CITY OF SANTA CLARA

Draft Climate Action Plan

March 2022

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ACRONYMS & ABBREVIATIONS

BAWSCA	Bay Area Water Supply & Conservation Agency
CAP	Climate Action Plan
C&D	Construction & Demolition
CARB	California Air Resources Board
CDD	Community Development District
CEQA	California Environmental Quality Act
CFL	Compact Fluorescent Lamps
EDR	Energy Design Rating
EV	Electric Vehicle
GHG	Greenhouse Gas
GSI	Green Stormwater Infrastructure
MWELO	Model Water Efficient Landscape Ordinance
RPS	Renewable Portfolio Standard
SFPUC	San Francisco Public Utilities Commission
SOV	Single-Occupancy Vehicle
SVP	Silicon Valley Power
TDM	Transportation Demand Management
TOD	Transit Oriented Development
VMT	Vehicle Miles Traveled
ZEV	Zero Emission Vehicles

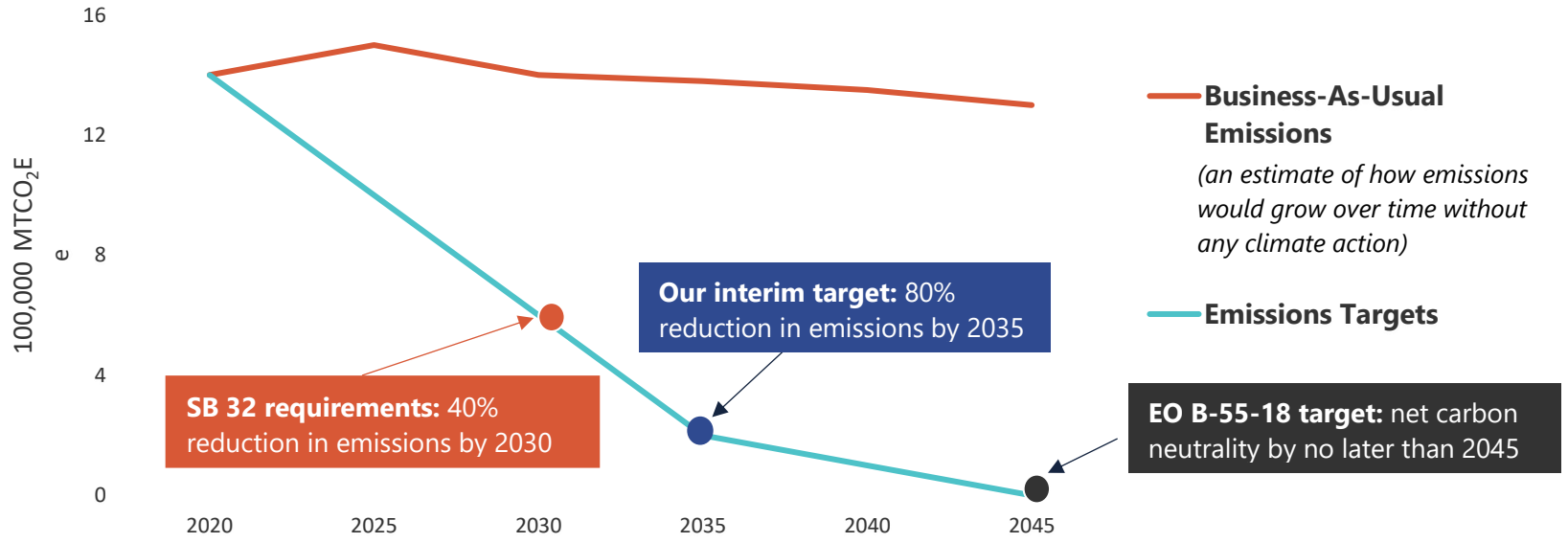
PLAN AT-A-GLANCE

OBJECTIVES

Santa Clara's updated Climate Action Plan (CAP) aims to take an equitable, inclusive, and pragmatic approach to holistically addressing climate change in a way that not only reduces greenhouse gas emissions and builds resiliency to anticipated climate impacts, but also brings other vital social and economic co-benefits for our city.

TARGETS

This CAP update establishes a pathway toward achieving the following targets:



STRATEGIES & ACTIONS

Sector	Strategies	Key Actions
Buildings & Energy	▸ Shift to electric fuels in new and existing buildings to achieve net-zero carbon buildings. ▸ Improve energy efficiency. ▸ Maximize renewable energy generation and storage capacity.	Electrification incentives and requirements for new and existing buildings; building retrofit programs and code; expansion of carbon-neutral electrification; grid storage and resilience
Transportation & Land Use	▸ Transition vehicles to electric alternatives. ▸ Expand clean mobility options and use of non-SOV transportation modes. ▸ Advance sustainable land use.	Expansion of EV infrastructure through incentives and reach codes; improvements to public transportation; expansion of clean mobility options and incentives for walking, biking, and other active transportation modes; promotion of sustainable, dense development
Materials & Consumption	▸ Increase waste diversion. ▸ Reduce landfilled food waste. ▸ Enhance sustainable production and consumption.	Support for waste diversion and food recovery programs; new waste diversion requirements; City programs to promote sustainably produced, packaged, and shipped goods and materials
Natural Systems & Water Resources	▸ Increase tree canopy cover. ▸ Enhance ecosystem resilience. ▸ Improve water supply and conservation.	City tree planting initiatives; ecosystem resilience through sustainable landscaping; water conservation and recycled water incentives and landscaping requirements; increased recycled water use in public parks; conversion of gas to electric-powered landscaping equipment
Community Resilience & Wellbeing	▸ Improve community resilience. ▸ Prepare for climate change.	Expansion of public programs and emergency systems to prepare for climate impacts; incentives for adaptation upgrades; climate resilient infrastructure

IMPLEMENTATION PLAN

The CAP includes a plan for implementing the plan and monitoring and evaluating progress through the implementation phase, including:

- **Timeframes for implementation**, including ongoing actions and those planned for Year 1, near-term (2023-2026), mid-term (2027-2030), and long-term (after 2030) phases.
- **Implementation roles**, including lead departments and key partners.
- **Oversight and accountability**, including a creation of a City Sustainability & Climate Action Team to coordinate implementation and regular public updates and reporting on CAP progress through a Community Dashboard.
- **Monitoring and evaluation**, including annual progress reports and frequent updates of the City's GHG emissions inventory.

INTRODUCTION

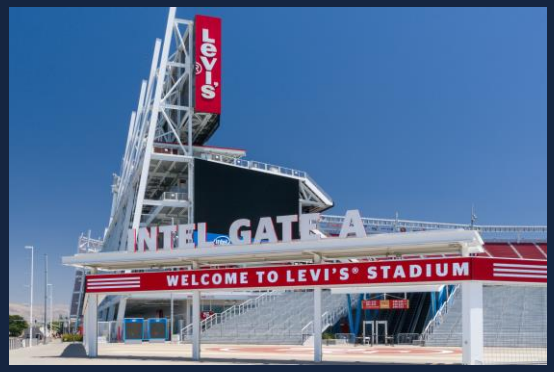
Bounded to the north by the San Francisco Bay and to the south by the City of San Jose, the City of Santa Clara sits **nestled in the heart of Silicon Valley**. The nearly 130,000 members of our diverse community enjoy warm summers and mild winters—with 300 days of sunshine each year. Our vibrant **tree-lined neighborhoods and job centers** welcome new residents who enjoy access to over 40 city parks and pools and our 70-mile bicycle network.

Santa Clara is also **home to technology leaders** like Intel and NVIDIA. Our city is distinguished as the primary hub for Silicon Valley data centers—supporting cloud technology giants like Amazon.com, Inc., Microsoft Corporation, and Apple Inc. It's no surprise that over 50 data centers are contained within Santa Clara's modest 19 square miles. Our competitive advantage stems in large part from municipally owned Silicon Valley Power's ability to offer **dependable, low-cost electricity**.

As our city continues to thrive, we are uniquely positioned to lead the way in **balancing economic growth and technological innovation with environmental responsibility**. We will continue to pursue **neighborhood-focused land use policies to increase infill housing developments** that both meet Santa Clara's housing demand and support sustainability efforts through more dense development.

Collectively, we must reduce greenhouse gas (GHG) emissions while building resiliency to climate change within our community to maintain a **vibrant, healthy, and sustainable community for future generations**. The City of Santa Clara is committed to achieving these goals through resourceful, efficient, and progressive leadership.

This update of the City of Santa Clara's CAP reflects the evolving needs of our community and the localized impacts of global climate change. It reaffirms the City of Santa Clara's **commitment to climate leadership** and outlines a path toward a more **sustainable, healthy, and livable future** for all.



VISION FOR A SUSTAINABLE SANTA CLARA

WE ENVISION SANTA CLARA'S FUTURE AS A **HEALTHY, THRIVING, AND SAFE CITY TO LIVE, WORK, AND ENJOY LIFE**, WHERE THE BENEFITS OF LIVING HERE ARE **DISTRIBUTED EQUITABLY AMONG OUR** RESIDENTS, AND WHERE WE BUILD A HEALTHY CLIMATE FUTURE WHILE WE PRESERVE WHAT WE LOVE ABOUT THIS COMMUNITY.

We will achieve this vision by taking an **equitable, inclusive, and pragmatic approach to holistically addressing climate change** in a way that not only reduces greenhouse gas emissions and builds resiliency to anticipated climate impacts, but also brings other vital social and economic benefits to our city. This plan provides a roadmap for reaching this future, guided by the following overarching goals:

Create a more equitable and accessible community.

- Develop sustainability policies and programs in collaboration with voices and groups typically underrepresented, particularly communities of color and **those most at-risk to climate change impacts**.
- Ensure **equitable access** to the high quality of life that Santa Clara offers.

Maintain and enhance our quality of life.

- **Create a healthier, more walkable, bikeable, and affordable community** with ample neighborhood and community parks and useful green space, a connected trail network, clean air, and affordable and convenient public transportation.

Foster thoughtful and inclusive growth.

- Balance economic growth and development with thoughtful, climate-focused city planning that allows us to **live more sustainability** while also supporting our economy, local businesses, and residents.
- Bring **new, green jobs** to our community that are accessible to a range of skill levels.

Make our community more resilient.

- **Engage community members** on climate change and sustainability.
- Ensure our residents have **access to reliable clean water sources**.
- Power our community with **reliable, clean energy sources** that can withstand future strain on the energy grid.
- **Strengthen our public programs and emergency services** to protect community members from future climate impacts.

WHY UPDATE THE CAP?

The City of Santa Clara already plays an important role in electricity provision, building construction, land use and development, transportation, infrastructure maintenance, solid waste management, parks and open space management and maintenance, and water and wastewater management. Accordingly, the City is uniquely positioned to lead on climate action, facilitate collaboration and partnerships, and engage individuals, businesses, community groups, and other local governments to join these efforts.

By updating its 2013 CAP, the City of Santa Clara reaffirms its commitment to leading the way to a more sustainable community. The City has set bold targets and developed strategic pathways for reducing greenhouse gas emissions while increasing the City's resilience to climate change impacts. The 2022 CAP aims to:

1. **Prevent and prepare for the impacts of climate change.**

Leading climate scientists around the world agree:

- **Human activity** is changing the earth's climate through the release of greenhouse gas emissions—caused primarily by the combustion of fossil fuels.
- **Significant and irreversible impacts** will occur if average global temperature increase by 2°C, and that we should strive to limit the temperature increase even further to below 1.5°C.

What is a Climate Action Plan?

A Climate Action Plan is the City's strategic planning document that outlines:

- Current and projected greenhouse gas emissions
- Greenhouse gas emissions reduction targets
- Strategies and actions for reducing emissions
- Projected vulnerability to climate change
- Strategies and actions for building climate resilience

The 2022 Climate Action Plan intends to reflect Santa Clara's unique environment and reaffirms commitment to leading on climate action.

The Intergovernmental Panel on Climate Change projects a wide range of climate changes—including changing precipitation, ocean acidification, more extreme temperature changes, sea level rise, and an increase in extreme events such as heat waves, droughts, floods, cyclones, and wildfires.

Continued emissions of greenhouse gases will cause further warming and long-lasting changes, increasing the likelihood of severe, pervasive, and irreversible impacts for people and the natural systems we depend on.

The City of Santa Clara must take action to prevent the worst impacts of climate change and build resilience to changes that are unavoidable. In the years ahead, Santa Clara can expect to face heat waves, prolonged periods of drought, and longer and more severe regional wildfires that will impact air quality across the West.

2. Reflect the City's changing environment and community.

Addressing climate change involves all of us—residents, businessowners, and city leaders alike. As a result, effective CAPs must reflect the unique values, needs, and concerns of their community. Since the adoption of the 2013 CAP, Santa Clara's community has changed, with our total population having grown by nearly 8,000 residents. To ensure that we reflected the diverse priorities of residents and businesses, the City engaged the public throughout this CAP update process. This CAP also reflects changes in the economic landscape, city demographics, relevant technological advancements, best available climate science, greenhouse gas emissions projections, and the evolving regulatory and political environment.

Identifying and incorporating these changes into the plan helps ensure that targets, strategies, and actions reflect today's realities and tomorrow's future.

3. Align with new state requirements and guidance.

Since adoption of the 2013 CAP, California has continued to set aggressive climate action goals. New legislation requires the City of Santa Clara to meet ambitious carbon reduction targets, reflected in this updated CAP. The "State Regulatory Landscape" section below provides further detail on relevant state policy.

4. Demonstrate climate leadership and commitment.

Since the 2013 CAP was adopted, the City has developed plans and taken action to: expand and improve its pedestrian and bicycle network; decarbonize its buildings through incentives and exploration of reach codes; improve citywide transportation demand management; expand use of electric vehicles (EV) and install EV charging; divert organic waste from the landfill; and expand Silicon Valley Power's renewable energy portfolio to reach 100% of electricity generated from renewable sources by 2045.

The 2022 CAP builds upon these long-term commitments and aligns with work already happening on the ground—led by community groups, universities, individuals, and businesses. For example, the decarbonization of Silicon Valley Power's energy portfolio aligns well with technology companies already developing innovative strategies and setting ambitious internal targets to reduce their emissions. By aligning their climate action missions, the City can continue to work collaboratively with businesses to lead the way in achieving collective climate goals.

5. Maximize co-benefits.

This CAP update provides a series of actions intended to reduce GHG emissions while building resilience to the projected impacts of climate change. These actions are designed to integrate with existing City planning efforts to gain synergies and benefit both the global climate *and* our local community.

For example, by expanding the bicycle and pedestrian network while improving accessibility and safety, the City can continue to encourage biking and walking as alternatives to driving motor vehicles. The co-benefits of this GHG emissions reduction effort allow residents to enjoy safe and accessible corridors and trails for recreation and commuting, while improving air quality and reducing traffic congestion and GHG emissions because of fewer vehicles on the road.

State Regulatory Landscape

California recognizes that GHG emissions and the impacts of climate change are a serious threat to our public health, economic wellbeing, and environment. A leader in climate action since the early 2000s, the State of California is on track to exceed its 2020 climate target of reducing GHG emissions to 1990 levels—while the economy continues to grow.

Since the adoption of Santa Clara's 2013 CAP, the **State of California has adopted multiple climate policies relevant to this updated plan**, such as:

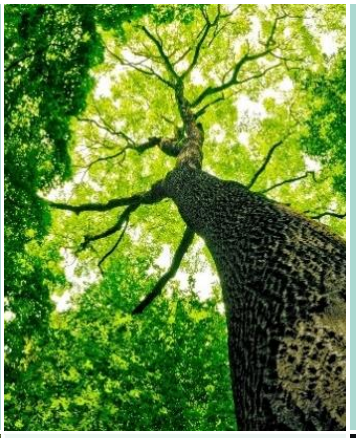
2015 **EO B-30-15**	**Executive Order B-30-15** Establishes a statewide goal of reducing greenhouse gas emissions to 40 percent below 1990 levels by 2030.
2016 **SB-32**	**Senate Bill 32** Expands on AB-32, requiring California to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.
2018 **EO B-55-18**	**Executive Order B-55-18** Expanded upon EO S-3-05, creating a statewide goal of carbon neutrality by 2045 (in addition to SB-32 targets).

This 2022 CAP reflects near-term SB-32 requirements and progress toward meeting long-term EO B-55-18 targets:

- Reduce greenhouse gas emissions to 40% below 1990 levels by 2030.
- Achieve net carbon neutrality no later than 2045.

SUCCESSES & ACCOMPLISHMENTS

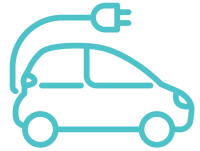
Prior to developing this CAP update, the City of Santa Clara made steady progress on climate action. **Santa Clara's total emissions decreased by 4.5% and per-capita emissions decreased 13% from 2008 to 2016.** Other key accomplishments include:

Coal-free and large renewables	Energy efficiency programs	Transportation and land use	Water and natural systems	Waste reduction
✓ Eliminated coal from the City's energy mix. ✓ Provided carbon-free energy for residential customers.		✓ Reduced 9% of transportation emissions, despite population growth. ✓ Installed over 450 EV chargers in public spaces.		✓ Implemented mixed waste collection and processing to divert organic materials from landfills to satisfy SB 1383 requirements and to increase overall waste diversion rates
	✓ Saved over 165 GWh of energy through energy efficiency incentives, pilot projects, and rebate programs. ✓ Implemented energy efficient practices in all new data centers.		✓ Reduced water use by over 2 billion gallons between 2008 and 2016. ✓ Planted ~4,000 new trees, facilitated by a policy to plant two trees for every one tree removed.	

ASSOCIATED CLIMATE & SUSTAINABILITY PLANNING EFFORTS

Bicycle Master Plan | Updated in 2018, this plan outlines the City's long-term vision for improving the cycling infrastructure through policies, programs, and City-run projects. Initiatives are focused on creating an integrated cycling network, improving safety for cyclists, making cycling a more convenient transportation option, and fostering a more bike-friendly culture in Santa Clara.[1]

Pedestrian Master Plan | Adopted in 2019, this is a blueprint for making Santa Clara more walkable, with particular focus on creating an integrated pedestrian network; making walkways safer, more enjoyable, and easier to navigate; and integrating walking into land use policy to make walking a more convenient mode of everyday transportation.[2]



EV Blueprint Plan | Developed in 2019 through a grant from the California Energy Commission, this blueprint outlines 14 program initiatives to improve Santa Clara's electric vehicle charging infrastructure to prepare to meet the state's goal to increase the number of zero-emissions vehicles to 5 million by 2030. Initiatives include updates to building codes, rebate and incentive programs, public-private partnerships, and changes to construction permitting requirements.[3]

Solar electric incentives | SVP offers the Low-Income Solar Grant Program, which provides free solar panel systems to qualifying residents.[4]

Reach codes | Reach codes refer to local building energy codes that "reach" beyond the minimum requirements for building energy use mandated by the state. Santa Clara's reach codes are focused on electrifying new buildings, improving energy efficiency, and increasing the electric vehicle charging infrastructure.[5]

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[1] City of Santa Clara. 2019. Bicycle Plan Update 2018.
[2] City of Santa Clara. 2019. Pedestrian Master Plan.
[3] City of Santa Clara. 2019. EV Ready Communities Challenge.
[4] Silicon Valley Power. Incentives and Financing Options.
[5] City of Santa Clara. 2019. Building Electrification and Electric Vehicles Reach Codes.

Complete Streets Policy | This policy outlines specific principles for ensuring the city roadways are safe, accessible, and convenient for all transportation types, including pedestrians, motorists, bicyclists, persons with disabilities, and seniors.

Organics Collection and Processing Program | After four years of gathering feedback and exploring alternative options, the City Council approved new contracts with Mission Trail Waste Systems (collection) and GreenWaste Recovery (processing) to provide residents and businesses with mixed-waste processing, a process that captures organic waste from the contents of garbage containers. Beginning January 2021, the organic material captured by mixed waste processing will be taken to a composting facility.[6]

Creek Trail Master Plan Expansion | Identified as a priority by the City Council in 2013, this trail expansion plan improves the existing on-street bicycle transportation system by developing bicycle and pedestrian creek trails along 5.75 miles of Calabazas Creek Corridor, 3.25 miles of Saratoga Creek Corridor, and 1.75 miles of the Hetch Hetchy corridor.[7]

City Green Fleet Policy | Directed in 2019, this policy effort ensures that the City purchases and uses the lowest emission vehicles available to reduce vehicle emissions, consumption of non-renewable resources, and maintenance and operating costs to the city.[8]

Urban Water Management Plan (UWMP) | Updated every five years, the UWMP provides an overview of the City's current and long-term water supplies, future water needs of the city, and the City's water conservation programs. The 2010 UWMP established a baseline target use goal of 186 gpcd (gallons per capita per day) per the Water Conservation Act of 2009 (SBX7-7). The City committed to achieve a 20% reduction in per capita water use by 2020. The City met this goal by achieving a calculated gpcd of 124 in 2020, saving approximately 6,328-acre feet (2,060 MG) of water from 2008 to 2016.[9]

Transportation Analysis Policy | Adopted in 2020, this policy establishes the requirements for evaluating land use and transportation projects based on the estimated vehicle miles traveled (VMT) for that project.[10]

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[6] City of Santa Clara. 2021. Residential Food Scrap Recycling Pilot Program Update.
[7] City of Santa Clara. 2013. City of Santa Clara Creek Trail Network Expanstion Feasibility Study.
[8] City of Santa Clara. 2019. City Manager's Directive 135-Green Fleet Policy.
[9] City of Santa Clara. 2020. Urban Water Management Plan.
[10] City of Santa Clara. 2020. Transportation Analysis Policy.

Specific Plans: Downtown, El Camino Real, Patrick Henry Drive, Freedom Circle, Tasman East | These neighborhood-specific plans outline General Plan development areas of Santa Clara where there is opportunity to intensify with limited impact on the existing neighborhood. Plans include initiatives focused on making the areas more pedestrian friendly and promoting sustainable, dense housing developments.[11]

Green Stormwater Infrastructure (GSI) Plan | GSI uses vegetation, soils, and natural processes to manage rainwater and improve water quality. Adopted in 2019, The GSI Plan provides a roadmap for how the City will gradually transform traditional storm drainage systems from "gray" to "green" by incorporating GSI into projects in the public and City-owned properties. [12]

Sustainable Purchasing Policy | The goal of the City's Sustainable Purchasing Policy is to strive to purchase products that minimize environmental impacts, toxins, pollution, and hazards to workers and the community. To the greatest extent practicable, the City will purchase products with the following characteristics:

- Are made with recycled content.
- Conserve energy and water.
- Reduce greenhouse gas emissions.
- Use unbleached or chlorine-free manufacturing processes.
- Are lead and mercury free.
- Use wood from sustainably harvested forests.
- Meet SB 1383 post-consumer recycled content paper purchasing requirements.

Adoption of Park and Recreational Land Dedication Ordinance | The goal of the addition of Chapter 17.35 to the City Code in July 2014 is to provide 2.6 to 3.0 acres of new developed parkland and recreational amenities in new residential development properties, pursuant to the California Quimby Act and the Mitigation Fee Act. New parkland in sufficient size, usable shape, and location near residential density provides quality of life, carbon sequestration, as well as natural habitats.

[11] City of Santa Clara. Specific Plans.

[12] City of Santa Clara. 2019. Green Stormwater Infrastructure Plan.

PLAN DEVELOPMENT PROCESS

This update of the City of Santa Clara's CAP reflects and brings together City and community priorities developed through a robust, two-year involvement and assessment process. The primary objective of this process was to build a plan that is comprehensive, grounded in Santa Clara's unique context, and reflects community priorities and needs. The process included the following key elements:

			
BASELINE ASSESSMENT	**TARGET SETTING**	**ACTION DEVELOPMENT**	**CAP DEVELOPMENT**
– 2013 CAP progress review – Greenhouse gas inventory review – Emissions forecasting and modeling	– Target, goal, key performance indicator (KPI) development – City staff meetings – Focus groups (#1) – Online survey (#1) – Planning Commission review	– Mitigation and adaptation strategy and action development – City staff meetings – Multi-criteria and quantitative analysis – Community workshop (#1) – Online survey (#2) – Planning Commission review – City Council review	– Focus groups (#2) – Community workshop (#2) – Public comment period – Planning Commission review – City Council review and adoption

COMMUNITY ENGAGEMENT

The City of Santa Clara engaged the community throughout the climate action planning process. Despite pivoting to an entirely virtual community engagement strategy due to COVID-19, the City engaged with hundreds of people and received over 1,000 comments throughout the CAP development process. The primary objectives of this outreach were to:

- Reflect the community's **values and priorities**.
- Engage a **broad representation** of stakeholders—including participants who are typically not engaged in planning.
- Gather **feedback** about how to reduce emissions and make Santa Clara a more sustainable place to live and work.
- **Educate** the community about the importance and urgency of climate action.
- **Empower** residents, stakeholders, City staff, and decision-makers to implement the CAP after its adoption.

To try and reach as many people as possible, the City engaged residents through a variety of channels over the two-year climate action planning process, including targeted stakeholder focus groups, online surveys, virtual workshops, public comments at the Planning Commission and City Council Study Sessions, and public comment period to review the draft plan. Looking ahead, the City will continue to engage the community as we move toward implementing the CAP.

Community Feedback

Target Setting		Select Strategies and Actions			Draft and Finalize Plan	
APRIL 2020	JUNE - JULY 2020	JULY 2020	OCT-NOV 2020	JULY 2021	SEPT 2021	OCT 2021
Focus groups	**Survey #1**	**Virtual Community workshop**	**Survey #2**	**City Council Feedback and Directives**	**Virtual Public Workshop and Online Platform**	**Virtual Focus Groups**
Summary of Feedback: • Balance housing and job markets. • Improve regional mobility. • Align reduction targets with peer cities and state regulations. **Focus groups with:** *Santa Clara Chamber of Commerce; Silicon Valley Leadership Group; Digital Realty; Santa Clara Youth Commission; Santa Clara University; ABAG; Silicon Valley Bicycle Coalition; Santa Clara Ped & Bike Committee*	**Summary of Feedback:** • Greatest barrier to addressing climate change in Santa Clara: "lack of public education or awareness." • Most important climate-related issue: "renewable energy." • Greatest climate-related threats: "drought" and "worsened air quality." • Preferred emissions target: "faster than state targets."	**Summary of Feedback:** • Prioritize equity. • Increase amount of renewable energy provided by SVP. • Develop strong transportation demand management plans. • Improve transportation network for bicyclists and pedestrians.	**Summary of Feedback**: • Preference for voluntary and incentive-based measures. • Reduce VMT by encouraging use of public transit, carpooling, biking, walking. • Increase solar and battery storage. • Plant/preserve trees and gardens; more public parks. • Reduce waste. • Increase public education and engagement.	**Summary of Feedback:** • Adopt an interim 80% GHG reduction target by 2035. • Enact new CAP actions to reach interim target, including adopting a burnout ordinance for gas furnaces and water heaters and requiring secured bicycle parking at multi-family properties. • Relax proposed TDM requirements for select businesses and residential properties.	**Summary of Feedback:** • Clarify how the CAP actions align with other City planning efforts, particularly reach codes. • Clarify the incentives integrated into the CAP—what they will include and how the City plans to promote them. • Expand private sector partnerships and seek other opportunities to engage the business community and promote sustainable business practices.	**Summary of Feedback:** • Prioritize incentives to mitigate cost concerns. • Explore ways to use the CAP to address existing income disparities. • Emphasize collaboration and resource sharing. **Focus groups with:** Organizations representing, • The unhoused population, low-income residents, and other vulnerable groups; • Asian American, Muslim American, and other underrepresented groups; • Contractors, developers, and other members of the building community.
20 participants	387 respondents	38 participants	496 respondents		20 workshop participants; 33 online comments	20 participants

Centering equity

Climate change disproportionately affects vulnerable and marginalized communities, such as communities of color, low-income populations, those with disabilities, and those experiencing homelessness or housing insecurity.

The City of Santa Clara recognizes that addressing the challenges of climate change will require **uprooting systemic inequalities** to uplift and strengthen the most at risk in our community and provide opportunities and benefits for all. Solutions must begin by questioning whether strategies and actions benefit some while burdening others.

By committing to the implementation of this CAP, the City of Santa Clara has prioritized cross-cutting solutions that support **long-term equity, resilience, public health, and community wellbeing.**

As we move forward, the City of Santa Clara must prioritize **shared benefits, accessibility, capacity-building, partnerships, and accountability** throughout the community.

We will take advantage of the actions already underway to **meet our climate goals**, **uplift our community**, and ensure no one is excluded from the additional **benefits of a healthier, low-carbon future**.

Equity Elements in the Updated CAP

Community Engagement

- ✓ Engaged Santa Clara's diverse community throughout the CAP process through inclusive, accessible outreach strategies.

Emissions Reduction Targets

- ✓ Acknowledges the City's responsibility in reducing global emissions to slow the impacts of climate change.

Strategies & Actions

- ✓ Prioritized actions that reduce historical or current disparities among communities of color, low-income populations, and other marginalized groups.

Plan Implementation

- ✓ Developed implementation plan that considers how to make benefits broadly accessible and shared among the community without disproportionately burdening vulnerable groups.

CLIMATE CHANGE IN SANTA CLARA

Santa Clara commits to maintaining the progress made and rising to the new challenges that climate change brings.

Left unchecked, climate change will undo the progress we have made as a city. Changing conditions will significantly impact Santa Clara's economic, ecological, and social systems that make up our daily lives. Climate impacts are projected to become more severe in the future, leading to disruptions to our critical facilities and services, such as disturbances to our highways and transportation systems, destruction of assets and property, power outages, water scarcity, and increased utility rates. The City must meet the moment and continue to adapt and evolve with the changing needs.

Action today will prepare our city for future climate impacts.

By reducing GHG emissions, Santa Clara can help prevent some of the most severe climate impacts. However, some impacts are now unavoidable, and the City must prepare by making our community more resilient through initiatives aimed to protect vulnerable populations, strengthen vital infrastructure, and preserve natural ecosystems critical to a balanced climate.

Proactive local climate action is vital for achieving carbon neutrality by 2045.

As shown below, the two major sources of remaining emissions are projected to be transportation and natural gas at 53% and 35% of projected 2045 emissions, respectively. Emissions from waste and wastewater treatment are projected to continue to rise, together making up the remaining 12% of total 2045 emissions.

The majority of Santa Clara's current greenhouse gas emissions stem from non-residential electricity use. State policies and carbon-free electricity will allow Santa Clara's emissions to decrease approximately 72% by 2045, leaving emissions from transportation, natural gas, waste, and wastewater treatment remaining. This plan sets us on a pathway for addressing these remaining emission sources and reaching carbon neutrality.

CLIMATE RISK & VULNERABILITY

Santa Clara is already experiencing climate change impacts, which will continue to worsen in the years to come unless we take action. These climate impacts pose a serious threat to our economy, health, and quality of life. Potential consequences to our community include:

Extreme Heat

Santa Clara County is expected to see an increase in annual average temperature of 2-4°F by 2050 and 4-6°F by 2100.**Error! Bookmark not defined.**

Riverine Flooding

The probability of a 100-year flood event in Santa Clara County could be 10-20% higher by 2050 and 30-40% higher by 2100.

Threats to Public Health

Extreme heat will cause more heat-related illness and hospitalizations.

Increased allergens and harmful air pollutants due to higher temperatures will put people with asthma and other vulnerable populations at higher risk of health complications.

Sea Level Rise & Coastal Flooding

The San Francisco Bay is projected to rise:

6 inches by 2030

11 inches by 2050

36 inches by 2100

Wildfire

The Bay Area is one of the more risk prone areas in the state. Regional wildfires threaten Santa Clara's air quality, supply chain and distribution channels, and water quality.

Threats to habitat and critical species

Wildfires, warming temperatures, and changing precipitation patterns will disrupt forests, streams, and other critical habitats that are home to important local species.

Economic Impacts

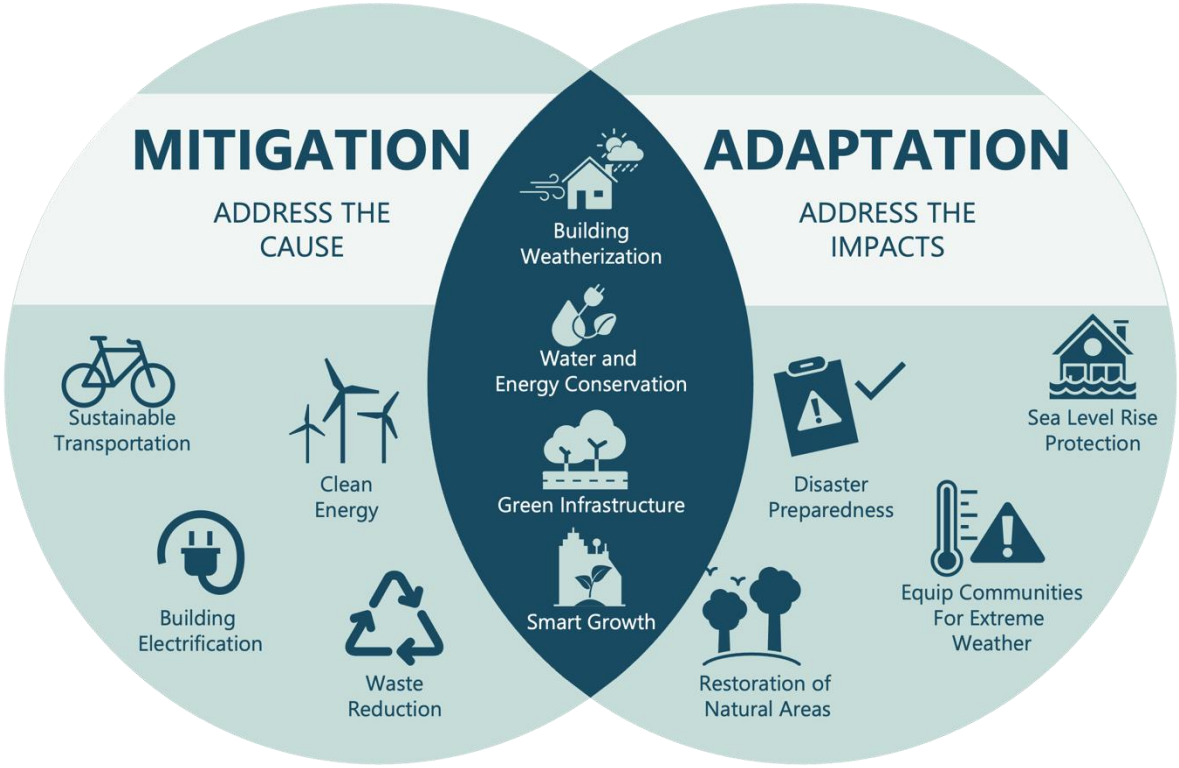
More extreme temperatures and weather patterns threaten agriculture and food security, tourism, outdoor recreation, and other seasonal and climate-dependent industries. Resource fluctuation also threatens products and service costs.

FOSTERING CLIMATE RESILIENCE

This CAP was developed using a two-pronged approach: reducing greenhouse gas emissions to slow the effects of climate change (mitigation) while building resiliency to the inevitable impacts of climate change (adaptation):

- **Mitigation actions** aim to prevent and slow down the impacts of climate change by reducing greenhouse gas emissions and increasing carbon "sinks" (oceans, forests, and soil) to store these gases.
- **Adaptation actions** manage the impacts of climate change by protecting vulnerable populations, ecosystems, natural resources, and infrastructure.

The figure at right outlines examples of climate mitigation and adaptation activities.



Successful climate change preparation includes both reducing climate-related vulnerabilities and preparing to respond to and recover from impacts as they occur.

SANTA CLARA'S GREENHOUSE GAS EMISSIONS PROFILE

Emissions Trends (2008 to 2016)

Santa Clara's **greenhouse gas emissions declined 4% from 2008 to 2016**—despite growth in Santa Clara's economy and a population increase of 10% over the same period. **Per-capita emissions also decreased**, declining 13% over the same period.

As Silicon Valley Power (SVP) provides electricity to over 50 major data centers in the city, it is no surprise that the **non-residential energy sector contributed over 60% of total community emissions.** As a municipal utility, SVP's ability to offer dependable, low-cost electricity makes Santa Clara a hub for these large data centers. Balancing the city's role as a technology hub with the need to reduce its climate footprint highlights the importance of 'cleaning the grid' to provide affordable, and renewable or carbon-neutral electricity to commercial customers.

Total emissions decreased in nearly every sector between 2008 and 2016. As detailed in the graphics on the following page, Santa Clara made the largest reductions in non-residential natural gas emissions. Transportation emissions decreased the least, indicating opportunity for further progress in this sector in the years ahead. Non-residential electricity emissions, meanwhile, increased by nearly 22% between 2008 and 2016. This increase was attributed to post-recession economic growth and the increase in data centers built during that period.

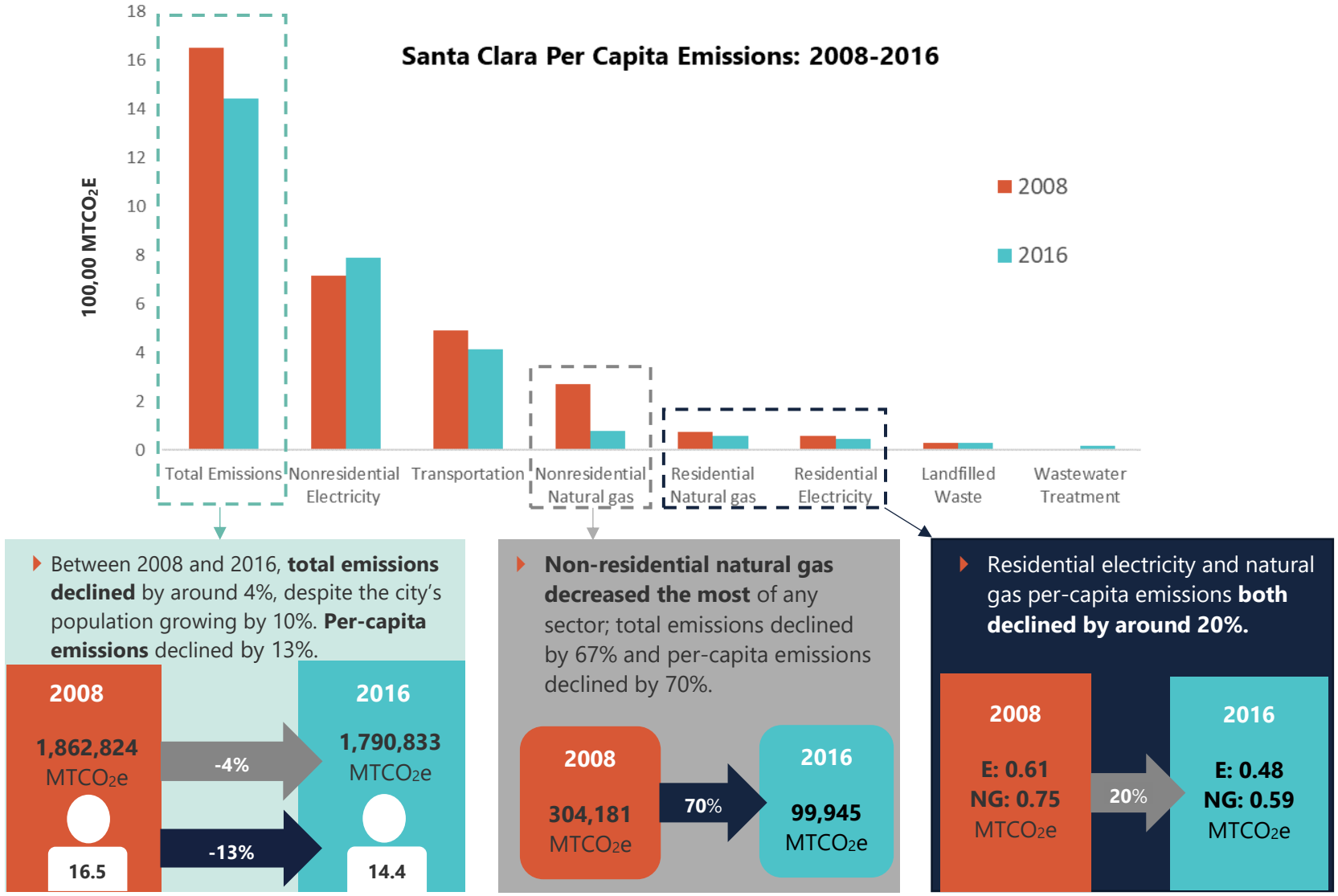
Emissions Forecast (2016 to 2045)

In 2018, SVP eliminated coal from its energy mix and now provides carbon-free energy to all residential customers, eliminating emissions from residential electricity. California's Renewable Portfolio Standard (RPS) requires electricity sold by utilities to be 33% renewable by 2020, 60% renewable by 2030, and 100% carbon-free by 2045. As a result, **emissions from electricity are expected to zero out by 2045**.

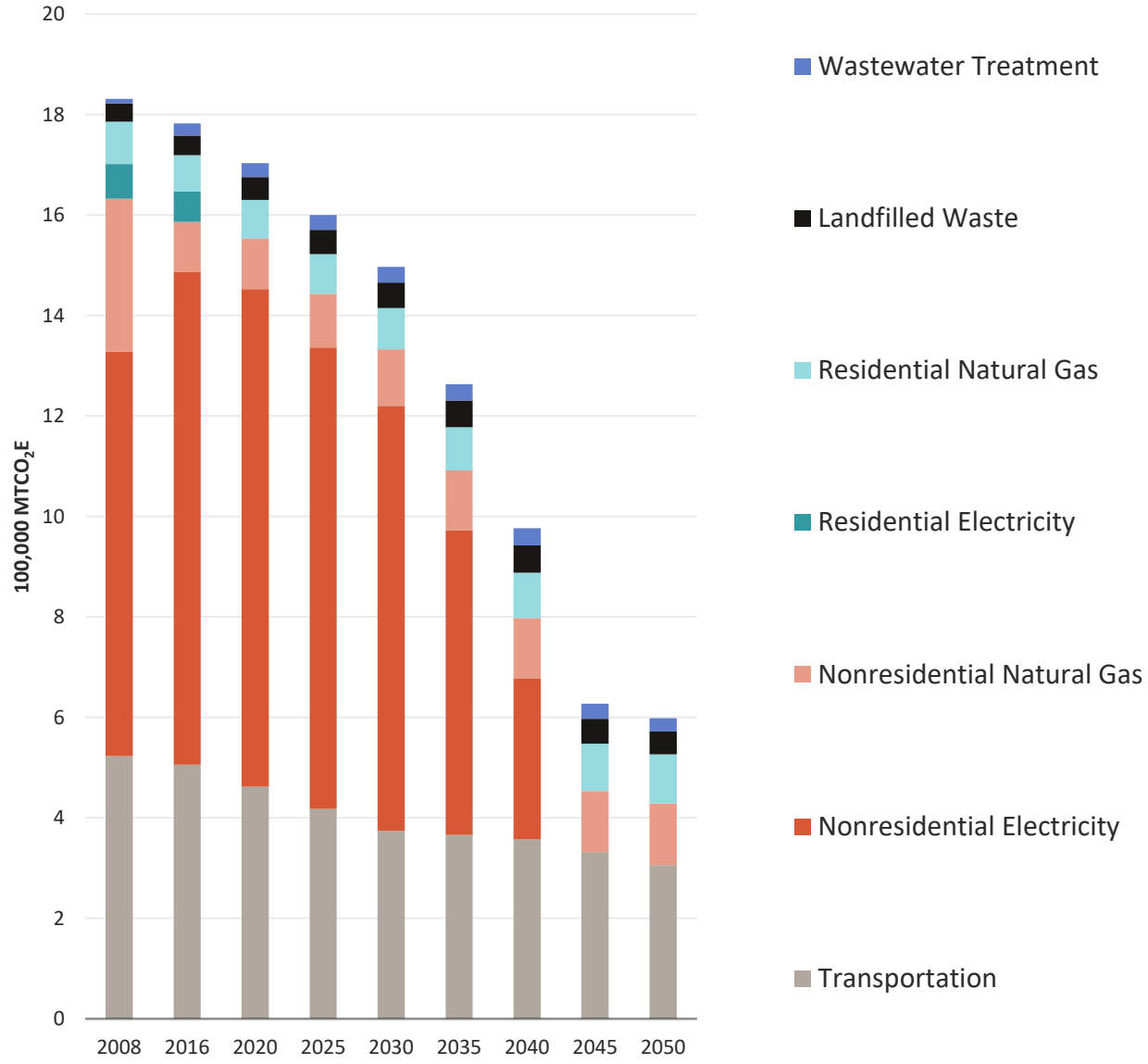
The 2016-to-2045 forecast, shown on page 22, reflects population growth projections, as well as reductions from state measures such as Title 24 building code standards, vehicle efficiency standards, and electric vehicle adoption. It shows that **current state policies and carbon-free electricity will allow Santa Clara's emissions to decrease approximately 70% by 2045**.

Two major sources of emissions are projected to remain: transportation and natural gas at 53% and 35% of projected 2045 emissions, respectively. Emissions from solid waste and wastewater treatment are projected to continue to rise, together making up the remaining 12% of total 2045 emissions. This forecast illuminates that California's state policies alone won't get us to our end goal; **the strategies and actions developed in this City of Santa Clara CAP are critical for a carbon-neutral future.**

Communitywide Greenhouse Gas Emissions Trends



Communitywide Greenhouse Gas Emissions Forecast



Even without this CAP, Santa Clara's GHG emissions are projected to decline in the future—largely due to the influence of federal, state, and regional policies:

- **SB-100** requires that 100% of electricity sold by utilities be carbon-free in 2045.
- **Title 24** specifies how new buildings must be constructed, including specifying minimum energy efficiency standards; California has set a goal for zero-net energy new construction by 2030.
- **Clean Car Standard** requires that vehicles sold in California meet minimum fuel efficiency requirements, and that fuel sold in the state emits less GHGs during production and use.
- **SB 1383** requires that food scraps and other organic material is diverted from landfill disposal such that 75% of organic material is diverted from landfill by 2025.
- **EO N-79-20** sets a goal that 100% of in-state sales of new passenger vehicles and trucks are zero-emission vehicles.

CARBON NEUTRAL 2045

This CAP update establishes a pathway toward achieving:

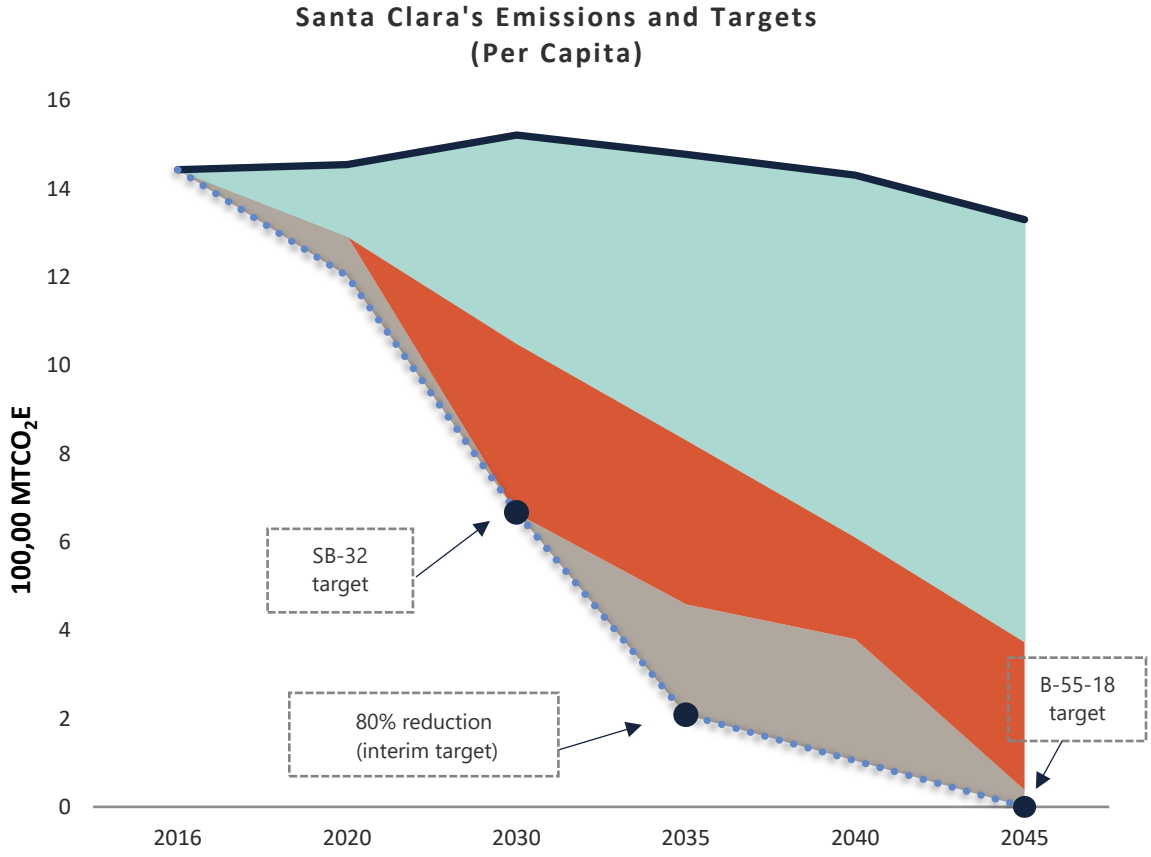
- **SB 32 requirements:** a 40% reduction in emissions by 2030.
- **Our interim target:** an 80% reduction in emissions by 2035.
- **EO B-55-18 target:** net carbon neutrality by no later than 2045.

These goals reflect community and City feedback to **set bold targets to address climate change**—getting ahead of anticipated state regulations and aligning with peer communities. Carbon neutrality refers to **net zero greenhouse gas emissions caused by fossil fuel use within the city**.

This CAP includes innovative strategies and actions to significantly reduce greenhouse gas emissions into the future—but technological constraints may prevent reducing emissions to absolute zero by 2045. As a result, **to achieve carbon neutrality, we will need to offset every ton of CO_2e emitted with an equivalent amount of CO_2e removed** through a combination of nature-based solutions, carbon capture technology, and other carbon offset options.

SANTA CLARA EMISSIONS AND TARGET PATHWAYS

As illustrated in the graphic below, we will need to proactively take local climate action to reduce and offset greenhouse gas emissions to achieve our targets. State and regional policies and regulations are projected to reduce 2045 business-as-usual (BAU) emissions by 72%. The actions within this CAP are projected to further reduce emissions by 25%.



Business-As-Usual (BAU):

An estimate of how emissions would grow over time without any climate action.

External Factors:

The influence of federal, statewide, and regional policies (e.g., California's Renewable Portfolio Standard) will have on Santa Clara's projected emissions.

CAP Actions:

The estimated collective impact of the actions in this CAP.

Additional Actions to Reach Goal:

The additional emissions reduction needed after implementing external policies and CAP actions.

Targets:

- Reduce emissions by 40% by 2030 (**SB-32**).
- Reduce emissions by 80% by 2035 (**Interim**).
- Carbon neutral by 2045 (**B-55-18**).

80% BY 2035: HOW WILL WE GET THERE?

The chapter that follows outlines Santa Clara's adopted strategies and actions that will collectively meet state GHG reduction requirements in the near-term (40% reduction by 2030) and set the city on a pathway to achieve carbon neutrality in the long-term (by 2045). In addition to these targets, the City aspires to reduce emissions more aggressively in the near-term: achieve an **80% reduction in emissions by 2035.**[14]

To achieve this interim target, one of the key actions that Santa Clara would need to take is to transition to a carbon-neutral electricity fuel mix. This would require SVP to achieve 100% carbon neutral electricity by 2035, which may require rate increases of 44% to 55%. Achieving this target would also require all-electric new construction by 2035.

An additional strategy would be to target the electrification of existing buildings.

Full implementation of actions in this CAP will also be critical for achieving long-term emission reductions, including the following:

1. Target building and transportation electrification through implementation of the all-electric reach codes adopted in November 2021 requiring all-electric new construction (with some exceptions) and to include robust EV charging.
2. Prepare a "burnout policy" to replace natural gas furnaces and water heaters with an electric equivalent.
3. Require all new data centers to operate on 100% carbon neutral energy, with offsets as needed.
4. Require a 25% reduction in project-based VMT through active Transportation Demand Management (TDM) requirements for large employers over 500 employees, including aggressive regulations to reduce parking, in new developments.
5. Adopt a 20% reduction of VMT for multifamily residential through active TDM requirements, which may require parking maximums, in new developments.
6. Require advanced EV charging stations and secured bicycle parking at new residential developments.

[14] This plan is focused on achieving a per service population reduction. Service population in this context refers to total Santa Clara residents plus total Santa Clara job force/employees.

STRATEGIES & ACTIONS

The strategies and actions in this plan reflect Santa Clara's unique context and role in taking climate action. Considerations include:

- **Utility ownership.**
  Silicon Valley Power electricity utility is municipally owned, which grants the City direct control over utility operations, business decisions, and related program activities.

- **Progressive state and regional activities**.
  California has introduced ambitious climate policies and regulations, as well as tools and resources for supporting local climate action. Santa Clara's strategies align with other California cities—setting ambitious emissions reduction targets and leading the nation in local climate action planning.

- **Data center hub in the center of Silicon Valley.**
  Santa Clara's electric utility provides unique opportunities for the provision of carbon neutral energy options. SVP will continue to work with Data Center developers who are interested in procuring additional renewable resources earlier than required by law.

- **An engaged community with a vision for a more sustainable future**.
  Our community is engaged on climate change issues, particularly in relation to transportation and expanding community green spaces.

The following strategies and actions collectively work toward achieving our long-term goal of carbon neutrality no later than 2045.

STRATEGIES & ACTIONS AT-A-GLANCE

Buildings & Energy

Transition to clean renewable energy sources and reduce energy consumption.

Strategy B1	Shift to electric fuels in new and existing buildings to achieve net-zero carbon buildings.
B-1-1	Electrification incentives & financing
B-1-2	Electrification outreach for commercial & residential energy upgrades
B-1-3	Electric panel upgrades upon sale/turnover
B-1-4	Municipal Electrification Action Plan
B-1-5	Reach codes for new construction
B-1-6	Burnout ordinance
B-1-7	Carbon-neutral data centers
Strategy B2	**Improve energy efficiency.**
B-2-1	Municipal energy retrofits
B-2-2	Free home energy upgrades for qualifying residents
B-2-3	Energy-efficient and electric-ready building code
B-2-4	Distributed energy resource pilots
B-2-5	Energy efficiency incentives
Strategy B3	**Maximize renewable energy generation and storage capacity.**
B-3-1	SVP Integrated Resource Plan (IRP) for carbon-neutral electricity
B-3-2	City-owned renewable energy projects
B-3-3	Renewable installations at municipal facilities
B-3-4	Renewable energy generation & storage on private property
B-3-5	Local grid resiliency & energy storage improvements
B-3-6	Alternative fuel backup generators
B-3-7	Renewable electricity for new data centers

Transportation & Land Use

Transition to clean and efficient mobility options and transportation modes while maintaining accessibility and mobility for all.

Strategy T1	**Transition vehicles to electric alternatives.**
T-1-1	Community EV Blueprint implementation
T-1-2	EV charging for all new construction
T-1-3	City Fleet Electrification Plan implementation
T-1-4	Heavy duty electric trucks
T-1-5	Municipal charging infrastructure
Strategy T2	**Expand clean mobility options and use of non-SOV transportation modes.**
T-2-1	Pedestrian & Bicycle Master Plans implementation
T-2-2	Curb management improvements
T-2-3	Bike & shared mobility improvements
T-2-4	Transit gap & improvement study
Strategy T3	**Advance sustainable land use.**
T-3-1	TDM plan requirements
T-3-2	Sustainable development in underutilized non-residential areas
T-3-3	Transit-oriented development
T-3-4	Telework
T-3-5	Transportation Analysis Policy compliance

Materials & Consumption

Increase diversion of waste from landfills, reduce communitywide waste generation, and reduce the upstream GHG impacts of consumption.

Strategy M1	**Increase waste diversion.**
M-1-1	Compliance with state solid waste ordinances
M-1-2	Waste diversion pricing signals
Strategy M2	**Reduce landfilled food waste.**
M-2-1	Technical assistance to top food generators
M-2-2	Food recovery & donation
M-2-3	Food recovery organization partnerships
Strategy M3	**Enhance sustainable production and consumption.**
M-3-1	Reuse of salvageable building materials
M-3-2	City property consumption & waste diversion
M-3-3	Municipal Sustainable Procurement Policy
M-3-4	Carbon-smart building materials
M-3-5	Low-carbon schools

Natural Systems & Water Resources

Foster nature-based solutions, climate-resilient natural landscapes, and help store more carbon in trees and soils. Conserve community water resources by maximizing water efficiency to ensure a secure and sustainable water supply in the face of climate change.

Strategy N1	**Increase tree canopy cover.**
N-1-1	Right-of-way tree planting
N-1-2	Private property tree planting support
N-1-3	Urban forest partnerships
N-1-4	Tree maintenance, replacement, & plantings
Strategy N2	**Enhance ecosystem resilience.**
N-2-1	Carbon farming on open space lands
N-2-2	Partnerships for compost management
N-2-3	Sustainable planting guide
N-2-4	Sustainable park management
Strategy N3	**Improve water supply and conservation.**
N-3-1	Water conservation rebates
N-3-2	Fixture replacements
N-3-3	Water-efficient landscaping requirements
N-3-4	Community water portfolio diversification
N-3-5	Recycled water connection requirements

Community Resilience & Wellbeing

Ensure Santa Clara is prepared and can withstand climate and non-climate emergencies, focusing on those at highest risk.

Strategy C1	Improve community resilience.
C-1-1	Community resilience networks
C-1-2	Support for people experiencing homelessness
C-1-3	Community climate action grant
C-1-4	Incentives for adaptation upgrades
Strategy C2	**Prepare for climate change.**
C-2-1	Climate-resilient land use & development
C-2-2	On-site & natural stormwater systems
C-2-3	High-albedo parking lots
C-2-4	Climate Resilience Capital Improvement Program (CIP)
C-2-5	Planned retreat strategies

A Strategic Approach

We will work to achieve carbon neutrality no later than 2045 by building upon the progress we have already made and adopting new emissions reduction strategies and actions. Together, these strategies and actions (1) provide a **framework for reaching carbon neutrality**; (2) make Santa Clara **more resilient to future climate impacts**; and (3) have important **social and economic benefits**, such as addressing historic inequities, creating green jobs, increasing community green spaces, and improving public health. The table below describes our phased, strategic approach for reaching our climate goals.

Focus immediately on expanding Santa Clara's **transition to clean electricity** by phasing out all remaining fossil fuel-sourced electricity. This transition is key in reducing emissions from both buildings and transportation and meeting our long-term goals.	Meanwhile, significantly reduce emissions from energy by **making buildings more energy efficient** while electrifying appliances and infrastructure. At the same time, **reduce transportation emissions** by expanding electric vehicle adoption and shifting away from single occupancy vehicles.	As the electricity fuel mix gets cleaner with a higher percent of renewable sources, we can ensure that our community is prepared by **phasing out natural gas infrastructure and fossil fuel-based transportation.** We will do this by electrifying new and existing buildings and transitioning to electric vehicles.	As we reduce emissions from transportation and energy, **we will also expand our zero waste and sustainable consumption programs**. These programs will divert organic waste from landfills, where it produces potent methane emissions, and will help community members to buy less generally, which reduces upstream emissions from material production and consumption.	Throughout this process, **we will also focus on local carbon sequestration projects**, including expanding local tree planting programs and adopting nature-based solutions that protect and restore natural systems and naturally capture and store carbon. Carbon sequestration is vital in reaching carbon neutrality and will help Santa Clara close any gaps left by other initiatives.

Climate Adaptation & Resilience | In addition to reducing GHG emissions, Santa Clara will also strategically **integrate adaptation and resilience actions** throughout the CAP implementation—simultaneously both **preventing and slowing down** the worst climate impacts while also **preparing** the community for impacts that are unavoidable.

Embedding Co-Benefits & Equity

In developing the strategies and actions in this CAP, the City considered how strategies and actions contribute to social and economic co-benefits, such as creating green jobs, or enhancing public health by supporting healthier lifestyles. Co-benefits refer to the additional benefits an action brings to the city, or ways it helps meet other City goals. Co-benefits are indicated with the icons below throughout the Strategies & Actions section of this plan. **While many actions have a range of co-benefits, actions with one or more of the below icons highlight those with a particularly strong contribution**.

Specific equity considerations included:

- Who will the action benefit and/or burden?
- Are the benefits broadly accessible?
- Does the action incorporate meaningful, authentic, and culturally appropriate engagement?
- Does the action support long-term relationships and trust between communities and local government?

	**Climate Resilience** Action is a vital, or foundational step, for improving strength against climate hazards like hotter temperatures, floods, wildfire, and drought.		**Ecosystem Health** Action helps expand protection and preservation of habitats, species, water, or air quality.
	**Public Health** Action supports enhanced health and longevity. Improving our environment to prevent lung, heart, and other diseases.		**Cost Savings** Action supports increased efficiencies, reduced health care expenses, and lower energy bills provide more money for other needs and investments.
	**Green Job Creation** Action encourages investment, jobs, and local dollars from construction, energy, transportation, and more.		**Emissions Reduction** Action leads to a relatively significant reduction in emissions or is a foundational step for reducing emissions.
	**Equity** Action has high potential to reduce or redress historical or current disparities.		**Implementation Considerations** Action has specific implementation considerations to ensure equitable outcomes.

BUILDINGS & ENERGY

Goal: Transition to clean, renewable energy sources and reduce energy consumption.

Nearly 70% of Santa Clara's GHG emissions come from our buildings and energy use—making it one of our greatest opportunities to reduce emissions. California state's requirements under SB-100 are anticipated to reduce GHG emissions from electricity to net zero by 2045. To further reduce GHG emissions from our buildings and energy consumption, we will implement the following strategies.

Strategy	Estimated GHG reductions from baseline year ($MTCO_2e$)		
	2030	2035	2045
▸ **Shift to electric fuels in new and existing buildings to achieve net-zero carbon buildings**. Actions include expanding incentive programs to support the electrification of residential and commercial buildings, transitioning all municipal buildings to electricity, and adopting construction requirements and building codes to electrify new buildings.	40,000	79,000	194,000
▸ **Improve energy efficiency** by using our energy more efficiently through retrofits to our homes and buildings. Actions include adopting building codes and other policies that enhance energy efficiency, offering residents and business owners rebates and other financing to offset the cost of energy efficiency upgrades, and conducting comprehensive energy efficient retrofits at municipal facilities.	67,000	77,000	114,000
▸ **Maximize renewable energy generation and storage capacity**. Actions include installing solar and other renewables at City-owned facilities, piloting new renewable energy technology in municipal buildings, and expanding financial support for residents to add renewable energy generation and storage systems to their homes.	180,000	135,000	-

Strategy B1: Shift to electric fuels in new and existing buildings to achieve net-zero carbon buildings

Action B-1-1: Electrification incentives & financing

Work with BayREN and other local jurisdictions and agencies to expand current financial incentives to accelerate electrification in new and existing buildings, which could include (1) options for low- or zero-interest financing; and/or (2) targeted upstream and midstream incentives to distributors and contractors.[15] Rebates could be structured by income level and prioritized for rental units to be used for panel upgrades, passive home design features, electric appliances, heat pumps, and renewable energy generation coupled with storage. The City will continue to promote and advertise available incentives through its website, newsletters, and other available platforms.

Co-benefits:

- Saves costs through incentives and financing for residents to make buildings more energy efficient.

Implementation Considerations:

- Structure rebates in a way that reduces barriers to adoption, such as offering direct install options for low-income residents.
- Target outreach to affordable housing organizations and other entities that could particularly benefit from financial incentives.
- Partner with BayREN to explore opportunities for expanding commercial incentives to large corporations as well as small- and medium-sized businesses.

[15] More information on current incentives is available at https://www.bayren.org/electrification.

Action B-1-2: Electrification outreach for commercial & residential energy upgrades

Continue to promote commercial and residential energy efficiency and electrification upgrades (such as heat pump water heaters and electric panel upgrades) through education and outreach, which could include creation of a clearinghouse of trained/certified contractors and professionals.

Co-benefits:

- Supports green job creation by equipping local contractors with the tools they need to complete building electrification and efficiency projects.

Implementation Considerations:

- Recognize the challenge of promoting energy upgrades to certain demographics, such as renters and small business owners. Focus outreach efforts on reaching decision-makers affecting these groups, such as landlords and property owners and managers.

Action B-1-3: Electric panel upgrades upon sale/turnover

Require electric panel upgrades as needed upon sale and/or rental turnover for low-rise residential and small multifamily and commercial buildings to facilitate the transition to clean electricity buildings and vehicles.

Implementation Considerations:

- Explore options for completing upgrades across the whole building or unit-by-unit to determine the most effective approach.
- Clearly define which residential buildings are considered "small multifamily."

Action B-1-4: Municipal Electrification Action Plan

Work with regional energy partnerships to develop and implement a Municipal Electrification Action Plan for City facilities. This will include fuel switching in new and existing buildings, incorporating strategies to address energy storage, focusing on highlighting any hurdles or solutions that would be applicable to the broader community, and leveraging existing rebates.

Action B-1-5: Reach codes for new construction

Implement all-electric reach codes, with exceptions. These codes would require:

- All new single-family residences to be all electric OR mixed fuel buildings at least 10 Energy Design Rating (EDR) points less than the calculated total for the Standard Design Building.
- All new multi-family residences 3 stories or less to be all electric OR mixed fuel buildings at least 11 EDR points less than the calculated total for the Standard Design Building.
- All new non-residential/commercial construction (except office and retail) or new multi-family residences over 3 stories to be all electric OR mixed fuel buildings 6% more efficient than the 2019 State Energy Code.
- All new office or retail construction over 3 stories to be all electric OR mixed fuel buildings 14% more efficient than the 2019 State Energy Code.

Implementation Considerations:

- Explore educational campaigns and outreach opportunities to engage with local contractors, developers, and other members of the building community to ensure they have the technical capacity and knowledge to comply with reach codes.

Action B-1-6: Burnout ordinance

Prepare a "burn-out" ordinance requiring that when natural gas furnaces or water heaters expire, they must be replaced with available electric alternatives.

Implementation Considerations:

- Consider offering exemptions or financial support for qualifying residents to ensure that replacement costs are not unduly burdensome to low-income residents.
- Consider who will bear the cost of upgrades in rental units—building owners, landlords, and/or tenants—and plan outreach and financial support programs accordingly.

Action B-1-7: Carbon-neutral data centers

Require all new data centers to operate on 100% carbon neutral energy, with offsets as needed. This requirement does not apply to data centers with planning application approval within six months of the CAP adoption date.

Implementation Considerations:

- Use offsets as needed to help ease the transition to carbon neutral energy but ensure that reducing emissions remains the main priority.

Strategy B2: Improve energy efficiency

Action B-2-1: Municipal energy retrofits

Continue to conduct comprehensive energy retrofits of existing City equipment and implementation of previously identified energy efficiency projects with a benefit-cost ratio of one or greater.

Co-benefits:

- Saves energy costs to the City and supports green job growth by providing an opportunity for local contractors to complete retrofit projects.

Action B-2-2: Free home-energy upgrades for qualifying residents

Continue to provide free home-energy audits and upgrade incentives for low-income households and affordable housing developers and property owners.

Co-benefits:

- Reduces energy costs for low-income residents and supports equity by addressing the energy-inefficient housing that has caused low-income residents to face a disproportionately high energy burden.

Implementation Considerations:

- Structure incentives in a way that benefits property owners and residents to ensure that both are incentivized to participate.

Action B-2-3: Energy-efficient and electric-ready building code

Update local building code to increase energy efficiency standards to at least CALGreen Tier 1.

Co-benefits:

- Aligns Santa Clara with aggressive new energy efficiency standards that are vital to meet emissions reduction goals.

Implementation Considerations:

- Develop outreach and facilitate resource sharing among contractors, developers, and other members of the building community to ensure they have the necessary resources to comply with energy efficiency standards.

Action B-2-4: Distributed energy resource pilots

Pilot technologies like energy storage, vehicle-to-grid charging stations, web-enabled devices, and microgrids within City facilities and with private sector partners, and evaluate their ability to reduce utility costs and carbon emissions.

Action B-2-5: Energy efficiency incentives

Partner with BayREN, SVP, and other local jurisdictions and agencies to provide and promote energy efficiency incentives and rebate programs for residents and businesses.

Strategy B3: Maximize renewable energy generation and storage capacity

Action B-3-1: SVP Integrated Resource Plan (IRP) for carbon-neutral electricity

- Examine resource procurement and cost scenarios to provide 70% carbon neutral electricity to all customers by 2030 to meet SB-32 climate goals, and 60% renewable electricity to meet SB-100 climate goals. Explore SVP achieving 100% carbon neutral electricity by 2035.

Implementation Considerations:

- Structure program so that transition does not lead to higher utility rates and increase the energy burden for low-income community members.

Action B-3-2: City-owned renewable energy projects

Continue to investigate the use of City-owned property for additional large-scale carbon-neutral energy and storage projects.

Co-benefits:

- Large-scale energy and storage projects have the potential to significantly reduce emissions.

Implementation Considerations:

- Capitalize on unused local real estate, such as empty parking lots, by installing solar panels and other renewable infrastructure.

Action B-3-3: Renewable installations at municipal facilities

Install solar or other on-site renewable energy projects at City-owned facilities.

Action B-3-4: Renewable energy generation & storage on private property

Expand financial assistance options to SVP customers to increase the implementation of renewable energy generation systems and energy storage infrastructure, including streamlining of project permitting and expanding the City's solar grant program.

Implementation Considerations:

- Structure program to ensure equitable access to renewable energy technology.
- Due to split incentive dilemma between landlords and tenants, focus outreach on multi-family properties.

Action B-3-5: Local grid resiliency & energy storage improvements

Accelerate improvements to the energy grid or storage as needed to transition the city to renewable energy sources. These improvements may include subsidy and grant programs for electrification in existing buildings to reduce the cost of battery storage and electric vehicle charging/storage system installations.

Action B-3-6: Alternative fuel backup generators

Provide information and technical assistance to data centers and other large commercial users to transition from diesel to lower-carbon backup generators (e.g., renewable diesel).

Implementation Considerations:

- Consider promoting the use of fuel cells to serve as an alternative back-up power source for data centers.

Action B-3-7: Renewable electricity for new data centers

Support convening of a data center working group to identify and implement renewable electricity purchasing options for commercial customers.

The "Split Incentive Dilemma"

A "split incentive" occurs when neither landlord nor tenant is incentivized to pay for retrofits or upgrades to electrify buildings or reduce energy use. Split incentives typically occur for the following reasons:

- Building owners pay for upgrades, but tenants receive the benefits of lower utility bills. While this scenario is favorable to tenants, landlords are not incentivized to pay for upgrades when they do not directly realize cost benefits.
- Building owners pass the cost of the upgrades along to the tenants in the form of increased rent or other charges. However, tenants may be unable to accommodate the short-term cost increases or may not rent long enough to see the financial benefits of the upgrade.

Split incentives often result in renters—who are often low to moderate income—living in less efficient buildings with higher energy bills.[1] As a result, these residents often face a higher housing cost burden than homeowners. While this dilemma remains a complex issue to solve, Santa Clara can address it in part through targeted community outreach to both tenants and landlords. Green leases, Environmental Upgrade Assessments (EUAs), on-bill financing, and local code changes preventing landlords from passing on retrofit costs are also potential solutions.

1: The Greenlining Institute. Equitable Building Electrification.

TRANSPORTATION & LAND USE

Goal: Transition to clean and efficient mobility options and transportation modes while maintaining accessibility and mobility for all.

The State of California's Clean Car Standards requiring that vehicles sold in California meet minimum fuel efficiency requirements—and the standards set under EO-79-20 that new cars and trucks be zero emission vehicles by 2035—are expected to drive a shift to electric vehicles. This shift will reduce emissions from transportation and help the City reach net zero by 2045. Santa Clara can build upon this legislation and further reduce emissions by further promoting widespread adoption of electric vehicles, supporting telecommute/telework strategies, and improving access to biking, walking, carpooling, and public transit. Planning to create convenient, pedestrian-friendly blocks with homes, businesses, parks, and other uses mixed together can also help reduce driving, particularly if these "mixed use" areas are located near transit stops.

Transportation measures overlap and can bolster each other's success. For example, developing areas around transit stops will best lead to more public transit use if the transit system is reliable and efficient, and a City bike share program will be most effective after the City implements the Bicycle and Pedestrian Master Plans and addresses gaps in safe bicycling infrastructure.

Strategy	Estimated GHG Reductions from baseline year ($MTCO_2e$)		
	2030	2035	2045
▸ **Transition to electric vehicles** by improving our EV charging infrastructure. Actions include expanding the number of public, commercial, and residential charging stations, transitioning a portion of the municipal fleet to electric vehicles, and incentivizing businesses and industries to electrify fleets.	92,000	97,000	112,000
▸ **Expand clean mobility options and use of non-SOV transportation modes** by making Santa Clara more bike and walk friendly, improving public transit, and incentivizing low-carbon transportation. Actions include improving the city's trail network, promoting low-carbon transportation, and identifying transit gaps.	152,000	163,000	142,000
▸ **Advance sustainable land use** through policies and programs that encourage higher density development near transit centers, walkable and bikeable communities, and support telecommuting. Actions include promoting sustainable development through new building standards, incentivizing "transit-oriented" development that creates compact, walkable, mixed-use communities centered around public transit, and supporting telecommuting.	N/A	N/A	N/A

Strategy T1: Transition vehicles to electric alternatives

Action T-1-1: Community EV Blueprint implementation

Implement the EV acceleration program in SVP's EV Blueprint to achieve EV Blueprint goals. Priority actions include:

- Expanding multi-unit dwelling and low-income charging availability.
- Electrifying City fleets and installing related charging stations.
- Expand public charging availability.
- Electrify transit fleets.

Implementation Considerations:

- Consider the location of charging stations, as well as the charging level (1,2, or 3), to make sure chargers are accessible to a diverse demographic and that they can charge a range of different vehicle models.
- Consider including charging stations at local schools and universities.

Action T-1-2: EV charging for all new construction

Implement EV charging requirements as specified in the adopted 2021 Reach Codes.

Implementation Considerations:

- Sequence actions to align EV charger requirements with building electrification incentives and electric panel upgrades to ensure that buildings are equipped to handle the increased electrical demand from EVs.

Action T-1-3: City Fleet Electrification Plan implementation

Require a percentage of new standard light-duty, medium-duty, and heavy-duty City fleet to be electric vehicles (zero emission) with EV infrastructure in accordance with Executive Order N-79-20 and related CARB regulations.[16]

Action T-1-4: Heavy duty electric trucks

Partner with businesses and industries to accelerate transition of heavy-duty trucks to electric through incentives or local tax credits. Heavy-duty trucks account for a significant portion of overall transportation GHG emissions, making it a priority to streamline the electrification of these vehicles.

Action T-1-5: Municipal charging infrastructure

Expand municipal facility charging infrastructure to serve municipal fleet, employee, and public charging needs.

[16] California Air Resources Board. 2021. Governor Newsom's Zero-Emission by 2035 Executive Order.

Strategy T2: Expand clean mobility options and use of non-SOV transportation modes

Action T-2-1: Pedestrian & Bicycle Master Plans implementation

Fund and accelerate implementation of the Pedestrian Master Plan and Bicycle Master Plan—focusing on 1) closing gaps in the bicycle and pedestrian networks with a focus on high demand arterials; 2) installing painted buffers or physical vertical elements on high stress roadways documented in the Bicycle Master Plan; and 3) implementing spot improvements in high traffic areas (e.g., bicycle detection, bulb-outs, and wayfinding elements)—such that walking and biking comprise 10% of total city mode share.

Co-benefits:

- Enhances public health by encouraging active transportation.
- Promotes active transportation to and from school through initiatives focused on ensuring safe walk and bus routes to school, stationing school crossing guards nearby schools, and other programs.

Action T-2-2: Curb management improvements

Incentivize projects that optimize curbside areas for low-carbon modes and reduce VMT, such as designated rideshare parking and loading zones, scooter and bike share docks, bike parking, electric vehicle and bike charging stations, and autonomous vehicle loading zones.

Co-benefits:

- Enhances public health by encouraging active transportation.

Implementation Considerations:

- Consider the location and configuration of vehicle loading zones to mitigate potential safety risks to cyclists in nearby bike lanes.
- Consider the accessibility of curbs to people with disabilities as part of curb management improvements.

Action T-2-3: Bike & shared mobility improvements

Increase public access to bikes, including electric bikes, implementing a bikeshare program, expanded bike parking, electric bike rebates, and requiring new developments to include one secured bicycle parking spot for each multi-family residential unit. Electrical outlets shall be available in bike storage room for ebike charging. The City should look to prioritize low stress facilities to encourage increased ridership.

Co-benefits:

- Enhances public health by promoting non-motorized travel and saves costs for residents through rebates and shared mobility programs.

Implementation Considerations:

- Balance bike and shared mobility improvements with other local transportation needs to ensure that Santa Clara's future transportation systems meet the needs of a diverse demographic.
- Consider coordinating improvements with the VTA Countywide Bicycle Plan.

Action T-2-4: Transit gap & improvement study

Partner with VTA to conduct a public transit gap study to increase transit use within the city—such that transit comprises 12% of total city mode share. These studies focus on identifying gaps in transit service or transit facilities in areas where there is need or demand; the results will help VTA identify where to target public transportation infrastructure projects most effectively.

Implementation Considerations:

- Ensure that study includes a component focused on demographics and proximity to transit stops.
- Consider focusing study on both city and regional transit needs.

Strategy T3: Advance sustainable land use

Action T-3-1: TDM plan requirements

Continue to analyze projects through the City's VMT Policy of 15% reductions below Countywide baseline VMT through TDM measures. For new developments, projects that are exempt from the VMT analysis per the City's VMT Policy would also be exempt from additional VMT reductions per the CAP. Previously entitled projects that are already subject to VMT requirements and/or TDM measures would continue to follow the requirements assigned at the time of entitlement.

For projects that are not exempt from the VMT policy:

- Require a 25% reduction in project-based VMT through active TDM requirements for large employers over 500 employees, including aggressive regulations to reduce parking, in new developments. For the purpose of calculating the number of employees, separate employers sharing a building or project site would be treated as one employer.
- Adopt a 20% reduction of VMT for multifamily residential through active TDM requirements, which may require parking maximums, in new developments.
- Projects shall provide annual reports demonstrating compliance with VMT reduction targets, pursuant to procedures established by City staff

Co-benefits:

- Foundational step for reducing VMT, which is a vital step to reduce emissions from transportation.

Action T-3-2: Sustainable development in underutilized non-residential areas

Require higher density, mixed-use development in the Specific Plan Areas, especially El Camino Real Specific Plan. These developments should include increased building heights, zoning changes to higher density mixed residential, and consider opportunities for mixed land use and/or transit-oriented development. Quantify the net benefits of specific plans.

Action T-3-3: Transit-oriented development

Introduce requirements and/or incentives to encourage transit-oriented development (TOD) near transit corridors.

Action T-3-4: Telework

Expand telecommuting options through fiber infrastructure investment and expand existing TDM programs to include telecommuting. Explore longer term municipal employee telework policies building from existing practices.

Action T-3-5: Transportation Analysis Policy compliance

Require that all projects comply with the Transportation Analysis Policy that was adopted by Council in June 2020, which establishes requirements for evaluating the transportation impacts of residential, commercial, and industrial projects.

What Happens to Old EV Batteries?

EVs release much less pollution and fewer greenhouse gas emissions overall than conventional vehicles, but they do have a problem: recycling EV batteries is difficult. Lithium-ion batteries used by EVs are made of many individual cells held together using strong glues. They contain hazardous materials and may explode if handled incorrectly. This makes recycling dangerous, polluting, and costly.[1]

Electric vehicle manufacturers delay the recycling process by giving used batteries second lives as large-scale storage systems. They have installed retired batteries as back-up power and renewable energy storage systems for arenas, convenience stores, and homes in Europe, Japan, and the United States. These strategies can extend the useful life of batteries by ten years or more. Batteries that are truly at the end of their lives may be disposed as hazardous waste or recycled via intensive processes. Lithium-ion battery recycling rates are still low (about 5% in the United States).[2] With more and more electric vehicles projected to hit the roads, battery recycling is an increasingly important issue, both to minimize waste and pollution and to guarantee a sustainable source of battery components into the future.

California has initiated the Lithium-ion Car Battery Recycling Advisory Group, which advises the state legislature on policies to address this issue.[3] Other countries are considering rules holding battery producers responsible for recycling. In the meantime, in the United States, researchers at universities, start-ups, and everywhere in between are searching for efficient recycling techniques.[2] The answer will come in the form several solutions at once: new technological innovations in battery design and recycling, supporting policies, and enough recycling facilities so that transportation costs are not too high.[1]

1: Science Magazine. 2021. A Dead Battery Dilemma.
2: New York Times. 2021. How green are electric vehicles?
3: Cal EPA. n.d. Lithium-ion Car Battery Recycling Advisory Group.

MATERIALS & CONSUMPTION

Goal: Increase diversion of waste from landfills, reduce communitywide waste generation, and reduce the upstream GHG impacts of consumption.

Waste from Santa Clara's consumption and disposal of goods and materials contributes to climate change in several ways. Waste disposed in landfills—particularly organic waste—produces potent methane. Producing and distributing new products, in turn, generates upstream emissions from the energy used to manufacture goods and transport them around the world. Santa Clara can reduce these emissions by diverting waste from landfills, promoting sustainably sourced and produced products, and supporting programs that support reuse of existing goods—especially construction materials. California state has set a goal to divert 75% of organic waste from landfills by 2025, and to reduce edible food disposal by at least 20% by 2025. Santa Clara can align with this goal and reduce waste emissions by doing the following.

Strategy
▸ **Increase waste diversion.** Actions include aligning with California's solid waste policies, promoting and expanding existing recycling and composting programs, such as the battery recycling stations located at City Hall and other public facilities, and requiring that more construction projects comply with regulations that aim to reduce construction and demolition (C&D) waste.
▸ **Reduce landfilled food waste** by preventing food waste and expanding edible food recovery and donation programs. Actions include food waste reduction education and outreach campaigns focused for top food waste producers, supporting local food recovery organizations, and joining food waste recovery and food security efforts.
▸ **Enhance sustainable production and consumption** by expanding programs that allow residents and businesses to buy less carbon-intensive goods and materials. Actions include supporting regional organizations that process and sell salvageable building materials, adopting new municipal purchasing policies that prioritize goods and materials with the lowest carbon footprint, and promoting sustainable building materials in local construction projects.

Strategy M1: Increase waste diversion

Action M-1-1: Compliance with state solid waste ordinances

Comply with state solid waste laws, including AB-1826, AB-341, and SB-1383. These bills require that businesses, public entities, and communities expand recycling and composting infrastructure to meet the state's ambitious landfill waste reduction targets. **AB-1826** requires commercial businesses that generate a certain level of organic waste arrange for recycling services for that waste. **AB-341** similarly requires that commercial businesses and public entities that generate a certain level of weekly waste have a recycling program in place. **SB-1383** requires that California reduce organic waste to landfills by 75% by 2025 and rescue 20% of surplus edible food in phases beginning in 2022.

Co-benefits:

- Significant emissions reduction benefit due to the methane emissions produced from landfill waste.
- Reduces upstream emissions from food production by diverting edible food from landfills.

Implementation Considerations:

- Consider pairing action with educational campaigns around proper waste disposal; consider integrating visuals in place of text to reach a wider audience.
- Consider partnering with neighboring communities to share resources and identify opportunities for costs savings (e.g., through contract negotiations with regional waste haulers).

Action M-1-2: Waste diversion pricing signals

Explore or promote existing incentives for recycling and composting and discouraging landfill waste. These programs provide tools and financial resources for individuals and institutions to divert waste, which collectively reduces Santa Clara's waste overall. Examples of these programs include:

- University of California Cooperative Extension Compost Education program, compost bin subsidies and compost giveaways for residents.
- Environmental Days provided by Recology, household hazardous waste drop-off events, and battery recycling stations at City Hall, Corp Yard, and Fire Stations.
- Collect used motor oil/oil filters/batteries/CFLs curbside.
- Recyclestuff.org.
- Countywide Bring Your Own Cup campaign, Reusable vs. Disposable, A La Carte, and South Bay Green Gardens.

Strategy M2: Reduce landfilled food waste

Action M-2-1: Technical assistance to top food generators

Provide education, outreach, and technical assistance to top food producers such as hotels, hospitals, corporate cafeterias, and campuses to prevent food waste, increase surplus of edible food donations, and comply with SB-1383 requirements. Options include food waste tracking software and food donation pickup services.

Co-benefits:

- Food waste in landfills is a major source of methane emissions. Partnering with food producers to reduce this waste at the source is a particularly effective strategy to reduce emissions.
- Takes pressure off of businesses who want to donate surplus edible food but lack the means to store it or implement the logistics needed for a successful program.
- Supports both public health and equity because it helps address food insecurity, which disproportionately impacts low income and minority community members.
- Reduces upstream emissions from food production by diverting edible food from landfills.

Action M-2-2: Food recovery & donation

Continue to partner with local agencies to implement an Edible Food Recovery Program as required under SB-1383. Establish an excess edible food baseline and then assist food recovery organizations in establishing pickup and redistribution.

Co-benefits:

- Potentially provides additional inventory to non-profit organizations that provide free meals but do not have enough food to expand their services, which helps reduce regional food insecurity.

Implementation Considerations:

- As part of support for recovery organizations, consider how the City can also improve access to these resources for community members who are most in need.
- Consider the nutritional quality of donated food to avoid inadvertently perpetuating existing health disparities among community members who rely on food assistance.

Action M-2-3: Food recovery organization partnerships

Participate in regional partnerships for promoting food waste reduction, recovery, and security, such as Loaves and Fishes, A La Carte, Silicon Valley Food Recovery, Second Harvest of Silicon Valley, and the Santa Clara County Food System Alliance.

Co-benefits:

- Supports both public health and equity because it helps address food insecurity, which disproportionately impacts low income and minority community members.

Implementation Considerations:

- Consider how regional collaboration can go beyond feeding those in need to also address the root causes of food insecurity so that fewer community members are dependent on hunger-relief organizations.

Strategy M3: Enhance sustainable production and consumption

Action M-3-1: Reuse of salvageable building materials

Promote organizations, such as The Reuse People, in Santa Clara County that salvage building materials. Building materials have a high amount of embodied carbon—the GHG emissions associated with producing a product. By supporting the reuse of these materials, Santa Clara can help reduce these emissions.

Action M-3-2: City property consumption & waste diversion

In all City contracts and event permits, require that all third-party vendors provide and utilize recyclable and/or reusable food service items to serve 50 or more people, and provide recycling and composting receptacles for attendees. Through this action, the City both diverts waste from landfills and shows the community its commitment to sustainability.

Implementation Considerations:

- As feasible, provide reusable cups, plates, and utensils at events and meetings or encourage event attendees to bring their own.

Action M-3-3: Municipal Sustainable Procurement Policy

Implement a municipal sustainable procurement policy to prioritize improvements for the highest emissions reduction impact purchasing decisions within each department, including vehicle and fuel purchases and low-carbon concrete. Adopting a formal policy both reduces the upstream emissions tied to producing products and shows the City's leadership on sustainability.

Implementation Considerations:

- Explore and consider the environmental sustainability related procurement practices and/or policies of City contractors and consultants.
- Explore feasibility of establishing an internal price on carbon to inform purchasing decisions.

Action M-3-4: Carbon-smart building materials

Educate architects, designers, and contractors to enable and promote carbon-sequestering and low-albedo building materials in new construction and renovations. This could include requirements for disclosing and/or limiting the embodied carbon emissions of buildings through whole-building or material specific policies. Sustainable building materials can significantly reduce emissions from construction projects; this action ensures that developers have the tools and information they need to build more sustainably.

Action M-3-5: Low-carbon schools

Partner with Santa Clara Unified School District to support low-carbon solutions. This may include working with the schools on energy efficiency and electrification, waste reduction and recycling, and sustainable purchasing. This action supports schools in reducing waste and emissions and engaging students in climate action.

Tracking Emissions on Purchased Products

To paint a more complete picture of their overall GHG emissions, communities around California and beyond are beginning to use "consumption-based" emissions inventories to estimate the emissions that are created from consumption of everyday goods and services. In future CAP updates, Santa Clara will explore expanding its current GHG inventory methodology to include these inventories to inform future climate change planning efforts and strengthen our overall approach to reducing emissions.

NATURAL SYSTEMS & WATER RESOURCES

Goal: Foster climate-resilient natural landscapes and help store more carbon in trees and soils. Conserve community water resources by maximizing water efficiency to ensure a secure and sustainable water supply in the face of climate change.

Santa Clara's natural systems are a vital tool for both climate change mitigation and building resiliency to climate impacts. Natural systems like trees, grasses, and soils, naturally capture and store carbon—making them a vital tool for reducing emissions. These systems also provide valuable resiliency benefits, such as the natural cooling from tree shade and vegetated areas that reduces impacts from extreme heat. A commitment to a healthy urban forest and nature-based solutions has additional community and neighborhood benefits, such as improved air quality, traffic calming, reduced crime, building energy savings due to shading, and increased property values. Santa Clara's water resources—vital for community wellbeing and public health—are vulnerable to climate impacts like extreme heat, less regional snowpack, and wildfires, which threaten water supply and water quality. Santa Clara's Public Park System expansion, meanwhile, is essential for providing continued biodiversity and adequate land for trees and vegetation, as well as opportunities for outdoor recreation and green spaces. We can protect these valuable resources by doing the following.

Strategy	Estimated GHG Reductions from baseline year ($MTCO_2e$)		
	2030	2035	2045
▸ **Increase tree planting and cover**. Actions include new City guidelines for replacing dying or hazardous trees, increased street tree planting, and regional collaboration on urban forests.	N/A	N/A	N/A
▸ **Enhance ecosystem resilience** by promoting more sustainable practices and other ecosystem management initiatives that optimize the carbon sequestration benefits of natural systems. Actions include partnering with regional groups on restoration projects aimed at increasing local carbon capture and developing a tree planting guide outlining best practices for tree management.	40	45	60
▸ **Improve water supply and conservation**. Actions include promoting water conservation incentive programs, expanding water efficiency retrofits and rebate programs, and diversifying the community water supply to prepare for future droughts.	3,600	3,000	-

Strategy N1: Increase tree canopy cover

Action N-1-1: Right-of-way tree planting

Promote residential street tree planting in the right-of-way (in front of the property line). Under the City's current street tree program, all planting, pruning and removal of street trees is provided to residents at no charge.

Co-benefits:

- Trees have valuable climate resiliency benefits, including improved air quality, traffic calming, reduced crime, and building energy savings due to shading. including providing cooling through natural shade
- Trees provide aesthetic appeal, increase property values, facilitate a sense of community, and are also vital for overall ecosystem health.

Implementation Considerations:

- Ensure that tree planting is administered community-wide, particularly in lower income neighborhoods that historically have had less green space.
- Consider the species and size of trees to avoid future damage to streets and sidewalks.
- Use regional heat island study data to determine where to prioritize tree planting.

Action N-1-2: Private property tree planting support

Support private property planting of trees through partnerships with organizations such as Our City Forest. Advertise services on the City website.

Co-benefits:

- Trees have valuable climate resiliency benefits, including improved air quality, and building energy savings due to shading.
- Trees provide aesthetic appeal, increase property values, facilitate a sense of community, and are also vital for overall ecosystem health and have can provide traffic calming effects and reduced crime.

Implementation Considerations:

- Consider pairing action with education and outreach campaigns that build upon past successful City tree programs to promote proper tree maintenance and highlight the value that trees bring to the community.

Action N-1-3: Urban forest partnerships

Promote healthy, well-managed urban forests by participating in the County's Urban Forest Alliance partnership.

Action N-1-4: Tree maintenance, replacement, and plantings

Update Street Tree Planting plan to develop a procedure for retiring and replacing trees (when they are dying or creating hazards), with an emphasis on species that maintain tree canopy, and prevent unintended consequences, such as sidewalk uplifts from tree root growth. Collaborate with the community on appropriate tree maintenance, replacement, and plantings as per City Tree Ordinance.

Co-benefits:

- Trees have valuable climate resiliency benefits, including improved air quality, traffic calming, reduced crime, and building energy savings due to shading. including providing cooling through natural shade
- Trees provide aesthetic appeal, increase property values, facilitate a sense of community, and are also vital for overall ecosystem health.

Carbon Sequestration Opportunities in Santa Clara

Santa Clara has an estimated 10,500 city street trees and 13 miles of creeks. This urban forest and other biomass in parks and protected natural areas represent a "stock" of sequestered carbon. It is important to maintain this valuable stock of stored carbon through the maintenance and replacement of trees and plants on an ongoing basis. While this established stock of stored carbon is not able to function as a credit in the greenhouse gas analysis, any additional trees that are planted or the restoration of riparian, estuary, or other ecosystems can be counted toward GHG reductions.

Opportunities include increasing the extent of the urban forest by planting in currently empty tree wells or replacement of dead trees in parks. Additional trees can also be planted in parks and public rights of way that have not had street trees previously in parks and in public property and rights of way. An additional 1,600 trees, or a 15% increase over current stock, would result a carbon drawn down of approximately 1,060 tons of carbon by 2045.[1]

Creek and riparian restoration is another option to increase carbon sequestration. Calabazas Creek, Saratoga Creek, and San Tomas Aquino Creek all flow through the City. These creek areas are generally in a moderately degraded ecological condition. Ecological restoration, planting of additional trees and woody shrubs, combined with ongoing maintenance, would enable additional carbon to be stored in the soil and additional biomass. Improving the ecological condition of the riparian areas in the City could result in the drawdown of an additional 1,200 tons of carbon by 2050.[2]

[1] Based on annual carbon factors from CAPCOA | [2] Based on analysis using the CREEC tool developed by the California Department of Conservation.

Strategy N2: Enhance ecosystem resilience

Action N-2-1: Carbon farming on open space lands

Partner with resource conservation districts to increase carbon farming, creek restoration, wetland restoration, and local offset opportunities in open space lands within the city limits of Santa Clara.

Co-benefits:

- Carbon sequestration fills the emissions gap left by other emission mitigation strategies, making it a vital tool for reducing emissions and improving Santa Clara's overall long-term climate resiliency.
- Supporting natural ecosystems on open space lands provides cooling and aesthetic benefits, and supports species habitats.

Action N-2-2: Partnerships for compost management

Explore potential partnerships with organizations such as conservation districts to manage and utilize compost products from organics processing in compliance with SB-1383.

Action N-2-3: Sustainable planting guide

Support local organizations in developing a planting guide that prioritizes increasing available soil, carbon sequestration, resilience, and other equitably distributed co-benefits. The guide could include information on native and climate-adaptive plants, how to properly apply compost and mulch, reducing synthetic fertilizers to support soil health, how to reduce water use and store more water in the ground, and how to store carbon in soil, plants, and trees.

Action N-2-4: Sustainable park management

Utilize sustainable park management practices, including continuing to convert from gas to E-powered landscape tools and increasing recycled water use in public parks.

Strategy N3: Improve water supply and conservation

Action N-3-1: Water conservation rebates

Conduct outreach to encourage participation in Santa Clara Valley Water District's (Valley Water) water conservation rebate programs, available to single-family homes, multi-family buildings, and businesses. Expand the City's rain barrel and landscape rebate programs.

Co-benefits:

- Supports ecosystem health by conserving valuable water resources, which makes Santa Clara more resilient against future water shortages. Water conservation programs can also provide cost savings for residents by reducing water bills.

Implementation Considerations:

- Conduct tailored outreach to groups that have been historically harder to reach, such as renters and small business owners.

Action N-3-2: Fixture replacements

Expand replacement incentives, such as Santa Clara Valley Water District (Valley Water) rebate programs, of inefficient water fixtures and appliances in high-end sectors. High-end sectors include commercial, multi-family, and single-family properties.

Co-benefits:

- Supports ecosystem health by conserving valuable water resources, which makes Santa Clara more resilient against future water shortages. Replacing inefficient water fixtures can also provide cost savings for residents by reducing water bills.

Action N-3-3: Water-efficient landscaping requirements

Expand requirements for water-efficient landscaping practices, including requirements for cooling (trees, green roofs) and drought-tolerant native plants. Update the Model Water Efficient Landscape Ordinance (MWELO) to apply to landscape renovations of 1,000 square feet or larger.

Co-benefits:

- Adopting water-efficient landscaping practices today is vital for conserving future water resources.

Action N-3-4: Community water portfolio diversification

Continue collaboration with agency partners such as South Bay Water Recycling, Valley Water, BAWSCA, and SFPUC to diversify water supply portfolio and expand current sources. Diversified water portfolio towards drought resiliency could include utilizing a varying mix of surface and groundwater and requiring the increased use of recycled urban water in applicable sectors (e.g., irrigation, groundwater recharge, dual pump plumbing, cooling towers).

Co-benefits:

- Diversifying the water portfolio is a vital and foundational step for building resiliency against future water shortage from climate change.

Action N-3-5: Recycled water connection requirements

Require the use of recycled water for all non-potable uses where recycled water is available, per City Code 13.15.160. Require all new development where applicable to connect to the recycled water distribution system in order to provide recycled water for approved uses at the development site.

Co-benefits:

- Recycled water is a particularly effective way of conserving water resources and is an important foundational step for building resiliency against future water shortage from climate change.

COMMUNITY RESILIENCE & WELL-BEING

Goal: Ensure Santa Clara is prepared and can withstand climate and non-climate emergencies, focusing on those at highest risk.

Climate change poses a significant risk to the health and safety of our residents, particularly vulnerable populations, including the elderly and low-income community members. Unless we prepare today, climate impacts—including wildfires, extreme weather events, and flood events—will stress our emergency services and disrupt other vital services. In light of these threats, the Governor's Office of Planning and Research (OPR) General Plan guidance now requires that California cities and counties include specific resilience and adaptation policies in general plans. Santa Clara can align with these guidelines and build resiliency to climate impacts by doing the following.

Strategy

- **Improve community resilience** by expanding public programs to prepare community members for climate impacts. Actions include expanding disaster relief by developing a network of community resiliency centers—including cooling centers—where residents can go in case of a climate-related emergency. Actions also include expanding public programs that support vulnerable populations, including people experiencing homelessness, and encouraging community-led climate action and adaptation initiatives through grants and other financial incentives.
- **Prepare for climate change** by strengthening vital infrastructure and adopting new climate-related regulations for development and capital improvement projects. Actions include integrating natural stormwater systems into site and building designs, requiring new parking lots be paved with more sustainable materials, and identifying and potentially relocating critical facilities threatened by severe climate impacts.

Strategy C1: Improve community resilience

Action C-1-1: Community resilience networks

Support neighborhood-based organizations and businesses in development of Neighborhood Resilience Hub Programs to prepare residents and respond to climate change. Identify suitable locations for resilience hubs, cooling centers, disaster assistance and supplies. These locations will also need to develop backup power sources in the event of a power outage.

Co-benefits:

- Foundational climate resiliency step to prepare our community for natural disasters and other climate impacts.

Implementation Considerations:

- Prioritize locating resilience hubs in communities with vulnerable populations who are most susceptible to climate impacts.
- Consider developing targeted outreach campaigns to local businesses to encourage them to offer commercial spaces for resilience hubs.

Action C-1-2: Support for people experiencing homelessness

Expand support services to people experiencing homelessness during all extreme weather and hazard events (e.g., extreme heat, flooding, wildfires).

Co-benefits:

- Enhances public health by protecting community members who are most directly threatened by climate impacts, like extreme heat. It also promotes equity by expanding support to a marginalized demographic.

Implementation Considerations:

- Expand outreach on existing support services as well as developing new programs.

Action C-1-3: Community climate action grant

Establish an annual micro-grant program to support local citizen-led projects and programs that will reduce emissions, adapt to climate change, and enhance equity.

Action C-1-4: Incentives for adaptation upgrades

Offer rebates and/or other financial incentives to encourage adaptation upgrades (e.g., cool roofs, green roofs, cool pavement) and installation of low-emissions space-cooling devices (e.g., ceiling fans, heat pumps), which increase resilience cost-effectively and with a lower environmental impact.

Co-benefits:

- Has important climate resiliency impacts by making our homes and buildings operate more efficiently, which reduces strain on the energy grid. This action can also provide cost savings by lowering energy bills.
- Adaptation upgrades reduce emissions, supporting carbon reduction goals.

Implementation Considerations:

- Consider sequencing of this action with others focused on residential and commercial energy upgrades, such as energy efficiency and electrification incentives.

Strategy C2: Prepare for climate change

Action C-2-1: Climate resilient land use & development

Evaluate city land use maps to identify whether new development is being planned in high-risk areas, such as those projected to experience increased flood risk under climate project scenarios. Consider developing guidance that would require evaluation of projected flood risk for proposed projects or limit building within identified high hazard zones. Prioritize more adaptable land uses in high hazard areas, such as parks and green space.

Action C-2-2: On-site & natural stormwater systems

Integrate natural stormwater systems within site and building design to expand on-site stormwater management capacity. Natural stormwater systems reduce pollution to waterways, conserve water resources, and reduce flood risks.

Co-benefits:

- Protects public health and ecosystem health by protecting water quality.

Action C-2-3: High-albedo parking lots

As part of conditions of approval, require new parking lots to be surfaced with more sustainable pavement materials (e.g., high-albedo, permeable pavement, e-pavement, etc.) to reduce heat gain during extreme heat events, reduce energy consumption related to cooling, and reduce stormwater runoff.

Action C-2-4: Climate Resilience Capital Improvement Program (CIP)

Incorporate climate resiliency strategies and considerations in development of discretionary CIP projects, including new parks projects. Review design standards to incorporate climate resiliency considerations as appropriate.

Co-benefits:

- Foundational step for improving climate resiliency by reducing exposure of vital infrastructure to future climate impacts.

Action C-2-5: Planned retreat strategies

Identify and consider relocation opportunities for critical facilities (i.e., planned retreat for structures at risk of recurring damages). By identifying these locations, the City can proactively prepare for and reduce future impacts—saving costs and resources and reducing the threat to community members.

Co-benefits:

- Foundational step for improving climate resiliency by reducing exposure of vital infrastructure to future climate impacts.

IMPLEMENTING THE CAP

This CAP provides a coordinated and intentional strategy for the City of Santa Clara to meet its GHG emissions reduction targets while building community resilience. Making progress on these goals will require the City and community to work together and commit dedicated time and resources. The following section provides a framework for the next phase of this project—moving from planning to action.

IMPLEMENTATION SCHEDULE

Year 1 Implementation Summary

In 2022, Santa Clara will begin building upon its existing foundation for plan implementation by taking several key initial steps and implementing priority actions (refer to Appendix A: Implementation Matrix for action implementation timeframes beyond year 1). Key milestones include:

- Ensure **updates to other planning documents** that implement the CAP are consistent with the adopted plan. Designate potential **funding sources** for CAP actions and identify additional funding needs and opportunities for ongoing plan implementation. Current and potential funding sources could include City General Fund; utility revenues; federal and state grants; revolving loan funds; potential new local revenue streams; potential increased utility taxes; and public/private partnerships.
- Establish **oversight/accountability** function and identify **specific equity criteria and indicators** to consider during monitoring and evaluation of future CAP progress.
- Establish plans for internal City **resource sharing, outreach and education, and promoting incentives**. Immediate residential and commercial outreach campaigns are currently planned for promoting induction cooktops. Internal efforts are also planned for training departments on implementing reach codes.
- **Engage key stakeholders**; work closely with NGO's, non-profit organizations and other community partners to expand reach and impact of CAP actions. Continue to engage with SVP to support CAP actions related to energy.
- **Begin implementation** of the following actions:

  - ✓ Implement adopted **reach codes**.
  - ✓ Update local building code to **increase energy efficiency standards**.
  - ✓ Examine resource procurement and cost scenarios to provide **100% carbon neutral electricity to all SVP customers**.
  - ✓ Take action to **comply with state solid waste ordinances**, including AB-1826, AB-341, and SB-1383.

Synergy Between CAP Actions and Reach Codes

CAP actions focus on the adoption of reach codes, and prioritizes their implementation in Year 1, because of the synergy between these two planning efforts. All-electric building electrification and electric vehicle charging reach codes, for instance, call for all electric appliances in new construction and pre-wiring for EV charging, which supports the larger CAP goals of electrifying buildings and transitioning toward electric vehicles. In implementing the CAP and developing reach codes, the City will continue to align efforts to ensure that both initiatives support and build upon each other. Further development of reach codes will continue to focus on meeting the recommended CAP targets, and the City may update reach codes with the State Building Code cycle as needed to support GHG reduction goals.

OVERSIGHT & ACCOUNTABILITY

Options for developing an ongoing structure for oversight of CAP implementation and long-term plan updates include:

- Create an internal Sustainability and Climate Action Team (led by the City's Sustainability Manager) to assist in coordinating and implementing actions across departments, identifying synergies/collaboration opportunities, and identifying funding sources.
- Prepare annual updates for the Planning Commission and City Council on CAP progress.
- Develop and maintain a Climate Action Tracking Dashboard.

MONITORING & EVALUATION

In the first year of implementation, the City will identify staff responsible for:

- Monitoring progress toward CAP target achievement.
- Preparing annual progress reports for review and consideration by the Planning Commission and City Council.

Staff will update the City's emissions inventory every three to five years, with the next CAP update planned for 2030. These updates are also opportunities to amend the CAP as necessary, should the City find that specific measures are not achieving intended emissions reductions.

In preparation for the 2030 update and annual reporting to the Planning Commission and City Council, staff will use an Excel-based CAP monitoring and reporting tool to track Santa Clara's progress in reducing emissions, VMT, waste generation, and energy use over time. The tool is used to collect data, track GHG emissions, and assess the implementation of measures. It enables the City to sort measures based on timing, responsible department, and level of success, progress, or completion.

IMPLEMENTING INCENTIVES

Incentives are an important tool for motivating businesses and residents to voluntarily participate in climate actions, and are integrated in actions throughout the CAP. In implementing these actions, the City will focus both on promoting existing regional rebates and other incentive programs, as well as exploring options for non-financial incentives to motivate behavior change.

Existing regional incentives programs that the City will promote include the following:

- **SVP Commercial Rebates** | Silicon Valley Power offers a variety of rebates to Santa Clara businesses to incentivize energy efficiency investments. Rebates cover a range of projects, including energy efficient equipment upgrades, installation of energy management control systems, large-scale efficiency upgrades for data centers, and installation of emerging technologies that are not yet commercially available.
- **SVP Residential Rebates** | Silicon Valley Power offers Santa Clara residents free home energy audits, as well as rebates to fund recommended energy efficiency and electrification upgrades, and other products. Rebates can be applied to purchases of electric bicycles, clothes dryers, electric vehicle charging stations, and electric heat pump water heaters. The program also offers low-income residents grants for free solar panel installation and rebates for electric vehicle purchases.
- **BayRen Free Home Energy Savings Kit** | BayREN provides a free custom energy savings kit featuring energy and water efficiency products. Kits are personalized to each customer based on their home energy usage. The kit may include faucet aerators, power strips, LED light bulbs, and high efficiency showerheads.
- **BayRen Home Energy Rebates** | BayREN provides rebates for home energy upgrades to Bay Area residents living in homes built in 2016 or earlier. Each customer may receive up to $5,000 of rebates on products, including: induction cooktops, air sealing services, insulation, heat pumps, energy efficient air conditioning, tankless water heaters, and more.
- **Santa Clara Valley Water Rebate Programs** | Valley Water offers a range of water conservation rebates to fund residential and commercial water efficiency upgrades, including converting from high-water use landscaping, installing graywater laundry systems, and implementing large-scale building upgrades.

Non-financial incentives that the City will explore include the following:

- **Expedited permitting** for residential and nonresidential renewable energy generation and storage systems.
- **Develop community awards** that highlight leadership in climate resiliency and emissions reductions.

APPENDIX A: IMPLEMENTATION MATRIX

Legend:	Low	Moderate	High
Impact: ▸ How likely is the action to address plan goals and targets? ▸ Does the action address a major sustainability need?			
Cost: ▸ How must does this action cost to residents and businesses? ▸ How much does this action cost to the City of Santa Clara?	$	$ $	$ $ $
Implementation Timeframe: ▸ Ongoing – action is already underway ▸ Year 1 – action implementation in Year 1 (2022) ▸ Near-term – action implementation in 2023-2026 ▸ Mid-term – action implementation in 2027-2030 ▸ Long-term – action implementation after 2030			

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
Strategy B1: Shift to electric fuels in new and existing buildings to achieve net-zero carbon buildings.						
B-1-1	**Electrification incentives & financing.** Work with BayREN and other local jurisdictions and agencies to expand current financial incentives to accelerate electrification in new and existing buildings.		$	Near-term	Incentives ease transition to mandates; electrification of building sector is high priority for addressing a major emissions source.	SVP
B-1-2	**Electrification outreach for commercial & residential energy upgrades.** Continue to promote commercial and residential energy efficiency and electrification through education and outreach.		$	Ongoing	Already underway.	SVP
B-1-3	**Electric panel upgrades upon sale/turnover.** Require electric panel upgrades as needed upon sale and/or rental turnover for low-rise residential and small multifamily and commercial buildings.		$ $	Mid-term	Will require significant stakeholder engagement and buy-in as a next phase in building electrification efforts to compliment reach codes.	CDD – Building, CMO (Sustainability)
B-1-4	**Municipal Electrification Action Plan.** Work with regional energy partnerships to develop and implement an Electrification Action Plan for City facilities.		$ $	Near-term	Important to plan early to allow time for implementation; City can be a leader for the broader community.	DPW – Facilities, CMO (Sustainability)
B-1-5	**Reach codes for new construction.** Implement all-electric reach codes, with exceptions.		$ $	Year 1	All-Electric building electrification and EV Charging reach codes adopted in November 2021, Effective in 2022; start realizing benefits in new buildings right away,	CDD – Building, CMO (Sustainability)

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
B-1-6	**Burnout ordinance.** Prepare a "burn-out" ordinance requiring that when natural gas furnaces or water heaters expire, they must be replaced with electric alternatives.	🍃🍃	$ $	Mid-term	May require some stakeholder engagement and buy-in.	CDD - Building
B-1-7	**Carbon neutral data centers.** Require all new data centers to operate on 100% carbon neutral energy, with offsets as needed.	🍃	$ $ $	Year 1	Important to establish with new data centers to start realizing benefits right away.	CDD – Planning/SVP
Strategy B2: Improve energy efficiency.						
B-2-1	**Municipal energy retrofits.** Continue to conduct comprehensive energy retrofits of existing City equipment and implementation of previously identified energy efficiency projects with a benefit-cost ratio of one or greater.	🍃	$ $ $	Ongoing	Already happening; preliminary planning and analysis already completed.	DPW - Facilities
B-2-2	**Free home-energy upgrades for qualifying residents**. Continue to provide free home-energy audits and upgrade incentives for low-income households and affordable housing developers and property owners.	🍃	$ $	Ongoing	Program already in place.	SVP
B-2-3	**Energy-efficient and electric-ready building code**. Update local building code to increase energy efficiency standards to at least CALGreen Tier 1.	🍃🍃🍃	$ $	Year 1	Reach codes already moving forward for adoption.	CDD - Building

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
B-2-4	**Distributed energy resource pilots.** Pilot technologies like energy storage, vehicle-to-grid charging stations, web-enabled devices and microgrids within City facilities and with private sector partners.		$ $	Near-term	Conduct pilots early on to learn from results and build out programs or infrastructure.	DPW/SVP and other departments as applicable
B-2-5	**Energy Efficiency incentives.** Partner with BayREN, SVP, and other local jurisdictions and agencies to provide and promote energy efficiency incentives and rebate programs for residents and businesses.		$	Ongoing	Many incentive programs are already in place. Next step is focused on expanding outreach to promote existing programs.	SVP
Strategy B3: Maximize renewable energy generation and storage capacity.						
B-3-1	**SVP Integrated Resource Plan (IRP) for carbon neutral electricity.** Examine resource procurement and cost scenarios to provide 70% carbon neutral electricity to all customers by 2030 to meet SB-32 climate goals, and 60% renewable electricity to meet SB-100 climate goals. Explore SVP achieving 100% carbon neutral electricity by 2035.		$ $	Year 1	SVP's upcoming IRP plan is due to Council in 2023. Critical to move this action forward to achieve targets.	SVP

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
B-3-2	**City-owned renewable energy projects.** Continue to investigate the use of City-owned property for additional large-scale carbon-neutral energy and storage projects.		$ $ $	Near-term	Study should come early so that there is time to inform infrastructure development. Could be considered as part of SVP's next IRP planning process; SVP transitioning to renewable energy is a key precursor to electrification benefits.	SVP
B-3-3	**Renewable installations at municipal facilities.** Install solar or other on-site renewable energy projects at City-owned facilities.		$ $	Near-term	Put in place while waiting for grid to get cleaner.	Cross departmental (e.g., SVP, DPW, Library
B-3-4	**Renewable energy generation and storage on private property.** Expand financial assistance options to SVP customers to increase the implementation of renewable energy generation systems and energy storage infrastructure.		$ $	Mid-term	Residential electricity is already carbon fee. Focus in near term is electrification rather than renewable energy generation.	SVP
B-3-5	**Local grid resiliency & energy storage improvements.** Accelerate improvements to the energy grid or storage as needed to transition to the city to renewable energy sources.		$ $	Near-term	Put in place while waiting for grid to get cleaner.	CDD - Building
B-3-6	**Alternative fuel backup generators.** Provide information and technical assistance to data centers to transition from diesel to lower-carbon backup generators.		$ $	Mid-term	Look into availability of renewable diesel? Is supply a constraint?	CDD-Planning, SVP

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
B-3-7	**Renewable electricity for new data centers.** Support convening of a data center working group to identify and implement renewable electricity purchasing options for commercial customers.		$	Near-term	Planning effort—will take time to ramp up and implement; need to put into place while waiting for electricity grid to become cleaner.	SVP
Strategy T1: Transition vehicles to electric alternatives.						
T-1-1	**Community EV Blueprint Implementation**. Implement the EV acceleration program in SVP's EV Blueprint to achieve EV Blueprint goals.		$ $	Ongoing	Already underway.	SVP
T-1-2	**EV charging for all new Construction** Implement EV charging requirements as specified in the adopted 2021 Reach Codes.		$ $	Year 1	Reach codes already adopted November 16, 2021.	CDD - Building
T-1-3	**City Fleet Electrification Plan implementation.** Require a percentage of new standard light-duty, medium-duty, and heavy-duty City fleet to be electric vehicles (zero emission) with EV infrastructure in accordance with state requirements.		$ $	Near-term	City lead by example.	DPW – Fleet Services
T-1-4	**Heavy duty electric trucks.** Partner with businesses and industries to accelerate transition of heavy-duty trucks to electric through incentives or local tax credits.		$ $	Mid-term	Technology is still being developed; wait until statewide policy/incentives may be available.	CMO

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
T-1-5	**Municipal charging infrastructure.** Expand municipal facility charging infrastructure to serve municipal fleet, employee, and public charging needs.		$ $ $	Near-term	City lead by example.	DPW
Strategy T2: Expand clean mobility options and use of non-SOV transportation modes.						
T-2-1	**Pedestrian & Bicycle Master Plans.** Fund and accelerate implementation of the Pedestrian Master Plan and Bicycle Master Plan.		$ $ $	Near-Term	Plans have already been developed; high priority for the community.	DPW - Traffic
T-2-2	**Curb management improvements.** Incentivize projects that optimize curbside areas for low-carbon modes and reduce VMT.		$ $	Mid-term	High priority for Council; City has more control; incentive carrots before sticks; develops infrastructure that supports future actions.	DPW - Traffic
T-2-3	**Bike and shared mobility improvements.** Increase public access to bikes, including electric bikes, through bikeshare programs and improved bike infrastructure.		$ $	Near-term	High priority from community; ties into Bike/Ped Plan implementation.	DPW-Traffic
T-2-4	**Transit gap & improvement study.** Partner with VTA to conduct a public transit gap study to increase transit use within the City.		$ $	Long-term	Action informs future strategies/ infrastructure.	DPW-Traffic
Strategy T3: Advance sustainable land use.						

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
T-3-1	**TDM plan requirements.** Require a 20-25% VMT reduction through active TDM requirements for non-exempt projects, for new developments. Previously entitled projects that are already subject to VMT requirements and/or TDM measures would continue to follow the requirements assigned at the time of entitlement.[17]		$ $	Near-term	A Council priority.	CDD - Planning

[17] For Action T-3-1, previously entitled projects that are already subject to VMT requirements and/or TDM measures would continue to follow the requirements assigned at the time of entitlement. In addition, projects in the following General Plan land use designations would be required to reduce project-based VMT through TDM requirements at the following percentages:

Land Use Designation	Minimum % VMT reduction from TDM
Santa Clara Station Very High Density Residential	Pre-BART:[1] 10% Post-BART: 20%
Urban Center/Entertainment [2]	Office: 4% Residential: 2%
Transit Neighborhood	10%

1. *Per Council Resolution 19-8734, the VMT reduction per project from TDM for the Santa Clara Station Very High Density Residential designation shall be 10% prior to the Santa Clara BART station becoming operational, and 20% subsequent to the Santa Clara BART station becoming operational.*
2. *For the Urban Center / Entertainment District, the VMT reduction requirements apply to the office and residential uses within that district, and the reduction requirements are specific to those two categories of uses.*

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
T-3-2	**Sustainable development in underutilized non-residential areas**. Require higher density, mixed-use development in the Specific Plan Areas, especially El Camino Real Specific Plan.		$ $ $	Mid-term	Foundation of the City's Housing Element.	CDD - Planning
T-3-3	**Transit-oriented development**. Introduce requirements and/or incentives to encourage transit-oriented development (TOD) near transit corridors.		$ $	Near-term	Puts in place important infrastructure; development is a direct lever that the City has to influence change; requires planning to determine what the requirements and/or incentives will include.	CDD - Planning
T-3-4	**Telework**. Expand telecommuting options through fiber infrastructure investment and expand existing TDM programs to include telecommuting.		$	Near-term	High impact action and telework becoming increasingly common—prioritize implementation.	CMO, SVP, DPW
T-3-5	**Transportation Analysis Policy compliance.** Require that all projects comply with the Transportation Analysis Policy that was adopted by Council in June 2020, which establishes requirements for evaluating the transportation impacts of residential, commercial, and industrial projects.		$	Year 1	Ordinances have been enacted and require immediate compliance.	CDD - Planning
Strategy M1: Increase waste diversion.						

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
M-1-1	**Compliance with state solid waste ordinances**. Comply with state solid waste laws, including AB-1826, AB-341, and SB-1383.	🍃🍃🍃	$	Year 1	Ordinances have been enacted and require immediate compliance.	DPW - Streets
M-1-2	**Waste diversion pricing signals**. Explore or promote existing incentives for recycling and composting and discouraging landfill waste.	🍃🍃	$	Ongoing	Incentives already underway.	DPW - Streets
Strategy M2: Reduce landfilled food waste.						
M-2-1	**Technical assistance to top food generators**. Provide education, outreach, and technical assistance to top food producers to prevent food waste, increase surplus of edible food donations, and comply with SB-1383 requirements.	🍃🍃🍃	$ $	Near-term	Supports compliance with existing ordinance; education and outreach support long-term behavior change.	DPW - Streets
M-2-2	**Food recovery & donation**. Continue to partner with local agencies to implement an Edible Food Recovery Program as required under SB-1383.	🍃🍃	$ $	Near-term	Need to reduce organic disposal 75% by 2025 (based on 2014 levels).	DPW - Streets
M-2-3	**Food recovery organization partnerships**. Participate in regional partnerships for promoting food waste reduction, recovery, and security.	🍃	$ $	Mid-term	Ongoing initiative with no vital start date—other actions take priority. Action is focused on regional partnerships, so Santa Clara has less control over process/outcomes.	DPW - Streets
Strategy M3: Enhance sustainable production and consumption.						

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
M-3-1	**Reuse of salvageable building materials**. Promote organizations, such as The Reuse People, in Santa Clara County that salvage building materials.		$	Mid-term	(By weight) large source of waste stream; however, typically does not contain organics; low or no emissions associated with building materials. Helps achieve diversion goals but low impact on emissions.	CDD-Building
M-3-2	**City property consumption & waste diversion**. In all City contracts and event permits, require that all third-party vendors provide and utilize recyclable and/or reusable food service items to serve 50 or more people, and provide recycling and composting receptacles for attendees.		$	Mid-term	Shows City leadership, but lower impact on total emissions.	Finance/CMO - Sustainability
M-3-3	**Municipal Sustainable Procurement Policy**. Implement a municipal sustainable procurement policy to prioritize improvements for the highest emissions reduction impact purchasing decisions within each department, including vehicle and fuel purchases and low-carbon concrete.		$	Mid-term	Demonstrates the City's commitment/leadership. Will take time to develop and approve policy.	Finance/CMO - Sustainability
M-3-4	**Carbon-smart building materials**. Educate architects, designers, and contractors to enable and promote carbon-sequestering and low-albedo building materials in new construction and renovations.		$ $	Long-term	Ongoing future initiative, does not require immediate start date; other initiatives take priority.	CMO - Sustainability

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
M-3-5	**Low-carbon schools**. Partner with Santa Clara Unified School District to support low-carbon solutions.		$	Long-term	May take some ramp up time; likely to have relatively low impact; prioritize more impactful near-term options.	SVP
Strategy N1: Increase tree plantings and canopy cover.						
N-1-1	**Right-of-way tree planting.** Promote residential street tree planting in the right-of-way.		$ $	Near-term	Not immediate priority for reducing emissions; could start with outreach then build up to requirement.	DPW - Streets
N-1-2	**Private property tree planting support.** Support private property planting of trees through partnerships with organizations such as Our City Forest.		$ $	Mid-term	Not immediate priority for reducing emissions; current programs already happening. Could build upon/scale in the future.	DPW – Streets/CDD
N-1-3	**Urban forest partnerships.** Promote healthy, well-managed urban forests by participating in the County's Urban Forest Alliance partnership.		$	Year 1	Not immediate priority for reducing emissions; relatively easily to facilitate so may warrant near-term implementation.	DPW – Streets/CMO Sustainability
N-1-4	**Tree maintenance, replacement, & plantings.** Update Street Tree Planting plan to develop a procedure for retiring and replacing trees.		$ $	Mid-term	Not immediate priority for reducing emissions; co-benefits (increased sidewalk accessibility; aesthetics) could warrant doing in mid-term vs long-term.	DPW - Streets
Strategy N2: Enhance ecosystem resilience.						

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
N-2-1	**Carbon farming on open space lands.** Partner with resource conservation districts to increase carbon farming, creek restoration, wetland restoration, and local offset opportunities in open space lands within the city limits of Santa Clara.		$ $	Long-term	Carbon sequestration lower priority (prioritize emissions reduction).	DPW – Streets/CMO Sustainability
N-2-2	**Partnerships for compost management.** Explore potential partnerships with organizations such as conservation districts to manage and utilize compost products from organics processing in compliance with SB-1383.		$	Near-term	Supports compliance with SB1383 (requirements by 2025).	DPW - Streets
N-2-3	**Sustainable planting guide.** Support local organizations in developing a planting guide that prioritizes increasing available soil, carbon sequestration, resilience, and other equitably distributed co-benefits.		$	Long-term	Carbon sequestration lower priority (prioritize emissions reduction). Outcomes uncertain.	DPW - Streets
N-2-4	**Sustainable park management**. Utilize sustainable park management practices, including continuing to convert from gas to E-powered landscape tools and increasing recycled water use in public parks.		$ $	Near-term	City lead by example; some initiatives already underway.	Parks & Recreation
Strategy N3: Improve water supply and conservation.						

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
N-3-1	**Water conservation rebates.** Conduct outreach to encourage participation in Santa Clara Valley Water District's (Valley Water) water conservation rebate programs, available to single-family homes, multi-family buildings, and businesses. Expand the City's rain barrel and landscape rebate programs.	🍃🍃	$ $	Mid-term	Water conservation not immediate priority for reducing emissions; program already exists, can expand upon gradually.	Water Department
N-3-2	**Fixture replacements.** Expand replacement incentives, such as Santa Clara Valley Water District (Valley Water) rebate programs, of inefficient water fixtures and appliances in high-end sectors.	🍃🍃	$	Mid-term	Water conservation not immediate priority for reducing emissions; program already exists, can expand upon gradually.	Water Department
N-3-3	**Water-efficient landscaping requirements.** Expand requirements for water-efficient landscaping practices, including requirements for cooling (trees, green roofs) and drought-tolerant native plants.	🍃🍃🍃	$ $	Mid-term	Not immediate priority for reducing emissions but will help city become more resilient; could start with outreach then elevate to requirements.	Water Department / CDD - Planning
N-3-4	**Community water portfolio diversification.** Continue collaboration with agency partners such as South Bay Water Recycling, Valley Water, BAWSCA, and SFPUC to diversify water supply portfolio and expand current sources.	🍃🍃	$ $	Ongoing	Collaborative partnerships already in plac—can continue to build and expand over time.	Water Department

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
N-3-5	**Recycled water connection requirements.** Require the use of recycled water for all non-potable uses where recycled water is available, per City Code 13.15.160.		$ $	Mid-term	Not immediate priority for reducing emissions; currently limited availability to connect to system. Could wait to expand until infrastructure is ready.	Water Department
Strategy C1: Improve community resilience.						
C-1-1	**Community resilience networks.** Support neighborhood-based organizations and businesses in development of Neighborhood Resilience Hub Programs to prepare residents and respond to climate change.		$ $ $	Long-term	Outcomes uncertain; led by outside organizations; action addresses longer term adaptation and resiliency needs; other actions take priority.	CMO - Sustainability
C-1-2	**Support for people experiencing homelessness.** Expand support services to people experiencing homelessness during all extreme weather and hazard events (e.g., extreme heat, flooding, wildfires).		$ $	Near-term	Climate impacts pose an immediate threat to these community members.	CDD - Housing
C-1-3	**Community climate action grant.** Establish an annual micro-grant program to support local citizen-led projects and programs that will reduce emissions, adapt to climate change, and enhance equity.		$	Long-term	Ongoing initiative with no vital start date; other actions take priority.	CMO - Sustainability

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
C-1-4	**Incentives for adaptation upgrades.** Offer rebates and/or other financial incentives to encourage adaptation upgrades and installation of low-emissions space-cooling devices.		$	Near-term	Incentives ease transition to future mandates; short-term emissions reduction opportunity.	CDD - Building
Strategy C2: Prepare for climate change.						
C-2-1	**Climate resilient land use & development**. Evaluate city land use maps to identify whether new development is being planned in high-risk areas, such as those projected to experience increased flood risk under climate project scenarios.		$ $	Near-term	Proactive risk mitigation less costly and more effective than reactive; important to enact immediately to reduce future infrastructure damage from climate impacts.	CDD - Building
C-2-2	**On-site & natural stormwater systems.** Integrate natural stormwater systems within site and building design to expand on-site stormwater management capacity.		$ $ $	Mid-term	Longer term infrastructure investment—other actions take priority.	DPW
C-2-3	**High-albedo parking lots.** As part of conditions of approval, require new parking lots to be surfaced with more sustainable pavement materials to reduce heat gain, energy consumption, and stormwater runoff.		$ $	Mid-term	Incentives before mandates; action may face opposition and require stakeholder engagement get buy-in.	CDD - Planning

Action ID	Action Description	Impact	Cost	Implementation Timeframe	Timeframe Considerations	Lead Department
C-2-4	**Climate Resilience Capital Improvement Program (CIP).** Incorporate climate resiliency strategies and considerations in development of discretionary CIP projects, including new parks projects.		$ $	Near-term	Proactive risk mitigation less costly and more effective than reactive; important to enact immediately to reduce future infrastructure damage from climate impacts.	DPW - Engineering
C-2-6	**Planned retreat strategies.** Identify and consider relocation opportunities for critical facilities.		$ $	Long-term	Planning effort—will take time to implement; important to identify at-risk infrastructure immediately to plan for future relocation projects.	CMO- Sustainability

APPENDIX B: CEQA ADDENDUM

[See Santa Clara CAP Addendum]