergency response and recovery, which goes into effect during an emergency or disaster. This plan describes specific roles for City and County departments, along with regional or State agencies, in responding to a disaster.

This section includes brief summaries of the background information on hazards provided in the LHMP and Health and Safety Element; **Chapter 4** provides strategies to address vulnerabilities identified in the Vulnerability Assessment, focusing on strategies that help Hollister both adapt to climate change hazards and reduce GHG emissions. For more detailed information and maps related to hazards and vulnerabilities described in this section, we recommend review of the City's General Plan, Vulnerability Assessment, LHMP, and EOP.

Agricultural and Ecosystem Pests and Diseases

Projections show temperatures getting warmer earlier in the year and remaining warmer until later in the year, which creates a wider activity window for pests and diseases. Agriculture and ecosystem pests and diseases can severely harm the agriculture and outdoor recreation industries in and surrounding Hollister. Row crops and vineyards can be affected by fungal pathogens and invasive disease vectors as temperatures continue to rise, affecting the quality and viability of crops.[5] Farmworkers are also highly vulnerable to reduced work opportunities and economic hardships resulting from crop losses.[6]

Photo credit: Jenny Knerr

Drought

A drought is defined as a period in which precipitation, including rainfall and snow, decreases. The Monterey Bay region is particularly susceptible to severe drought because the area relies heavily on annual precipitation to restore water aquifers and sustain agricultural operations. When the City prepared its Climate Change Vulnerability Assessment in March 2022, Hollister and San Benito County were experiencing severe to extreme drought conditions.[7] In future drought conditions, the city could experience a drop in annual precipitation from an average of 16 inches per year to an average of 12.7 inches per year.[8]

Hollister residents receive water from two suppliers, the City of Hollister and the Sunnyslope County Water District. Both purveyors source groundwater from local wells in the city and surrounding North San Benito Groundwater Basin, and the City also sources imported surface water from the Central Valley Water Project through the San Benito County Water District (SBCWD). The Central Valley Water Project is a complex water supply and distribution network made up of a series of 20 dams and reservoirs along the foothills of the Sierra Nevada that provides water to urban areas in the greater Sacramento and San Francisco Bay Area regions.[9]

Snowpack levels in the Sierra Nevada dropped by 25 percent during the 2011 to 2016 drought, and average springtime snowpack is expected to drop 64 percent by 2100.[10] In 2022, statewide snowpack was 68 percent of the average for March 1, making it the driest documented year in state history.[11]

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[5] California Climate and Agricultural Network. 2019. *Cultivating Climate Resilience in Farming: Ensuring California Farms and Ranches Thrive in the Face of Climate Change*. https://calclimateag.org/wp-content/uploads/2019/07/Cultivating-Resilience-August-2019.pdf.

[6] Roos, Michelle. 2018. "Climate Justice Summary Report." *California's Fourth Climate Change Assessment*. E4 Strategic Solutions. Publication number: SUM-CCCA4-2018-012.

[7] National Drought Mitigation Center. University of Nebraska-Lincoln. 2022. "U.S. Drought Monitor, California." https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CA.

[8] Cal-Adapt. 2018. "Extended Drought Scenarios." https://cal-adapt.org/tools/extended-drought/.

[9] Bureau of Reclamation. 2020. "California-Great Basin: Central Valley Project." https://www.usbr.gov/mp/cvp/.

[10] ARCCA. 2018. *From Mountain to Cities: Exploring California's Urban Connections to Sierra Nevada Ecosystems*. https://arccacalifornia.org/wpcontent/uploads/2018/08/ARCCA-UrbanRural-Whitepaper.pdf.

[11] California Department of Water Resources. 2022. "Statewide Snowpack Falls Well Below Average Following Consecutive Dry Months." https://water.ca.gov/News/News-Releases/2022/March-22/March-2022-Snow-Survey.

Current modeling and analysis indicate that extended drought conditions will become more frequent and more severe because of climate change. Warmer temperatures and greater swings in precipitation levels are likely to lead to increased frequency and intensity of drought events, including an increase in severe, long-lasting "mega-drought" events.[12] Warmer temperatures, decreased levels of snowfall in the Sierra Nevada, and faster melting of snow are likely to contribute to the increased frequency of droughts.

A reduction in water supplies could cause water shortages, mandatory water restrictions, and increased costs for water and goods, increasing economic instability of low-income and low-resourced residents. A reduction in Central Valley Project water supplies may cause the city to use more water from the North San Benito Groundwater Basin, which may cause groundwater overdraft. In addition, an increase in the number and intensity of drought years, along with an increase in extreme heat events, may increase the frequency and severity of wildfire events.

Extreme Heat

Extreme heat events are days when high temperatures significantly exceed normal levels, which for Hollister are temperatures above 97°F. The annual number of extreme heat days in Hollister is projected to increase from a historical average of four days to an average of 14 days by mid-century and an average of 24 by the end of the century.[13] **Figure 4** shows the past and projected extreme heat days in Hollister.

Extreme heat can cause heat-related illnesses, such as heat cramps, heat exhaustion, and heat stroke, in addition to worsening respiratory and cardiovascular conditions. Populations especially vulnerable to extreme heat include outdoor workers, low-income communities of color, renters, seniors, and persons experiencing homelessness. Some homes in Hollister lack air conditioning; people living in these homes may be more susceptible to harm from extreme heat events. Residents may not be able to cool homes or keep medications cooled if extreme heat events cause public safety power shutoff (PSPS) events. If extreme heat coincides with wildfire or other poor air quality conditions, residents may have to choose between opening windows to cool their homes and keeping windows closed, causing indoor air temperatures to rise to unhealthy levels. There is only one cooling center in the region, the Hollister Veterans Memorial Building.

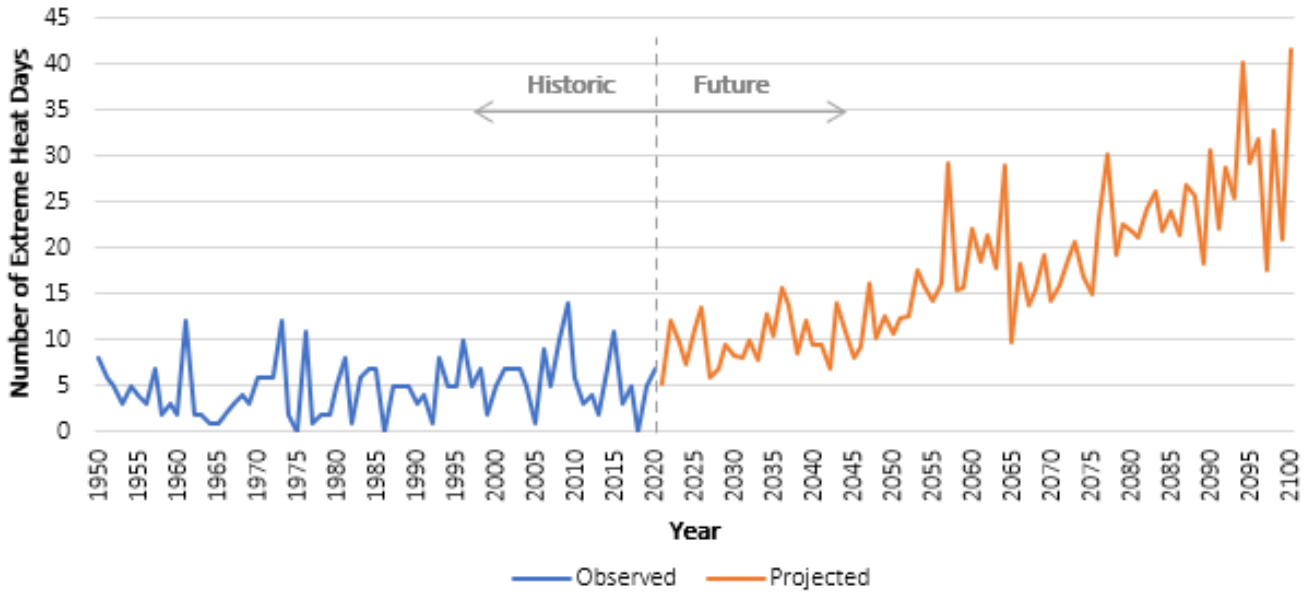
Energy delivery services and associated infrastructure are highly vulnerable to extreme heat, as high temperatures can stress and overload the grid, causing power outages and damage to transmission lines. The agricultural economy is also highly vulnerable to extreme heat, as higher temperatures may alter the variety of crops that can be grown in the Hollister Valley. Yields of vegetable and row crops are expected to decrease and water demand is expected to rise due to extreme heat conditions.[14] A future increase in temperatures is expected to contribute to longer and more severe droughts, which could create significant challenges for water supplies, natural ecosystems, and agricultural operations.

[12] Langridge, Ruth. 2018. "Central Coast Summary Report." California's Fourth Climate Change Assessment. University of California, Santa Cruz. Publication number: SUM-CCCA4-2018-006.

[13] Cal-Adapt. 2018. "Extreme Heat Days & Warm Nights." https://cal-adapt.org/tools/extreme-heat/.

[14] Langridge, Ruth. 2018. "Central Coast Summary Report." *California's Fourth Climate Change Assessment.* University of California, Santa Cruz. Publication number: SUM-CCCA4-2018-006.

Figure 4 Past and Projected Extreme Heat Days in Hollister



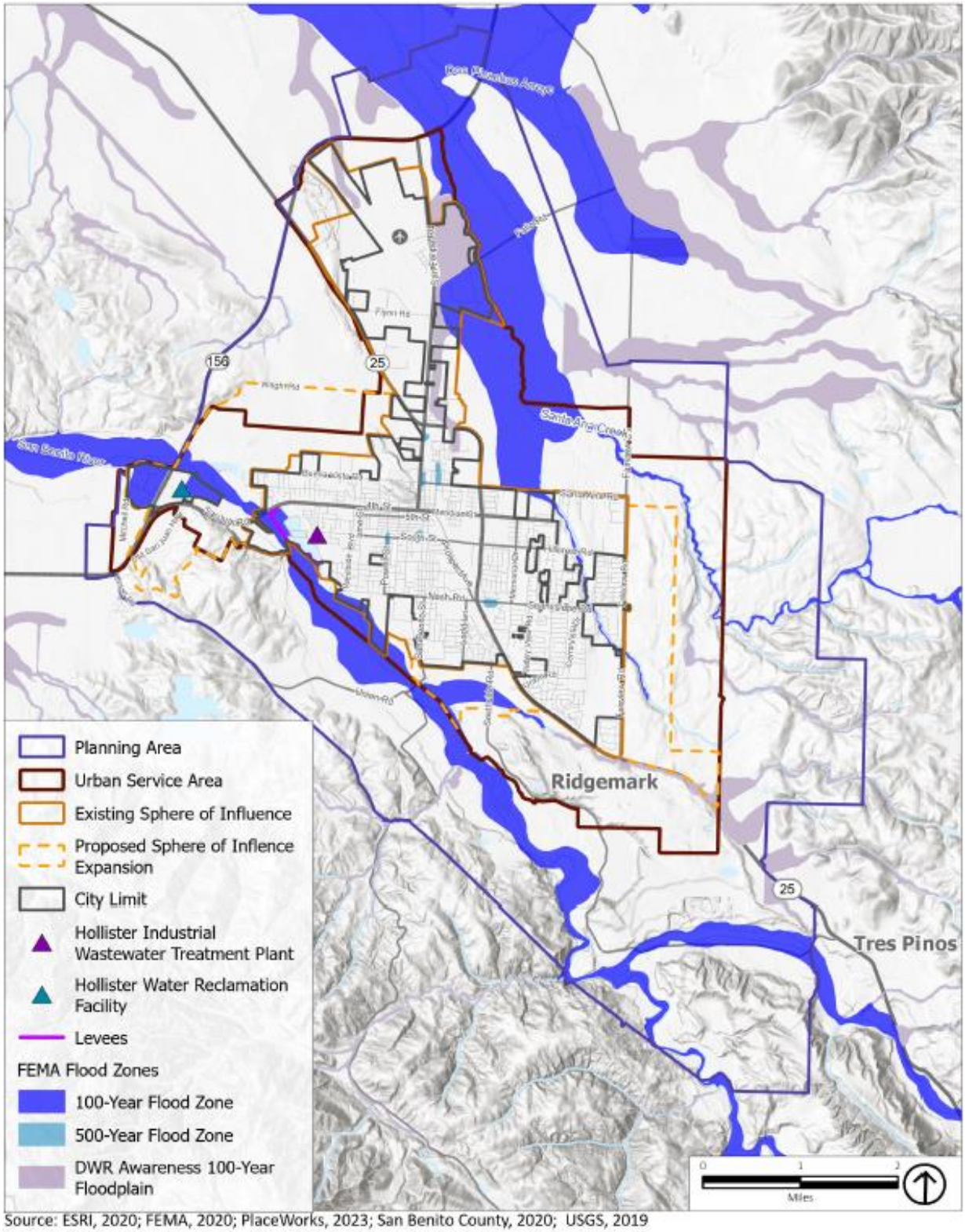
Sources: Cal-Adapt, 2021; National Weather Service, 2022.

Flooding

Potential flooding in Hollister would likely occur in low-lying areas adjacent to waterways, largely around the San Benito River to the southwest and Santa Ana Creek to the northeast of Hollister. As shown in **Figure 5**, several areas in and surrounding Hollister are in the 100-year and 500-year floodplain, which have an elevated risk of flooding. Few areas within the city limits are in a flood zone; however, areas adjacent to the San Benito River, Pacheco Creek, and Santa Ana Creek are in the 100-year flood zone. During heavy rainfall events, flooding occurs at the airport, and in commercial, residential, and agricultural areas.

Regional flooding typically occurs every four to five years. As the climate changes, floods are expected to occur more frequently, affecting how the community defines and experiences a "normal" flood. For example, what is currently considered a 100-year flood, or a flood that has a 1 percent chance of occurring in any given year, may occur with greater frequency (such as a 2 or 5 percent chance in any given year). More intense and frequent flooding could exceed the capacity of the San Benito River and Santa Ana Creek basins, which are principal drainage basins for the region. Damage from flooding in and around Hollister would largely occur on agricultural lands resulting in crop losses, field work delays, and crop damage or loss. Flooding in urban areas can damage buildings, homes, streets, bridges, and utility infrastructure.

Figure 5 City of Hollister Flood Zones



Source: ESRI, 2020; FEMA, 2020; PlaceWorks, 2023; San Benito County, 2020; USGS, 2019

NOTABLE FLOOD EVENTS IN HOLLISTER AND THE REGION

2004: A storm event brought 4 inches of rain to San Benito County and winds up to 10 miles per hour, causing flooding along East and Second Streets.
2010: A storm overwhelmed the storm drain system, flooding San Benito Street near Nash Road.
2014: A large storm brought 3.8 inches of rain to San Benito County, causing flooding, mudslides, and knocking over trees. Landslides and flooding caused Southside School to close along Southside Road.
2017: A storm brought 2.37 inches of rain over a week period, causing flooding along Pacheco Creek. Approximately 59 people evacuated from their homes and a state of emergency was declared in San Benito County.

Wildfire

Wildfires are a regular feature of the landscape in much of California; however, nearly 85 percent of wildfires are caused by humans.[15] Wildfires can be sparked by lightning, malfunctioning equipment, vehicle crashes, or other causes.[16] Warmer temperatures, an increase in drought conditions, and extreme wind events are likely to create more fuel for fires in natural and rural areas, leading to a greater chance that a spark will grow into a potentially dangerous blaze. Climate change is also expected to extend the fire season.

Areas that are especially vulnerable to wildfire are identified according to fire hazard severity zones and their location relative to the wildland urban interface (WUI). Fire hazard severity zones are areas of significant fire hazard based on fuels, terrain, weather, and other relevant hazards.[17] The California Governor's Office of Planning and Research (OPR) defines the WUI as any developed area where a combination of combustible natural vegetation and structures allow for the ignition and spread of fire through these combined fuels. There are no mapped fire hazard severity zones within Hollister city limits. However, the city is within the WUI, as shown in **Figure 6**, which increases the risk of wildfires spreading into the community.

Major roads and highways, including those that serve as evacuation routes, such as Highway 25 and 4th Street, can be blocked by wildfire flames or debris, making it difficult for residents to evacuate and emergency personnel to reach certain areas of the city. The entire energy delivery system, including electric transmission lines, can be damaged by wildfires. Homes can be burned and damaged by wildfires.

[15] Balch, J. K., Bradley, B. A., Abatzoglou, J. T., Nagy, R. C., Fusco, E. J., & Mahood, A. L. 2017. "Human-started wildfires expand the fire niche across the United States." *Proceedings of the National Academy of Sciences, 114*(11), 2946-2951. https://www.pnas.org/doi/10.1073/pnas.1617394114
[16] National Park Service. 2022. Wildfire Causes and Evaluations. https://www.nps.gov/articles/wildfire-causes-and-evaluation.htm
[17] California Office of the State Fire Marshal. 2021. Fire Hazard Severity Zones. https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildfire-preparedness/fire-hazard-severity-zones/.

Several agricultural areas surrounding the city are within fire-prone areas and are therefore vulnerable to crop loss and damage from wildfire. Recurring wildfires may make recovery difficult, especially if adaptation measures are not implemented to boost economic resilience.

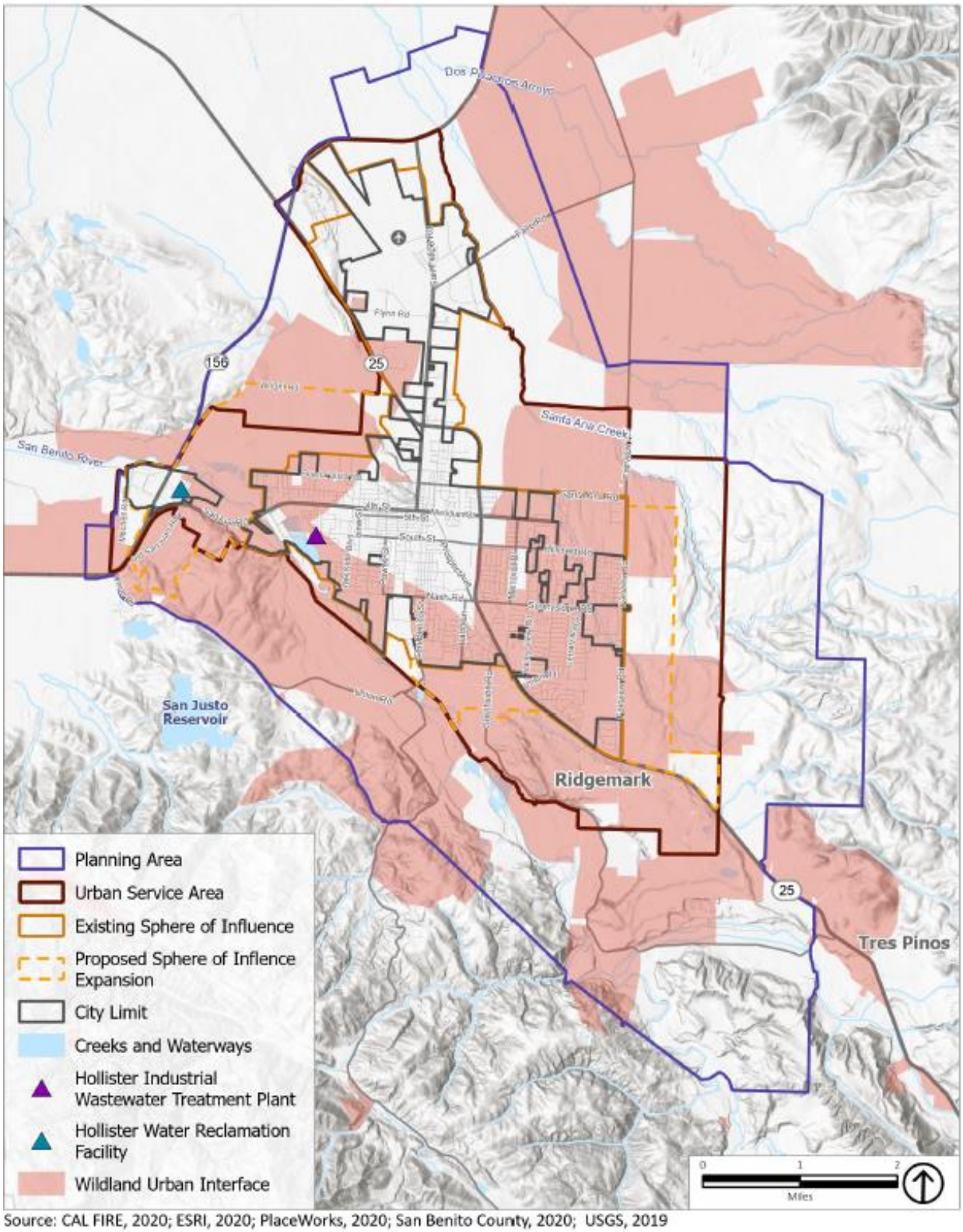
The city's proximity to fire-prone areas also increases the potential for smoke from wildfires to increase air pollution levels, creating a significant health risk in the region. Smoke and ash can damage crops, farms, and agricultural fields, as well as altering the nutrients in the soil and polluting water supplies. Smoke can prevent visitors from traveling to the city to participate in outdoor recreation and tourism, including recreation at nearby state and regional parks, and ash from wildfires can pollute water supplies.

The populations in Hollister face frequent, and potentially severe, disruptions, hardships, and health impacts due to wildfire.

WHAT ARE PUBLIC SAFETY POWER SHUTOFFS?

Electricity utility companies throughout California, including Pacific Gas and Electric Company (PG&E), initiate PSPS events that "de-energize", or turn off the electricity for power lines that run through areas when there is an elevated fire risk. This is intended to reduce the risk of power lines sparking or being damaged and starting a wildfire. PSPS events result in a loss of power for customers served by the affected power lines. A PSPS event may occur at any time of the year, though they are most common during high wind events and dry conditions. PSPS events may be limited to specific communities, or they may affect broad swaths of the state. Planned PSPS events to prevent wildfires have already impacted persons who depend on electricity for air conditioning or their medically necessary equipment.

Figure 6 City of Hollister Wildland Urban Interface Areas



Source: CAL FIRE, 2020; ESRI, 2020; PlaceWorks, 2020; San Benito County, 2020; USGS, 2019

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3. GHG EMISSIONS IN HOLLISTER

Photo credit: Sabrina Stark

GHG emissions are generated by various activities that are commonplace in daily life. Some daily activities release GHG emissions in the location of the activity, such as gases released anytime a car is driven. On the other hand, some activities cause GHG emissions to be released elsewhere, such as someone using electricity to power their home, which generates GHG emissions in the location of the power plant that supplies the power and not in the home itself.

The CAP considers GHG emissions caused by activities in the CAP Study Area, which is made up of the territory within the City's jurisdictional boundary and the land that falls within the City's SOI (see **Figure 1**). Hollister's General Plan Update identifies the SOI as areas that are currently outside of the City's official boundary but that the City may annex in the future.

This chapter presents the methods used to prepare the GHG emissions inventories, the results of the GHG inventories and forecasts, an overview of emissions reduction targets, and recommended GHG reduction strategies to achieve the targets.

WHAT IS A CITY LIMIT, SOI, AND CAP STUDY AREA?

The City boundary is the existing urban area that comprises the city limits in Hollister. By contrast, the Sphere of Influence (SOI) is the area that has the potential for annexation in the future. The CAP Study Area is the existing urban area plus the SOI.

COMMUNITY-WIDE GHG INVENTORY

A community-wide GHG inventory identifies GHG emissions resulting from the activities of residents, employees, and other community members occurring within the city boundary. Examples include residents driving cars, homes using water, and

businesses using electricity. Conducting a GHG inventory helps the City identify the most significant contributors to community GHG emissions and establish a baseline that the City can use to track emissions reductions over time. Knowing which activities release these GHG emissions allows the City to develop policies and programs that facilitate a decrease in emissions for each activity.

Inventory Method

A series of guidance documents, called protocols, provide recommendations on how to assess GHG emissions. These protocols provide guidance on what activities to evaluate in GHG inventories and how emissions from those activities should be measured. GHG inventories are estimates of GHG emissions based on these standard methods and verified datasets. While they are not direct measurements of GHG emissions, the use of the standard methods identified in the protocol, in combination with accurate data from appropriate sources, allows GHG inventories to provide reliable estimates of local emission levels. Using standard methods allows for an easy comparison of GHG emission levels across multiple years and communities. The City updated GHG inventories consistent with the guidance in widely adopted, standard protocol documents:

- The CAP Study Area GHG inventory uses the United States Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions (U.S. Community Protocol), which was first developed in 2012 and updated most recently in 2019. The OPR encourages cities and counties in California to follow the U.S. Community Protocol for community-wide GHG emissions.
- The Global Protocol for Community-Scale Greenhouse Gas Inventories (Global Protocol) was first developed in 2014 and is intended for use in preparing international community-scale GHG inventories. It is largely consistent with the U.S. Community Protocol, although it contains additional guidance and resources to support a wider range of activities that may be found in other countries. The project team has used the Global Protocol to assess GHG emissions from sources that are not covered in the U.S. Community Protocol.

UNITS OF MEASUREMENT

GHG inventories assess emissions in a unit called carbon dioxide equivalent (CO_2e), which is a combined unit of all GHGs analyzed in the inventory. As different GHGs have different effects on the processes that drive climate change, CO_2e is a weighted unit that reflects the relative potency of the different GHGs. These inventories report amounts of GHGs in metric tons of CO_2e ($MTCO_2e$), equal to 1,000 kilograms or approximately 2,205 pounds.

Prior to preparation of this CAP, AMBAG prepared community-wide GHG inventories for Hollister for the baseline year of 2005 and 2019. The 2005 inventory provides a baseline for establishing targets, while the 2019 inventory is the most recent available indication of how emissions have changed since the baseline and is the year from which future emissions are forecasted. The City revised the existing AMBAG GHG inventories for 2005 and 2019 to use consistent and current methods and data sources that are in line with recommended guidance and best practices. These revisions included the addition of new sectors and sources, revised emission factors, updated global warming potentials for certain GHGs, different data sources for certain sectors for consistency with the General Plan Update, and adjustments to methods for certain sectors. The new sectors added to the updated inventories are agriculture and land use and sequestration. Updates in methods most noticeably affect the results of the transportation sector; all other changes are minor. Details about the inventory update process are in **Appendix A**.

Emission Factors

The City calculated most of its GHG emissions using data on GHG-generating activities in combination with emission factors. An emissions factor describes how many $MTCO_2e$ are released per unit of an activity. For instance, an emissions factor for electricity describes the $MTCO_2e$ produced per kWh of electricity used, and an emission factor for on-road transportation describes the $MTCO_2e$ produced per mile of driving. **Appendix A** provides more detail about the GHG emissions inventory process, including a table of emissions factors for all sectors (refer to **Table A-1**).

GHG Inventory Results

The City conducted GHG inventories for the area within the city boundary and the entire CAP Study Area. Both inventories assessed GHG emissions from the following eight categories of activities, known as sectors:

Transportation includes GHG emissions created by driving on-road vehicles, including passenger and freight vehicles.

Nonresidential energy includes GHG emissions attributed to the use of electricity and natural gas in nonresidential buildings.

Residential energy includes GHG emissions attributed to the use of electricity and natural gas in residential buildings.

Solid waste includes the GHG emissions released from trash collected in Hollister. Estimates of emissions released by the solid waste sector are derived from figures for the tonnage of solid waste collected within Hollister. Decomposition emission rates vary by waste material type and are estimated according to statewide waste composition statistics. Primary generators of decomposition emissions include paper and cardboard materials, food, leaves and branches, lumber, textiles, and medical and construction waste.

Off-road equipment includes GHG emissions from equipment that does not provide on-road transportation, such as tractors for construction or equipment used for landscape maintenance.

Agriculture includes GHG emissions from fertilizer use for crop cultivation.

Water and wastewater accounts for the electricity used to transport every gallon of water or wastewater to residents and businesses, as well as direct emissions resulting from the processing of wastewater material.

Land use and sequestration includes GHG emissions released into the atmosphere from development of previously undeveloped land and GHG emissions saved from carbon absorption and storage in trees.

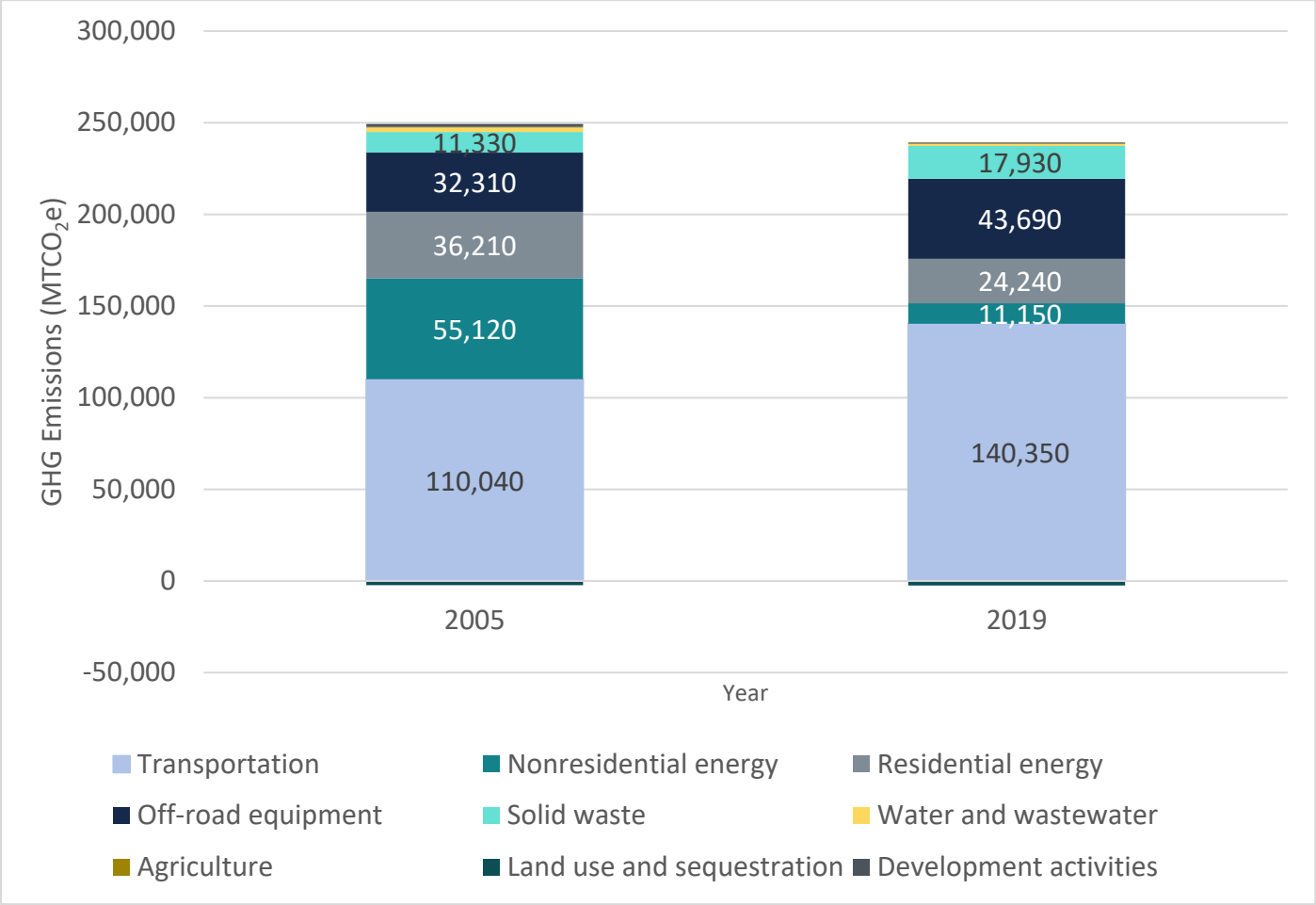
The amount and proportion of each sector's contribution to the community's annual GHG emissions in 2005 and 2019 is shown in **Table 1** and **Figure 7**. **Table 1** shows how GHG emissions changed across sectors between 2005 and 2019.

Table 1 Annual GHG Emissions and Proportions by Sector within City Limit in 2005 and 2019

Sector	2005 Inventory $MTCO_2e$	2005 Proportion of Total	2019 Inventory $MTCO_2e$	2019 Proportion of Total
Transportation	110,040	45%	140,350	59%
Nonresidential energy	55,120	22%	11,150	5%
Residential energy	36,210	15%	24,240	10%
Off-road equipment	32,310	13%	43,690	18%
Solid waste	11,330	5%	17,930	8%
Water and wastewater	2,320	1%	1,040	Less than 1%
Agriculture	400	Less than 1%	320	Less than 1%
Land use and sequestration	-2,300	-1%	-2,460	-1%
Development activities	1,600	Less than 1%	500	Less than 1%
Total Annual $MTCO_2e$	**247,030**	**100%**	**236,760**	**100%**

As shown in Table 1, the transportation sector was the largest source of GHG emissions in Hollister for both inventory years, increasing from 45 percent in 2005 to 59 percent of community-wide emissions in 2019. The transportation sector was followed by the nonresidential energy sector and residential energy sectors as the second- and third-largest sources of GHG emissions in 2005. However, in 2019, when emissions from electricity use dropped dramatically due to the availability of cleaner sources of electricity, the off-road equipment sector rose to the second-highest emitting sector, followed by the residential energy sector.

Figure 7 GHG Emissions by Sector ($MTCO_2e$) within City Limit, 2005 and 2019



As shown in Table 2, emissions in Hollister decreased from 247,030 $MTCO_2e$ in 2005 to 236,760 $MTCO_2e$ in 2019, a decrease of 4 percent. In 2005, the sectors with the highest emissions were transportation and nonresidential energy. In 2019, the sectors with the highest emissions were transportation and off-road equipment.

The three sectors that experienced the greatest decrease in emissions between 2005 and 2019 were nonresidential energy, water and wastewater, and residential energy sectors, which decreased by 80, 55, and 33 percent, respectively. While nonresidential energy was the second-highest emitting sector in 2005, it fell below solid waste as the fifth-highest emitter in 2019. Hollister's electricity providers, 3CE and PG&E, both supplied most of their electricity in 2019 from renewable and carbon-free sources, leading to a large reduction in GHG emissions from the residential energy, nonresidential energy, and water and wastewater sectors.

Table 2 Percentage Change of GHG Emissions by Sector within City Limit in 2005 and 2019

Sector	2005 $MTCO_2e$	2019 $MTCO_2e$	Percentage Change 2005 to 2019 $MTCO_2e$
Transportation	110,040	140,350	28%
Nonresidential energy	55,120	11,150	-80%
Residential energy	36,210	24,240	-33%
Off-road equipment	32,310	43,690	35%
Solid waste	11,330	17,930	58%
Water and wastewater	2,320	1,040	-55%
Agriculture	400	320	-20%
Land use and sequestration	-2,300	-2,460	7%
Development activities	1,600	500	-69%
Total Annual $MTCO_2e$	**247,030**	**236,760**	**-4%**

Three sectors experienced an increase in GHG emissions: solid waste, off-road equipment, and transportation. GHG emissions from the solid waste sector, which are estimated based on waste produced by Hollister residents only, increased by 58 percent due to population growth within the city. Off-road equipment GHG emissions increased by 35 percent, due at least in part to an increase in construction activity and population growth. Despite an increase in fuel efficiency and adoption of EVs, GHG emissions from the transportation sector increased by 28 percent, driven by a substantial increase in VMT.

2019 Inventory for CAP Study Area

As noted in the introduction to this document, the General Plan anticipates that Hollister will grow within its existing boundary and through the annexation of land outside of the current city boundary but within the General Plan's CAP Study Area. This land consists primarily of agricultural or low-density residential land west, south, and east of the city boundary, as shown in **Figure 1**. GHG emissions in 2019 for the CAP Study Area are shown in **Table 3**. The SOI is responsible for approximately 7,900 MTCO2e emissions.

Table 3 GHG Emissions within Existing City Limit, Sphere of Influence, and Combined Total (CAP Study Area) in 2019

Area	2019 Emissions ($MTCO_2e$)
City Limit	236,760
Sphere of Influence Only	7,990
CAP Study Area (Total)	**244,750**

CAP Study Area GHG Forecasts

The CAP Study Area forecast is a projection of future GHG emissions from the sources included in Hollister's GHG inventory. For consistency with the General Plan Update, the CAP assesses emissions through the General Plan's horizon year of 2040 and beyond. The forecast projects emissions in the years 2030, 2040, and 2045 to function as a foundation for exploring strategies to decrease emissions consistent with State reduction targets and goals for these years (as further explained in **Chapter 4**). This section presents future GHG emissions for the existing city boundary, the SOI, and the combined CAP Study Area. These forecasts assume that each person in Hollister will continue to produce the same amount of GHG emissions as they did in 2019, so that the amount of GHG emissions changes proportionally to the projected change in community demographics.

GHG Emissions Forecast within City Limit

Emissions forecasts are based on the 2019 GHG emissions inventory for the city boundary, taking into account Hollister's 2019 demographics and predicted demographic trends used in the Hollister 2040 General Plan Update. **Table 4** and **Figure 8** show these projected emissions. **Appendix A** provides projected changes in population, households, jobs, service population, and VMT between 2019 and 2045.

The forecast is a worst-case projection that assumes that no action is taken at any level, including by State, regional, and local agencies. As shown in **Table 4** and **Figure 8**, GHG emissions are expected to increase by 93 percent between 2019 and 2045 within the existing city boundary. This projection accounts for GHG emission changes from land use and carbon sequestration from urban trees.

The four sectors projected to have the largest increase in GHG emissions between 2019 and 2045 are as follows:

- Transportation emissions are projected to increase by 99 percent.
- Residential energy emissions are projected to increase by 90 percent.
- Off-road emissions are projected to increase by 81 percent.
- Solid waste emissions are projected to increase by 78 percent.

Increases in emissions are due to large projected increases in the city's population and number of jobs over the next three decades.

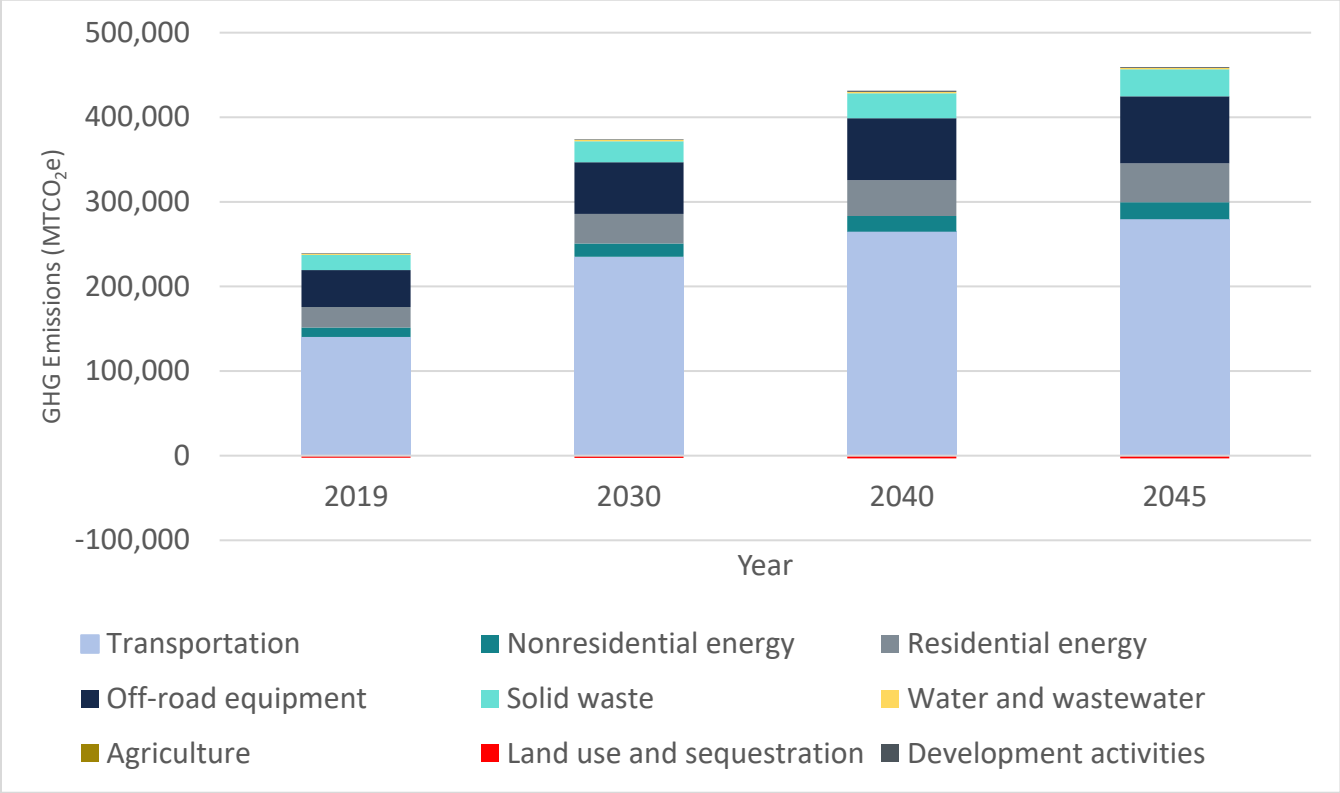
Agriculture is the only sector whose emissions are projected to decline. Agricultural emissions are projected to reach 0 by 2040 due to the projected loss of agricultural land in the city.

Table 4 Forecast GHG Emissions within City Limit, 2019-2045

Sector	2019[1]	2030[1]	2040[1]	2045[1]	Percentage Change, 2019 to 2045
Transportation	140,350	235,140	264,770	279,600	99%
Nonresidential energy	11,150	15,690	18,510	19,910	79%
Residential energy	24,240	34,900	42,340	46,060	90%
Off-road equipment	43,690	61,030	73,230	79,200	81%
Solid waste	17,930	24,910	29,550	31,870	78%
Water and wastewater	1,040	1,440	1,720	1,850	78%
Agriculture[2]	320	240	0	0	-100%
Land use and sequestration	-2,460	-2,720	-3,270	-3,270	33%
Development activities	500	550	1,230	830	66%
Total	**236,760**	**371,180**	**428,080**	**456,050**	**93%**

1. Data shown for 2019 are inventoried GHG emissions. The data shown for 2030, 2040, and 2045 are GHG emission forecasts based on projections from the 2019 inventory.
2. GHG emission projections for agriculture assume that by 2040, all agricultural land will be developed and converted to other land uses.

Figure 8 GHG Emissions within City Limit, 2019-2045



Emissions Forecast of Hollister's Sphere of Influence

Hollister's projected future SOI emissions result from activities occurring within the SOI, excluding the area within the existing city boundary. As with the forecast for the city boundary, the forecast of GHG emissions in the SOI is based on the results of the 2019 community-wide GHG emissions inventory for the SOI, the SOI's 2019 demographics, and future demographic projections. These population, housing, and employment projections are based on the estimates of future buildout under the Hollister 2040 General Plan Update in the SOI. **Appendix A** shows the demographic projections used to prepare the GHG emissions forecast of the SOI.

Table 5 and **Figure 9** show the SOI's forecasted GHG emissions through 2045. This forecast shows that GHG emissions are expected to increase by 112 percent by 2045 relative to 2019 levels. This increase in GHG emissions is attributed to the dramatic increase in the population of this area between 2019 and 2045.

The four sectors in the SOI projected to experience the largest increase in GHG emissions between 2019 and 2045 are transportation (105 percent increase in emissions), residential energy (97 percent increase in emissions), solid waste (84 percent increase in emissions), water and wastewater (84 percent increase in emissions), and off-road equipment (78 percent increase in emissions). Increases in emissions associated with off-road equipment, transportation, residential energy, and solid waste sectors between 2019 and 2045 are attributed to a large increase in the service population of the SOI during this period.

Like the GHG emission forecast for the city boundary, GHG emissions from the agriculture sector in the SOI gradually decline through 2045 due to conversion of agricultural land to urban uses. Similar to the land use and sequestration sector in the city

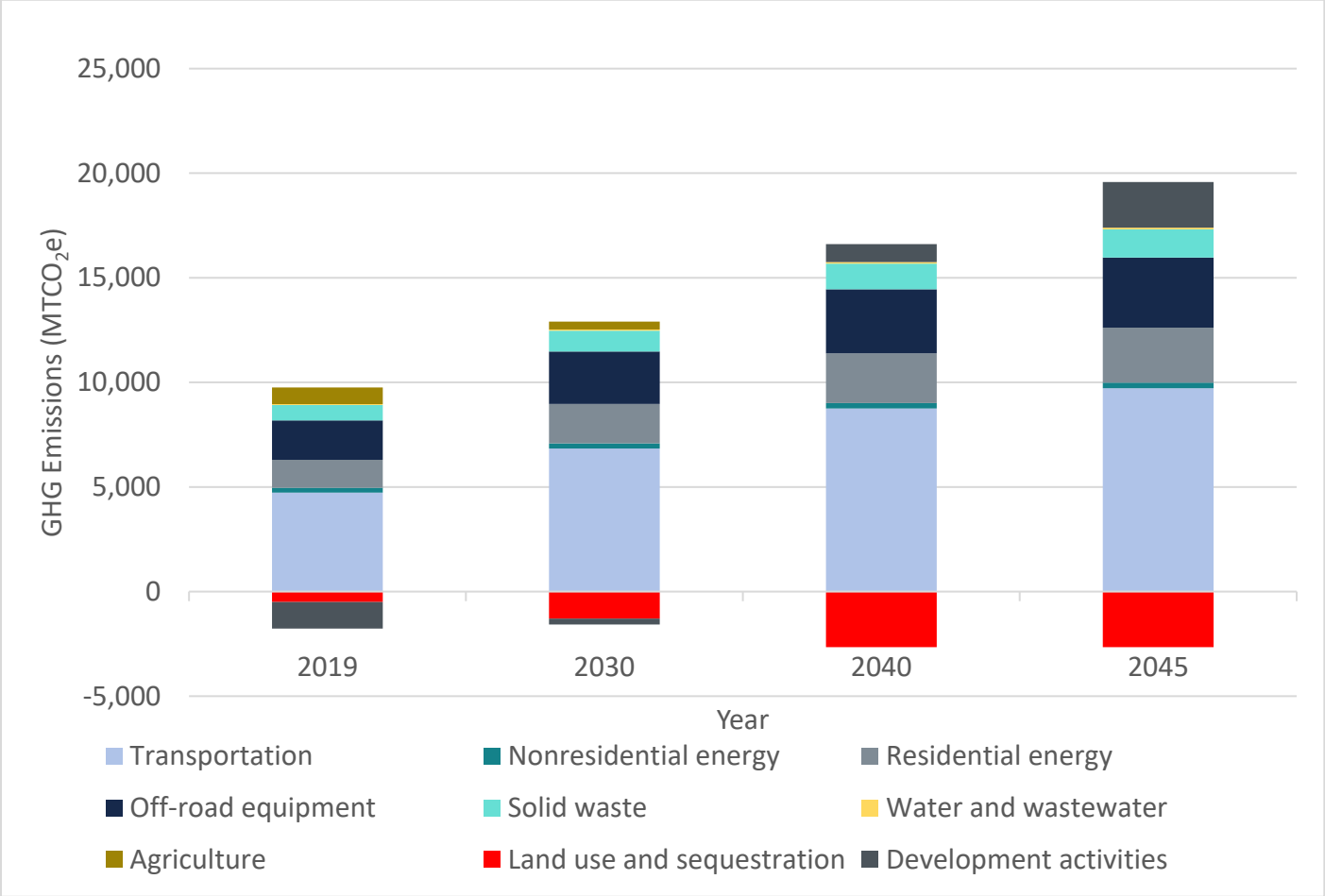
boundary GHG inventory, the SOI land use and sequestration sector experiences a net decrease in GHG emissions since urban street trees sequester carbon and offset the release of emissions from new urban development.

Table 5 Forecasted GHG Emissions within Sphere of Influence by Sector, 2019-2045

Sector	2019[1]	2030	2040	2045	Percentage Change, 2019 to 2045
Transportation	4,730	6,840	8,750	9,720	105%
Nonresidential energy	231	246	260	270	15%
Residential energy	1,336	1,880	2,380	2,631	97%
Off-road equipment	1,885	2,500	3,060	3,350	78%
Solid waste	730	995	1,230	1,350	84%
Water and wastewater	40	60	70	80	84%
Agriculture[2]	800	380	0	0	-100%
Land use and sequestration	-500	-1,290	-2,660	-2,660	432%
Development activities	-1,270	-280	860	2,180	-272%
Total	**7,990**	**11,340**	**13,950**	**16,920**	**112%**

1. Data shown for 2019 are inventoried GHG emissions. The data shown for 2030, 2040, and 2045 are GHG emission forecasts based on projections from the 2019 inventory.
2. GHG emission projections for agriculture assume that by 2040, all agricultural land will be developed and converted to other land uses.

Figure 9 Forecasted GHG Emissions within Sphere of Influence, 2019-2045



GHG Emissions Forecast of Hollister's CAP Study Area

For the purposes of the GHG inventory and forecast in the CAP, in addition to analyzing the GHG emissions in the city limits and growth areas, it is important to analyze the combined area of the city boundary and SOI. This combined area, known as the CAP Study Area, represents the potential expanded area of the city boundary if all growth areas are annexed and incorporated into the City of Hollister as planned. Urban expansion in Hollister has the potential to significantly increase community-wide GHG emissions in the future.

Appendix A shows the demographic projections used to prepare the GHG emissions forecast for the comprehensive CAP Study Area. In the CAP Study Area, GHG emissions are expected to increase by 93 percent in 2045 relative to 2019 levels. **Table 6** and **Figure 10** show Hollister's forecasted GHG emissions in the CAP Study Area through 2045.

Table 6 Forecasted GHG Emissions within CAP Study Area by Sector, 2019-2045

Sector	2019*	2030*	2040*	2045*	Percentage Change, 2019 to 2045
Transportation	145,080	241,980	273,520	289,320	99%
Nonresidential energy	11,380	15,940	18,770	20,180	77%
Residential energy	25,580	36,790	44,720	48,690	90%
Off-road equipment	45,580	63,540	76,290	82,550	81%
Solid waste	18,660	25,910	30,780	33,220	78%
Water and wastewater	1,080	1,500	1,790	1,930	78%
Agriculture	1,120	620	0	0	-100%
Land use and sequestration	-2,960	-4,010	-5,930	-5,930	100%
Development activities	-770	270	2,090	3,010	-491%
Total	**244,750**	**382,520**	**442,030**	**472,970**	**93%**

* Data shown for 2019 are the inventory of GHG emissions. The data shown for 2030, 2040, and 2045 are GHG emission forecasts based on projections from the 2019 inventory.

The three sectors in the CAP Study Area that are projected to experience the largest increase in GHG emissions between 2019 and 2045 are the transportation (99 percent increase in emissions), residential energy (90 percent increase in emissions), and off-road equipment sectors (81 percent increase in emissions). The increase in emissions in these sectors are the result of a substantial increase in the CAP Study Area's projected population and number of jobs over the next three decades. As shown in **Table 7**, emissions in the CAP Study Area are projected to increase by 82 percent between 2019 and 2045.

Land use GHG emissions are expected to decrease in the CAP Study Area because, while a portion of the annexed land that is currently used primarily for agricultural and open space uses, will be converted to urban land uses, the GHG emissions associated with this land conversion are more than offset by the absorption of carbon by urban street trees. In Hollister's CAP Study Area, similar to the GHG emission forecast for the city boundary (not including the growth areas), the agriculture sector is projected to experience a gradual decrease in GHG emissions in the future.

Figure 10 Forecasted GHG Emissions within CAP Study Area, 2019-2045

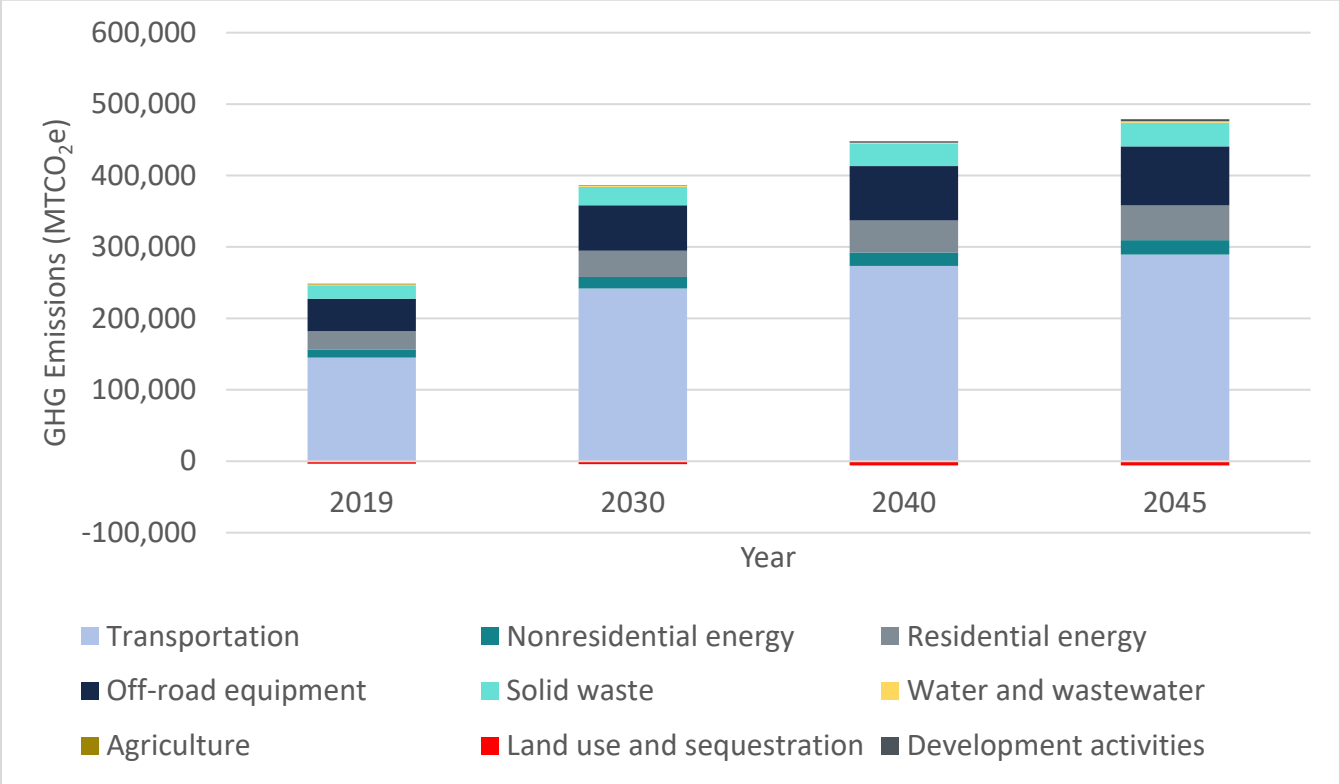


Table 7 Forecasted Emissions within City Limit, Sphere of Influence, and CAP Study Area

Geographic Boundary	2019	2030	2040	2045	Percentage Change 2019 to 2045
City Limit	236,760	371,180	428,080	456,050	93%
Sphere of Influence	7,990	11,340	13,950	16,920	112%
CAP Study Area (Total)	**244,750**	**382,520**	**442,030**	**472,970**	**93%**

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4. GREENHOUSE GAS EMISSIONS REDUCTION STRATEGY

Photo credit: Rene Rodriguez

BACKGROUND

This chapter describes Hollister's GHG reduction targets and the community's path to reducing GHG emissions to meet or exceed its targets, including existing/planned efforts led by state, regional, and local agencies, and new strategies in this CAP.

GHG EMISSIONS REDUCTION TARGETS

Hollister's GHG emissions reduction target is the quantity of GHG emissions that the City commits to reduce by a certain year. GHG reduction targets apply to all GHGs attributed to the community and all sectors as identified in the City's GHG inventories.

State GHG Reduction Targets

California has committed to achieving GHG emission reductions through legislative actions and executive orders. Legislative actions are binding targets that are codified in State law. Executive orders do not have the force of law but provide an indication of the State's goals and intentions. **Table 8** shows the State's GHG emission reduction targets.

Table 8 State GHG Emission Reduction Targets

Target Year	Target	Establishing Act
2020	Reduce GHG emissions to 1990 levels.	Assembly Bill 32 (2006)
2030	Reduce GHG emissions 40 percent below 1990 levels.	Senate Bill 32 (2016)
2045	Carbon neutrality. Reduce GHG emissions 85 percent below 1990 levels, at a minimum.	Executive Order B-55-18 (2018) Assembly Bill 1279 (2022)

AB 1279 establishes the statewide goal of achieving carbon neutrality no later than 2045 and reducing GHG emissions by 85 percent below 1990 levels by 2045.

Targets for Hollister

For the CAP, the City has selected local GHG emissions reduction targets that are consistent with the State's recommendations in the 2022 Climate Change Scoping Plan of 40 percent and 85 percent below 1990 levels in 2030 and 2045, respectively. In addition, Hollister has selected an interim target of 64 percent below 1990 levels by 2040. These emissions targets are fully consistent with State guidance while reflecting the particular sources of GHG emissions in Hollister. **Table 9** shows these targets.

Table 9 Targets for Hollister CAP Study Area

Target Year	Target GHG Emissions	Description
2030	125,990 $MTCO_2e$	40 percent below 1990 levels
2040	75,988 $MTCO_2e$	64 percent below 1990 levels
2045	31,500 $MTCO_2e$	85 percent below 1990 levels

Carbon Neutral Target

California has set a State goal to achieve carbon neutrality by 2045. The State encourages local jurisdictions to take ambitious, coordinated climate action at the community scale that is consistent with and supportive of the State's climate goals while also reflective of a community's characteristics, goals, and resources. Under a carbon neutral target, the community pledges to aggressively reduce GHG emissions to a certain level or as close to zero as possible and offset the remaining GHG emissions. The community will still produce some GHG emissions, but these will be balanced out by removing GHGs from the atmosphere through carbon sequestration, carbon offsets, or similar carbon removal practices. The CAP will substantially reduce GHG emissions, meeting the targets shown above while also supporting achievement of carbon neutrality statewide. Additionally, the CAP includes strategies and actions to help implement local and regional sequestration activities that can support the State's goal of carbon neutrality.

Achieving the Targets: Existing and New Reduction Strategies

Progress Toward GHG Reduction Targets

To understand the level of action necessary to achieve the City's reduction targets, the CAP analyzes GHG emissions reductions from existing, planned, and new actions.

By first assessing GHG emissions reductions from existing State and local actions, the City can measure progress achieved and identify opportunities to further reduce emissions. These new strategies can further close the gap between projected GHG emission levels and the reduction targets and guide development and implementation of future programs. Each of the GHG reduction strategies assessed includes performance metrics and GHG emissions reductions associated with implementation of the measures in the Technical Data for Existing and Planned Activities section of **Appendix A**. The implementation matrix in Chapter 5 also provides actions for monitoring and evaluation of GHG reduction strategies.

State Initiatives to Reduce GHG Emissions

Since passing AB 32, the State has enacted regulations and programs to reduce GHG emissions. Although statewide in scope, these actions affect several sources of Hollister's emissions, so the local benefits of these State efforts can be "credited" to Hollister, even in cases where the community did not need to take any action. This CAP includes the local benefits from five State policies:

- **Renewable Portfolio Standard:** The Renewable Portfolio Standard (RPS) was first established in 2002 and has been amended multiple times, most recently in 2018 by SB 100. It requires all electricity providers in the State to obtain at least 33 percent of their electricity from eligible renewable resources by the end of 2030, and all their electricity from carbon-free (although not necessarily eligible renewable) resources by the end of 2045.
- **Clean Car Standards:** In 2002, California adopted AB 1493, the New Passenger Motor Vehicle Greenhouse Gas Emission Standards, or Pavley standard. It required a reduction in tailpipe GHG emissions from new vehicles produced from 2009 to 2015. In 2012, CARB adopted an extension of this policy, the Advanced Clean Car Standards, which requires more stringent reductions in tailpipe GHG emissions from vehicles produced from 2016 to 2025. In 2022, the State adopted the Advanced Clean Cars II standards, which applies to vehicles produced from 2026 to 2035, and requires that all new light-duty vehicles sold in California be zero emission by 2035. Similar standards, known as the Advanced Clean Trucks, Advanced Clean Fleets, and Innovative Clean Transit regulations, require GHG reductions for larger vehicles and organizations that operate vehicle fleets.
- **Title 24 Energy-Efficiency Standards:** California Code of Regulations, Title 24, Part 6, is California's energy-efficiency standards for new and renovated buildings, applied at the local level through the project review/building permit process. The standards are strengthened every three years. The most recent set of Title 24 standards went into effect on January 1, 2023, although the reductions shown from this policy include past, current, and anticipated future Title 24 standards.
- **Low Carbon Fuel Standard:** The Low Carbon Fuel Standard (LCFS) was adopted in 2009 and required a 10 percent reduction in the carbon intensity of all transportation and off-road equipment fuels by 2020.
- **The short-lived climate pollutants law (SB 1383):** SB 1383, approved in 2016, proposes a comprehensive strategy to reduce methane and other emissions of short-lived GHGs through regulations on dairy operations and urban landfills, including higher diversion rates of food waste from landfills.

Renewable Energy Emissions Reductions in 2045

As required by the State's RPS, all electricity sold in California must be carbon free by 2045. Consequently, future GHG reduction strategies that only reduce electricity use or increase renewable electricity supplies will show zero GHG reductions in 2045.

According to the forecast in **Table 10**, GHG emissions in the CAP Study Area are projected to increase by 93 percent between 2019 and 2045. However, when State actions are accounted for, GHG emissions increase by 15 percent between 2019 and 2045. **Table 10** shows the GHG emissions reductions resulting from State actions.

Table 10 GHG Emission Reductions from State Actions in CAP Study Area, 2019

GHG Emissions	2019 $MTCO_2e$	2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Percentage Change 2019- 2045
Emissions without State actions	244,750	382,520	442,030	472,970	93%
Reductions from RPS	0	321	746	1,439	
Renewable natural gas	0	3,200	9,700	12,300	
Reductions from Clean Car standards	0	45,930	81,450	91,220	
Reductions from Title 24	0	5,090	12,430	16,540	
Reductions from LCFS (off-road only)	0	47,023	56,557	61,094	
Reductions from SB 1383	0	6,100	7,250	7,820	
Reductions from all State actions	0	107,663	168,133	190,413	
Emissions with State actions	**244,750**	**274,860**	**273,910**	**282,560**	**15%**

ACHIEVING THE TARGETS: EXISTING LOCAL ACTIONS TO REDUCE GHG EMISSIONS

Regional and local initiatives help to further reduce Hollister's community-wide GHG emissions (see **Table 11**). The actions the City has already taken to reduce GHG emissions include:

- Partnership with 3CE, the default electricity provider in Hollister, to provide affordable renewable energy to community members.
- Water recycling program at the Hollister Water Reclamation Facility.
- Installation of residential and commercial solar energy systems in the community.
- Installation of EV charging stations.

Table 11 GHG Emission Reductions from Local Actions in CAP Study Area, 2019 to 2045

Number	Existing Action	2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$
1	Solar installations throughout the city.	Less than 10	Less than 10	Less than 10
2	3CE renewable energy portfolio	610	400	Less than 10
3	EV charger installations throughout the city.	Less than 10	Less than 10	Less than 10
	Total	**610**	**400**	**Less than 10**

Achieving the Targets: New GHG Emission Reduction Strategies

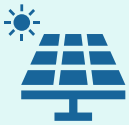
While GHG savings from existing State and local actions are significant, they are not sufficient to meet the City's GHG reduction targets. The CAP introduces new strategies to help Hollister meet these targets and achieve carbon neutrality by 2045. To identify strategies for achieving these goals, the project team began with the conservation, natural resources, and transportation policies in the City's General Plan. There were also opportunities to develop strategies to address new and emerging issues not covered in the General Plan. The project team developed the CAP strategies based on several sources, including:

- Past and recent GHG inventories and forecast.
- The existing and planned State, regional, and local accomplishments.
- Existing and revised policies in the General Plan.

The CAP introduces 33 strategies and recommended implementation actions to reduce emissions that are consistent with Hollister 2040 goals and policies relating to climate, energy, and natural resource conservation. These strategies align with the existing emergency response and recover framework provided in the EOP, the short-term hazard mitigation actions in the LHMP, and the long-term policies and programs in the Health and Safety Element.

These 33 strategies are organized by eight goals, listed here with their corresponding sectors:

Sustainable Energy and Resilience: Reduced energy use through use of energy-efficient appliances, lighting, and materials in our homes, businesses, and City facilities.



Carbon-Free Energy: Existing and new buildings, facilities, and operations are resilient and powered by carbon-free electricity or other low carbon, clean energy sources

Transportation: A connected and efficient transportation network that provides equitable access to low carbon motorized and GHG free non-motorized mobility options.

Off-road Equipment: Hollister encourages residents, businesses, and industries to electrify off-road equipment when feasible.

Solid Waste: Hollister residents, businesses, and visitors minimize waste sent to the landfill.

Water and Wastewater: The community maintains a sustainable supply of drinking water and efficient indoor and outdoor water use in homes, businesses, and operations.

Natural Resources and Agriculture: Preserve and expand natural resources and agricultural land.

Governance and Leadership: Work with regional partners to implement the CAP and take actions to increase community resilience against climate hazards.

Each strategy includes a description; the anticipated 2030, 2040, and 2045 GHG reductions achieved by the strategy at the projected performance level; and the recommended actions necessary for successful implementation.

Recommended actions represent the City's current understanding of best practices in achieving GHG emissions reductions and community equity, availability of technology, and local regulations, as well as the current State and federal regulatory environment. The implementation strategies presented in **Chapter 5** provide guidelines for City staff to follow when implementing GHG reduction strategies to track annual progress, while allowing flexibility to integrate new opportunities or expand programs when feasible.

Calculating Credit

This CAP uses a process called quantification to estimate the absolute number of GHG emissions savings associated with each existing and new GHG reduction strategy. Quantification uses activity data for each sector in the GHG inventory, such as VMT or kWh, and projected participation rates and the change in activity resulting from each strategy to calculate the net GHG emissions savings for each strategy. This approach ensures that the GHG reductions from the CAP strategies are tied to current and future activities that are occurring in the community.

Calculations for reduction in activity data come from tools and reports provided by State and federal agencies such as the US Environmental Protection Agency (EPA), the California Energy Commission, CARB, the California Air Pollution Control Officers Association (CAPCOA), the US Department of Energy (DOE), and the Monterey Bay Air Resources District (MBARD). If accurate data is not available from these sources, the quantification uses case studies from comparable communities and applicable scholarly research. Detailed information about how GHG emissions savings from each strategy are calculated appear in **Appendix A**.

The City was able to quantify GHG reductions for most of the strategies in the CAP. However, the savings from some strategies are not quantified due to lack of data and/or the lack of a reliable quantification method. These strategies are still expected to reduce GHG emissions, but exact emissions reductions cannot be accurately determined. These strategies are labeled "supportive".

This plan identifies GHG reductions for most strategies. However, there are a few that do not have a specific reduction level due to missing data or the lack of a reliable assessment method.

As stated previously, the State's RPS requirements mean that strategies that only reduce electricity use or increase renewable electricity supplies will show zero GHG reductions in 2045. However, local renewable energy systems and energy-efficiency strategies will continue to provide several benefits to the community, including lower electricity bills and increased resiliency against power disruptions, even if there are no measurable additional GHG reductions (see co-benefits section that follows).

The results of quantifying GHG reduction potential of the strategies in this CAP show that, with successful implementation of the strategies, Hollister can meet its 2045 emissions reduction targets. It is likely that new technologies, policies and regulations, personal and economic behaviors and preferences, and other factors t will emerge in future years that may contribute to additional GHG emission reductions in a way that cannot be accurately forecasted in the CAP at this time. Future updates to Hollister's CAP will be able to assess emerging trends more accurately, along with any unexpected changes in GHG emissions, and will revise Hollister's GHG emission reduction strategy as appropriate.

Co-benefits of GHG Reduction Strategies

In addition to reducing GHG emissions, these strategies provide co-benefits that improve mobility, equity, and the quality of the natural environment. Some co-benefits resulting from the GHG reduction strategies include energy bill savings for households and businesses, improved air quality, increased water and energy conservation, and increased demand for green jobs. This plan highlights 12 co-benefits that a GHG reduction strategy can provide, although strategies may provide additional benefits beyond those identified here. The 12 co-benefits are listed below. The description of each strategy also identifies the co-benefits of the strategy.

Co-benefits assessed for each climate action strategy

Conserves Natural Resources

Promotes Technological Innovation

Promotes Community Resilience

Improves Air Quality

Improves Habitability

Promotes Economic Savings

Encourages Active Mobility

Supports Workforce Development

Promotes Social Equity

Supports Local Agriculture

Supports the Local Economy

Promotes Local Governance and Leadership

Sustainable Energy

Goal: Reduced energy use through use of energy-efficient appliances, lighting, and materials in our homes, businesses, and City facilities.

The Sustainable Energy category includes energy-efficiency measures for residential, nonresidential, and government buildings. Most buildings use electricity and natural gas to operate appliances and equipment. While sources of electricity have become much cleaner over time and will continue to become cleaner due to State law and utility policies, the GHG emissions associated with fossil fuels, such as natural gas, have remained constant. Hollister strives to increase community-wide participation rates in efficient appliance rebate programs, energy-efficiency retrofits, and weatherization programs. Households, businesses, and government operations can benefit from retrofits that improve energy efficiency of the building envelope, especially in older buildings, through improved comfort and energy cost savings. For more details about implementation, refer to **Chapter 5**, CAP Implementation Strategy.

Hollister contains 10,660 residential units in the city limits and 1,860 units in the SOI. The average Hollister home uses about 4,000 kWh of electricity and 420 therms of natural gas per year.

Hollister contains 550 businesses within the city limits and 4 within the SOI. The average business uses 171,750 kWh of electricity and 3,600 therms of natural gas per year.

Strategy 1 MUNICIPAL ENERGY EFFICIENCY AND CONSERVATION

Existing and new City-owned and operated facilities achieve optimal energy conservation and efficiency in their performance.

Strategy 1 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	10	20	20
SOI	Less than 10	Less than 10	Less than 10

STRATEGY 1 CO-BENEFITS:

Conserves Natural Resources

Promotes Cost Savings

Improves Air Quality

Promotes Technological Innovation

STRATEGY 1 ACTIONS

1-1: Require Cal Green Tier 1 compliance for all new City buildings.

1-2: Retrofit City-owned streetlights and traffic lights with LED fixtures by 2030.

1-3: Conduct benchmarking of energy use at all City-owned and operated facilities.

1-4: Audit existing City buildings and facilities to identify opportunities for energy conservation and efficiency upgrades or retrofits that optimize energy performance of buildings and operations and save the City energy and operating costs over time.

1-5: Conduct a municipal operations inventory to identify opportunities for energy and resource conservation within the City's vehicle usage, employee commuting, water and wastewater use and generation, and solid waste disposal.

1-6: Add energy-efficiency improvement projects to the City's Capital Improvement Program annually and complete energy-efficiency capital projects on the list with support from San Benito County, Central Coast Community Energy (3CE), Pacific Gas and Electric Company (PG&E), and other partners, as appropriate.

Strategy 2 SUSTAINABLE COMMUNITY-WIDE BUILDING STANDARDS

Expand and promote residential energy-efficiency of existing and new market rate homes in Hollister.

Strategy 2 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	1,210	3,170	4,900
SOI	70	110	160
CAP Study Area	1,280	3,280	5,060

Strategy 2 Key Metrics			
Metric	2030	2040	2045
Number of residential units retrofit	2,290	4,570	6,860

STRATEGY 2 CO-BENEFITS:

Conserves Natural Resources

Improves Habitability

Promotes Workforce Development

Supports the Local Economy

STRATEGY 2 ACTIONS

2-1: Ensure the City's existing design review guidelines, as applicable, account for energy-efficient design consistent with the California Building and Energy Codes and requirements.

2-2: Evaluate the effectiveness of the City's current land use, energy, water use, stormwater management, and design codes and permitting processes in to achieve energy-efficient, carbon free, and sustainable design and operations and update applicable codes, programs, and processes as needed to improve building performance as part of the City's building and development review processes.

2-3: Support AMBAG Energy Watch and San Benito County efforts to conduct outreach and education with local contractors to ensure they are kept up to date on local code requirements and energy-efficient appliances and devices.

2-4: Continue to require residential projects, including renovations, to meet Title 24 energy-efficiency requirements, and, where possible, require structural design to make use of natural heating and cooling, as well as landscaping design to reduce the heat island effect.

Strategy 3 RESIDENTIAL ENERGY EFFICIENCY AND CONSERVATION

Expand and promote residential energy-efficiency of existing and new below market-rate homes in Hollister.

Strategy 3 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	510	1,330	2,500
SOI	30	70	140
CAP Study Area	540	1,400	2,640

Strategy 3 Key Metrics			
Metric	2030	2040	2045
Number of low-income residential units retrofit	1,110	3,320	6,640

STRATEGY 3 CO-BENEFITS:

Conserves Natural Resources

Improves Habitability

Promotes cost savings

Promotes technological innovation

STRATEGY 3 ACTIONS

3-1: Promote and support efforts of Central Coast Energy Services (CCES) and other similar community-based organizations and local contractors to provide affordable energy-efficiency retrofits and low- to no-cost weatherization services to low-income homeowners and renters.

3-2: Seek grant funding for weatherization programs that support low-income households.

3-3: Develop an inventory of residential buildings in the city that were constructed prior to 1980 to identify the greatest opportunities for energy efficiency and conservation improvements and targeted outreach and education campaigns. Prepare information materials targeted to these buildings and engage with the owners of the buildings to promote energy-efficiency upgrades.

3-4: Support and promote programs and incentives for installation of all-electric appliances in new residential construction and remodels by partnering with 3CE AMBAG Energy Watch.

3-5: Partner with San Benito County Water District and San Benito County to establish or expand existing recycling and appliance rebate programs for energy- and water-efficient washing machines and electric, including heat pumps and dryers.

3-6: Support AMBAG Energy Watch, San Benito County, 3CE, and other partners with their outreach and education campaigns, including, but not limited to, promoting programs through City communication and promotion tools, engaging in person or online with homeowners and contractors, maintaining a City webpage of resources, and sharing permitting data to inform targeted outreach.

Strategy 4 NONRESIDENTIAL ENERGY CONSERVATION AND EFFICIENCY

Support energy conservation and efficiency improvements in nonresidential uses, including businesses, office complexes, commercial and retail buildings, shopping centers, medical facilities and hospitals, warehouses, and industrial facilities.

Strategy 4 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	980	2,210	3,320
SOI	20	40	50
CAP Study Area	1,000	2,250	3,370

Strategy 4 Key Metrics			
Metric	2030	2040	2045
Number of nonresidential units retrofit	230	450	670

STRATEGY 4 CO-BENEFITS:

Conserves Natural Resources

Improves Habitability

Promotes economic savings

Promotes technological innovation

STRATEGY 4 ACTIONS

4-1: Support existing 3CE and AMBAG Energy Watch programs by publicizing energy-efficiency programs, technical assistance, and financing opportunities for businesses and nonprofit organizations.

4-2: Encourage businesses to conduct energy audits. Use the business license process (new and renewals) as an opportunity to share information about incentives for energy efficiency improvements.

4-3: Support outreach to small business owners by partnering with the Cal Coastal Small Business Development Center.

4-4: Expand energy-saving opportunities and assistance for large and small commercial and industrial businesses by working with AMBAG Energy Watch, 3CE, and nonprofit organizations.

4-5: Expand the distribution of free or subsidized energy and water efficiency and conservation toolkits, devices, and services to residents and businesses citywide through partnerships with public libraries, AMBAG Energy Watch, and local nonprofit organizations.

Photo credit: PlaceWorks.

Carbon-Free Energy

Goal: Existing and new buildings, facilities, and operations are resilient and powered by carbon-free electricity or other low carbon, clean energy sources.

Electricity is fundamental to life and well-being in Hollister because it powers homes, businesses, and essential facilities, such as hospitals, schools, water treatment plants, police stations, and fire stations. Hollister aims to reduce its reliance on fossil fuels by increasing municipal and community-wide participation in 3CE's low carbon electricity services, promoting the phase-out of natural-gas appliances, and encouraging distributed generation of renewable energy. Buildings can be retrofitted or newly constructed to be mostly- or all-electric to reduce GHG emissions, improve energy resilience, and improve indoor air quality. In accordance with this plan, Hollister plans to modernize existing public facilities, build new facilities equipped with electricity-generating solar panels, and encourage community residents and businesses to invest in solar energy systems to promote energy resilience in the face of power shortages, PSPS events, and natural disasters. Larger properties or more energy-intensive uses can use ground-mounted solar energy systems or a combination of renewable energy technologies to meet all or part of their energy demand. The strategies in the Carbon-Free Energy category support Hollister 2040 General Plan Update's Carbon-Free Energy policy.

Strategy 5 On-site solar energy for new development

Ensure new large nonresidential development includes on-site renewable energy to support the site's energy needs by promoting solar photovoltaic panels or other appropriate on-site renewable energy generation systems for the following types of projects:

- New commercial and office buildings, or existing commercial and office building expansions greater or equal to 45,000 square feet in size.
- New industrial or existing industrial buildings expansions greater than or equal to 99,000 square feet in size.

Strategy 5 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	Less than 10	Less than 10	Less than 10
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	Less than 10	Less than 10	Less than 10

Strategy 5 Key Metrics			
Metric	2030	2040	2045
Solar installations on new nonresidential buildings	150	290	390

STRATEGY 5 CO-BENEFITS:

Conserves Natural Resources

Promotes technological innovation

Supports the Local Economy

STRATEGY 5 ACTIONS

5-1: Prepare, adopt, and implement a reach code that requires certain large non-residential development to install and use renewable and carbon free energy generated and stored, as appropriate, on-site. At a minimum, this code will apply to new commercial and office buildings, or existing commercial and office building expansions greater or equal to 45,000 square feet in size and new industrial or existing industrial buildings expansions greater than or equal to 99,000 square feet in size.

5-2: Support outreach and education activities by community and regional partners and supplement with City-specific outreach as needed to raise awareness about the benefits of solar energy for businesses, promote incentives, and increase installations of nonresidential solar PV systems in Hollister.

5-3: Establish a solar permitting webpage on the City's website that summarizes requirements for installing solar PV systems to ensure the information is easily accessible to the public. Provide handouts at City Hall to promote the website.

5-4: Update City permit tracking as appropriate to track size and number of renewable energy installations.

5-5: Provide incentives and rebates for solar PV systems to encourage increased local use of renewable energy.

5-6: Work with San Benito County, 3CE, and regional partners to explore opportunities to provide financial incentives to residents and businesses purchasing small-scale on-site battery energy storage systems for new development.

Strategy 6 MUNICIPAL RENEWABLE AND CARBON-FREE ENERGY

Transition municipal operations and buildings to local, renewable, and resilient energy sources.

Strategy 6 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	Less than 10	Less than 10	Less than 10
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	Less than 10	Less than 10	Less than 10

Strategy 6 Key Metrics			
Metric	2030	2040	2045
Number of new solar installations on municipal property	5	10	15

STRATEGY 6 CO-BENEFITS:

Conserves Natural Resources

Promotes technological innovation

Supports the Local Economy

STRATEGY 6 ACTIONS

6-1: Conduct a feasibility study to identify opportunities and benefits of constructing and operating solar or other renewable, clean energy generation technology on or at existing City-owned properties. The study should consider optimized conservation and technology as well as new uses, including generating power for vehicle charging stations, supporting energy storage, and new City uses.

6-2: Install back-up power sources at City-owned community facilities, prioritizing solar energy battery storage and microgrid systems where feasible.

6-3: Partner with regional agencies and jurisdictions to establish a regional microgrid agency to support 3CE in developing local microgrids for energy resilience.

6-4: Seek grant funding to conduct a feasibility study for a microgrid to serve public facilities in Hollister.

Strategy 7 COMMUNITY-WIDE RENEWABLE, CARBON-FREE, AND RESILIENT ENERGY SYSTEMS

Promote on-site renewable energy production and storage, and community-wide use of 3CE's renewable energy service in existing Hollister homes and businesses.

Strategy 7 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	Less than 10	Less than 10	Less than 10
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	Less than 10	Less than 10	Less than 10

Strategy 7 Key Metrics			
Metric	2030	2040	2045
New solar installations	1,180	2,950	3,540

STRATEGY 7 CO-BENEFITS:

Conserves Natural Resources

Promotes Community Resilience

Supports the Local Economy

Promotes Technological Innovation

STRATEGY 7 ACTIONS

7-1: Develop and implement a community outreach and education program that promotes the benefits and incentives for renewable energy and energy resilience and increase awareness of the benefits and incentive programs for rooftop solar energy and on-site energy storage systems. This includes developing a City webpage to inform residents and business owners about the permitting process for residential and commercial solar energy systems and links to partner pages for more details about incentive programs.

7-2: Work with PG&E on its efforts to prepare the community for power outages through battery storage programs and incentives, including the Self-Generation Incentive Program and related energy resilience efforts.

7-3: Work with San Benito County, 3CE, and regional partners to explore opportunities to provide financial incentives to residents and businesses purchasing small-scale on-site battery energy storage systems for existing development.

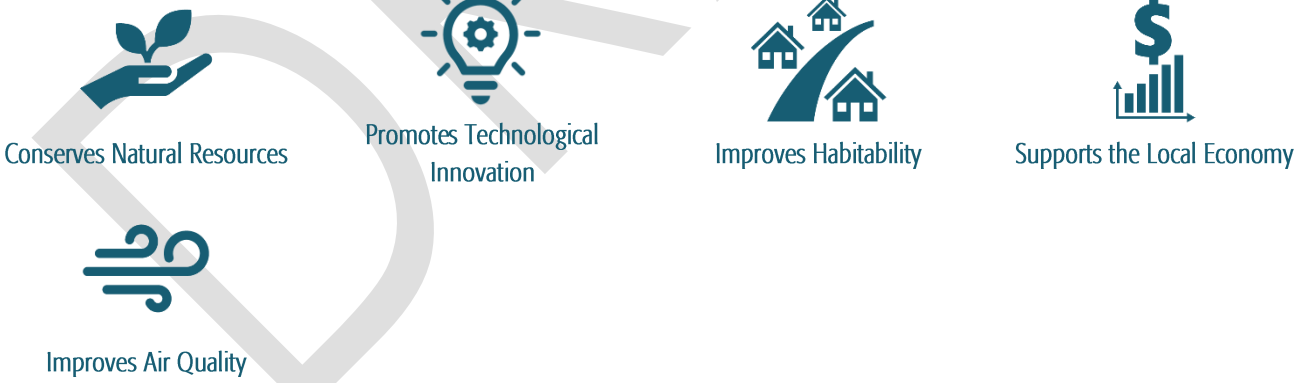
Strategy 8 ELECTRIFICATION

Promote and incentivize the phase-out of gas appliances in existing homes and businesses throughout the community to advance GHG reductions, increase energy efficiency, and protect public safety and environmental health.

Strategy 8 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	8,820	15,570	16,480
SOI	400	760	830
CAP Study Area	9,220	16,330	17,310

Strategy 8 Key Metrics			
Metric	2030	2040	2045
Number of residential units undergoing electrification	3,220	7,500	9,110
Number of nonresidential units undergoing electrification	140	280	370

STRATEGY 8 CO-BENEFITS:



STRATEGY 8 ACTIONS

8-1: Support education and outreach to increase participation in electric appliance rebate programs offered by 3CE, AMBAG Energy Watch, and other providers with a focus on contractors and residents of older properties (constructed in or before 1980).

8-2: Identify and remove any existing code, permitting, or other City requirements that serve as barriers to all-electric conversions of existing homes and businesses and assess opportunities to provide incentives and streamline the permitting process through bundled projects and one-stop permits.

8-3: Update the City's permit tracking system as appropriate to track electrification improvements.

8-4: Review City-supported weatherization and energy-efficiency programs and requirements, if applicable, to ensure they support all-electric, high-efficiency appliances.

8-5: Work with local contractors to increase public awareness about and participation in existing incentive programs that promote replacement of natural gas appliances with electric space and water heating systems.

8-6: Explore and adopt, as feasible, local building code amendments requiring replacement of natural gas-powered space and water heaters with electric models at end of life during the 2022 and successive Buildings Standards Code updates.

8-7: Work with local and regional partners to identify ways to decrease the financial burden of electrification of low-income households and rental units, including paying up-front costs or identification of financial incentives.

Strategy 9 BUILDING CODE UPDATES AND INCENTIVES FOR ELECTRIFICATION OF NEW BUILDINGS

By 2026, all new development to be "all electric," with minor exceptions for appropriate facilities, which may include restaurants, manufacturing, and industrial uses.

Strategy 9 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	2,010	7,020	8,050
SOI	80	270	320
CAP Study Area	2,090	7,290	8,370

Strategy 9 Key Metrics			
Metric	2030	2040	2045
Number of new residential units built to be all-electric	990	5,890	8,130
Number of new nonresidential units built to be all-electric	60	240	330

STRATEGY 9 CO-BENEFITS:

STRATEGY 9 ACTIONS

9-1: Identify and partner with local industry organizations, community-based organizations, and regional partners to inform the preparation of an All-Electric Reach Code for new development, which would leverage the use of the 3CE's Reach Code Incentive Program to offset some costs associated with adopting a Reach Code.

9-2: Seek grant funding for electrification of affordable housing, such as the California Energy Commission's (CEC's) Building Initiative for Low Emissions Development (BUILD) program (SB 1477).

9-3: Promote public awareness about and participation in existing incentive programs that promote electric space and water heating systems to upgrade and replace natural gas appliances.

Transportation

Goal: A connected, and efficient transportation network that provides equitable access to low carbon motorized and GHG free non-motorized mobility options.

The personal automobile has long dominated Hollister's transportation landscape. While convenient, private vehicle travel releases significant volumes of GHGs, emits air pollutants, degrades roads, and poses safety concerns for the community. Promoting the expansion of pedestrian and bicycle infrastructure, especially near schools, business districts, and employment centers, makes it easier for all residents to participate in public life. Moreover, greater choice in transportation modes can promote public health and reduce fuel costs and time lost in traffic. This CAP aims to reduce transportation emissions by promoting EV adoption through municipal fleet electrification, community-wide EV charging stations, and rebates for EV purchases, as well as promoting public transit, carpooling, and active transportation. The strategies in the Transportation category support the Hollister 2040 General Plan Update's Infill and Mixed-Use Development policy, Low-Emission/No Carbon Transportation policy, and Municipal Fleet Alternative Fuel Vehicles policy.

- As of 2021, there were about 50,340 registered light-duty vehicles within Hollister, approximately 420 of which were all-electric.
- 330 EV sales occurred within Hollister in 2022.
- As of 2022, San Benito County contained approximately 40 publicly accessible EV chargers.
- The average Hollister resident drove 6,500 miles in 2019.

Strategy 10 Vehicle Miles Traveled

Reduce community-wide VMT and associated transportation-related emissions per resident and employee.

Strategy 10 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	5,170	8,380	12,120
SOI	140	280	420
CAP Study Area	5,310	8,660	12,540

Strategy 10 Key Metrics			
Metric	2030	2040	2045
Employees participating in commute trip reduction programs	1,010	2,380	3,840
Residents in transit-oriented developments	770	3,930	7,890
Jobs in transit-oriented developments	580	1,880	3,350

STRATEGY 10 CO-BENEFITS:

Improves Air Quality

Supports the Local Economy

STRATEGY 10 ACTIONS

10-1: Promote transit as a viable option for local and regional trips.

- Collaborate with the San Benito Council of Governments, Caltrans, and San Benito County to ensure efficient and accessible public transit services are available to all residents, workers, and visitors.
- Support further integration and overall expansion of public transit service within the city, region, and to and from Salinas, Central Coast communities, and Silicon Valley communities.
- Promote transit-friendly street design by encouraging features such as bus stop shelters, street lighting, bus-only signal phases, curb extensions, and wayfinding.

10-2: Collaborate with the San Benito Council of Governments, Caltrans, and San Benito County to develop, implement, and maintain park-and-ride facilities.

10-3: Assess the feasibility of incorporating infrastructure to support micro-mobility devices in the downtown or in other locations where such a program could have success.

10-4: Aid new and existing multifamily and commercial developments in implementing and expanding opportunities for transit-oriented development and affordable housing.

10-5: Encourage employers to provide ridership programs, public transit passes, and offer telecommuting to employees. Regularly assess and update incentives to respond to employee needs.

10-6: Provide transportation-demand incentives to City employees, including telecommuting as a viable option to reduce VMT and GHGs, without compromising the ability to provide public services.

10-7: Collaborate with regional partners to explore the feasibility of a shuttle between Hollister and Pinnacles National Park during high-traffic season.

Strategy 11 Active Transportation Infrastructure

Ensure the community has safe and connected opportunities for bicycling and walking, especially between and within residential areas and commercial areas, parks, schools, job centers, and transit centers.

Strategy 11 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	980	1,030	1,090
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	980	1,030	1,090

Strategy 11 Key Metrics			
Metric	2030	2040	2045
Miles of new bike lanes	10.6	21.2	26.5
Total milage of pedestrian facility improvements	1.4	2.8	3.5

STRATEGY 11 CO-BENEFITS:

Encourages Active Mobility

Promotes Social Equity

STRATEGY 11 ACTIONS

11-1: Develop and adopt a Complete Streets Plan to support safety, accessibility, and equity in multi-mobility.

11-2: Conduct an assessment of the City's existing sidewalk and prepare a list of sidewalk improvement projects, with priorities to complete gaps and connectivity in existing sidewalks, provide safe connections between residential areas and key destinations like parks, schools, places of employment, and shopping centers.

11-3: Improve street design to include safe, accessible, and interconnected pedestrian routes and bicycle paths in the downtown area and near existing and planned commercial centers and job centers. Develop street design guidelines to ensure consistency and safety of pedestrian and bicycle facilities.

11-4: Improve bike and pedestrian connections as identified in the 2019 Hollister Parks Facilities Master Plan.

11-5: Require bicycle parking at new commercial centers, job centers, and large-scale mixed-use developments, and ensure all City facilities provide safe and secure bicycle parking.

11-6: Promote incentive programs to fund the purchase of bicycles or electric-assist bicycles for low-income community members.

11-7: Support community-led bicycle safety training and materials for drivers, bikers, and pedestrians.

11-8: Coordinate with Caltrans and other agencies to ensure future Caltrans-funded projects in Hollister consider pedestrian and bicycle circulation improvements to incentivize active transportation trips.

11-9: Facilitate and support the development of shared micromobility programs in Hollister, including:

- Amending the City's municipal code to regulate parking for scooter and bike-share programs.
- Developing and implementing regulations specifying right-of-way rules for e-bikes and e-scooters.
- Identifying accessible and equitable locations for micromobility hubs.
- Marketing micromobility programs across the community.
- Working with service providers to keep micromobility safe and affordable.

Strategy 12 Safe Routes to Schools

Support regional agencies in ensuring that K-12 students in Hollister have pollution-free, safe, and accessible modes to get to and from school.

STRATEGY 12 CO-BENEFITS:

Encourages Active Mobility

Promotes Social Equity

STRATEGY 12 ACTIONS

12-1: Partner with school districts to promote "walk pools" or "walking buses" to increase the number of students who walk to school.

12-2: Work with regional partners to promote incentives to provide bicycles to low-income youth in the community.

12-3: Establish a committee in the city focused on implementing Safe Routes to Schools projects and programs.

12-4: Work with regional partners to offer bicycle safety and pedestrian education classes at schools.

12-5: Conduct walkability scores of residential neighborhoods, starting with neighborhoods within a 1-mile radius of a public or private school. Use the results to inform identification of City projects that would improve or provide new safe, comfortable, and connected pedestrian networks between residential areas and schools.

Strategy 12 is not quantifiable; however, it supports community-wide GHG emissions reductions.

Strategy 13 TRANSIT ACCESS

Increase overall transit ridership and improve access to light-rail transit for commuting to Silicon Valley and Bay Area job centers.

Strategy 13 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	12,780	23,950	30,530
SOI	280	530	750
CAP Study Area	13,060	24,480	31,280

Strategy 13 Key Metrics			
Metric	2030	2040	2045
Number of new transit trips per year	79,150	215,680	250,290

STRATEGY 13 CO-BENEFITS:

Encourages Active Mobility

Promotes social equity

Supports the Local Economy

STRATEGY 13 ACTIONS

13-1: Work with Caltrain or San Benito County Express to offer express bus service from Hollister to Gilroy to provide a public transit link to Caltrain service and Bay Area employment centers.

13-2: Develop marketing materials to promote San Benito County Express regional transit services, to be distributed at public facilities, workshops, and electronically on the City's website and social media channels.

13-3: Cooperatively work with Councils of Government (COG), Caltrans, and San Benito County to develop, implement, and maintain public transit services.

13-4: Support development of a centrally located multi-modal transit hub to encourage transit ridership, improve connectivity, and build on existing services while reducing demand for parking and vehicle trips.

Strategy 14 ELECTRIC VEHICLES

Promote adoption of electric and clean-fuel vehicles and expansion of public and private EV charging infrastructure.

Strategy 14 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	23,670	84,820	125,150
SOI	700	2,820	4,360
CAP Study Area	24,370	87,640	129,510

Strategy 14 Key Metrics			
Metric	2030	2040	2045
New light-duty EVs	12,400	38,200	52,380

STRATEGY 14 CO-BENEFITS:

Improves Air Quality

Promotes Technological Innovation

STRATEGY 14 ACTIONS

14-1: Install EV charging stations equitably throughout the community at City facilities, parks, and parking lots.

14-2: Review the City's municipal code to identify barriers and opportunities to accelerate the use of EVs by Hollister's residents and employees, and update the code as needed. This review should ensure parking areas, gas stations, and fossil-fuel dependent transportation-related uses provide low and no carbon fuel options.

14-3: Adopt an EV reach code with minimum requirements for parking spaces with EV charging capacity for multifamily residential buildings and nonresidential buildings.

14-4: Provide dedicated parking spaces for electric or low carbon car-share vehicles at park-and-ride lots, public transit centers, and core commercial and business areas.

14-5: Participate in 3CE's Central Coast Incentive Project and other existing or future programs.

14-6: Work with San Benito County Express to ensure equitable access to electric or low carbon carshare vehicles.

14-7: Collaborate with regional partners, such as 3CE and the Monterey Bay Air Resources District, among others, to support accelerated adoption of EVs through the provision of incentives and public outreach campaigns.

Strategy 15 LOW CARBON MUNICIPAL VEHICLES, SCHOOL BUSES, AND TRANSIT OPTIONS

Expand the municipal EV fleet and promote low carbon transportation options.

STRATEGY 15 CO-BENEFITS:

Improves Air Quality

Promotes Social Equity

Supports Technological Innovation

STRATEGY 15 ACTIONS

15-1: Work with regional public transit partners to increase the adoption of electric buses and alternative fueled buses.

15-2: Support the 3CE's Zero-Emission School Bus Program, the Monterey Bay Air Resources District, and other regional partners, to electrify school buses used for Hollister-area schools.

15-3: As part of preparation of a GHG emissions inventory of City Operations, identify present and future GHGs released by the City fleet and by contractor vehicles used to provide municipal services, including collection of trash, recycling, and compostable materials.

15-4: Transition the municipal vehicle fleet to hybrid, electric, or clean fuel vehicles to the greatest extent possible. Incorporate an "electric vehicles first" policy into the City's vehicle replacement program to support this transition.

15-5: Install EV chargers at all City facilities as needed to provide sufficient chargers to City electric fleet vehicles.

Instead of being quantified as a stand-alone strategy, GHG emissions reductions for this strategy were quantified at the community-wide scale. As a result, there are no GHG reductions, assumptions, or performance targets specific to municipal operations. For the corresponding community-wide strategy, which includes municipal operations, refer to Strategy 14.

Strategy 16 Car Share Program

Consider developing an EV Car-Share Program to provide an alternative for car ownership.

Strategy 16 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	650	820	900
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	650	820	900

Strategy 16 Key Metrics			
Metric	2030	2040	2045
Number of EVs in Car Share Program	20	30	35

STRATEGY 16 CO-BENEFITS:

Improves Air Quality

Promotes Social Equity

Supports Technological Innovation

STRATEGY 16 ACTIONS

16-1: Conduct a feasibility study of different car-share programs, such as a car-share program with dedicated parking spaces and "free-floating" car share, to be followed by a citywide pilot program.

16-2: Partner with San Benito County and neighboring jurisdictions and discuss opportunities for car-share programs with regional car-share operators.

16-3: Incentivize car-share program use by providing special parking privileges for car share vehicles and providing EV charging stations at dedicated parking spaces.

16-4: Consider strategies to overcome barriers to participating in and accessing car-share priority locations, including providing information in multiple languages and prioritizing locations near environmental justice communities and in easily accessible locations.

Off-Road Equipment

Goal: Hollister encourages residents, businesses, and industries to electrify off-road equipment when feasible.

Off-road equipment is used in many important sectors of the Hollister economy, such as construction and landscaping. The use of off-road equipment contributes to GHG emissions, air pollution, and noise levels in Hollister. By encouraging the transition to electric off-road equipment, Hollister can improve quality of life and reduce air pollution while reducing GHG emissions.

Strategy 17 ELECTRIFICATION OF CONSTRUCTION AND LANDSCAPING EQUIPMENT

Promote and incentivize the transition to electric construction and landscaping equipment.

Strategy 17 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	4,830	11,460	16,560
SOI	160	100	130
CAP Study Area	4,990	11,560	16,690

Strategy 17 Key Metrics			
Metric	2030	2040	2045
Percentage of construction equipment converted to electric	30%	60%	80%
Percentage of landscaping equipment converted to electric	40%	65%	80%

STRATEGY 17 CO-BENEFITS:

Improves Air Quality

Promotes Technological Innovation

STRATEGY 17 ACTIONS

17-1: Promote the health and safety benefits of battery-operated or electric-powered landscaping equipment and collaborate with regional partners such as the Monterey Bay Air Resources District and 3CE to identify and provide incentives to support replacement of gas-powered landscaping equipment.

17-2: Develop and implement a ban on gas-powered leaf blowers.

17-3: Support State and regional efforts to replace diesel-powered construction and landscaping equipment with electric equipment.

17-4: Conduct targeted outreach to local construction and landscaping companies to raise awareness about and increase participation in available electric equipment rebate programs.

17-5: Require hybrid or clean-fuel construction and landscaping equipment in City contracts.

Solid Waste

Goal: Hollister residents, businesses, and visitors minimize waste sent to the landfill.

Many materials, including food, paper products, and wood, release GHGs as they decompose. By reducing the volume of waste that community members send to landfills, Hollister can significantly reduce waste-based GHG emissions. Waste reduction can take a variety of forms, from reducing the amount of packing used in food service and retail products, as envisioned in Hollister 2040 General Plan Update's Zero-Waste Community policy, to reimagining alternative uses for items that might otherwise be considered garbage. For materials that do end up in landfills, emissions from decomposing waste can be captured and used for electricity, offsetting emissions from electricity use for facility operations.

Strategy 18 REDUCE COMMUNITY-WIDE WASTE GENERATION

Promote programs and behavioral shifts to reduce community-wide consumption and generation of trash sent to landfills.

Strategy 18 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	2,860	5,650	9,750
SOI	110	240	410
CAP Study Area	2,970	5,890	10,160

Strategy 18 Key Metrics			
Metric	2030	2040	2045
Reduction in solid waste generation	15%	25%	40%

STRATEGY 18 CO-BENEFITS:

Conserves Natural Resources

STRATEGY 18 ACTIONS

18-1: Work with Recology, San Benito County Waste Management Regional Agency, and community partners to establish a source-reduction program and associated outreach and education campaign that promotes options to rethink, refuse, reduce, reuse, regenerate, recycle, and recover materials and work toward a zero-waste community goal.

18-2: Work with waste haulers and regional agencies to encourage efforts to promote recycling and composting of organic materials.

18-3: Establish sharing, exchange, and reuse program(s), including fix-it clinics, swap events, second-hand markets, and shop local campaigns by collaborating with community and regional partners.

18-4: Work with San Benito County to require the recycling of demolition materials or the use of recycled materials in new construction, as feasible.

18-5: Continue to implement the City's purchasing preference for products containing recycled materials, as described in Section 3.06.280 of the Hollister Municipal Code.

18-6: Develop and adopt an ordinance to prohibit specific types of single-use or disposable plastics, particularly for use by restaurants, caterers, and other commercial kitchens.

18-7: Engage with businesses and industry to encourage the purchase and use of recycled materials where possible.

18-8: Encourage the community to participate in waste exchanges and used goods resale programs.

Strategy 19 RECYCLING AND COMPOSTING EDUCATION

Publicize Recology's composting services and educational resources to homes and businesses in Hollister.

Strategy 19 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	780	930	1,500
SOI	30	40	60
CAP Study Area	810	970	1,560

Strategy 19 Key Metrics			
Metric	2030	2040	2045
Tons of solid waste reduced	1,820	2,160	3,500

STRATEGY 19 CO-BENEFITS:

Conserves Natural Resources

STRATEGY 19 ACTIONS

19-1: Support San Benito County and Recology's existing programs by publicizing information about composting services for homes and businesses through the city's website, mailers, social media, and other communication channels.

19-2: Work with Recology to ensure residents and businesses have access to compost bins.

19-3: Work with local and regional partners to ensure each residence in the city is provided with curbside composting pursuant to SB 1383.

19-4: Require composting and other food waste diversion techniques at restaurants citywide.

19-5: Require composting at City facilities and at public events requiring City approval.

Strategy 20 METHANE CAPTURE AT LANDFILLS

Support efforts to reduce methane emissions from regional landfills.

Strategy 20 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	3,080	6,400	8,920
SOI	120	270	380
CAP Study Area	3,200	6,670	9,300

STRATEGY 20 CO-BENEFITS:

Conserves Natural Resources

STRATEGY 20 ACTIONS

20-1: Encourage efforts of the John Smith Road Landfill to install or enhance existing methane capture technology and associated monitoring systems with a goal of increasing the methane capture rate to the greatest extent feasible.

20-2: Encourage the use of captured methane for flaring or generation of electricity to offset fossil fuel energy use and reduce GHG emissions.

Water and Wastewater

Goal: The community maintains a sustainable supply of drinking water and efficient indoor and outdoor water use in homes, businesses, and operations.

The average Hollister resident uses 16,760 gallons of water per year.

Water conservation reduces emissions by reducing the amount of energy needed to process, heat, and deliver water. In addition to saving energy, water conservation and efficiency helps protect one of California's most precious resources and helps Hollister be more resilient to drought and water shortages. Meanwhile, individual homes and businesses benefit from reduced utility costs. The CAP also includes strategies to increase efficiency of water and wastewater treatment processes, which can reduce the amount of electricity required to operate water treatment facilities, further reducing GHG emissions in the water and wastewater sector.

HOLLISTER WATER RECLAMATION FACILITY

The Hollister Water Reclamation Facility, owned by the City and operated by Veolia North America, is responsible for treating domestic, commercial, and industrial wastewater. It generates recycled water used for agricultural production (including horticultural crops such as lettuce and tomatoes), park irrigation, airport landscaping, and groundwater recharge. Water recycling conserves water by reducing community demand on limited surface water and saves energy used in the sourcing and distribution of freshwater.

Strategy 21 REDUCE COMMUNITY-WIDE WATER USE

Reduce water use in the community through water conservation, water-efficient retrofits, water-wise landscaping, graywater, and recycled water programs.

Strategy 21 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	280	410	530
SOI	10	20	20
CAP Study Area	290	430	550

Strategy 21 Key Metrics			
Metric	2030	2040	2045
Reduction in water use (million gallons)	310	360	430

STRATEGY 21 CO-BENEFITS:

Conserves Natural Resources

STRATEGY 21 ACTIONS

21-1: Work with Sunnyslope and San Benito County Water District to develop and implement a water conservation and storage plan to ensure sustainable water supply as droughts become more frequent.

21-2: Require a Plumbing Retrofit Water Conservation Certification in accordance with SB 407 upon sale of residential properties.

21-3: Provide educational resources and incentives to increase the planting of residential and commercial drought-tolerant landscaping.

21-4: Distribute resources from San Benito County Water District to educate homeowners and business owners about water-efficiency and water reuse appliances and devices and existing incentive programs.

21-5: Collaborate with regional partners to provide incentives for graywater, rainwater storage systems, and other on-site water reuse systems.

Strategy 22 REDUCE MUNICIPAL WATER USE

Reduce municipal water use.

Strategy 22 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	Less than 10	Less than 10	Less than 10
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	Less than 10	Less than 10	Less than 10

STRATEGY 22 CO-BENEFITS:

Conserves Natural Resources

STRATEGY 22 ACTIONS

22-1: Require water-efficient retrofits in municipal buildings and facilities through implementation of requirements for water-conserving plumbing fixtures and other techniques.

22-2: Implement drought-tolerant landscaping and/or water-efficient irrigation systems for public parks and facilities.

22-3: Work with the Regional Domestic Wastewater Treatment Plant (RDWWTP), the local wastewater treatment provider, to upgrade and replace wastewater treatment and pumping equipment with more energy-efficient equipment as feasible.

22-4: Assess and upgrade City-owned water pumping and treatment equipment, as needed, to increase energy efficiency and save energy costs.

Instead of being quantified as a stand-alone strategy, GHG emissions reductions for this strategy were quantified at the community-wide scale. As a result, there are no GHG reductions, assumptions, or performance targets specific to municipal operations. For the corresponding community-wide strategy, which includes municipal operations, refer to Strategy 20.

Strategy 23 METHANE CAPTURE FOR WASTEWATER TREATMENT FACILITIES

Work with the Regional Domestic Wastewater Treatment Plant (RDWWTP), the City's wastewater treatment plant, to increase methane capture rate in the indirect wastewater treatment process.

Strategy 23 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	100	210	510
SOI	Less than 10	10	20
CAP Study Area	100	220	530

STRATEGY 23 CO-BENEFITS:

Conserves Natural Resources

STRATEGY 23 ACTIONS

23-1: Work with RDWWTP to explore the possibility of generating electricity from captured methane to power various facilities and reduce operating costs.

Natural Resources and Agriculture

Goal: Preserve and expand natural resources and agricultural land.

Historically, Hollister was an agricultural community with abundant orchards, farms, and ranches. The remaining agricultural lands, including those classified as prime farmland, have the potential to sequester carbon through conversion of topsoil, minimization of tillage and erosion, and maximization of soil organic matter content. This CAP includes strategies that support the goals in the Hollister 2040 General Plan Update Open Space and Agriculture Element to promote conservation of existing natural and working lands. These strategies involve collaboration with regional partners, agencies, and members of the agricultural community to reduce GHG emissions from the agriculture sector in Hollister.

Strategy 24 NATURAL RESOURCES AND OPEN SPACE

Ensure the preservation and expansion of park land and open space land to provide space for natural habitat, carbon sequestration, and recreation opportunities.

STRATEGY 24 CO-BENEFITS:

Conserves Natural Resources

Supports Local Agriculture

STRATEGY 24 ACTIONS

24-1: Explore opportunities to increase park space at locations identified in the Hollister Parks Master Plan.

24-2: Explore opportunities to increase tree plantings and vegetation in existing urban areas, such as requiring landscaping on public and private sites, such as entry areas, street medians, parks, , parking lots, plazas, courtyards, and recreational areas.

24-3: Become a Tree City USA city, which requires designation of a staff person, board, or department to be responsible for the care of trees in the city and administering the program; adopting a tree care ordinance; ensuring the expenditure of $2 per capita per year on tree planting and maintenance; and adopting an annual Arbor Day proclamation.

24-4: Develop a Trail Master Plan with a gap-analysis study of existing parks, trails, and open spaces in Hollister to ensure equal access to natural resources and open space.

24-5: Collaborate with San Benito County on implementation of their Parks and Recreation Facilities Master Plan and implementation of the Hollister Parks Master Plan to ensure regional connectivity to trails and open space, along

with County and City collaborated efforts to enhance the San Benito River frontage through the San Benito River Parkway Master Plan and other studies.

24-6: Create open space preservation opportunities. Through the development review process, preserve open space areas. Encourage the dedication of open space areas that are adjacent to public open space.

Strategy 24 is not quantifiable; however, it supports community-wide GHG emissions reductions.

Photo credit: Janet Chang.

Strategy 25 TREE PLANTING AND PRESERVATION

Maintain and expand the City's existing tree canopy to improve urban environmental quality and mitigate the urban heat island effect.

Strategy 25 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	250	310	150
SOI	50	60	30
CAP Study Area	300	370	180

Strategy 25 Key Metrics			
Metric	2030	2040	2045
New trees planted	100	300	500

STRATEGY 25 CO-BENEFITS:

Improves Air Quality

Promotes Community Resilience

Improves Habitability

STRATEGY 25 ACTIONS

25-1: Implement an urban forestry program to manage citywide tree planting and maintenance, conduct a citywide tree inventory and canopy cover, and monitor tree health to maintain and expand the city's existing tree canopy.

25-2: As part of preparation of an Urban Forest Master Plan, identify priority areas for tree planting, focusing on environmental justice communities, to mitigate the heat island effect in underserved neighborhoods.

25-3: Ensure that new and retrofitted large hardscaped areas, such as parking lots, incorporate trees and other green infrastructure appropriate for current and future climate conditions.

25-4: Explore grant funding opportunities for urban forestry, pervious concrete, and cool pavement.

25-5: Encourage property owners to plant and maintain trees in existing urban areas through a citywide "Adopt a Tree" program to reduce the urban heat island effect, while ensuring compliance with fire-safe planting protocols and maintaining defensible space, as applicable.

Strategy 26 GREEN INFRASTRUCTURE

Incorporate drought-tolerant landscapes, bioswales, green roofs, and permeable pavements in new development to increase absorption of precipitation during heavy rain events and reduce surface water runoff.

STRATEGY 26 CO-BENEFITS:

Supports the Local Economy

Supports Local Agriculture

STRATEGY 26 ACTIONS

26-1: Develop sustainable building design standards that include requirements for green infrastructure and landscaping for outdoor areas.

26-2: Adopt green infrastructure design standards to improve stormwater management at public facilities, streets, and parking lots based on recognized green. infrastructure design guidelines, such as the one developed by Flows to the Bay.

26-3: Incorporate green infrastructure standards into design review.

26-4: Strategy 26 is not quantifiable; however, it supports community-wide GHG emissions reductions.

Strategy 27 LOCAL FOOD SYSTEMS

Promote local and sustainable food sources, including community gardens, home vegetable and fruit gardening, farmers markets, food cooperatives, and community-based efforts to grow and share locally grown food.

STRATEGY 27 CO-BENEFITS:

Supports the Local Economy

Supports Local Agriculture

STRATEGY 27 ACTIONS

27-1: Identify locations for community gardens and work with community groups to establish gardens on appropriate sites.

27-2: Collaborate with community partners to share information and resources on the benefits of eating seasonally, locally grown food, which include reducing individual GHG emissions and support the local economy.

27-3: Work with community partners to increase reliable and affordable access to fresh and healthy food.

27-4: Support efforts of community partners to promote local and regional farms, viticulture, food processors, home gardeners, and other agriculture uses, including through educational farm tours, tasting events, farm-to-table community meals, gardening workshops, and more.

Strategy 27 is not quantifiable; however, it supports community-wide GHG emissions reductions.

Strategy 28 SUSTAINABLE AGRICULTURE AND CARBON SEQUESTRATION

Work with regional partners and farmers to increase sustainable agricultural practices and carbon sequestration on agricultural lands.

Strategy 28 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	180	0	0
SOI	660	0	0
CAP Study Area	840	0	0

Strategy 28 Key Metrics			
Metric	2030	2040	2045
Acres of farmland in the Healthy Soils Program	230	0	0

STRATEGY 28 CO-BENEFITS:

Supports Local Agriculture

STRATEGY 28 ACTIONS

28-1: Implement Hollister 2040 goals and policies aimed at preserving agricultural lands in the City's SOI and mitigating the loss of such lands. Work with local and regional partners to track development at the State level pertaining to sequestration of natural and working lands, including through CARB's Natural and Working Lands GHG inventory and the California 2030 Natural and Working Lands Climate Change Implementation Plan.

28-2: Work with local and regional partners to explore innovative techniques to increase carbon sequestration on agricultural land, including through compost application, agroforestry, grazing land, grassland and cropland management, crop covering, mulching, reduced or no-till practices, and planting of windbreaks, among others.

28-3: Partner with farming groups, academic institutions, and other partners to review and implement suggestions in the State's Healthy Soils Initiative, which facilitates the management of farms and ranches specifically for carbon sequestration and other benefits, such as increased water-holding capacity and soil fertility.

28-4: Work with CARB and other local and regional partners and participating agencies to identify and implement actions to maximize the use of the city's natural and working lands, including exploration of funding opportunities such as green loans, mitigation and carbon banking, or pursuit of grant funding.

28-5: Work with local farmers and community organizations involved with local farms to highlight agricultural properties and operating farms in the city's SOI, and to encourage their operation.

28-6: Work with Resource Conservation Districts and nonprofit organizations to pursue funding for sustainable agriculture grants that can help incentivize farmers and ranchers to minimize synthetic pesticide and fertilizer use.

28-7: Develop and implement an ordinance that prohibits the use of synthetic pesticides and fertilizers on City-owned property.

WHAT IS CARBON SEQUESTRATION?

Carbon sequestration is absorption of CO_2 into living biomass of trees, plants, and soils, which is accounted for in the Land Use and Sequestration sector. This GHG inventory estimates the amount of carbon sequestered by urban street trees (not including trees in open spaces and agricultural lands) over a period of 20 years in the total urban area based on average sequestration rates for urban trees in Hollister's climate zone.

Governance and Leadership

Goal: Work with regional partners to implement the CAP and take actions to increase community resilience against climate hazards.

The City of Hollister strives to serve as a regional leader of sustainability. The City recognizes that successful implementation of this CAP will require integration of sustainability practices and commitment across all City departments, throughout City operations, and at most City facilities to the greatest extent feasible. The City will rely on existing regional partnerships to support many initiatives in this plan, including those with 3CE, AMBAG, and San Benito County. By incorporating CAP strategies into city-wide municipal operations, the City will be well positioned to save money over time and increase community resilience, including continuity of services in the event of natural and climate-related hazards, power outages, and PSPS events. In addition, the City and community can benefit from enhanced community resilience through implementation of CAP sustainability measures that advance racial equity and environmental justice, including community resilience resources, green jobs, safety for outdoor workers, and climate change education.

The City is committed to support the State's goal of carbon neutrality statewide by 2045 and a minimum reduction of GHGs 80 percent below 1990 levels by 2045. This commitment will require dedicated staff and a budget for the implementation of this CAP, which is a change from the City's current day-to-day operations. Preparation of this CAP revealed data limitations and challenges, which should be addressed as part of implementation, including preparation of a City Operations GHG Inventory in the near term to support benchmarking and establishment of processes for tracking key metrics that support monitoring and reporting. The City's commitment to implementation is demonstrated through the strategies and actions under the Governance and Leadership goal and the implementation strategies presented in Chapter 5.

Strategy 29 REGIONAL COOPERATION

Collaborate with neighboring jurisdictions, landfills, county agencies, the Central Coast Climate Collaborative, and community organizations to implement the Climate Action Plan.

STRATEGY 29 CO-BENEFITS:

Promotes Local Governance and Leadership

STRATEGY 29 ACTIONS

29-1: Coordinate with regional partners to seek funding for regional climate projects, such as a weatherization program or energy-efficiency rebates.

29-2: Collaborate with regional partners to share updates, case studies, and lessons learned from implementation of climate actions.

Strategy 29 is not quantifiable; however, it supports community-wide GHG emissions reductions.

Strategy 30 COMMUNITY RESILIENCE RESOURCES

Provide emergency information, essential services, and financial assistance to the community to enhance resilience during climate hazard events.

STRATEGY 30 CO-BENEFITS:

Promotes Community Resilience

Promotes Social Equity

STRATEGY 30 ACTIONS

30-1: Partner with county agencies, local weather stations, and air quality districts to provide public health advisories regarding extreme heat and poor air quality.

30-2: Fund the creation and operation of centrally located accessible resilience hubs that can serve as shelters and resource centers during climate hazard events and natural disasters.

30-3: Work with community and regional partners to identify funding options and opportunities to provide temporary or permanent free air conditioning units and/or fans for highly vulnerable residents, including low-income households

especially low-income households representing multiple characteristics of vulnerability to the effects of climate change.

30-4: Provide information on how to prepare for emergencies in the event of a wildfire, flood, or other natural disaster.

30-5: Partner with community organizations and faith-based groups to raise awareness about resilience resources and financial assistance programs, such as energy bill assistance and free air conditioning units.

Strategy 30 is not quantifiable; however, it supports community-wide GHG emissions reductions.

Strategy 31 Safety for Outdoor Workers

Ensure that workers in outdoor industries have adequate protection from environmental hazards.

STRATEGY 31 CO-BENEFITS:

Promotes Social Equity

STRATEGY 31 ACTIONS

31-1: Identify and support community organizations and regional partners that provide resources and training on workplace environmental hazards, including extreme heat, poor air quality, and diseases to all employers of outdoor workers (e.g., landscaping, construction, mining, farming) in Hollister.

Strategy 31 is not quantifiable; however, it supports community-wide GHG emissions reductions.

Strategy 32 Green Jobs

Provide green job training to create living wages and quality employment opportunities while reducing health and environmental impacts of local industries.

STRATEGY 32 CO-BENEFITS:

Supports the Local Economy

STRATEGY 32 ACTIONS

32-1: Partner with community colleges, local non-profits, and community groups to provide green jobs training for residents.

32-2: Provide information about green jobs, especially to people currently or recently working in polluting or extractive industries.

32-3: Collaborate with community-based organizations and regional partners to amend the City's economic development strategy and attract businesses to Hollister that contribute to a sustainable economy.

Strategy 32 is not quantifiable; however, it supports community-wide GHG emissions reductions.

Strategy 33 CLIMATE CHANGE AWARENESS AND EDUCATION

Promote climate change awareness and GHG reduction community-wide, through a variety of mechanisms, including through support of climate change education in schools or community colleges.

STRATEGY 33 CO-BENEFITS:

Conserves Natural Resources

STRATEGY 33 ACTIONS

33-1: Promote educational resources to students and parents each year and encourage community educators to incorporate clean energy and climate change discussions into their curriculum by partnering with Gavilan College and school districts.

33-2: Use City newsletters to spotlight community members, including K-12 teachers and students, who are working on climate change or sustainability and who are making a difference in our community.

33-3: Increase energy and water educational resources in the Hollister School District by working with the San Benito County Office of Education.

33-4: Work with nonprofits and community-based organizations to develop a list of green volunteer opportunities and skills training for high school students, such as community gardening, tree planting, bicycle advocacy, food recovery, and composting.

Strategy 33 is not quantifiable; however, it supports community-wide GHG emissions reductions.

Summary of Total GHG Emissions Reductions

The climate action strategies detailed in this chapter, in conjunction with existing and planned local and State programs, provide a flexible path to reduce the community's GHG emissions to support the State's adopted targets for 2030 and 2045. **Table 12** shows projected emissions in 2030, 2040, and 2045 without any actions compared to emissions expected after implementation of existing and planned local and State actions and implementation of the City's new climate action strategies. **Figure 11** illustrates the City's GHG emissions from 2005 through 2045.

Table 12 Progress to GHG Emissions Targets in CAP Study Area ($MTCO_2e$)

Target	2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$
Forecasted Emissions without Actions	382,520	442,030	472,970
Forecasted Emissions with State and 3CE Actions	274,250	273,510	282,560
Emissions with State Actions, 3CE, and CAP	202,040	94,200	31,500
Reduction Targets	125,990	75,990	31,500

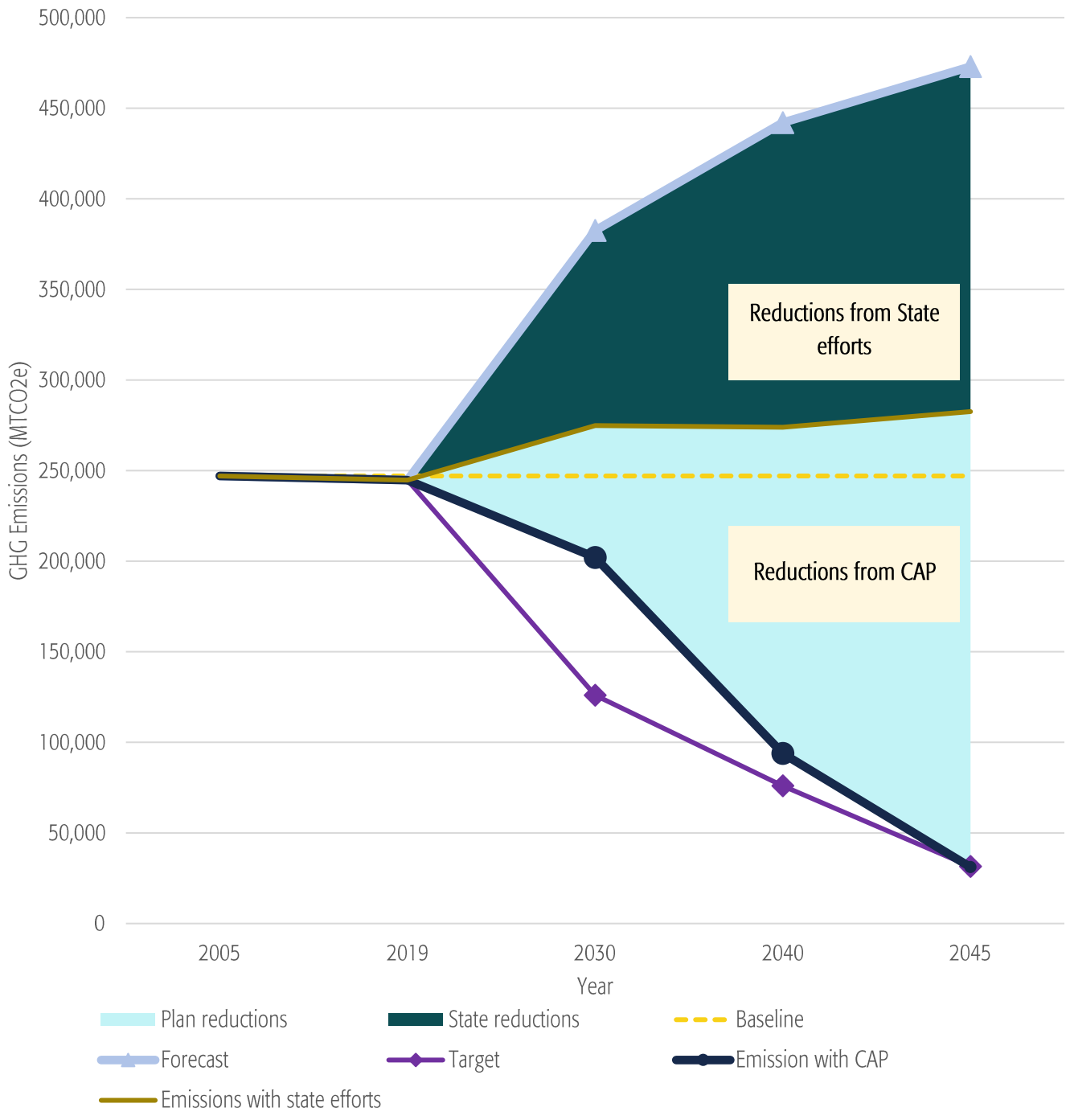
California has two regulatory GHG reduction targets, as discussed in **Chapter 1**. SB 32 (2015) requires that the State reduce GHG emissions 40 percent below 1990 levels by 2030. AB 1279 (2022) requires California to reduce GHG emissions 85 percent below 1990 levels and to achieve net carbon neutrality by 2045. Although the State does not have an adopted GHG reduction target for 2040, a 2040 target of 64 percent below 1990 levels is consistent with the State's planned GHG reduction trends.

Implementation of this CAP is projected to reduce the CAP Study Area's future GHG emissions to 202,040 $MTCO_2e$ (3.68 percent below 1990 levels) by 2030, 94,200 $MTCO_2e$ (55.14 percent below 1990 levels) by 2040, and 31,500 $MTCO_2e$ (85 percent below 1990 levels) by 2045. The CAP thus allows Hollister to achieve a level of GHG reduction consistent with the State's long-term reduction targets. The performance standards associated with the strategies that achieve these reductions are in line with the modeling prepared for the State's Climate Change Scoping Plan. There is a demonstrable path to meeting the 2045 GHG reduction target without significantly exceeding the statewide modeling assumptions.

The CAP does not quantitatively demonstrate net-carbon neutrality, as the State has not yet provided guidance for how local governments can achieve this. However, this CAP supports a path to net-carbon neutrality by providing strategies to increase carbon sequestration. This CAP also does not achieve the shorter-term 2030 target, as quantitatively modeling that level of reduction would require establishing and rapidly accelerating programs at a level that is not feasible. However, it does put Hollister on a path toward these reductions.

It is likely that in future years, new policies and regulations, new technologies, changes in personal and economic behaviors and preferences, and other factors will reduce Hollister's GHG emissions. These reductions cannot be accurately forecasted at this time, but they may enable future GHG emissions reductions. Future updates to this CAP will be able to better assess emerging trends and unexpected changes and include them in the GHG reduction strategy as appropriate.

Figure 11 Hollister CAP Study Area GHG Emissions with Reduction Strategies, 2005 to 2045



5. CAP IMPLEMENTATION STRATEGY

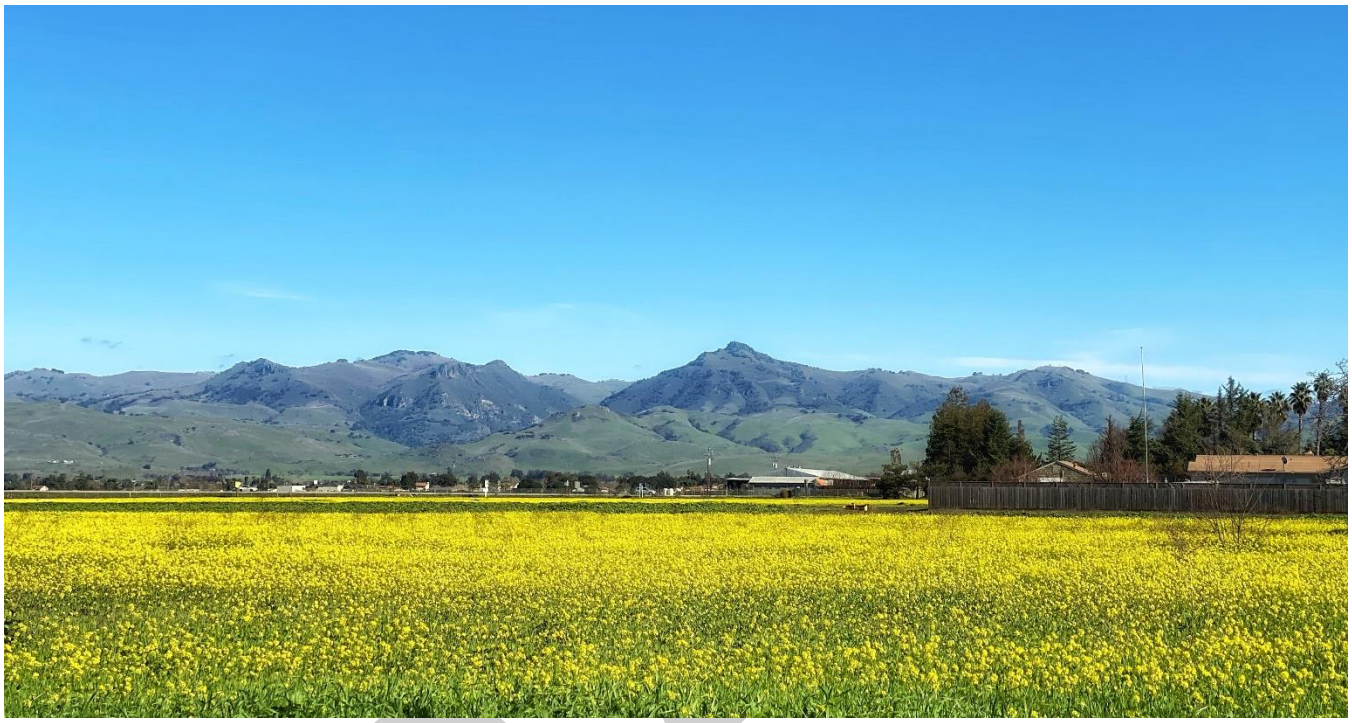


Photo credit: Jenny Knerr

IMPLEMENTING THE CLIMATE ACTION PLAN

Implementation Measures

To ensure the success of the CAP, the City of Hollister will prioritize and implement the strategies and actions detailed in **Chapter 4**. Implementing this plan will require City leadership to execute these strategies and report progress. Staff will monitor progress on an annual basis and will provide an annual update to City decision makers.

As the City updates other planning documents, such as the municipal and zoning codes or specific plans, staff will ensure that these documents support and are consistent with the CAP. As part of CAP implementation, staff will apply some strategies and actions to existing or new development projects through the City's permit application and review process. A separate and forthcoming supplement to the Implementation Strategy will be screening tables for use by project applicants as part of applicable permit application processes.

The strategies in this CAP are accompanied by a list of recommended implementation actions selected by City staff and stakeholders. The list represents suggested means of achieving the measure but are not a prescriptive path to implementation. Furthermore, not all the listed actions may be necessary for the City to achieve its GHG reduction target or support Hollister's GHG reduction goals.

The following strategies and associated actions are designed to guide Hollister in successfully implementing the CAP.

Implementation Strategies

IS 1: Develop and staff a new Climate Action Program Development and Staffing

1-1: Create a Climate Action Team that includes staff assignments from all City departments. The Team should meet regularly and directly support implementation of this CAP.

1-2: Designate a staff person responsible for implementation of the CAP and to coordinate the City Climate Action Team. Responsibilities include CAP implementation, climate action and sustainability communications, grant writing, GHG inventory data collection, and tracking progress.

1-3: Identify a Climate Action Lead in each department, and division as appropriate, to support new and existing sustainability efforts that support CAP implementation. Identify their roles in providing information and updates for annual reporting and monitoring.

IS 2: Monitor and report progress toward Climate Action Plan target achievement on an annual basis.

2-1: Assign responsibility for facilitating and supporting CAP implementation to the City's Development Services Department.

2-2: Continue to involve community partners and other key stakeholders in reviewing and recommending CAP action items.

2-3: Prepare an annual progress report on implementation of the recommended GHG reduction strategies for review and consideration by the City Council. When information is available, provide updates on estimated GHG emissions reductions and current GHG emissions levels.

IS 3: Continue collaborative partnership with agencies and community groups that support Climate Action Plan implementation.

3-1: Continue formal membership and participation in local and regional organizations that provide tools and support for energy efficiency, energy conservation, GHG emissions reductions, adaptation, public information, and implementation of this CAP.

3-2: As appropriate and at the direction of the City Council, commit to formal membership through joint powers authorities or other partnerships to implement high-priority strategies from the CAP.

3-3: Provide policy input to partner agencies (e.g., League of Cities) on policy barriers that need to be addressed at the State level.

IS 4: Secure necessary funding to implement the Climate Action Plan.

4-1: Identify and apply for grants to fund citywide programs and activities that implement the CAP.

4-2: Include grant funding and levels for reduction strategies as part of annual reporting.

4-3: Include emissions reduction strategies in department work plans, the capital improvement program, and other plans as appropriate.

4-4: Pursue local, regional, State, and federal grants to support implementation.

4-5: Explore dedicated funding sources for CAP implementation.

4-6: Explore opportunities to allocate a portion of revenues from revenue-generating strategies to CAP implementation.

IS 5: Inventory Community-wide and City Operations GHG emissions inventory regularly.

5-1: Support AMBAG's work to prepare annual community-wide GHG emissions inventories.

5-2: Prepare comprehensive community-wide GHG inventories, with modeled VMT and all sectors as required by the U.S. Community Protocol, every three to five years.

5-3: Prepare a City Operations GHG Emissions Inventory within two years of adoption of this CAP and conduct subsequent inventories every three to five years.

5-4: Review and update the CAP within five years of adoption to incorporate new technology, practices, and other options to further reduce emissions, adapt to changing climate conditions, and increase community resilience.

IS 6: Maintain and update the Community Climate Action Plan to allow for greater resilience.

6-1: Coordinate updates of the CAP, General Plan Safety Element (Hollister 2040), and Local Hazard Mitigation Plan cycle to ensure plan alignment and coordination of climate mitigation and adaptation efforts.

6-2: Assess the implementation status and effectiveness of CAP strategies annually.

Work Plan

The Work Plan shown in **Table 13** contains information to support City staff in integrating CAP strategies into budgets, the Capital Improvement Program, and other programs and projects. **Table 13** includes implementation details for the CAP, including the party responsible for implementing the strategy, the estimated time frame until completion, and potential community partners and sources of funding. The City can use this information to identify and prioritize strategies.

Photo credit: City of Hollister Parks and Recreation Staff

The strategies of success in **Table 13** are defined as follows:

- Strategy number: The number used to refer to each strategy in the CAP and all corresponding workbooks.
- Strategy: The language used to guide actions needed for reductions.
- Action(s): The action(s) that support each strategy.
- GHG Emission Reductions: The amount of GHG emissions that would be reached by 2030, 2040, and 2045 through full implementation of each strategy and its associated actions.
- Responsible Departments: The lead City department tasked with implementing the strategy and the City department that will support the lead department in implementing the strategy.

- Metrics: Indicators of implementation progress.
- Partner Agencies/Organizations: Example local organizations that the City will partner with in implementing each strategy. Additional community partners will be welcome.
- Time Frame: The year by which a strategy should be effective by fiscal year's end. The exact status of a strategy will vary based on its actions, and many strategies will be ongoing through and beyond 2030. An effective strategy is one that will be actively on track to achieve its targeted GHG emission reductions, support adaptation to climate change effects, or achieve long-term resilience. For a strategy to be effective, the necessary programs and efforts should be active, and any infrastructure or other capital improvements should be in place. The effective year is not the end year, as many strategies and programs are intended to remain in effect for the foreseeable future.
- Funding Options: General options for funding sources to complete implementation of each strategy.

Although significant GHG reduction and adaptation policies and initiatives are already in place, the actions proposed in this CAP, by necessity, far surpass the scale of existing efforts.

Implementing the CAP and ensuring that it results in real, deep GHG emissions reductions and improved resilience will require increased and deliberate coordination across sectors and institutionalizing climate protection efforts across the community.

This chapter outlines the process for turning the CAP into action. The CAP outlines reduction strategies and recommendations for implementation, including strategies and actions whose implementation can begin immediately. However, the CAP is not a technical implementation plan for Hollister programs and community actions. City staff will lead CAP implementation and will collaborate with and support community organizations, residents, businesses, and stakeholders as appropriate to create individual programs based on the goals, strategies, and actions outlined in this report.

While short-term priorities are illustrated, please note that priorities can and do shift based on funding availability, advances in technology, new and better ideas, and other reasons. The CAP, and this implementation section, should be considered a living document.

Table 13 CAP Implementation Table

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
1. Existing and new City-owned and operated facilities achieve optimal energy conservation and efficiency in their performance. 1-1. Require Cal Green Tier 1 compliance for all new City buildings. 1-2. Retrofit City-owned streetlights and traffic lights with LED fixtures by 2030. 1-3. Conduct benchmarking of energy use at all City-owned and operated facilities. 1-4. Audit existing City buildings and facilities to identify opportunities for energy conservation and efficiency upgrades or retrofits that optimize energy performance of buildings and operations and save the City energy and operating costs over time. 1-5. Conduct a municipal operations inventory to identify opportunities for energy and resource conservation within the City's vehicle usage, employee commuting, water and wastewater use and generation, and solid waste disposal. 1-6. Add energy efficiency improvement projects to the City's Capital Improvement Program annually and complete energy efficiency capital projects on the list with support from San Benito County, Central Coast Community Energy (3CE), Pacific Gas and Electric Company (PG&E), and other partners as appropriate.	10	20	20	Municipal buildings receiving energy efficiency retrofits (number of buildings) LED streetlights installed (number of lights)	City Manager Community Services Department	Central Coast Community Energy (3CE) Pacific Gas and Electric Company (PG&E) San Benito County Other partners	Midterm (2024–26)	General Fund
2. Expand and promote residential energy-efficiency of existing and new market rate homes in Hollister. 2-1. Ensure the City's design review guidelines, as applicable, account for energy efficient design consistent with the California Building and Energy Codes and requirements. 2-2. Evaluate the effectiveness of the City's current land use, energy, water use, stormwater management, and design codes and permitting processes in to achieve energy-efficient, carbon free, and sustainable design and operations and update applicable codes, programs, and processes as needed to improve building performance as part of the City's building and development review processes. 2-3. Support AMBAG Energy Watch and San Benito County efforts to conduct outreach and education with local contractors to ensure they are kept up to date on local code requirements and energy-efficient appliances and devices. 2-4. Continue to require residential projects, including renovations, meet Title 24 energy efficiency requirements, and, where possible, require structural design to make use of natural heating and cooling, as well as landscaping design to reduce the heat island effect.	1,280	3,280	5,060	Existing residential units receiving energy efficiency retrofits (number of units)	Development Services Department	AMBAG Energy Watch San Benito County Local builders and suppliers	Midterm (2024–26)	General Fund

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	GHG Emission Reductions 2040 $MTCO_2e$	GHG Emission Reductions 2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
3. Expand and promote residential energy-efficiency services to homeowners and of existing and new below market-rate homes in Hollister. 3-1. Promote and support efforts of Central Coast Energy Services (CCES) and other similar community-based organizations and local contractors to provide affordable energy efficiency retrofits and low- to no-cost weatherization services to homeowners and renters. 3-2. Seek grant funding for weatherization programs that support low-income households. 3-3. Develop an inventory of residential buildings in the city that were constructed prior to 1980 to identify the greatest opportunities for energy efficiency and conservation improvements and targeted outreach and education campaigns. 3-4. Prepare information materials targeted to these buildings and engage with the owners of the buildings to promote energy-efficiency upgrades. 3-5. Support and promote programs and incentives for installation of all-electric appliances in new residential construction and remodels by partnering with 3CE AMBAG Energy Watch. 3-6. Partner with San Benito County Water District and San Benito County to establish or expand existing recycling and appliance rebate programs for energy and water-efficient washing machines and electric, including heat pump, dryers. 3-7. Support AMBAG Energy Watch, San Benito County, 3CE, and other partners with their outreach and education campaigns, including but not limited to, promoting programs through City communication and promotion tools, engaging in person or online with homeowners and contractors, maintaining a City webpage of resources, and sharing permitting data to inform targeted outreach.	540	1,400	2,640	Existing residential units receiving energy efficiency retrofits (number of units)	Development Services Department	Central Coast Energy Services 3CE AMBAG San Benito County Water District San Benito County	Midterm (2024–26)	General Fund Partnerships

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	GHG Emission Reductions 2040 $MTCO_2e$	GHG Emission Reductions 2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
4. Support energy conservation and efficiency improvements in nonresidential uses, including businesses, office complexes, commercial and retail buildings, shopping centers, medical facilities and hospitals, warehouses, and industrial facilities. 4-1. Support existing 3CE and AMBAG Energy Watch programs by publicizing energy efficiency programs, technical assistance, and financing opportunities for businesses and non-profit organizations. 4-2. Encourage businesses to conduct energy audits. Use the business license process (new and renewals) as an opportunity to share information about incentives for energy efficiency improvements. 4-3. Support outreach to small business owners by partnering with the Cal Coastal Small Business Development Center. 4-4. Expand energy-saving opportunities and assistance for large and small commercial and industrial businesses by working with AMBAG Energy Watch, 3CE, and non-profit organizations. 4-5. Expand the distribution of free or subsidized energy and water efficiency and conservation toolkits, devices, and services to residents and businesses citywide through partnerships with public libraries, AMBAG Energy Watch, and local non-profit organizations.	1,000	2,250	3,370	Existing nonresidential units receiving energy efficiency retrofits (number of units)	Development Services Department	3CE AMBAG Cal Coastal Small Business Development Center Local nonprofit organizations.	Near term (by 2024)	General Fund Partnerships
5. Ensure new large nonresidential development includes on-site renewable energy to support the site's energy needs by promoting solar photovoltaic panels or other appropriate on-site renewable energy generation systems for the following types of projects: • New commercial and office buildings, or existing commercial and office building expansions greater or equal to 45,000 square feet in size. • New industrial or existing industrial buildings expansions greater or equal to 99,000 square feet in size. 5-1. Prepare, adopt, and implement a reach code that requires certain large non-residential development to install and use renewable and carbon free energy generated and stored, as appropriate, on-site. At a minimum, this code will apply to new commercial and office buildings, or existing commercial and office building expansions greater or equal to 45,000 square feet in size and new industrial or existing industrial buildings expansions greater than or equal to 99,000 square feet in size. 5-2. Support outreach and education activities by community and regional partners and supplement with City-specific outreach as needed to raise awareness about the benefits of solar energy for businesses, promote incentives, and increase installations of nonresidential solar PV systems in Hollister. 5-3. Establish a solar permitting webpage on the City's website that summarizes requirements for installing solar PV systems to ensure the information is easily accessible to the public. Provide handouts at City Hall to promote the website. 5-4. Update City permit tracking as appropriate to track size and number of renewable energy installations. 5-5. Provide incentives and rebates for solar PV systems to encourage increased local use of renewable energy.	Less than 10	Less than 10	Less than 10	Nonresidential solar systems installed (total kW installed)	Development Services Department	San Benito County 3CE	Midterm (2024–26)	General Fund Partnerships

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
5-6. Work with San Benito County, 3CE, and regional partners to explore opportunities to provide financial incentives to residents and businesses purchasing small-scale on-site battery energy storage systems for new development.								
6. Transition municipal operations and buildings to local, renewable, and resilient energy sources. 6-1. Conduct a feasibility study to identify opportunities and benefits of constructing and operating solar or other renewable, clean energy generation technology on or at existing City-owned properties. The study should consider optimized conservation and technology as well as new uses, including generating power for vehicle charging stations, supporting energy storage, and new City uses. 6-2. Install back-up power sources at City-owned community facilities, prioritizing solar energy battery storage and microgrid systems where feasible. 6-3. Partner with regional agencies and jurisdictions to establish a regional microgrid agency to support 3CE in developing local microgrids for energy resilience. 6-4. Seek grant funding to conduct a feasibility study for a microgrid to serve public facilities in Hollister.	Less than 10	Less than 10	Less than 10	Solar, battery, and microgrid energy systems installed at City-owned sites (total kW installed)	City Manager	3CE	Midterm (2024–26)	General Fund
7. Promote on-site renewable energy production and storage, and community-wide utilization of 3CE's renewable energy service in existing Hollister homes and businesses. 7-1. Develop and implement a community outreach and education program that promotes the benefits and incentives for renewable energy and energy resilience and increase awareness of the benefits and incentive programs for rooftop solar energy and on-site energy storage systems. This includes developing a City webpage to inform residents and business owners about the permitting process for residential and commercial solar energy systems and links to partner pages for more details about incentive programs. 7-2. Work with PG&E on its efforts to prepare the community for power outages through battery storage programs and incentives, including the Self-Generation Incentive Program and related energy resilience efforts. 7-3. Work with San Benito County, 3CE, and regional partners to explore opportunities to provide financial incentives to residents and businesses purchasing small-scale on-site battery energy storage systems for existing development.	Less than 10	Less than 10	Less than 10	Solar energy systems installed (total kW installed) Participation rate in 3CE among Hollister nonresidential accounts (rate of participation)	Development Services Department	3CE PG&E San Benito County	Near term (by 2024)	General Fund Partnerships

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	GHG Emission Reductions 2040 $MTCO_2e$	GHG Emission Reductions 2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
8. Promote and incentivize the phase-out of gas appliances in existing homes and businesses throughout the community to advance GHG reductions, increase energy efficiency, and protect public safety and environmental health. 8-1. Support education and outreach to increase participation in electric appliance rebate programs offered by 3CE, AMBAG Energy Watch, and other providers with a focus on contractors and residents of older properties (constructed in or before 1980). Identify and remove any existing code, permitting, or other City requirements that serve as barriers to all-electric conversions of existing homes and businesses and assess opportunities to provide incentives and streamline the permitting process through bundled projects and one-stop permits. 8-2. Update the City's permit tracking system as appropriate to track electrification improvements. 8-3. Review City-supported weatherization and energy efficiency programs and requirements, if applicable, to ensure they support all-electric, high-efficiency appliances. 8-4. Work with local contractors to increase public awareness about and participation in existing incentive programs that promote replacement of natural gas appliances with electric space and water heating systems. 8-5. Explore and adopt, as feasible, local building code amendments requiring replacement of natural gas-powered space and water heaters with electric models at end of life during the 2022 and successive Buildings Standards Code updates. 8-6. Work with local and regional partners to identify ways to decrease the financial burden of electrification of low-income households and rental units, including paying up-front costs or identification of financial incentives.	9,220	16,330	17,310	Existing buildings converted to electric (number of buildings)	Development Services Department	3CE AMBAG	Midterm (2024–26)	General Fund Partnerships
9. By 2026, all new development to be "all electric," with minor exceptions for appropriate facilities, which may include restaurants, manufacturing, and industrial uses. 9-1. Identify and partner with local industry organizations, community-based organizations, and regional partners to inform the preparation of an All-Electric Reach Code for new development, which would leverage the use of the 3CE's Reach Code Incentive Program to offset some costs associated with adopting a Reach Code. 9-2. Seek grant funding for electrification of affordable housing, such as the California Energy Commission's (CEC's) Building Initiative for Low Emissions Development (BUILD) program (SB 1477). 9-3. Promote public awareness about and participation in existing incentive programs that promote electric space and water heating systems to upgrade and replace natural gas appliances.	2,090	7,290	8,370	All-electric buildings constructed (number of new buildings)	Development Services Department		Near term (by 2024)	General Fund

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	GHG Emission Reductions 2040 $MTCO_2e$	GHG Emission Reductions 2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
10. Reduce community-wide VMT and associated transportation-related emissions per resident and employee. 10-1. Promote transit as a viable option for local and regional trips. – Collaborate with the San Benito Council of Governments, Caltrans, and San Benito County to ensure efficient and accessible public transit services are available to all residents, workers, and visitors. – Support further integration and overall expansion of public transit service within the city, region, and to and from Salinas, Central Coast communities, and Silicon Valley communities. – Promote transit-friendly street design by encouraging features such as bus stop shelters, street lighting, bus-only signal phases, curb extensions, and wayfinding. – Collaborate with the San Benito Council of Governments, Caltrans, and San Benito County to develop, implement, and maintain park-and-ride facilities. 10-2. Assess the feasibility of incorporating infrastructure to support micro-mobility devices in the downtown or in other locations that such a program could have success. 10-3. Aid new and existing multifamily and commercial developments in implementing and expanding opportunities for transit-oriented development and affordable housing. 10-4. Encourage employers to provide ridership programs, public transit passes, and offer telecommuting to employees. Regularly assess and update incentives to respond to employee needs. 10-5. Provide transportation-demand incentives to City employees, including telecommuting as a viable option to reduce VMT and GHGs, without compromising the ability to provide public services. 10-6. Collaborate with regional partners to explore the feasibility of a shuttle between Hollister and Pinnacles National Park during high-traffic season.	5,310	8,660	12,540	Transit ridership Vehicle miles traveled (vehicle service miles)	Development Services Department Community Services Department	Council of San Benito County Governments Caltrans San Benito County	Midterm (2024–26)	General Fund Partnerships

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
11. Ensure the community has safe and connected opportunities for bicycling and walking, especially between and within residential areas and commercial areas, parks, schools, job centers, and transit centers. 11-1. Develop and adopt a Complete Streets Plan to support safety, accessibility, and equity in multi-mobility. 11-2. Conduct an assessment of the City's existing sidewalk and prepare a list of sidewalk improvement projects, with priorities to complete gaps and connectivity in existing sidewalks, provide safe connections between residential areas and key destinations like parks, schools, places of employment, and shopping centers. 11-3. Improve street design to include safe, accessible, and interconnected pedestrian routes and bicycle paths in the downtown area and near existing and planned commercial centers and job centers. Develop street design guidelines to ensure consistency and safety of pedestrian and bicycle facilities. 11-4. Improve bike and pedestrian connections as identified in the 2019 Hollister Parks Facilities Master Plan. 11-5. Require bicycle parking at all new commercial centers, job centers, and large-scale mixed-use developments, and ensure all City facilities provide safe and secure bicycle parking. 11-6. Promote incentive programs to fund the purchase of bicycles or electric-assist bicycles for low-income community members. 11-7. Support community-led bicycle safety training and materials for drivers, bikers, and pedestrians. 11-8. Coordinate with Caltrans and other agencies to ensure future Caltrans-funded projects in Hollister consider pedestrian and bicycle circulation improvements to incentivize active transportation trips. 11-9. Facilitate and support the development of shared micro-mobility programs in Hollister, including: – Amending the City's municipal code to regulate parking for scooter and bike-share programs. – Developing and implementing regulations specifying right-of-way rules for e-bikes and e-scooters. – Identifying accessible and equitable locations for micro-mobility hubs. – Marketing micro-mobility programs across the community. – Working with service providers to keep micro-mobility safe and affordable.	980	1,030	1,090	Bike lanes and facilities (miles of bike lanes)	Community Services Department Parks and Recreation	Council of San Benito County Governments Caltrans	Midterm (2024–26)	General Fund
12. Support regional agencies in ensuring that K-12 students in Hollister have pollution-free, safe, and accessible modes to get to and from school. 12-1. Partner with school districts to promote "walk pools" or "walking buses" to increase the number of students who walk to school. 12-2. Work with regional partners to promote incentives to provide bicycles to low-income youth in the community. 12-3. Establish a committee in the City focused on implementing Safe Routes to Schools projects and programs. 12-4. Work with regional partners to offer bicycle safety and pedestrian education classes at schools. 12-5. Conduct walkability scores of residential neighborhoods, starting with neighborhoods within a 1-mile radius of a public or private school. Use the results to inform identification of City projects that would improve or provide new safe, comfortable, and connected pedestrian networks between residential areas and schools.	0	0	0	Number of students taking alternative transportation to school (number of students)	Community Services Department	Schools	Near term (by 2024)	General Fund

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	GHG Emission Reductions 2040 $MTCO_2e$	GHG Emission Reductions 2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
13. Increase overall transit ridership and improve access to light-rail transit for commuting to Silicon Valley and Bay Area job centers. 13-1. Work with Caltrain or San Benito County Express to offer express bus service from Hollister to Gilroy to provide a public transit link to Caltrain service and Bay Area employment centers. 13-2. Develop marketing materials to promote San Benito County Express regional transit services, to be distributed at public facilities, workshops, and electronically on the City's website, and social media channels. 13-3. Cooperatively work with Councils of Government (COG), Caltrans, and San Benito County to develop, implement, and maintain public transit services. 13-4. Support the development of a centrally located multi-modal transit hub to encourage transit ridership, improve connectivity, and build on existing services while reducing demand for parking and vehicle trips.	13,060	24,480	31,280	Transit service miles (vehicle service miles)	Community Services Department	Caltrain San Benito County Express Councils of Government Caltrans San Benito County	Midterm (2024–26)	General Fund Partnerships
14. Promote adoption of electric and clean-fuel vehicles and expansion of public and private EV charging infrastructure. 14-1. Install electric vehicle charging stations equitably throughout the community at City facilities, parks, and parking lots. 14-2. Review the City's municipal code to identify barriers and opportunities to accelerate the use of EVs by Hollister's residents and employees, and update the code as needed. This review should ensure parking areas, gas stations, and fossil-fuel dependent transportation-related uses provide low and no carbon fuel options. 14-3. Adopt an EV reach code with minimum requirements for parking spaces with EV charging capacity for multifamily residential buildings and nonresidential buildings. 14-4. Provide dedicated parking spaces for electric or low carbon car-share vehicles at park-and-ride lots, public transit centers, and core commercial and business areas. 14-5. Participate in 3CE's Central Coast Incentive Project and other existing or future programs. 14-6. Work with San Benito County Express to ensure equitable access to electric or low carbon carshare vehicles. 14-7. Collaborate with regional partners such as 3CE and the Monterey Bay Air Resources District, among others, to support accelerated adoption of electric vehicles through the provision of incentives and public outreach campaigns.	24,370	87,640	129,510	EVs registered (number of cars) EV chargers installed (number of chargers)	Development Services Department	3CE Monterey Bay Air Resources District Caltrans	Midterm (2024–26)	General Fund Partnerships
15. Expand the municipal EV fleet and promote low carbon transportation options. 15-1. Work with regional public transit partners to increase the adoption of electric buses and alternative fueled buses.	0	0	0	EVs registered (number of cars)	Community Services Department	3CE Monterey Bay Air Resources District	Midterm (2024–26)	General Fund Partnerships

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
15-2. Support the 3CE's Zero Emission School Bus Program, the Monterey Bay Air Resources District, and other regional partners, to electrify school buses used for Hollister-area schools. 15-3. As part of preparation of a GHG emissions inventory of City Operations, identify present and future GHGs released by the City fleet and by contractor vehicles used to provide municipal services, including collection of trash, recycling, and compostable materials. 15-4. Transition the municipal vehicle fleet to hybrid, electric, or clean fuel vehicles to the greatest extent possible. Incorporate an "electric vehicles first" policy into the City's vehicle replacement program to support this transition. 15-5. Install electric vehicle chargers at all City facilities to provide sufficient chargers to City electric fleet vehicles.				EV chargers installed (number of chargers)				
16. Consider developing an EV Car-Share Program to provide an alternative for car ownership. 16-1. Conduct a feasibility study of different car share programs, such as a car-share program with dedicated parking spaces and "free-floating" car share, to be followed by a citywide pilot program. 16-2. Partner with San Benito County and neighboring jurisdictions and discuss opportunities for car-share programs with regional car share operators. 16-3. Incentivize car-share program use by providing special parking privileges for car share vehicles and providing EV charging stations at dedicated parking spaces. 16-4. Consider strategies to overcome barriers to participating in and accessing car share priority locations, including providing information in multiple languages and prioritizing locations near environmental justice communities and in easily accessible locations.	650	820	900	Electric car sharing rides (number of rides or vehicle service miles)	Development Services Department	San Benito County Neighboring jurisdictions	Midterm (2024–26)	General Fund
17. Promote and incentivize the transition to electric construction and landscaping equipment. 17-1. Promote the health and safety benefits of battery operated or electric powered landscaping equipment and collaborate with regional partners such as the Monterey Bay Air Resources District and 3CE to identify and provide incentives to support replacement of gas-powered landscaping equipment. 17-2. Develop and implement a ban on gas-powered leaf blowers. 17-3. Support State and regional efforts to replace diesel-powered construction and landscaping equipment with electric equipment. 17-4. Conduct targeted outreach to local construction and landscaping companies to raise awareness about and increase participation in available electric equipment rebate programs. 17-5. Require hybrid or clean-fuel construction and landscaping equipment in City contracts.	4,990	11,560	16,690	Offroad equipment converted to electric (number of units)	Development Services Department	3CE Monterey Bay Air Resources District San Benito County	Near term (by 2024)	General Fund

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
18. Promote programs and behavioral shifts to reduce community-wide consumption and generation of trash sent to landfills. 18-1. Work with Recology, San Benito County Waste Management Regional Agency, and community partners to establish a source-reduction program and associated outreach and education campaign that promotes options to rethink, refuse, reduce, reuse, regenerate, recycle, and recover materials and work toward a zero-waste community goal. 18-2. Work with waste haulers and regional agencies to encourage efforts to promote recycling and composting of organic materials. 18-3. Establish sharing, exchange, and reuse program(s), including fix-it clinics, swap events, second-hand markets, and shop local campaigns by collaborating with community and regional partners. 18-4. Work with San Benito County to require the recycling of demolition materials or the use of recycled materials in new construction, as feasible. 18-5. Continue to implement the City's purchasing preference for products containing recycled materials, as described in Section 3.06.280 of the Hollister Municipal Code. 18-6. Develop and adopt an ordinance to prohibit specific types of single-use or disposable plastics, particularly for use by restaurants, caterers, and other commercial kitchens. 18-7. Engage with businesses and industry to encourage the purchase and use of recycled materials where possible. 18-8. Encourage the community to participate in waste exchanges and used goods resale programs.	2,970	5,890	10,160	Solid waste generated (tons municipal solid waste) Recovery rate (percent of waste recovered)	Community Services Department	Recology San Benito County Waste Management Regional Agency San Benito County	Midterm (2024–26)	General Fund Partnerships
19. Publicize Recology's composting services and educational resources to homes and businesses in Hollister. 19-1. Support San Benito County and Recology's existing programs by publicizing information about composting services for homes and businesses through the city's website, mailers, social media, and other communication channels. 19-2. Work with Recology to ensure residents and businesses have access to compost bins. 19-3. Work with local and regional partners to ensure each residence in the city is provided with curbside composting pursuant to Senate Bill 1383. 19-4. Require composting and other food waste diversion techniques at restaurants citywide.	810	970	1,560	Solid waste generated (tons municipal solid waste) Recovery rate (percent of waste recovered)	Community Services Department	Recology San Benito County Waste Management Regional Agency San Benito County	Near term (by 2024)	General Fund Partnerships
20. Support efforts to reduce methane emissions from regional landfills. 20-1. Encourage efforts of the John Smith Road Landfill to install or enhance existing methane capture technology and associated monitoring systems with a goal of increasing the methane capture rate to the highest extent feasible. 20-2. Encourage the use of captured methane for flaring or generation of electricity to offset fossil fuel energy use and reduce GHG emissions.	3,200	6,670	9,300	Methane captured (metric tons of methane)	Community Services Department		Near term (by 2024)	General Fund

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
21. Reduce water use in the community through water conservation, water efficient retrofits, water-wise landscaping, and graywater and recycled water programs. 21-1. Work with Sunnyslope and San Benito County Water District to develop and implement a water conservation and storage plan to ensure sustainable water supply as droughts become more frequent. 21-2. Require a Plumbing Retrofit Water Conservation Certification in accordance with SB 407 upon sale of residential properties. 21-3. Provide educational resources and incentives to increase the planting of residential and commercial drought-tolerant landscaping. 21-4. Distribute resources from San Benito County Water District to educate homeowners and business owners about water-conserving appliances and devices and existing incentive programs. 21-5. Collaborate with regional partners to provide incentives for graywater, rainwater storage systems, and other on-site water reuse systems.	290	430	550	Water used (millions of gallons) Water-efficiency devices installed (number of water-efficiency water retrofits conducted)	Community Services Department	Sunnyslope County Water District San Benito County Water District	Midterm (2024–26)	General Fund
22. Reduce municipal water use. 22-1. Require water efficient retrofits in municipal buildings and facilities through implementation of requirements for water-conserving plumbing fixtures, and other techniques. 22-2. Implement drought tolerant landscaping and/or water efficient irrigation systems for public parks and facilities. 22-3. Work with the Regional Domestic Wastewater Treatment Plant (RDWWTP), the local wastewater treatment provider, to upgrade and replace wastewater treatment and pumping equipment with more energy-efficient equipment as feasible. 22-4. Assess and upgrade City-owned water pumping and treatment equipment, as needed, to increase energy efficiency and save energy costs.	Less than 10	Less than 10	Less than 10	Water used (millions of gallons) Water-efficiency devices installed (number of water efficiency water retrofits conducted)	City Manager's Office Community Services Department	Regional Domestic Wastewater Treatment Plant	Midterm (2024–26)	General Fund
23. Work with the Regional Domestic Wastewater Treatment Plant (RDWWTP), the City's wastewater treatment plant, to increase methane capture rate in the indirect wastewater treatment process. 23-1. Work with RDWWTP to explore the possibility of generating electricity from captured methane to power various facilities and reduce operating costs.	100	220	530	Methane captured (metric tons of methane)	Community Services Department	Regional Domestic Wastewater Treatment Plant	Near term (by 2024)	General Fund

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
24. Ensure the preservation and expansion of park land and open space land to provide space for natural habitat, carbon sequestration, and recreation opportunities. 24-1. Explore opportunities to increase park space at locations identified in the Hollister Parks Master Plan. 24-2. Explore opportunities to increase tree plantings and vegetation in existing urban areas such as requiring landscaping on public and private sites such as entry areas, street medians, parks, schools, parking lots, plazas, courtyards, and recreational areas. 24-3. Become a Tree City USA city, which requires designation of a staff person, board, or department to be responsible for the care of trees in the city and administering the program; adopting a tree care ordinance; ensuring the expenditure of $2 per capita per year on tree planting and maintenance; and adopting an annual Arbor Day proclamation. 24-4. Develop a Trail Master Plan with a gap-analysis study of existing parks, trails, and open spaces in Hollister to ensure equal access to natural resources and open space. 24-5. Collaborate with San Benito County on implementation of their Parks and Recreation Facilities Master Plan and implementation of the Hollister Parks Master Plan to ensure regional connectivity to trails and open space, along with County and City collaborated efforts to enhance the San Benito River frontage through the San Benito River Parkway Master Plan and other studies. 24-6. Create open space preservation opportunities. Through the development review process, preserve open space areas. Encourage the dedication of open space areas that are adjacent to public open space.	0	0	0	Trees planted (number of trees) Park space created (acres of parkland created)	Parks and Recreation Community Services Department	San Benito County	Midterm (2024–26)	General Fund

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
25. Maintain and expand the City's existing tree canopy to improve urban environmental quality and mitigate the urban heat island effect. 25-1. Implement an urban forestry program to manage citywide tree planting and maintenance, conduct a citywide tree inventory and canopy cover, and monitor tree health to maintain and expand the City's existing tree canopy. 25-2. As part of the City's Urban Forest Master Plan, identify priority areas for tree planting, focusing on environmental justice communities, to mitigate the heat island effect in underserved neighborhoods. 25-3. Ensure that new and retrofitted large hardscaped areas, such as parking lots, incorporate trees and other green infrastructure appropriate for current and future climate conditions. 25-4. Explore grant funding opportunities for urban forestry, pervious concrete, and cool pavement. 25-5. Encourage property owners to plant and maintain trees in existing urban areas through a citywide "Adopt a Tree" program to reduce the urban heat island effect, while ensuring compliance with fire-safe planting protocols and maintaining defensible space, as applicable.	300	370	180	Trees planted (number of trees)	Community Services Department	Landscape architects, landscapers, architects, and other design and industry professionals and organizations Community-based organization	Midterm (2024–26)	General Fund
26. Incorporate drought-tolerant landscapes, bioswales, green roofs, and permeable pavements in new development to increase absorption of precipitation during heavy rain events and reduce surface water runoff. 26-1. Develop sustainable building design standards that include requirements for green infrastructure and landscaping for outdoor areas. 26-2. Adopt green infrastructure design standards to improve stormwater management at public facilities, streets, and parking lots based on recognized green infrastructure design guidelines, such as the one developed by Flows to the Bay. 26-3. Incorporate green infrastructure standards into design review.	0	0	0	Water used (millions of gallons) Landscaped areas converted to drought-tolerant landscaping (acres of landscaping)	Community Services Department Development Services Department	Landscape architects, landscapers, architects, and other design and industry professionals and organizations	Midterm (2024–26)	General Fund

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	GHG Emission Reductions 2040 $MTCO_2e$	GHG Emission Reductions 2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
27. Promote local and sustainable food sources, including community gardens, home vegetable and fruit gardening, farmers markets, food cooperatives, and community-based efforts to grow and share locally grown food. 27-1. Identify locations for community gardens and work with community groups to establish gardens on appropriate sites. 27-2. Collaborate with community partners to share information and resources on the benefits of eating seasonally, locally grown food, which include reducing individual GHG emissions and support the local economy. 27-3. Work with community partners to increase reliable and affordable access to fresh and healthy food. 27-4. Support efforts of community partners to promote local and regional farms, viticulture, food processors, home gardeners, and other agriculture uses, including through educational farm tours, tasting events, farm-to-table community meals, gardening workshops, and more.	0	0	0	Community gardens established (number of gardens) Food recovered (tons of food)	Community Services Department Development Services Department	Community organizations	Midterm (2024–26)	General Fund
28. Work with regional partners and farmers to increase sustainable agricultural practices and carbon sequestration on agricultural lands. 28-1. Implement Hollister 2040 goals and policies aimed at preserving agricultural lands in the City's SOI and mitigating the loss of such lands. Work with local and regional partners to track development at the State level pertaining to sequestration of natural and working lands, including through CARB's Natural and Working Lands GHG inventory and the California 2030 Natural and Working Lands Climate Change Implementation Plan. 28-2. Work with local and regional partners to explore innovative techniques to increase carbon sequestration on agricultural land, including through compost application, agroforestry, grazing land, grassland and cropland management, crop covering, mulching, reduced or no-till practices, and planting of windbreaks, among others. 28-3. Partner with farming groups, academic institutions, and other partners, to review and implement suggestions in the State's Healthy Soils Initiative, which facilitates the management of farms and ranches specifically for carbon sequestration and other benefits such as increased water holding capacity and soil fertility. 28-4. Work with CARB and other local and regional partners and participating agencies to identify and implement actions to maximize the use of the city's natural and working lands, including exploration of funding opportunities such as green loans, mitigation and carbon banking, or pursuit of grant funding. 28-5. Work with local farmers and community organizations involved with local farms to highlight agricultural properties and operating farms in the city's SOI, and to encourage their operation. 28-6. Work with Resource Conservation Districts and non-profit organizations to pursue funding for sustainable agriculture grants that can help incentivize farmers and ranchers to minimize synthetic pesticide and fertilizer use. 28-7. Develop and implement an ordinance that prohibits the use of synthetic pesticides and fertilizers on City-owned property.	840	0	0	Farm and grazing land created (acres)	Development Services Department	CARB Resource Conservation Districts	Midterm (2024–26)	General Fund

Strategy Actions	GHG Emission Reductions 2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
29. Collaborate with neighboring jurisdictions, landfills, county agencies, the Central Coast Climate Collaborative, and community organizations to implement the Climate Action Plan. 29-1. Coordinate with regional partners to seek funding for regional climate projects, such as a weatherization program or energy efficiency rebates. 29-2. Collaborate with regional partners to share updates, case studies, and lessons learned from implementation of climate actions partners.	0	0	0		Development Services Department	Central Coast Climate Collaborative San Benito County Community organizations	Near term (by 2024)	General Fund
30. Provide emergency information, essential services, and financial assistance to the community to enhance resilience during climate hazard events. 30-1. Partner with county agencies, local weather stations, and air quality districts to provide public health advisories regarding extreme heat and poor air quality. 30-2. Fund the creation and operation of centrally located accessible resilience hubs that can serve as shelters and resource centers during climate hazard events and natural disasters. 30-3. Work with community and regional partners to identify funding options and opportunities to provide temporary or permanent free air conditioning units and/or fans for highly vulnerable residents, including low-income households especially low-income households representing multiple characteristics of vulnerability to the effects of climate change. 30-4. Provide information on how to prepare for emergencies in the event of a wildfire, flood, or other natural disaster. 30-5. Partner with community organizations and faith-based groups to raise awareness about resilience resources and financial assistance programs, such as energy bill assistance and free air conditioning units.	0	0	0		Development Services Department	San Benito County Monterey Bay Air Quality Management District Community Organizations	Near term (by 2024)	General Fund
31. Ensure that workers in outdoor industries have adequate protection from environmental hazards. 31-1. Identify and support community organizations and regional partners that provide resources and training on workplace environmental hazards, including extreme heat, poor air quality, and diseases to all employers of outdoor workers (e.g., landscaping, construction, mining, farming) in Hollister.	0	0	0		Development Services Department	Local and regional community organizations and service providers	Near term (by 2024)	General Fund
32. Provide green job trainings to create living wages and quality employment opportunities while reducing health and environmental impacts of local industries. 32-1. Partner with community colleges, local non-profits, and community groups to provide green jobs training for residents. 32-2. Provide information about green jobs, especially to people currently or recently working in polluting or extractive industries. 32-3. Collaborate with community-based organizations and regional partners to amend the City's economic development strategy and attract businesses to Hollister that contribute to a sustainable economy.	0	0	0		Development Services Department	Local community groups	Midterm (2024–26)	General Fund

Strategy Actions	GHG Emission Reductions			Metrics	Responsible Departments	Partner Agencies	Timeframe	Funding options
	2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$					
33. Promote climate change awareness and GHG reduction community-wide, through a variety of mechanisms, including through support of climate change education in schools or community colleges. 33-1. Promote educational resources to students and parents each year and encourage community educators to incorporate clean energy and climate change discussions into their curriculum, by partnering with Gavilan College and school districts. 33-2. Use City newsletters to spotlight community members, including K-12 teachers and students, who are working on climate change or sustainability and who are making a difference in our community. 33-3. Increase energy educational resources in the Hollister School District by working with the San Benito County Office of Education. 33-4. Work with nonprofits and community-based organizations to develop a list of green volunteer opportunities and skills trainings for high school students, such as community gardening, tree planting, bicycle advocacy, food recovery, and composting.	0	0	0		Development Services Department	Gavilan College Hollister School District San Benito County Office of Education	Near term (by 2024)	General Fund Partnerships

APPENDIX A

This appendix provides additional details regarding the GHG emissions inventory, forecast, and reduction strategies. It summarizes the data sources, assumptions, and performance metrics used to calculate the potential for GHG savings from the community-wide reduction strategies in the Hollister Climate Action Plan (CAP).

The inventories include the years 2005 and 2019. These inventories assess emissions produced by transportation, residential and nonresidential energy use, off-road equipment, solid waste, water and wastewater, agriculture, and land use, including development and sequestration. For the purposes of the GHG inventory and forecast in the CAP, in addition to analyzing the GHG emissions in the city limits, the City assessed GHG emissions for the City's Sphere of Influence (SOI). This combined area, known as the CAP Study Area, represents the potential expanded area of the city boundary if all growth areas are annexed and incorporated into the City of Hollister as anticipated by the Hollister 2040 General Plan. Urban expansion in Hollister has the potential to significantly increase community-wide GHG emissions in the future.

Emission Factors

The City calculated most GHG emissions using data on GHG-generating activities in combination with emission factors. An emissions factor describes how many metric tons of carbon dioxide equivalent ($MTCO_2e$) are released per unit of an activity. **Table A-1** shows the emissions factors for 2005 and 2019. Some sectors, including agriculture and off-road emissions, are calculated using formulas or models that do not have specific emission factors.

Table A-1 Emissions Factors, 2005 and 2019

Sector	Unit	2005	2019	Source
PG&E electricity	$MTCO_2e$/kWh	0.000224	0.000002	PG&E
3CE electricity	$MTCO_2e$/kWh	N/A*	0.000005	3CE
Natural gas	$MTCO_2e$/therm	0.005319	0.005319	U.S. Community Protocol
On-road transportation (light- and medium-duty vehicles)	$MTCO_2e$/mile	0.000418	0.000352	California Air Resources Board
On-road transportation (heavy-duty vehicles)	$MTCO_2e$/mile	0.001483	0.001417	California Air Resources Board
On-road transportation (all vehicle types)	$MTCO_2e$/mile	0.000554	0.000489	California Air Resources Board
Solid waste (municipal solid waste)	$MTCO_2e$/ton	0.293219	0.286056	AMBAG

* 3CE did not operate in 2005 and did not provide electricity data or emissions factors for that year.

2005 and 2019 Inventory Updates (City Limit)

Prior to preparation of this CAP, the Association of Monterey Bay Area Governments (AMBAG) prepared community-wide GHG inventories for Hollister for the baseline year of 2005 and the most recent year of 2019. The 2005 inventory provides a baseline for establishing targets, while the 2019 inventory is the most recent indication of how emissions have changed since the baseline and is the year from which future emissions are forecasted.

The City revised the existing AMBAG GHG inventories for 2005 and 2019 to use consistent and current methods and data sources that are in line with recommended guidance and best practices. These revisions included the addition of new sectors and sources, revised emission factors, updated global warming potentials for certain GHGs, different data sources for certain sectors for consistency with the General Plan Update, and adjustments to methods for certain sectors. The new sectors added to the updated inventories are agriculture and land use and sequestration. Updates in methods most noticeably affect the results of the transportation sector; all other changes are minor. **Table A-2** and **Table A-3** show how the baseline 2005 inventory and the 2019 inventory have been updated. Both tables present inventory results in absolute and per capita emissions for comparison with previous inventories.

Table A-2 Updates to 2005 Baseline GHG Inventory within the City Limit ($MTCO_2e$)

Sector	Original 2005 Absolute[1]	Original 2005 Per Capita	Updated 2005 Absolute[1]	Updated 2005 Per Capita	Percentage Change
Transportation	23,660	0.54	110,040	2.52	365%
Nonresidential energy	55,120	1.26	55,120	1.27	0%
Residential energy	36,210	0.83	36,210	0.83	0%
Off-road equipment	-	-	32,310	0.74	-
Solid waste	10,660	0.24	11,330	0.26	6%
Water and wastewater	2,150	0.05	2,320	0.05	8%
Agriculture	-	-	400	0.01	-
Land use and sequestration	-	-	-2,300	-0.05	-
Development activities	-	-	1,600	0.04	-
Total Annual $MTCO_2e$	**127,800**	**2.93**	**247,030**	**5.63**	**93%**

[1]Absolute emissions are rounded to the nearest 10. Totals may not equal the sum of individual rows.

Table A-3 Updates to 2019 GHG Inventory within City Limit ($MTCO_2e$)

Sector	Original 2019 Absolute[1]	Original 2019 Per Capita	Updated 2019 Absolute[1]	Updated 2019 Per Capita	Percentage Change
Transportation	41,490	0.79	140,350	3.64	238%
Nonresidential energy	11,150	0.21	11,150	0.29	0%
Residential energy	24,230	0.46	24,240	0.62	0%
Off-road equipment	-	-	43,690	1.13	-

Sector	Original 2019 Absolute[1]	Original 2019 Per Capita	Updated 2019 Absolute[1]	Updated 2019 Per Capita	Percentage Change
Solid waste	17,930	0.34	17,930	0.47	0%
Water and wastewater	890	0.02	1,040	0.03	17%
Agriculture	-	-	320	0.01	-
Land use and sequestration	-	-	-2,460	-0.06	-
Development activities	-	-	500	0.01	-
Total Annual $MTCO_2e$	**95,690**	**1.82**	**236,760**	**6.15**	**147%**

[1]Absolute emissions are rounded to the nearest 10. Totals may not equal the sum of individual rows.

The large increase in transportation-related emissions is due to a change in the method of quantifying emissions from VMT. The original GHG inventories prepared by AMBAG used a method called the "boundary model". This model accounts for emissions from all travel miles that occurred within the geographic area, in this case, the city limits of Hollister. The boundary model does not account for travel miles outside of the area, even if the origin or destination of the trip was in Hollister. Although it does not account for travel demand, the original GHG inventories include a portion of "pass-through" or partial trips, which are those that do not begin or end in Hollister but pass through the community.

By contrast, the updated 2005 and 2019 GHG inventories use the "origin-destination" model, which accounts for travel demand by reporting all trips in which both the origin and destination are within the geographic area, as well as trips that have only an origin or destination within the area. The latter, known as transboundary trips, are quantified by allocating 50 percent of travel miles to the city where the trip began or ended. Due to the more comprehensive scope of the origin-destination model, which accounts for travel demand into and outside of the city limits, emissions associated with VMT are much higher in the updated GHG inventories. This change in method for quantifying vehicle emissions explains the large increase in emissions for the transportation sector in the updated 2005 and 2019 GHG inventories compared to the original inventory from AMBAG.

The increase in emissions for the water and wastewater sector in the revised 2005 and 2019 inventories as compared to the original AMBAG results is due to a more complete analysis of activities and emissions for this sector. The water and wastewater sector includes two types of GHG emissions: indirect and direct emissions. Indirect emissions are GHG emissions associated with electricity use for the supply, conveyance, distribution, and treatment of potable water and wastewater. Direct emissions are GHG emissions associated with biological processes that occur naturally through the treatment process. The original 2005 and 2019 GHG inventories assessed only direct emissions of nitrous oxide associated with effluent discharge and wastewater treatment. The update to the 2005 and 2019 GHG inventories includes indirect water and wastewater use in addition to the direct emissions. This change in method for quantifying the water and wastewater emissions explains the 8 and 13 percent increase in emissions for this sector in the updated 2005 and 2019 GHG inventories, respectively.

City Limits Inventory Sector Details

Each sector experienced notable changes in activity and emissions level between 2005 and 2019. This section provides a summary of the changes by sector and presents possible explanations for these changes.

Transportation

Hollister's community members drove approximately 198,652,450 vehicle miles in 2005, increasing to 287,080,730 vehicle miles in 2019. The vehicle miles traveled (VMT) in 2005 resulted in the release of approximately 110,040 $MTCO_2e$, which increased to 140,270 $MTCO_2e$ in 2019. Although vehicle miles increased by 45 percent between 2005 and 2019, emissions only increased by 27 percent due to increasingly fuel-efficient vehicles, along with a wider adoption of electric vehicles (EVs). The method used to calculate VMT for the transportation sector of the CAP, and the results of this process, are consistent with those of the General Plan Update. **Table A-4** provides a breakdown of the activity data and GHG emissions for on-road transportation by each individual year included in the updated community-wide inventory.

Table A-4 Transportation Activity Data and GHG Emissions within City Limit, 2005 and 2019

Sector	2005	2019	Percentage Change 2005 to 2019
Activity Data (VMT)			
Light-duty vehicles	173,226,780	250,328,920	45%
Heavy-duty vehicles	25,425,670	36,751,810	45%
Total Annual VMT	**198,652,450**	**287,080,730**	**45%**
GHG Emissions ($MTCO_2e$)			
Light-duty vehicles	72,340	88,200	22%
Heavy-duty vehicles	37,700	52,070	38%
Total Emissions ($MTCO_2e$)	**110,040**	**140,270**	**27%**

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

Residential Electricity

Hollister's GHG emissions from residential electricity totaled approximately 220 $MTCO_2e$ in 2019, compared to 13,560 $MTCO_2e$ in 2005, a decline of 98 percent. Improvements in energy efficiency have reduced the amount of electricity and natural gas used in Hollister despite a growing population, which has also contributed to reduced energy-related GHG emissions. While residential electricity use declined approximately 29 percent over this period due to increases in energy efficiency, much of the decline in emissions is due to electricity coming from renewable and carbon-free sources. This trend accelerated after the wide-scale adoption of 3CE, which in 2019 supplied electricity entirely from renewable and other carbon-free sources. **Table A-5** provides a breakdown of the activity data and GHG emissions for residential electricity by each individual year included in the updated community inventory.

Table A-5 Residential Electricity Activity GHG Emissions by Subsector within City Limit, 2005 and 2019

Sector	2005	2019	Percentage Change 2005 to 2019
Activity Data (kWh)			
Residential electricity PG&E	60,662,240	5,013,670	-92%
Residential electricity 3CE	-	38,068,800	-
Total activity (kWh)	**60,662,240**	**43,082,470**	**-29%**
GHG Emissions ($MTCO_2e$)			
Residential electricity PG&E	13,560	10	-100%
Residential electricity 3CE	-	210	-
Total emissions ($MTCO_2e$)	**13,560**	**220**	**-98%**

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

Residential Natural Gas

GHG emissions from residential natural gas use totaled approximately 24,020 $MTCO_2e$ in 2019, compared to approximately 22,650 $MTCO_2e$ in 2005, an increase of 6 percent. This increase in natural gas GHG emissions is proportional to the increase in natural gas use between the two inventory years. Table A-6 provides a breakdown of the activity data and GHG emissions for residential natural gas by year in the updated community-wide GHG inventory.

Table A-6 Residential Natural Gas Activity and GHG Emissions within City Limit, 2005 and 2019

Sector	2005	2019	Percentage Change 2005 to 2019
Activity Data (therms)			
Residential natural gas	4,257,670	4,515,300	6%
GHG emissions ($MTCO_2e$)			
Residential natural gas	**22,650**	**24,020**	**6%**

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

Nonresidential Electricity

Hollister's GHG emissions from nonresidential electricity, including GHG emissions from direct access electricity, totaled 510 MTCO2e in 2019, compared to approximately 20,280 MTCO2e in 2005, a decline of 97 percent. This decline in nonresidential electricity emissions occurred despite an increase in electricity use by 7 percent and is primarily attributable to electricity coming from cleaner sources. As mentioned previously, this trend accelerated when 3CE started to supply electricity in Hollister, which provides electricity from renewable and carbon-free sources. **Table A-7** provides a breakdown of the activity data and GHG emissions for nonresidential electricity by each year included in the updated community-wide inventory.

Table A-7 Nonresidential Electricity Activity and GHG Emissions by Subsector within City Limit, 2005 and 2019

Sector	2005	2019	Percentage Change 2005 to 2019
Activity Data (kWh)			
Nonresidential electricity PG&E	83,591,440	1,333,710	-98%
Nonresidential electricity 3CE	-	93,299,730	-
Direct access electricity*	4,874,830	-	-100%
Total activity (kWh)	**88,466,270**	**94,633,440**	**7%**
GHG Emissions ($MTCO_2e$)			
Nonresidential electricity PG&E	18,690	Less than 0.0002	-100%
Nonresidential electricity 3CE	-	510	
Direct access electricity	1,590	-	-100%
Total emissions ($MTCO_2e$)	**20,280**	**510**	**-98%**

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.
*No direct access electricity was reported in 2019.

Nonresidential Natural Gas

Nonresidential natural gas GHG emissions totaled approximately 10,640 $MTCO_2e$ in 2019, compared to approximately 34,840 $MTCO_2e$ in 2005, a decrease of 69 percent. This decrease in natural gas GHG emissions may be due to changes in weather conditions (affecting the need for natural gas heating), and general improvements in energy efficiency. Conversions from natural gas to electric appliances may also contribute to reduced natural gas emissions. **Table A-8** provides a breakdown of the activity data and GHG emissions for nonresidential natural gas by each individual year included in the updated community inventory.

Table A-8 Nonresidential Natural Gas Activity and GHG Emissions within City Limit, 2005 and 2019

Sector	2005	2019	Percentage Change 2005 to 2019
Activity Data (therms)			
Nonresidential natural gas	6,550,060	2,001,050	-69%
GHG Emissions ($MTCO_2e$)			
Residential natural gas	**34,840**	**10,640**	**-69%**

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

Solid Waste

Hollister's GHG emissions associated with municipal solid waste (MSW) thrown away by community members within the city limits increased by 58 percent between 2005 and 2019, from 11,330 $MTCO_2e$ in 2005 to 17,930 $MTCO_2e$ by 2019. This increase in emissions, which is smaller than the rate of increase in the volume of solid waste, is potentially the result of an increase in population during the time period. **Table A-9** presents specific solid waste data for each year.

Table A-9 Solid Waste Activity and GHG Emissions within City Limit, 2005 and 2019

Sector	2005	2019	Percentage Change 2005 to 2019
Activity Data (tons)			
MSW	38,640	62,680	62%
GHG Emissions ($MTCO_2e$)			
MSW	11,330	17,930	58%

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

Off-Road Equipment

GHG emissions from the off-road equipment sector in Hollister increased approximately 35 percent between 2005 and 2019, from 32,310 $MTCO_2e$ in 2005 to 43,590 $MTCO_2e$ in 2019, based on data available from the California Air Resources Board (CARB). **Table A-10** shows the change in GHG emissions for each year. As shown, emissions from transport refrigeration units (TRUs) have increased the most significantly, followed by construction and mining equipment and light commercial equipment, which rose by 8,350, 973, and 92 percent, respectively. Increases in TRU and light commercial equipment emissions may be attributed to an increase in commercial and agricultural activity, while growth in construction and mining equipment emissions may be attributed to an increase in construction activities and employment. Portable equipment emissions rose by 57 percent. These increases are largely attributed to increases in population that Hollister experienced during this time.

Conversely, lawn and garden equipment emissions remained relatively constant, pleasure craft equipment emissions decreased by 2 percent, and recreational equipment emissions decreased by 11 percent between 2005 and 2019. The decrease in industrial equipment may be due to more fuel-efficient equipment becoming available in combination with changing equipment needs.

Table A-10 Off-Road Equipment GHG Emissions by Subsector within City Limit, 2005 and 2019

Off-Road Equipment	2005	2019	Percentage Change 2005 to 2019
Agricultural	-	20	-
Construction and mining	660	7,080	973%
Industrial	750	1,050	40%
Lawn and garden	5,510	5,490	0%
Light commercial	4,120	7,930	92%
Pleasure craft	13,100	12,790	-2%
Portable equipment	470	740	57%
Recreational	7,680	6,800	-11%
Transport Refrigeration Units	20	1,690	8,350%
Total Off-Road Equipment ($MTCO_2e$)	**32,210**	**43,590**	**-35%**

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

Water and Wastewater

GHG emissions from Hollister's water and wastewater consumption decreased by 56 percent from 2,320 $MTCO_2e$ in 2005 to 1,010 $MTCO_2e$ in 2019. Emissions associated with indirect water and indirect wastewater (i.e., the electricity needed to move and process water and wastewater) both decreased by 97 percent. GHG emissions released from direct wastewater grew by 15 percent due to increased indoor water consumption. Although the activity data in Table A-11 shows a decrease in water consumption of only 8 percent and a significant increase (41 percent) in the amount of wastewater produced, the GHG emissions for these subsectors decreased due to the use of renewable and carbon-free electricity sourced from 3CE.

Table A-11 Water and Wastewater Activity and GHG Emissions by Subsector within City Limit, 2005 and 2019

Sector	2005	2019	Percentage Change 2005 to 2019
Activity Data			
Indirect water (millions of gallons)	1,750	1,610	-8%
Indirect water (kWh)	5,331,260	4,908,890	-8%
Indirect wastewater (kWh)	1,305,600	1,836,260	41%
Water and Wastewater Total	**6,636,860**	**6,532,090**	**-2%**
GHG Emissions ($MTCO_2e$)			
Indirect water	1,190	30	-97%
Indirect wastewater	290	10	-97%
Direct wastewater	840	970	15%
Water and Wastewater Total ($MTCO_2e$)	**2,320**	**1,010**	**-56%**

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

Agriculture

The project team assessed GHG emissions from agriculture by calculating the nitrous oxide emissions associated with fertilizer use for all types of agricultural production in Hollister, including field, vegetable crops, fruit, and nut crops. As shown in **Table A-12**, GHG emissions in this sector decreased from 400 $MTCO_2e$ in 2005 to 320 $MTCO_2e$ in 2019, a decrease of 20 percent during this period. The emissions decrease is attributed to a decrease in agricultural production, reflected in the proportional decline in acres of crop production between 2005 and 2019.

Table A-12 Fertilizer Use and GHG Emissions within City Limit, 2005 and 2019

Sector	2005	2019	Percentage Change 2005 to 2019
Activity Data (acres)			
Acres of Fertilized Crops	1,120	890	-21%
GHG Emissions ($MTCO_2e$)			
Fertilizer GHG Emissions	400	320	-20%

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

Land Use and Sequestration

GHG emissions from land use and sequestration can be either positive or negative. Natural lands and street trees can absorb carbon by storing it in biomass such as wood, plants, and soil. As a result, when natural land is preserved or when more street trees are planted, emissions from this sector go down because GHGs are being removed from the atmosphere. However, developing natural lands or converting them to a different form (for example, replacing forests with crop land) or removing street trees causes carbon to be released, creating GHG emissions.

The land use and sequestration sector includes emission sources and sinks from two types of activities: (1) emissions caused by permanently removing vegetation from natural lands or farmlands as a part of development (emissions source), and (2) sequestration of GHG emissions in street trees in urbanized areas (emissions sink). As shown in **Table A-13**, the development of agricultural land resulted in the release of 1,600 $MTCO_2e$ and 500 $MTCO_2e$ in 2005 and 2019, respectively. These emissions are calculated based on development of agricultural land that occurred during a 20-year period. Urban street trees absorbed approximately 2,300 $MTCO_2e$ and 2,460 in 2005 and 2019, respectively, offsetting the emissions caused by urban development and other activities. As a result, the net impact of land use change, when accounting for urban street trees, is a decrease in emissions. Emissions from this sector total -700 $MTCO_2e$ in 2005 and -1,960 $MTCO_2e$ in 2019.

Table A-13 Land Use Change and Street Tree Biomass within City Limit 2005 and 2019

Sector	2005	2019	Percentage Change 2005 to 2019
Activity Data (acres)			
Land use change*	1,700	590	-69%
Street tree biomass	730	780	7%
GHG Emissions ($MTCO_2e$)			
Land use change*	1,600	500	-69%
Street tree biomass	-2,300	-2,460	-7%
Total $MTCO_2e$	**-700**	**-1,960**	**-180%**

*The conversion of agricultural to urban land method assumes that all developed agricultural land was converted into urban land uses, and no street trees were removed on those urban lands.

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

2019 GHG Inventory Totals for CAP Study Area

As noted in the Introduction section, the General Plan anticipates that Hollister will grow within its existing boundary and through the annexation of land outside of the current city boundary but within the General Plan's CAP Study Area (see **Table A-14**). This land consists primarily of agricultural or low-density residential land west, south, and east of the city boundary. The Hollister SOI, totaling approximately 6,844 acres, including the area in the city boundary, is the area designated to indicate land that is likely to be annexed into the city in the near future.

Table A-14 Combined 2019 GHG Emissions – Existing City Limit, Sphere of Influence, and Combined Total (CAP Study Area)

Total Emissions ($MTCO_2e$)	2019
City Limit	236,760
Sphere of Influence	7,990
CAP Study Area (Total)	**244,750**

Demographic Projections

The community-wide GHG emissions forecasts are based on the 2019 community-wide GHG emissions inventory, taking into account Hollister's 2019 demographics and predicted demographic trends used in the Hollister 2040 General Plan Update. **Table A-15** shows projected changes in population, households, jobs, service population, and VMT between 2019 and 2045. The 2019 demographic statistics are from the US Census, the Department of Finance, and AMBAG. Projected demographic information is from General Plan Update buildout projections. VMT are derived from Kimley-Horn (2019). VMT is modeled for 2015 and 2040. The City interpolated and extrapolated these results to obtain VMT estimates for 2019, 2030, and 2045.

The City of Hollister's service population in the city boundary is projected to increase by 78 percent between 2019 and 2045.

Table A-15 City of Hollister Demographic Projection within City Limit, 2019-2045

Metric	2019	2030	2040	2045	Percentage Change, 2019 to 2045	Relevant Sectors
Population	38,507	53,250	63,295	68,317	77%	Off-road equipment
Households	10,660	15,352	18,619	20,253	90%	Residential energy, off-road equipment
Jobs	14,164	19,934	23,506	25,293	79%	Nonresidential energy, off-road equipment
Service population	52,671	73,183	86,801	93,610	78%	Solid, water and wastewater, off-road equipment
Vehicle miles traveled	287,080,730	453,820,480	512,416,640	541,714,540	89%	Transportation

Table A-16 shows the demographic projections used to prepare the GHG emissions forecast of the SOI.

Table A-16 Hollister Demographic Projection in Sphere of Influence, 2019-2045

Metric	2019	2030	2040	2045	Percentage Change, 2019 to 2045	Relevant Sectors
Population	1,863	2,610	3,289	3,628	95%	Off-road equipment
Households	588	829	1,048	1,157	97%	Residential energy, off-road equipment
Jobs	294	312	329	338	15%	Nonresidential energy, off-road equipment
Service population*	2,157	2,922	3,618	3,966	84%	Solid waste, water and wastewater, off-road equipment
Vehicle miles traveled (VMT)	9,178,059	13,273,444	16,996,407	18,858,062	105%	Transportation

Sources: 2019 demographic numbers are from US Census, the Department of Finance, and AMBAG.
* Service population is the sum of populations and jobs.
All numbers except residents per household are rounded to the nearest 10.
Future demographics are from buildout projections. VMT are derived from Kimley-Horn (2019) using modeled VMT analysis for the years 2015 and 2040 to interpolate and extrapolate as needed to obtain VMT estimates for 2019, 2030, and 2045.

The service population of the city's SOI, not including the city boundary, is projected to increase by 84 percent between 2019 and 2045.

State GHG Emission Reductions

California has adopted and committed to implementing policies to decrease GHG emission levels statewide, many of which apply to the major GHG emitters in Hollister. Many of these policies are identified in the State's Climate Change Scoping Plan (Scoping Plan), which was originally adopted in 2008 in response to the California Global Warming Solutions Act. The Scoping Plan outlines several regulatory and market-based solutions to achieving California's GHG emission reduction goals. Successive updates to the Scoping Plan in 2014,2017, and 2022 revised these State level actions and identified additional opportunities for GHG emission reductions, as applicable.

While the Scoping Plan and related documents lay out policies to reduce GHG emissions statewide, the CAP focuses on the policies that most directly impact Hollister. The CAP accounts for the impacts of the State's GHG emissions reduction efforts on the level of emissions released by activities that take place in Hollister. These efforts are:

The Renewables Portfolio Standard (RPS), which requires increases in renewable and carbon-free electricity supplies. RPS was first established in 2002 and has been amended multiple times, most recently by Senate Bill (SB) 1020 in 2022. It requires all electricity providers in the state to obtain at least 60 percent of their electricity from eligible renewable resources by the end of 2030 and all their electricity from carbon-free (although not necessarily eligible renewable) resources by the end of 2045. This policy reduces GHG emissions from electricity use, including the electricity used to transport and process water and wastewater, and the electricity used for electric vehicles.

The Clean Car Standards, which require increased fuel efficiency of on-road vehicles and decreased carbon intensity of vehicle fuels. In 2002, California adopted Assembly Bill (AB) 1493, the New Passenger Motor Vehicle Greenhouse Gas Emission Standards, or Pavley standard. It required a reduction in tailpipe GHG emissions from new vehicles produced from 2009 to 2015. In 2012, the California Air Resources Board (CARB) adopted an extension of this policy, the Advanced Clean Car Standards, which requires more stringent reductions in tailpipe GHG emissions from vehicles produced from 2016 to 2025. In August 2022, CARB adopted another expansion of these standards, known as the Advanced Clean Cars II standards. This regulation requires that all new light-duty vehicles (e.g., passenger cars, small trucks, and SUVs) sold in the state be zero-emission by 2035, with interim targets for new light-duty vehicle sales beginning in 2026. There are some limited exceptions for plug-in hybrid vehicles. CARB adopted similar rules for heavy-duty vehicles and State and local government fleets in 2020 (Advanced Clean Trucks) and 2023 (Advanced Clean Fleets).

The updated Title 24 building energy-efficiency standards require new buildings to achieve increased energy-efficiency targets. California Code of Regulations, Title 24, Part 6 are California's energy-efficiency standards for new and renovated buildings, which are applied at the local level through the project review and building permit process. The standards are strengthened every three years, with the ultimate goal of making new buildings net-zero energy, meaning that they would generate as much energy as they use. The most recent set of Title 24 standards, known as the 2022 standards, went into effect on January 1, 2023. The 2022 Title 24 standards encourage efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, and strengthen ventilation standards. The Low Carbon Fuel Standard (LCFS) mandates reduced carbon intensity of fuels used in off-road equipment.

The short-lived climate pollutants law (SB 1383) requires that communities divert 75 percent of organic waste (e.g., food scraps, grass, and plant trimmings) away from landfills and toward alternatives such as composting or energy generation. As a part of this requirement, all jurisdictions must offer curbside composting to single-family and small multifamily properties (less than five units). Larger multifamily properties and businesses must either participate in curbside composting or self-haul organic waste to a composting

program or collection site. SB 1383 also includes requirements related to diverting surplus food to people in need, increasing the use of products made from recycled organics, and providing more detailed reporting statistics.

Title 24: Building Standards Code

Title 24 is the section of the California Code of Regulations that establishes standards to promote energy efficiency, public health, and GHG reduction standards for the construction of new commercial, residential, and public-school buildings. Title 24 includes Part 6, Building Energy Efficiency Standards (also known as the Energy Code), which focuses on reducing energy consumption of new buildings, and Part 11, CALGreen Code, which focuses on reducing environmental impacts and improving public health through mandatory measures in the building sector.

Title 24 is applied at the local level through the building permit and development review process, implemented through the municipal building code. Section 15.04.050 of the Hollister Municipal Code adopts the California Building Standards Code, including the CALGreen Code, by reference. The Municipal Code thus requires compliance with statewide Title 24 standards that improve energy efficiency, public health, and environmental sustainability in new homes and nonresidential buildings, such as high-efficiency electric air and water heating systems, improved ventilation systems, and rooftop solar and battery storage systems. This CAP was prepared with the 2022 standards in effect.

GHG Emission Reductions from State Actions in City Limit

In the city limit, if no changes in activities or emissions occur (business as usual scenario), GHG emissions are projected to increase by approximately 93 percent between 2019 and 2045. By comparison, with State actions, Hollister's community-wide GHG emissions are projected to increase by 15 percent relative to 2019 levels by 2045. Table A-17 shows the GHG emission forecast for the city limit with and without reductions from State actions.

Table A-17 GHG Emission Reductions from State Actions in City Limit, 2019-2045

GHG Emissions	2019 $MTCO_2e$	2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Percentage Change 2019 to 2045
Forecasted emissions without State actions	236,760	371,180	428,080	456,050	**93%**
Reductions from RPS	0	310	730	1,400	---
Renewable natural gas	0	3,070	9,300	11,800	
Reductions from Clean Car standards	0	44,630	78,850	88,150	---
Reductions from Title 24	0	5,030	12,310	16,390	---
Reductions from LCFS (off-road only)	0	45,120	54,190	58,500	---
Reductions from SB 1383	0	5,870	6,960	7,500	---
Reductions from all State actions	0	104,030	162,340	183,740	---
Emissions with State actions	**236,760**	267,150	265,740	272,310	**15%**

GHG Emission Reductions from State Actions in Sphere of Influence

In the SOI, if no changes in activities or emissions occur, GHG emissions are projected to increase by 112 percent between 2019 and 2045. By comparison, with State actions, 2045 GHG emissions in the SOI are projected to increase by 28 percent. **Table A-18** shows the GHG emission forecast with and without reductions from State actions in the SOI.

Table A-18 GHG Emission Reductions from State Actions in the Sphere of Influence, 2019 – 2045

GHG Emissions	2019 $MTCO_2e$	2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Percentage Change 2019- 2045
Forecasted emissions without State actions	7,990	11,340	13,950	16,920	112%
Reductions from RPS	0	10	20	40	-
Renewable natural gas	0	130	400	500	
Reductions from Clean Car standards	0	1,300	2,600	3,070	-
Reductions from Title 24	0	60	120	150	-
Reductions from LCFS (off-road only)	0	1,900	2,370	2,590	-
Reductions from SB 1383	0	230	290	320	-
Reductions from all State actions	0	3,630	5,790	6,670	-
Emissions with State actions	7,980	7,710	8,170	10,250	28%

GHG Emission Reductions in CAP Study Area

With State actions, the CAP Study Area's GHG emissions are projected to increase by 15 percent relative to 2019 levels by 2045. **Table A-19** shows the GHG emission reductions from State actions in the CAP Study Area.

Table A-19 GHG Emission Reductions from State Actions in the CAP Study Area, 2019 – 2045

GHG Emissions	2019 $MTCO_2e$	2030 $MTCO_2e$	2040 $MTCO_2e$	2045 $MTCO_2e$	Percentage Change 2019- 2045
Forecasted emissions without State actions	244,750	382,520	442,030	472,970	93%
Reductions from RPS	0	320	750	1,440	-
Renewable natural gas	0	3,200	9,700	12,300	
Reductions from Clean Car standards	0	45,930	81,450	91,220	-
Reductions from Title 24	0	5,090	12,430	16,540	-
Reductions from LCFS (off-road only)	0	47,020	56,560	61,090	-
Reductions from SB 1383	0	6,100	7,250	7,820	-
Reductions from all State actions	0	107,660	168,130	190,410	-
Emissions with State actions	244,750	274,860	273,910	282,560	15%

Technical Data for Existing and Planned Activities

Existing Activities

EXISTING ACTION 1 Citywide Solar Energy Systems

Existing Action 1 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	Less than 10	Less than 10	Less than 10

EXISTING ACTION 2 3CE Renewable Energy Portfolio

Existing Action 2 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	610	400	Less than 10

EXISTING ACTION 3 Installation of EV Chargers

Existing Action 3 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	Less than 10	Less than 10	Less than 10

Planned Activities

Strategy 1 MUNICIPAL ENERGY EFFICIENCY AND CONSERVATION

Strategy 1 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	10	20	20
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	10	20	20

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Percentage municipal electricity reduced	15.0%	25.0%	30.0%	N/A	N/A	N/A	N/A
Percentage municipal natural gas use reduced	10.0%	20.0%	25.0%	N/A	N/A	N/A	N/A

Strategy 2 SUSTAINABLE COMMUNITY-WIDE BUILDING STANDARDS

Strategy 2 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	1,210	3,170	4,900
SOI	70	110	160
CAP Study Area	1,280	3,280	5,060

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Percentage residential electricity reduced	15.0%	25.0%	30.0%	Number of retrofitted residential units	2,290	4,570	6,860

Assumptions				Performance Standards			
Percentage residential natural gas use reduced	10.0%	20.0%	30.0%	-	-	-	-

Source: Greenblatt, J. (2015) "Modeling California policy impacts of greenhouse gas emissions." Energy Policy. Accessed online at https://www.sciencedirect.com/science/article/abs/pii/S0301421514006892?via%3Dihub

Strategy 3 RESIDENTIAL ENERGY EFFICIENCY AND CONSERVATION

Strategy 3 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	510	1,330	2,500
SOI	30	70	140
CAP Study Area	540	1,400	2,640

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Percentage residential electricity reduced	10.0%	20.0%	30.0%	Number of retrofitted low-income residential units	1,110	3,320	6,640
Percentage residential natural gas use reduced	5.0%	15.0%	30.0%	-	-	-	-

Sources:

Greenblatt, J. (2015) "Modeling California policy impacts of greenhouse gas emissions." Energy Policy. https://www.sciencedirect.com/science/article/abs/pii/S0301421514006892?via%3Dihub

California Department of Housing and Community Development. (2022). State Income Limits for 2022. https://www.hcd.ca.gov/docs/grants-and-funding/inc2k22.pdf

Strategy 4 NONRESIDENTIAL ENERGY CONSERVATION AND EFFICIENCY

Strategy 4 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	980	2,210	3,320
SOI	20	40	50
CAP Study Area	1,000	2,250	3,370

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Percentage nonresidential electricity use reduced	15.0%	25.0%	30.0%	Number of nonresidential spaces retrofit	230	450	670
Percentage nonresidential natural gas use reduced	10.0%	20.0%	30.0%	-	-	-	-

Source: Greenblatt, J. (2015) "Modeling California policy impacts of greenhouse gas emissions." Energy Policy. https://www.sciencedirect.com/science/article/abs/pii/S0301421514006892?via%3Dihub

Strategy 5 ONSITE SOLAR ENERGY FOR NEW DEVELOPMENT

Strategy 5 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	Less than 10	Less than 10	Less than 10
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	Less than 10	Less than 10	Less than 10

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Percentage of new nonresidential buildings with solar installations	65.0%	80.0%	90.0%	Solar installations on new nonresidential buildings	150	290	390

Source:
U.S. Department of Energy. (n.d.). National Renewable Energy Laboratory. PV Watts Calculator. https//pvwatts.nrel.gov/

Strategy 6 Municipal Renewable and Carbon-Free Energy

Strategy 6 GHG Reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	Less than 10	Less than 10	Less than 10
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	Less than 10	Less than 10	Less than 10

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Number of new solar installations on municipal property	5	10	15	Number of new solar installations on municipal property	5	10	15

Source:

U.S. Department of Energy. (n.d.). National Renewable Energy Laboratory. PV Watts Calculator. https//pvwatts.nrel.gov/

Strategy 7 Community-Wide Renewable, Carbon-Free, and Resilient Energy Systems

Strategy 7 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	Less than 10	Less than 10	Less than 10
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	Less than 10	Less than 10	Less than 10

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Percentage existing nonresidential buildings obtaining new solar systems (city limits)	10.0%	25.0%	30.0%	New solar installations (City Limit)	1,120	2,800	3,360
Percentage existing nonresidential buildings obtaining new solar systems (SOI)	10.0%	25.0%	30.0%	New solar installations (SOI)	60	150	180

Source:
U.S. Department of Energy. (n.d.). National Renewable Energy Laboratory. PV Watts Calculator. https//pvwatts.nrel.gov/

Strategy 8 Building Electrification

Strategy 8 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	8,820	15,570	16,480
SOI	400	760	830
CAP Study Area	9,220	16,330	17,310

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Percentage of existing homes converting to all-electric	30.0%	70.0%	85.0%	Residential units undergoing all-electric retrofits	3,220	7,500	9,110
Percentage of existing nonresidential spaces converting to all-electric	25.0%	50.0%	65.0%	Nonresidential spaces undergoing all-electric retrofits	140	280	370

Source:
Greenblatt, J. (2015) "Modeling California policy impacts of greenhouse gas emissions." Energy Policy. https://www.sciencedirect.com/science/article/abs/pii/S0301421514006892?via%3Dihub

Strategy 9 BUILDING CODE UPDATES AND INCENTIVES FOR ELECTRIFICATION OF NEW BUILDINGS

Strategy 9 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	2,010	7,020	8,050
SOI	80	270	320
CAP Study Area	2,090	7,290	8,370

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Percentage of new homes built to be all-electric	20%	70%	80%	Residential units built to be all-electric	990	5,890	8,130
Percentage of new nonresidential spaces built to be all-electric	25%	65%	75%	Nonresidential spaces built to be all-electric	60	240	330

Source:
Greenblatt, J. (2015) "Modeling California policy impacts of greenhouse gas emissions." Energy Policy. https://www.sciencedirect.com/science/article/abs/pii/S0301421514006892?via%3Dihub

Strategy 10 Reducing Vehicle Miles Traveled

Strategy 10 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	5,170	8,380	12,120
SOI	140	280	420
CAP Study Area	5,310	8,660	12,540

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Target participation rate in Commute Trip Reduction Program	5.0%	10.0%	15.0%	Employees participating in commute trip reduction program	1,010	2,380	3,840
Percent new residents in transit-oriented development	5.0%	15.0%	25.0%	Residents in transit-oriented developments	770	3,930	7,890
Percent new jobs in transit-oriented development	10.0%	20.0%	30.0%	Jobs in transit-oriented developments	580	1,880	3,350
Percent new multifamily units designated affordable	20.0%	20.0%	25.0%				
Target light-duty VMT/service population reduction for new development	15.0%	20.0%	25.0%				
Percent transit routes that receive treatments	10.0%	20.0%	25.0%				

Sources:

California Air Pollution Control Officers Association (CAPCOA). (2022). Handbook for analyzing greenhouse gas emissions reductions, assessing climate vulnerabilities, and advancing health and equity. CAPCOA. https://www.airquality.org/residents/climate-change/ghg-handbook-caleemod

Federal Highway Administration (FHWA). (22 November 2019). Travel Chapter 3: Mode Choice. FHWA. https://www.fhwa.dot.gov/policy/23cpr/chap3.cfm#vmt-and-person-miles-traveled.

Strategy 11 ACTIVE TRANSPORTATION INFRASTRUCTURE

Strategy 11 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	980	1,030	1,090
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	980	1,030	1,090

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Percentage of installation of planned bicycle facilities	28.0%	56.0%	69.0%	Total mileage of bicycle facilities	10.6	21.2	26.5
Percentage of installation of planned pedestrian facilities	28.0%	56.0%	69.0%	Total mileage of pedestrian facility improvements	1.4	2.8	3.5
Percent reduction in VMT from displaced vehicles due to bicycle facility	0.4%	0.4%	0.4%				
Percent reduction in VMT from displaced vehicles due to pedestrian improvements	3.2%	3.2%	3.2%				
Percent change of residences who have access to scootering	15.0%	20.0%	25.0%				

Sources:

California Air Pollution Control Officers Association (CAPCOA). (2022). Handbook for analyzing greenhouse gas emissions reductions, assessing climate vulnerabilities, and advancing health and equity. CAPCOA. https://www.airquality.org/residents/climate-change/ghg-handbook-caleemod

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Strategy 12 Safe Routes to Schools

Safe Routes to Schools is not a quantifiable strategy. There are no measurable GHG reductions for this strategy. There are no assumptions or performance targets.

Strategy 13 Transit Access

Strategy 13 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	12,780	23,950	30,530
SOI	280	530	750
CAP Study Area	13,060	24,480	31,280

Assumptions					Performance Standards		
Description	2030	2040	2045	Description	2030	2040	2045
Average round trip commute distance in Hollister (miles)	50	50	50	Number of new Hollister transit trips per year with service expansion	76,110	207,050	240,120
Average round trip commute distance in Hollister SOI (miles)	50	50	50	Number of new Hollister SOI transit trips per year with service expansion	3,040	8,630	10,170
Percent increase in transit network coverage	15.0%	25.0%	35.0%				

Sources:

California Air Pollution Control Officers Association (CAPCOA). (2022). Handbook for analyzing greenhouse gas emissions reductions, assessing climate vulnerabilities, and advancing health and equity. CAPCOA. https://www.airquality.org/residents/climate-change/ghg-handbook-caleemodCalifornia Air Resources Board (CARB). (2019). Emission Factors model (EMFAC), Emissions inventory tool. CARB. https://arb.ca.gov/emfac/emissions-inventory.

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Strategy 14 ELECTRIC VEHICLES (EVs)

Strategy 14 Per reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	23,670	84,820	125,150
SOI	700	2,820	4,360
CAP Study Area	24,370	87,640	129,510

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Target for eVMT share of community wide VMT (light-duty)	25.0%	65.0%	90.0%	Light duty eVMT in city limits	59,857,630	183,793,070	251,678,790
Target for eVMT share of community wide VMT (heavy-duty)	10.0%	55.0%	85.0%	Light duty eVMT in SOI	1,782,640	6,145,170	8,800,780
City Limit target number of new charging stations	20.00	35.00	45.00	Heavy-duty eVMT in city limits	6,176,330	39,128,740	65,077,890
SOI target number of new charging stations	1	2	3	Heavy-duty eVMT in SOI	178,230	1,285,740	2,250,690

Sources:

California Air Pollution Control Officers Association (CAPCOA). (2022). Handbook for analyzing greenhouse gas emissions reductions, assessing climate vulnerabilities, and advancing health and equity. CAPCOA. https://www.airquality.org/residents/climate-change/ghg-handbook-caleemod

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Strategy 15 Expand Municipal Electric Vehicle Fleet and Promote Low Carbon Transportation Options.

Expand Municipal Electric Vehicle Fleet and Promote Low Carbon Transportation Options is not a quantifiable strategy in Hollister because municipal electric fleet and public bus data are not available. Instead of being quantified as a stand-alone strategy, GHG emissions reductions for this strategy were quantified at the community-wide scale. As a result, there are no specific GHG reductions, assumptions, or performance targets specific to municipal operations.

Strategy 16 Consider developing an EV Car Share Program.

Strategy 16 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	650	820	900
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	650	820	900

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Number of EVs in Car Share Program	20	30	35	Number of EVs in Car Share Program	20	30	35

Strategy 17 ELECTRIFICATION OF CONSTRUCTION AND LANDSCAPING EQUIPMENT

Strategy 17GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	4,830	11,460	16,560
SOI	160	100	130
CAP Study Area	4,990	11,560	16,690

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Percentage of construction equipment converted to electric	30.0%	60.0%	80.0%	N/A	-	-	-
Percentage of landscaping equipment converted to electric	40.0%	65.0%	80.0%	N/A	-	-	-
Percentage of all other off-road equipment converted to electric	30.0%	60.0%	80.0%	N/A	-	-	-

Sources:

California Air Pollution Control Officers Association (CAPCOA). (2022). Handbook for analyzing greenhouse gas emissions reductions, assessing climate vulnerabilities, and advancing health and equity. CAPCOA. https://www.airquality.org/residents/climate-change/ghg-handbook-caleemod

California Air Resources Board (CARB). (2019). Emission Factors model (EMFAC), Emissions inventory tool. CARB. https://arb.ca.gov/emfac/emissions-inventory.

Strategy 18 REDUCE COMMUNITY-WIDE WASTE GENERATION

Strategy 18 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	2,860	5,650	9,750
SOI	110	240	410
CAP Study Area	2,970	5,890	10,160

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Reduction in solid waste generation	15.0%	25.0%	40.0%	N/A	-	-	-

Strategy 19 RECYCLING AND COMPOSTING EDUCATION

Strategy 19 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	780	930	1,500
SOI	30	40	60
CAP Study Area	810	970	1,560

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Organic recycling target	85.0%	85.0%	90.0%	Tons of solid waste reduced	1,820	2,160	3,500

Strategy 20 Methane Capture at Landfills

Strategy 20 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	3,080	6,400	8,920
SOI	120	270	380
CAP Study Area	3,200	6,670	9,300

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Current methane capture rate	75.0%	75.0%	75.0%	N/A	-	-	-
Target for methane capture rate	80.0%	85.0%	92.0%	N/A	-	-	-
Percentage of captured methane that will be combusted for cogeneration	4.0%	6.0%	8.0%	N/A	-	-	-

Source:

California Air Pollution Control Officers Association (CAPCOA). (2022). Handbook for analyzing greenhouse gas emissions reductions, assessing climate vulnerabilities, and advancing health and equity. https://www.airquality.org/residents/climate-change/ghg-handbook-caleemod

Strategy 21 REDUCE COMMUNITY-WIDE WATER USE

Strategy 21 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	280	410	530
SOI	10	20	20
CAP Study Area	290	430	550

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Percentage water use reduced	20.0%	25.0%	30.0%	Water use reduction (MG)	310	360	430
N/A	-	-	-	Wastewater generation reduction (MG)	120	150	170
N/A	-	-	-	Energy use reduction (kWh)	1,568,230	2,325,060	3,008,920

Source:

PlaceWorks. (2021). City of Hollister 2019 GHG Inventory, Water and Wastewater Sector. PlaceWorks.

Strategy 22 Reduce Municipal Water Use

Strategy 22 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	Less than 10	Less than 10	Less than 10
SOI	Less than 10	Less than 10	Less than 10
CAP Study Area	Less than 10	Less than 10	Less than 10

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Efficiency improvement in water treatment and distribution system	10.0%	15.0%	20.0%	Electricity use of water treatment and distribution system	3,570,070	3,041,870	2,688,970

Strategy 23 Methane Capture for Wastewater Treatment Facilities

Strategy 23 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	100	210	510
SOI	Less than 10	10	20
CAP Study Area	100	220	530

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
RDWWTP's existing wastewater methane capture rate (2019)	0.0%	0.0%	0.0%	N/A	-	-	-
RDWWTP's target wastewater methane capture rate	70%	80%	90%	N/A	-	-	-

Source:

PlaceWorks. (2021). City of Hollister 2019 GHG Inventory, Water and Wastewater Sector. PlaceWorks.

Strategy 24 Natural Resources and Open Space

Reducing Community-wide Waste Generation is not a quantifiable strategy. There are no measurable GHG reductions for this strategy. There are no assumptions or performance targets.

Strategy 25 Tree Planting and Preservation

Strategy 25 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	250	310	150
SOI	50	60	30
CAP Study Area	300	370	180

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Trees planted	100	300	500	N/A	-	-	-
Mortality rate	5.5%	5.5%	5.5%	N/A	-	-	-
Cumulative total number of trees planted	700	1,700	2,200	N/A	-	-	-

Sources:

California Air Pollution Control Officers Association (CAPCOA). (2010). Quantifying Greenhouse Gas Mitigation Measures. CAPCOA. http://www.aqmd.gov/docs/default-source/ceqa/handbook/capcoa-quantifying-greenhouse-gas-mitigation-measures.pdf

Hilbert, D. R., Roman, L. A., Koeser, A. K., Vogt, J., & van Doorn, N. S. (2019). Urban tree mortality: a literature review. Arboriculture & Urban Forestry: 45 (5): 167-200., 45(5), 167-200.

Strategy 26 Green Infrastructure

Green Infrastructure is not a quantifiable strategy. There are no measurable GHG reductions for this strategy. There are no assumptions or performance targets.

Strategy 27 Local Food Systems

Local Food Systems is not a quantifiable strategy. There are no measurable GHG reductions for this strategy. There are no assumptions or performance targets.

Strategy 28 Sustainable Agriculture and Carbon Sequestration

Strategy 28 GHG reduction ($MTCO_2e$)			
Geography	2030	2040	2045
City Limit	180	0	0
SOI	660	0	0
CAP Study Area	840	0	0

Assumptions				Performance Standards			
Description	2030	2040	2045	Description	2030	2040	2045
Percentage of prime farmland involved in Healthy Soils Program	10.0%	0.0%	0.0%	City limit acres of prime farmland involved in Healthy Soils Program	49	0	0
Percentage of grazing land involved in Healthy Soils Program	10.0%	0.0%	0.0%	SOI acres of farmland involved in Healthy Soils Program	178	0	0

Sources:

California Air Pollution Control Officers Association (CAPCOA). (2022). Handbook for analyzing greenhouse gas emissions reductions, assessing climate vulnerabilities, and advancing health and equity. CAPCOA. https://www.airquality.org/residents/climate-change/ghg-handbook-caleemodCalifornia Air Resources Board (CARB).

USDA, Natural Resources Conservation Service (NRCS). (2022). COMET-Planner CDFA Healthy Soils Program (HSP). USDA NRCS. http://comet-planner-cdfahsp.com/#:~:text=COMET%2DPlanner%20California%20Healthy%20Soils&text=COMET%2DPlanner%20for%20the%20CDFA,Practices%20included%20in%20the%20program

Strategy 29 Regional Cooperation

Regional Cooperation is not a quantifiable strategy. There are no measurable GHG reductions for this strategy. There are no assumptions or performance targets.

Strategy 30 Community Resilience Resources

Community Resilience Resources is not a quantifiable strategy. There are no measurable GHG reductions for this strategy. There are no assumptions or performance targets.

Strategy 31 Safety for Outdoor Workers

Safety for Outdoor Workers is not a quantifiable strategy. There are no measurable GHG reductions for this strategy. There are no assumptions or performance targets.

Strategy 32 Green Jobs

Green Jobs is not a quantifiable strategy. There are no measurable GHG reductions for this strategy. There are no assumptions or performance targets.

Strategy 33 Climate Change Awareness and Education

Climate Change Awareness and Education is not a quantifiable strategy. There are no measurable GHG reductions for this strategy. There are no assumptions or performance targets.

APPENDIX B

State of California Regulations and Guidance

California has adopted several laws to reduce GHG emissions and prepare for the impacts of climate change. These laws and associated regulations are briefly summarized here.

Executive Order S-03-05

In 2005, Governor Arnold Schwarzenegger issued Executive Order (EO) S-03-05, which established the first statewide GHG reduction goals for California: reduce emissions to 2000 levels by 2010, reduce emissions to 1990 levels by 2020, and reduce emissions 80 percent below 1990 levels by 2045.

Assembly Bill 32: California Global Warming Solutions Act of 2006

Assembly Bill (AB) 32 was adopted in 2006. It establishes a legislative target for the State of California to reduce its GHG emissions to 1990 levels by 2020. It also makes the California Air Resources Board (CARB) responsible for reducing statewide GHG emissions. AB 32 includes the major GHGs and groups of GHGs that are being emitted into the atmosphere. These gases include carbon dioxide (CO_2), methane (CH_4), nitrogen dioxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). Through the adoption of AB 32, the California Legislature declared:

(a) Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the State from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

(b) Global warming will have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity supplies necessary to meet the demand for summer air conditioning in the hottest parts of the State.

Climate Change Scoping Plan

The Climate Change Scoping Plan (Scoping Plan) was first adopted by CARB in 2008. It lays out the State's plan to reduce GHG emissions in accordance with adopted targets, including direct regulations, alternate compliance mechanisms, incentives, voluntary actions, and market-based approaches like a cap-and-trade program. CARB updated the Scoping Plan in 2014 and 2017 to reflect new State targets and additional opportunities for GHG emission reduction.

In December 2022, CARB adopted a third update to the Scoping Plan. Core strategies in the 2022 Scoping Plan include:

- Making the transition to zero-emission vehicles (ZEVs) and near-ZEV technologies.
- Continued investment in renewables, such as solar, wind, and other types of renewable energy.
- Greater use of low carbon fuels.

- Integrated land conservation and development strategies.
- Coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases).
- Integrated land use planning to support livable, transit-connected communities and conserve agricultural and other lands.
- Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutant and toxic air contaminant emissions limits on a broad spectrum of industrial sources.

Senate Bill 375: Sustainable Communities and Climate Protection Act of 2008

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations.

Executive Order B-30-15

Executive Order (EO) B-30-15 was signed in 2015 by Governor Jerry Brown and set a goal of reducing GHG emissions in the State to 40 percent below 1990 levels by 2030. EO B-30-15 directed CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the State and requires State agencies to implement strategies to meet the interim 2030 goal.

Senate Bill 32 and Assembly Bill 197

In 2016, Governor Brown signed SB 32 and AB 197, making the EO goal for 2030 into a statewide, mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires CARB to prioritize direct emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

Executive Order B-55-18

EO B-55-18, signed in 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter". EO B-55-18 directs CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning that not only should emissions be reduced to 80 percent below 1990 levels by 2045, but that, by no later than 2045, the remaining emissions should be offset by equivalent net removals of carbon dioxide equivalent (CO_2e) from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Executive Order N-79-20

In 2020, Governor Newsom issued EO N-79-20, which sets a time frame for the transition to ZEVs, including passenger vehicles, trucks, and off-road equipment. It directs CARB to develop and propose passenger vehicle and truck regulations requiring increasing volumes of new ZEVs sold in California toward the target of 100 percent of in-state sales by 2035, and similar regulations for medium- and heavy-duty vehicles to achieve a target of 100 percent fleet electrification by 2045. In addition, EO N-79-20 provides strategies—in cooperation with other State agencies, the EPA, and local air districts—to achieve 100 percent zero emissions from all off-road vehicles and equipment operations in California by 2035.

Assembly Bill 1279

AB 1279, also referred to as the California Climate Crisis Act, was approved by the California legislature on August 31, 2022, and signed by Governor Newsom on September 16, 2022. The California Climate Crisis Act requires the State to:

- Achieve net-zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter.
- Ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below statewide 1990 levels.

The legislation requires CARB to work with relevant State agencies to ensure that updates to the Climate Change Scoping Plan identify and recommend measures to achieve these policy goals and to identify and implement a variety of policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in California, as specified. "Net zero greenhouse gas emissions" means emissions of GHGs released to the atmosphere are balanced by removals of GHG emissions over a period of time, as determined by the State board. The goals established by AB 1279 are in addition to, and do not replace or supersede, the statewide GHG emissions reduction targets established by AB 32 for SB 32.

Monterey Bay Air Resources District

The Monterey Bay Air Resources District (MBARD) is the regional air district responsible for air quality management in Monterey, Santa Cruz, and San Benito Counties, also geographically known as the North Central Coast Air Basin (NCCAB). The MBARD is responsible for monitoring air quality, achieving and maintaining air quality standards, and supporting the mission to protect environmental and public health in the Monterey Bay region. MBARD plays an important role in controlling emissions of GHGs, such as carbon dioxide, released from privately owned facilities in the region that are not under the jurisdiction of city planning. These facilities are called stationary sources of emissions, and they include industrial facilities and natural gas fired-power plants. In addition, MBARD is the regional agency responsible for compliance with State air quality standards, such as the California Clean Air Act (CCAA), which established regulatory standards for ozone, carbon monoxide, sulfur dioxide, or nitrogen dioxide. Pinnacles National Park is classified as a nonattainment area for ozone under the State's Ambient Air Quality Standards, which means that it exceeds the threshold for ozone levels deemed acceptable for human health in California.[18] According to the United States Environmental Protection Agency (US EPA), GHG emissions and ozone levels are correlated because ozone formation in the atmosphere accelerates as temperature increases. Ozone exposure can exacerbate human health conditions such as cardiovascular disease, asthma, and other respiratory diseases.[19] Fortunately, studies show that nitrogen oxide (NOx) emissions from the San Francisco Bay Area and San Joaquin Air Basins areas are forecast to decline through the year 2030.

[18] Monterey Bay Air Resources District. 2017, March 15. *Air Quality Management Plan: 2012-2017.* https://www.mbard.org/files/6632732f5/2012-2015-AQMP_FINAL.pdf

[19] Environmental Protection Agency (EPA). 2022, February 15. "How Climate Change May Impact Ozone Pollution and Public Health Through the 21st Century." https://www.epa.gov/sciencematters/how-climate-change-may-impact-ozone-pollution-and-public-health-through-21st-century.

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