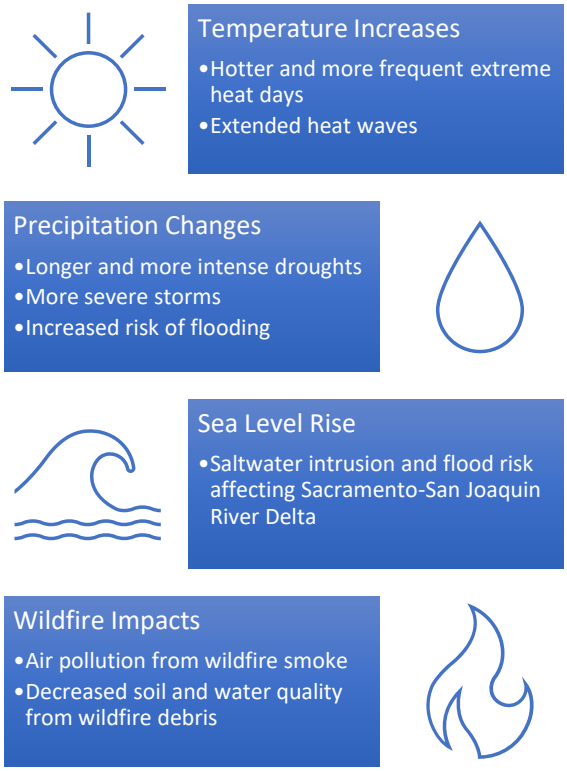
# Climate Action in Sacramento

## What Does Climate Change Mean for Sacramento?

Sacramento both contributes to and faces the impacts of climate change. To avoid the most destructive and costly impacts of climate change, the world must achieve carbon neutrality, or no net greenhouse gas (GHG) emissions, by the middle of this century.[1] Sacramento feels the effects of climate change in a variety of ways:




Climate change threatens public health, ecosystems, and the economy. Worldwide, leading researchers have called climate change "the greatest threat to global public health" and linked rising global temperature and biodiversity loss to various health impacts.[2] In addition to public health threats such as heat-related, respiratory, and vector-borne illnesses, the Sacramento region faces economic disruptions including damaged infrastructure, diminished ecosystem services such as the reliability of the water supply, and decreased agricultural yields.

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[1] Carbon neutrality means that the amounts of GHGs added to and removed from the atmosphere are equal. Achieving carbon neutrality requires reducing GHG emissions to as near to zero as possible, and then sequestering (or removing from the atmosphere) any remaining emissions through carbon sinks, like trees or soil.

[2] Atwoli, L., Baqui, A.H., Benfield, T. et al. (2021). Call for emergency action to limit global temperature increases, restore biodiversity, and protect health. *New England Journal of Medicine*, 385, 1134-1137. https://www.nejm.org/doi/full/10.1056/NEJMe2113200.

The effects of climate change are not evenly distributed, with low-income communities of color often least equipped to deal with facing the most immediate and severe impacts. Climate change compounds the effects of decades of disinvestment, greater exposure to pollution, and other existing inequities affecting people of color and low-income communities. For instance, while all of Sacramento will experience rising temperatures, tree canopy can keep neighborhoods cooler and protect public health. In Sacramento, the most affluent neighborhoods have the greatest tree canopy cover, while low-income communities of color have the least tree canopy cover. To mitigate such disparities and ensure that all communities build resilience to climate change, the City's approach to climate action must center equity.

As California's capital, Sacramento has an opportunity to act as a climate leader for the state. While delivering local benefits, Sacramento is a proof of concept for State climate policy and demonstrates statewide opportunities to advance and normalize climate action.

## How is the City Addressing Climate Change?

The City of Sacramento has a long-standing commitment to both reducing GHG emissions and adapting to the impacts of climate change.

In December 2019, the City Council declared a climate emergency and committed to achieving carbon neutrality by 2045 (Resolution No. 2019-0465). This declaration built on the City's first climate action plans and 2035 General Plan. Specifically, the Resolution committed to advance feasible efforts to implement carbon reductions by 2030 as much as possible. The Resolution also committed to present the City's plan to "achieve carbon neutrality by 2045 and emergency actions needed towards emissions elimination by 2030" in the 2040 General Plan and Climate Action Plan.

In late 2020, City Council elevated Sacramento's climate efforts, prioritizing urgent actions for implementation, and calling for designation of a City staff lead for climate action. The City Manager has since established Sacramento's first Office of Climate Action and Sustainability with two staff members,[3] while the City has hired two additional department staff members to ensure capacity for near-term implementation. Critical near-term efforts are already underway as summarized in the 2021 Climate Work Plan. An early allocation of $4.4 million from the City Council in the Fiscal Year 2020/2021 Midyear Budget catalyzed early project progress, even as major climate planning efforts are underway.

### Mayors' Commission on Climate Change

Sacramento Mayor Darrell Steinberg and former West Sacramento Mayor Christopher Cabaldon convened the Mayors' Commission on Climate Change (MCCC) in 2018. The mayors tasked the MCCC with developing a common vision and set of strategies for both cities to reach carbon zero by 2045.

The MCCC was comprised of local and regional leaders representing community-based organizations, public agencies, businesses, and academia. In June 2020, the MCCC released its final report, recommending climate action strategies and targets for the built environment, mobility, and community health and resiliency.

The City Council embraced the MCCC's recommendations and prioritized urgent climate change mitigation and adaptation for the City, prioritizing several key recommendations of the MCCC (Motion No. 2020-0266).

[3] Learn more online: cityofsacramento.org/ClimateAction.

Key recent efforts include the following:

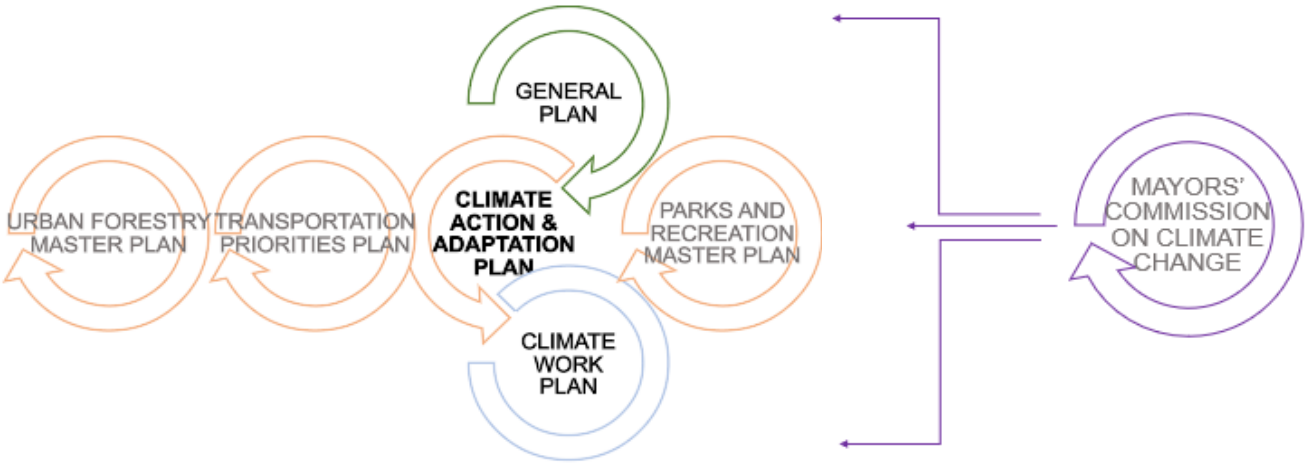
- In 2010, the City completed its first **Climate Action Plan for Internal Operations** and set the goal of reducing GHG emissions from municipal operations to 22% below 2005 levels by 2020. The City has exceeded this target, achieving a 28% reduction in municipal GHG emissions since 2005.[4]
- In 2012, the City adopted its first community-wide **Climate Action Plan** and targeted reducing community GHG emissions to 15% below 2005 levels by 2020. This target has also been exceeded, with attainment of a 19% reduction below 2005 levels.[5]
- With the adoption of the **2035 General Plan** in 2015, the City incorporated an updated community Climate Action Plan into the General Plan.[6] In addition to the existing 2020 GHG emission reduction goals, the General Plan set targets for 2035 and 2050:
    - Environmental Resources Policy 6.1.5: The City shall reduce community GHG emissions by 15% below 2005 baseline levels by 2020, and strive to reduce community emissions by 49% percent and 83% by 2035 and 2050, respectively.
    - Environmental Resources Policy 6.1.6: The City shall maintain and implement its Phase 1 Climate Action Plan to reduce municipal GHG emissions by 22% below 2005 baseline level by 2020, and strive to reduce municipal emissions by 49% and 83% by 2035 and 2050, respectively.
- In 2016, the City updated the **Climate Action Plan for Internal Operations** and adopted a new target for municipal GHG emissions, 33% below 2005 levels by 2020. The City achieved the previous municipal GHG emissions reduction goal (22% below 2005 levels by 2020) seven years early.
- In 2020, staff developed the Climate Implementation Work Plan[7] to prioritize near-term efforts, based on direction of the City Council (Motion No. 2020-0226) in response to the MCCC's recommendations. The Work Plan identifies critical items underway or soon to be initiated, expedited in light of Council's direction for urgent action even while updates of the General Plan update and CAAP are underway in 2021 and 2022.
- Now, the City is developing the **2040 General Plan** and **Climate Action and Adaptation Plan**. In 2019, City Council adopted the General Plan Vision and Guiding Principles (Resolution No. 2019-0433). The Vision and Guiding Principles reaffirm the City's commitment to "take bold action to achieve carbon neutrality by 2045 and become a leading voice in the effort to reduce greenhouse gas emissions and adapt to climate change." To achieve this vision, the Climate Action and Adaptation Plan will establish

[4] See the City's 2016 Municipal Inventory.
[5] See the City's 2016 Community-wide Inventory.
[6] A list of climate action policies in 2035 General Plan is available here.
[7] Available at cityofsacramento.org/ClimateAction.

updated GHG emission goals and emissions reduction actions for the City. The General Plan will contain applicable regulatory and supporting policies.

In addition, several other City plans support implementation of the City's climate action goals. These include the Urban Forestry Master Plan, Transportation Priorities Plan, and Parks and Recreation Master Plan.

*Key City Plans for Climate Action*




## What is the Climate Action and Adaptation Plan?

The Climate Action and Adaptation Plan (CAAP) is an implementing document of the 2040 General Plan. The CAAP lays out the City's climate goals and strategy. Additionally, the CAAP serves as a qualified California Environmental Quality Act (CEQA) streamlining document. The CAAP facilitates sustainable growth in Sacramento by evaluating the environmental impacts of new developments in the city so that this analysis does not need to be done on a project-by-project basis.

To provide CEQA streamlining, the CAAP must meet CEQA criteria for "qualified" GHG emission reduction plans.[8] These criteria include quantification of Sacramento's existing and projected GHG emissions, an emissions reduction target consistent with the State goals of GHG emissions 40% below 1990 levels by 2030 (per Senate Bill 32) and carbon neutrality by 2045 (per Executive Order B-55-18), identification and quantification of sector-specific GHG emission reduction strategies that the City and partners will implement, data collection to monitor progress, and regular updates. The CAAP addresses these requirements as follows.

[8] CEQA Guidelines § 15183.5(b), Plans for the Reduction of Greenhouse Gas Emissions

## Quantifying Sacramento's GHG Emissions

To benchmark Sacramento's existing GHG emissions and anticipate future trends, the CAAP includes inventories of GHG emissions from community and municipal sources as well as projections of GHG emissions for the next 25 years.

### Community GHG Inventory

A community GHG inventory estimates emissions from sectors of the local economy like residential, commercial, and industrial energy use; personal and commercial transportation; waste; and water and wastewater utilities. The current CAAP updates Sacramento's previous GHG inventories (2005 and 2011) and provides new 2016 inventories for both community and municipal GHG emissions.

In 2016, Sacramento generated approximately 3.4 million metric tons of carbon dioxide equivalent ($MTCO_2e$), equal to approximately 7 $MTCO_2e$ per person. This represents a 19% reduction in community GHG emissions relative to 2005, exceeding the City's 2020 target of a 15% reduction from 2005 levels. For context, in 2016 California's statewide emissions were approximately 431 million $MTCO_2e$.[9]

*Sacramento Community GHG Inventories, 2005-2016*

| Sector | 2005 $MTCO_2e$ | 2011 $MTCO_2e$ | 2016 $MTCO_2e$ |
|---|---|---|---|
| Residential Energy | 714,178 | 656,472 | 636,578 |
| Commercial and Industrial Energy | 811,337 | 650,627 | 661,964 |
| Transportation | 2,184,617 | 2,091,154 | 1,935,870 |
| Generated Waste | 405,301 | 113,192 | 134,339 |
| Waste-in-place | 49,921 | 25,773 | 26,504 |
| Wastewater | 57,380 | 18,719 | 19,867 |
| Water | 12,810 | 9,804 | 9,607 |
| **Total Emissions** | **4,235,545** | **3,565,741** | **3,424,729** |
| Reduction from 2005 Levels | N/A | 16% | 19% |
| Emissions per Capita* | 9.57 | 7.58 | 7.25 |

* Emissions per capita are calculated as mass emissions divided by the resident population.

### Municipal GHG Inventory

The municipal GHG inventory includes GHG emissions from City operations and facilities which the City directly controls. The municipal inventory is generally considered a subset of the community inventory and has therefore already largely been accounted for in the community inventory. In total, municipal operations generated nearly 56,500 $MTCO_2e$ in 2016. These

[9] California Air Resources Board (2021). *California Greenhouse Gas Emissions for 2000 to 2019.* https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf

emissions are equivalent to less than 2% of Sacramento's total community emissions. The City has reduced GHG emissions from municipal operations by over 28% since 2005.

### GHG Emission Forecasts

The CAAP provides forecasts of Sacramento's GHG emissions out to 2045 and estimates the reductions needed to meet State and local goals. The CAAP includes projections of Sacramento's GHG emissions in a business-as-usual scenario, without any State or local action to reduce emissions, and in a scenario adjusted to account for State policies and programs that reduce GHG emissions statewide, such as the Low Carbon Fuel Standard and the Renewables Portfolio Standard. Even with anticipated population growth, in the adjusted scenario community GHG emissions are expected to decrease by 36% from 2005 levels to 2.7 million $MCTO_2e$ in 2030, and by 47% from 2005 levels to 2.3 million $MTCO_2e$ in 2045.

*Sacramento Community GHG Emissions Forecasts, 2020-2045*

| Emissions Forecast | 2020 $MTCO_2e$ | 2025 $MTCO_2e$ | 2030 $MTCO_2e$ | 2040 $MTCO_2e$ | 2045 $MTCO_2e$ |
|---|---|---|---|---|---|
| Business-as-usual Forecast | 3,558,871 | 3,726,548 | 3,894,225 | 4,203,918 | 4,393,122 |
| **Forecast adjusted for State policies** | **3,214,256** | **2,946,452** | **2,703,565** | **2,428,545** | **2,256,794** |

## Sacramento's GHG Emission Reduction Targets

Based on the results of the GHG emissions inventories and projections, the CAAP establishes targets for GHG emission reductions that will keep Sacramento on track to meet the State's 2030 goal of emissions 40% below 1990 levels, and carbon neutrality by 2045.

For 2030, the CAAP sets a GHG emissions target of 3.6 $MTCO_2e$ per person, equivalent to reducing total emissions below 2,160,128 $MTCO_2e$. This goal represents a 40% reduction below 1990 emissions, aligning with State goals, and a 37% reduction below 2016 emissions. For 2045, the City's goal is carbon zero, or zero net GHG emissions.

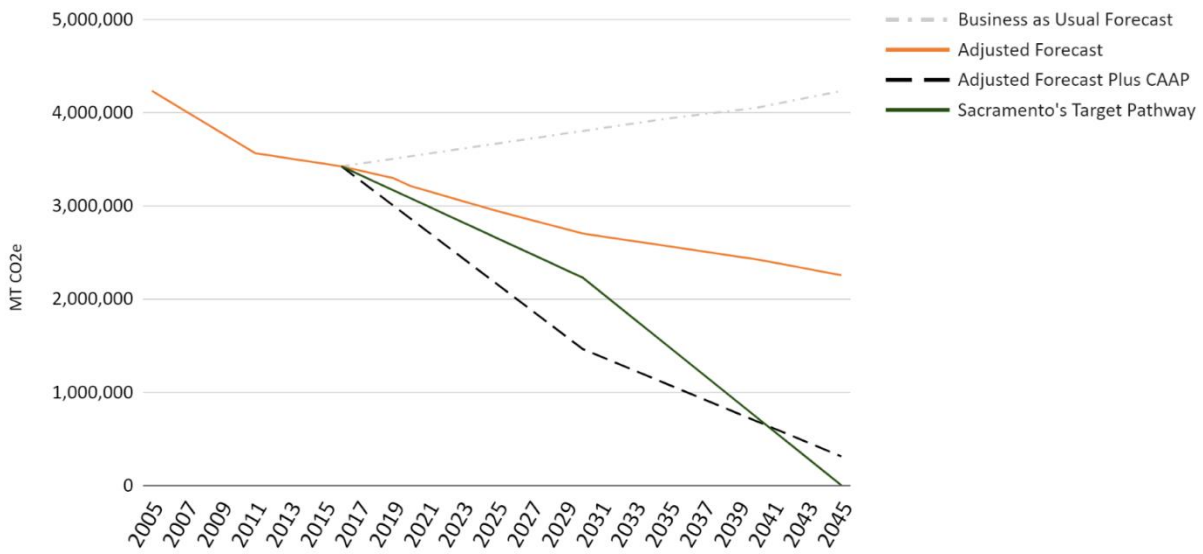
## Sector-specific GHG Emission Reduction Measures

To achieve Sacramento's climate goals, the CAAP identifies GHG emission reduction measures for implementation by the City and key partners. These measures build on the MCCC's recommendations and were further informed by community engagement efforts that included citywide workshops, interest-based focus groups, consultation with the Environmental Justice Working Group (convened to guide the General Plan update), a Summer Youth Engagement Program, and a scientific survey.

The draft CAAP presents measures in five sectors: built environment, mobility, waste, carbon sequestration, and water and wastewater. In addition, the CAAP outlines how the City will reduce GHG emissions from municipal operations.

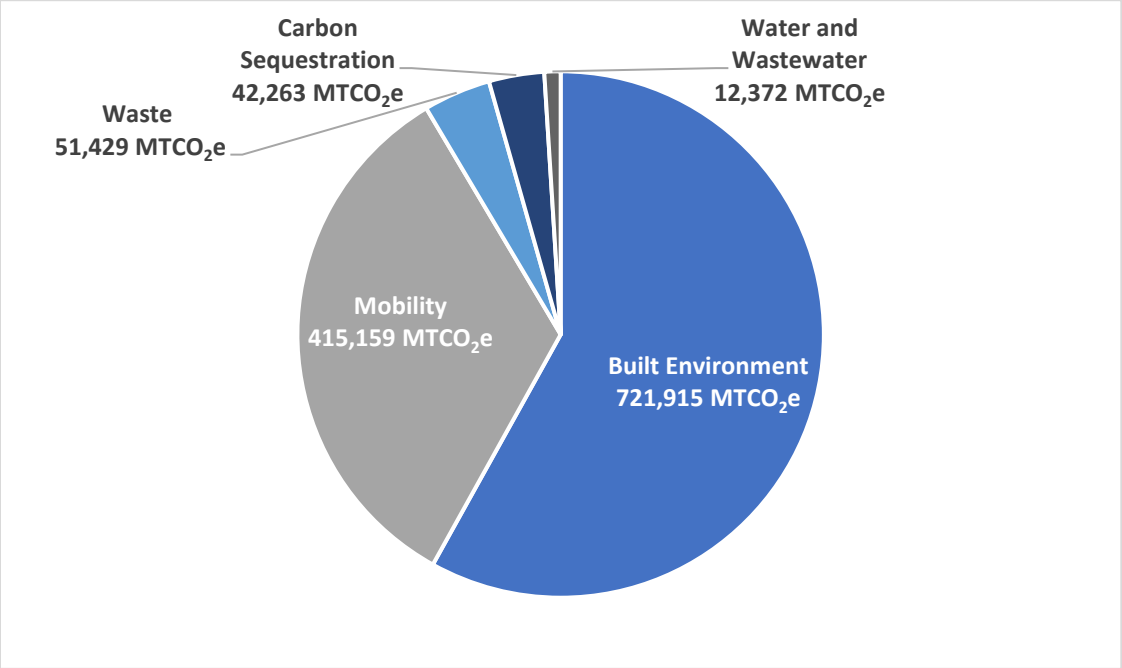
In total, the CAAP identifies measures to reduce GHG emissions by over 1.2 million $MTCO_2e$ in 2030 and achieve a 59% reduction below 1990 emissions levels and a 57% reduction below 2016 levels. This exceeds the 543,437 $MTCO_2e$ reductions necessary to meet the City's 2030 target. To achieve carbon neutrality by 2045, Sacramento must reduce GHG emissions by a total of 2.3 million $MTCO_2e$. As the following figure illustrates, although the measures identified in the CAAP define a pathway for substantial progress towards carbon neutrality (depicted as the black dashed line below), there is still a gap between the City's identified measures and carbon neutrality. Additional strategies and resources are needed to close the gap by 2045.

*Sacramento's GHG Emissions Targets and Reduction Pathway*



The following graph summarizes emissions reductions by sector, depicting the total emissions reductions expected in 2030 from full implementation of the draft measures in each sector.

*Expected GHG Emission Reductions by Sector, 2030*




Full implementation of the GHG emission reduction strategy will be costly. A preliminary estimate puts the cost for implementation of priority City-led measures at over $616 million. The priority City-led measures include the critical infrastructure necessary for transportation, urban forestry, and mobility goals. Implementation of all City-led measures will likely cost over $2.5 billion. These estimates only include capital costs for City-implemented measures. The City's partners, such as SMUD and Sacramento Regional Transit (SacRT), will bear substantial costs for the measures they lead. Estimated capital costs for SacRT's transit system improvements, for instance, are between $1 billion to $3 billion.

The following pages summarize draft emissions reductions strategies, metrics, and preliminary cost estimates for each sector. To facilitate cross-referencing with future documents, each measure has an identifying measure number. Note that these measure numbers are subject to change. Preliminary cost estimates are for illustrative purposes; specific project costs will be confirmed as measure implementation proceeds.

## Built Environment

Strategies for reducing GHG emissions from the built environment center on clean energy and infill growth. The City will support SMUD's plan to produce 100% carbon-free electricity by 2030 and will build on this work by transitioning existing buildings from natural gas to electricity and requiring that new construction is all-electric. Promoting infill growth reduces GHG emissions by decreasing vehicle miles traveled (VMT).

Direct City implementation costs for built environment sector strategies are estimated to exceed $280,000. This estimate only includes direct costs to the City for contract and consultant support. It does not include private costs of building improvements or infill development.

### Built Environment Key Strategies –Energy and Land Use (E)

- E-1: Support SMUD as it implements its 2030 Zero Carbon Plan to produce carbon-free electricity by 2030.
- E-2: Eliminate natural gas in new construction by requiring that all new construction under four stories be all-electric by 2023 and all new construction be all-electric by 2026.
- E-3: Transition gas in existing buildings to carbon-free energy by 2045.
- E-4: Increase amount of electricity produced from local resources and work with SMUD to install 246 MWh of local storage by 2030.
- E-5: Support infill growth to ensure that 90% of growth is in established and center/corridor communities and 90% is small-lot and attached homes by 2040.

### Expected GHG Emission Reductions

| | **$MTCO_2e$** | **Share of Total Needed GHG Emission Reductions*** |
|---|---|---|
| **2030** | 721,915 | 32% |
| **2045** | 514,525 | 23% |

*The share of total needed GHG emission reductions is calculated as the expected emissions reductions in each target year out of the 2,256,794 $MTCO_2e$ reductions needed to achieve carbon neutrality by 2045.

## MCCC Recommendations and CAAP Performance Metrics

Draft CAAP strategies directly align with recommendations from the MCCC, with implementation already underway.

| MCCC Recommendations | CAAP Performance Metrics |
|---|---|
| Support infill growth in a manner consistent with the regional Sustainable Communities Strategy to ensure that:<br>• 90% of the cities' growth is in the established and center/corridor communities and is 90% small-lot and attached homes by 2040.<br>• Project level VMT is 15% below (or 85% of) the regional average. | • 90% of infill growth in established and center/corridor communities as defined by the Sacramento Area Council of Governments (SACOG) and 90% small lot and attached homes by 2040<br>• 30% of region's new living-wage jobs and 30% of the SACOG region's new housing units accommodated by 2040 |
| Mandate all-electric construction to eliminate fossil fuel use in new low-rise buildings (under 4 stories) by 2023 and all buildings by 2026. | • Adoption of a new construction electrification ordinance by 2023 (Complete; preparation for implementation underway, with phased applicability as identified in MCCC recommendations) |
| Transition 25% of existing residential buildings and small commercial buildings to all-electric by 2030. | • Natural gas usage in existing buildings reduced 28% by 2030 and 100% by 2045 |

Additional CAAP performance metrics for the built environment sector include:

- 100% carbon-free electricity citywide by 2030
- Local renewable energy project piloted by 2030

## Mobility

Strategies for reducing GHG emissions from the transportation sector follow the MCCC's recommendation of a hierarchy that first prioritizes active transportation (walking and bicycling), followed by transit and shared mobility, and finally zero emission vehicles (ZEV). The 2040 General Plan Vision adopted by City Council in November 2019 also states: "Pedestrian, bicycle and transit options will be prioritized over automobiles." In addition to CAAP measures, these recommendations will be reflected in the forthcoming draft 2040 General Plan.

Direct City implementation costs for mobility sector strategies are estimated to exceed $1.4 billion.

### Mobility Key Strategies –Transportation Resources (TR)

- TR-1: Prioritize active transportation to reduce VMT by 3% by 2030 and 6% by 2045.
- TR-2: Prioritize transit and shared mobility to reduce VMT by 12% by 2030 and 14% by 2045.
- TR-3: Shift 28% of passenger vehicles and 22% of commercial vehicles to ZEV by 2030 and 100% of all vehicles by 2045.

### Expected GHG Emission Reductions

| | **$MTCO_2e$** | **Share of Total Needed GHG Emission Reductions*** |
|---|---|---|
| **2030** | 415,159 | 18% |
| **2045** | 1,319,017 | 58% |

*The share of total needed GHG emission reductions is calculated as the expected emissions reductions in each target year out of the 2,256,794 $MTCO_2e$ reductions needed to achieve carbon neutrality by 2045.

### MCCC Recommendations and CAAP Performance Metrics

The MCCC recommended prioritizing active transportation infrastructure and shared mobility in a new "modal hierarchy" that places people and shared trips before single-occupancy vehicles. Prioritizing active transportation is the first step to reducing transportation emissions in Sacramento. The MCCC's recommendations include transitioning 30% of all trips to active transportation by 2030 and 40% by 2045.

Because the CAAP must quantify the GHG emission reductions associated with strategies to meet CEQA requirements, the CAAP mobility strategies refer to VMT reductions that form the basis of the CAAP transportation forecasts, rather than number of active transportation trips (which cannot be quantified unless trip length is known). However, the CAAP measures align with the intent of the MCCC's recommendations for mode share. The CAAP calls for tripling bicycle mode share from 2% in 2016 to 6% by 2030. This aligns with the MCCC's recommendation to triple the share of active transportation trips from 10% to 30%. This level of mode shift by 2030 is consistent with outcomes of comparable case studies, peer-reviewed literature, and anticipated investment through 2030, all of which are necessary factors to

consider in quantifying evidence-based GHG emission reductions for a qualified GHG reduction plan.

| MCCC Recommendations | CAAP Performance Metrics |
|---|---|
| Expand and enhance accessibility to low-stress, connected infrastructure for walking and rolling, prioritizing improvements that address specific community and neighborhood needs so that:<br>• 30% of all trips are by active transportation by 2030.<br>• 40% of all trips are by active transportation by 2045. | • 30 miles of new bike lane by 2030<br>• 20,000 feet of new or repaired pedestrian infrastructure by 2030<br>• 70 new pedestrian crossings<br>• Implementation of 2016 Bicycle Master Plan by 2045<br>• 6% bicycle mode share by 2030 and 12% by 2045<br>• Implementation of 2006 Pedestrian Master Plan by 2045 |
| Expand and improve transit and shared mobility services to be more accessible, affordable, timely and attractive than single-occupancy-vehicle use so that:<br>• 30% of all trips are by transit and pooled shared mobility by 2030.<br>• 50% of all trips are by transit and pooled shared mobility by 2045. | • Implementation of new parking minimums and maximums<br>• Collaboration with SacRT to achieve 11% transit mode share by 2030 and maintain to 2045<br>• Continued achievement of 2 million miles traveled annually by shared mobility |
| Develop a comprehensive package of incentives, disincentives and policies to encourage the adoption of zero-emission vehicles (ZEVs) so that:<br>• 70% of new vehicle registrations will be for ZEVs by 2030.<br>• All public, private and shared fleets are fully electrified by 2045. | • 11% electric vehicles (EVs) and 3,250 public EV chargers in Sacramento by 2025<br>• 28% EVs and 8,150 public EV chargers in Sacramento by 2030<br>• 100% EVs by 2045<br>• All new light-duty vehicle sales to be ZEV by 2035 (State goal) |

## Waste

Waste sector strategies focus on implementation of Senate Bill (SB) 1383, a State mandate which requires local governments to reduce organic waste that is sent to landfills and increase recovery of edible food that would otherwise be wasted. Reducing organic waste disposal provides an important climate benefit by decreasing emissions of methane, a powerful short-lived climate pollutant that forms when organic matter breaks down in landfills. Implementation of the requirements of SB 1383 also supports the MCCC's recommendations to develop sustainable food systems.

Direct City implementation costs waste sector strategies are estimated to fall between $876 million to $1.14 billion per year.

### Waste Key Strategies (W)

- W-1: Reduce organic waste by 75% from 2014 levels by 2025.

### Expected GHG Emission Reductions

| | **$MTCO_2e$** | **Share of Total Needed GHG Emission Reductions*** |
|---|---|---|
| **2030** | 51,429 | 2% |
| **2045** | 61,298 | 3% |

*The share of total needed GHG emission reductions is calculated as the expected emissions reductions in each target year out of the 2,256,794 $MTCO_2e$ reductions needed to achieve carbon neutrality by 2045.

### MCCC Recommendations and CAAP Performance Metrics

For purposes of the CAAP, waste measures focus on waste diversion and consistency with SB 1383 requirements. However, the forthcoming 2040 General Plan Environmental Justice Element will establish new goals and policies related to food security, healthy food access, and other related issues.

| **MCCC Recommendations** | **CAAP Performance Metrics** |
|---|---|
| Increase food security and access to healthy, affordable food for all communities, while supporting a regenerative food system by:<br>• Sourcing 25% of food locally within a 200-mile radius by 2030, and 40% by 2045.<br>• Reducing 50% of aggregate food waste by 2025, and 75% by 2030. | • Compliance with SB 1383 requirements by 2025<br>• Diversion of at least 75% of organic waste by 2025<br>• Edible food recovery increased 20% by 2025 |

## Carbon Sequestration

Sacramento's urban forest provides a GHG benefit by removing carbon dioxide from the atmosphere and sequestering it as trees grow. Currently, tree canopy covers 19% of Sacramento's land surface area. Expanding tree canopy cover to 25% by 2030 will increase carbon sequestration and provide co-benefits like mitigation of the urban heat island effect, increased habitat, and improved soil, water, and air quality. The forthcoming 2040 General Plan and Urban Forestry Master Plan will establish new policies and implementation programs related to access to green space.

Direct City implementation costs for carbon sequestration strategies are estimated to fall between $7 million to $10 million per year.

### Carbon Sequestration Key Strategies (CS)

- CS-1: Increase urban tree canopy cover to 25% by 2030 and 35% by 2045.

### Expected Carbon Sequestration

| | **$MTCO_2e$** | **Share of Total Needed GHG Benefit*** |
|---|---|---|
| **2030** | 42,263 | 2% |
| **2045** | 61,474 | 3% |

*The share of total needed benefit is calculated as the expected carbon sequestration in each target year out of the 2,256,794 $MTCO_2e$ reductions needed to achieve carbon neutrality by 2045.

### MCCC Recommendations and CAAP Performance Metrics

CAAP measures align direction with recommendations from the MCCC.

| **MCCC Recommendations** | **CAAP Performance Metrics** |
|---|---|
| Expand green infrastructure to ensure that all neighborhoods, starting with historically marginalized communities and tree-deficient neighborhoods, have:<br>• Access to green space within a quarter-mile by 2030.<br>• A baseline canopy of 25% by 2030, and 35% by 2045. | • 25% urban tree canopy cover by 2030 and 35% by 2045 |

## Water and Wastewater

Water and wastewater sector GHG emissions come from two primary sources: the generation of electricity used to move and treat water, and methane emissions from wastewater itself. Powering water utility operations with carbon-free electricity is essential for the first source. With the implementation of SMUD's 2030 Zero Carbon Plan, the City Department of Utilities will purchase 100% carbon-free electricity for water treatment and conveyance by 2030. Water conservation, greywater reuse, and stormwater management measures can further reduce the amount of electricity needed by decreasing water demand. For wastewater, methane capture at treatment facilities is the primary strategy. The Sacramento Regional Sanitation District, which operates wastewater treatment facilities for the Sacramento area, is undertaking biogas capture and solar photovoltaic projects that the City will support.

The City is not anticipated to bear direct implementation costs for water and wastewater sector strategies.

### Water and Wastewater Key Strategies (WW)

- WW-1: Reduce GHG emissions from water utility electricity demands by 100% by 2030
- WW-2: Reduce wastewater emissions by 22% by 2030 and 40% by 2045

### Expected GHG Emission Reductions

| | **$MTCO_2e$** | **Share of Total Needed GHG Emission Reductions*** |
|---|---|---|
| **2030** | 42,263 | 1% |
| **2045** | 61,474 | 1% |

*The share of total needed GHG emission reductions is calculated as the expected emissions reductions in each target year out of the 2,256,794 $MTCO_2e$ reductions needed to achieve carbon neutrality by 2045.

### MCCC Recommendations and CAAP Performance Metrics

Water and wastewater are outside the scope of the MCCC's report. The draft CAAP performance metric for water and wastewater sector strategies is carbon-free power utilized for 100% of water utility electricity demands by 2030.

## Municipal Operations

In addition to identifying measures to reduce community GHG emissions, the CAAP defines a pathway to decrease emissions from City operations and to lead by example. The municipal targets are a 63% reduction in GHG emissions from 2005 levels by 2030 and carbon neutrality by 2045. To achieve these targets, the CAAP includes municipal GHG emission reduction measures in the following areas:

- Natural gas consumption at City facilities
- Municipal fleet electrification
- Vehicle travel for City operations
- Waste-related emissions
- Utility-related emissions
- Carbon sequestration at City open spaces and parks
- Carbon-free electricity
- Employee commute emissions

The GHG emission reductions estimated for these municipal measures are not counted towards the community GHG emission reduction targets to avoid double-counting. However, municipal measures will achieve an estimated 74% reduction below 1990 municipal emissions levels by 2030.

## Community Action and Sustainability

The Draft CAAP will also include a “bonus” chapter containing informational resources and community-level actions that individuals, households, businesses, and other organizations can take to support the CAAP and help create a more sustainable Sacramento. This chapter will support community members, to encourage exploration of opportunities for contributing to GHG reductions, resiliency, and sustainability in the City of Sacramento.