

ATTACHMENT 1



**LOS ALTOS, CA**

**CLIMATE ACTION &  
ADAPTATION PLAN**

**2022**

# Vision

“To place Los Altos on an accelerated, sustainable path to carbon neutrality by advancing bold and effective climate policies.”

# Mission

The mission of our Climate Action and Adaptation Plan is to preserve the unique character of Los Altos and enhance its natural environment while improving the quality of life and health of its people by supporting transformative change in the areas of climate action, resilience and equity.

# Executive Summary

# Executive Summary

**This Climate Action and Adaptation Plan (CAAP) assesses the impacts of Los Altos on the climate, how Los Altos can reduce its impact on the climate and how Los Altos can adapt to the changing climate.**

## Call to Action

There is international consensus on the science of climate change and actions that must be taken over the next few years to avoid some of the potentially catastrophic impacts on Earth and its ability to sustain our current population and civilization. The CAAP’s Introduction section presents information on the urgency of action and policies being developed to address and adapt to climate change locally, nationally and internationally in just and equitable ways. Executive Summary Figure 1 shows that warming of the planet is unprecedented since the middle of the 19th Century.

## Our Impacts

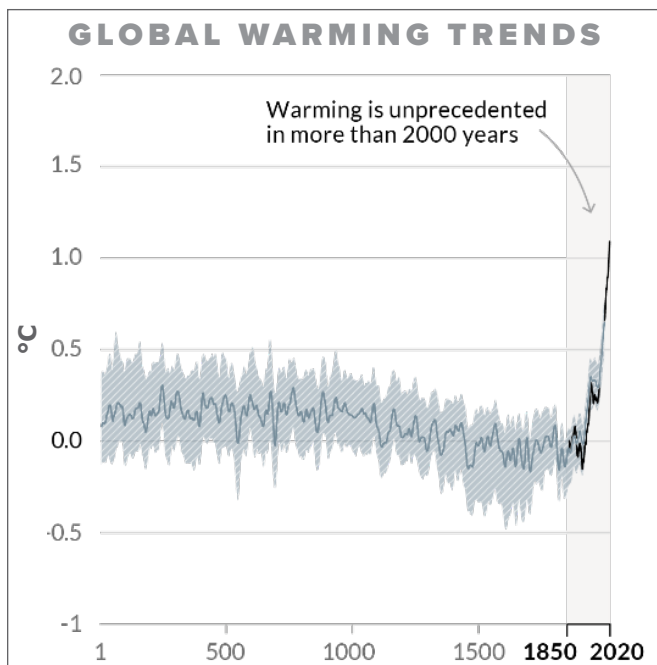
An updated greenhouse gas (GHG) inventory was conducted to understand the current GHG emissions of Los Altos and to establish a baseline for the forecasting and measuring of future emissions. Executive Summary Figure 2 shows that approximately 96% of Los Altos’ city-wide community GHG emissions are from the use of fossil fuels in the transportation and energy sectors. To mitigate Los Altos’ impact on climate change we must:

- **Switch from fossil fuels to clean renewable electrical energy in our buildings and residences**
- **Reduce vehicle miles traveled**

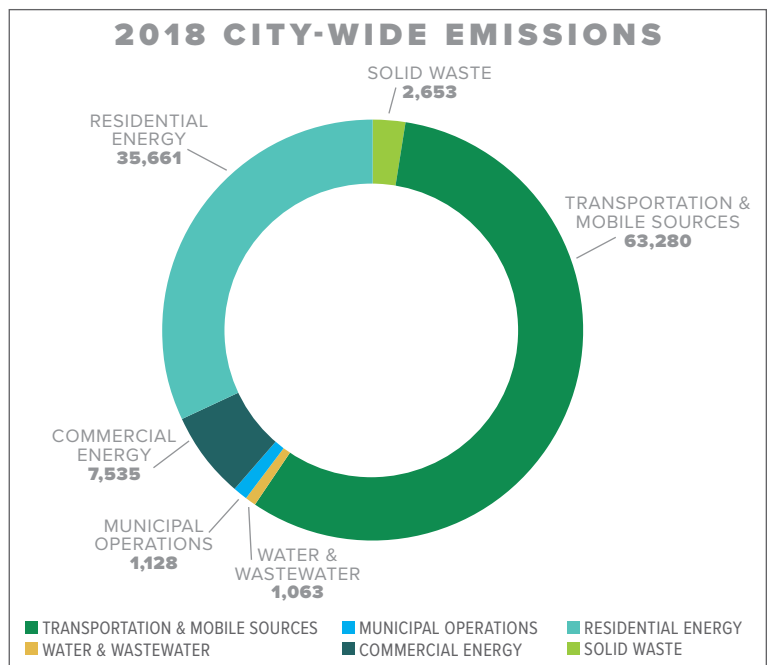
- **Electrify transportation**
- **Increase walking, bicycling and shared transportation in our lives and work**

## Climate Impacts

A Vulnerability Assessment was conducted to determine threats Los Altos is likely to face from the changing climate, as well as assess the City’s preparedness and capacity to address those threats. Los Altos will experience increased heat waves, floods, drought, and poor air quality from regional events and reverberations from the regional impacts of climate change on the natural environment, water supply



**Executive Summary Figure 1** Global Warming trends.  
Source: IPCC Sixth Assessment Report, pg. SPM-7. (IPCC slide deck pg.6)



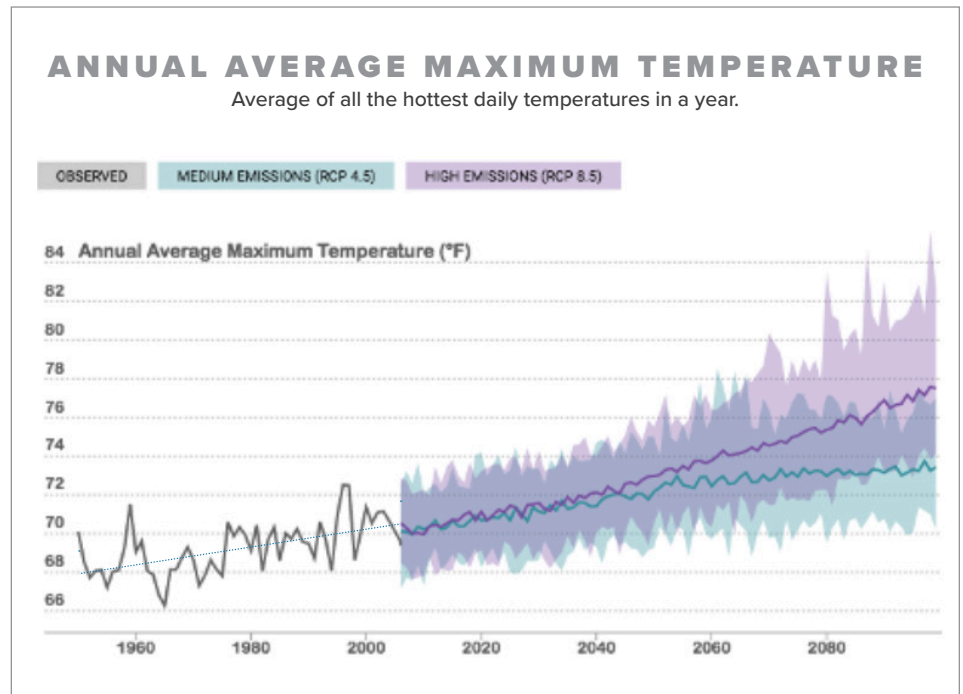
**Executive Summary Figure 2** 2018 City-wide emissions

# Executive Summary CONTINUED

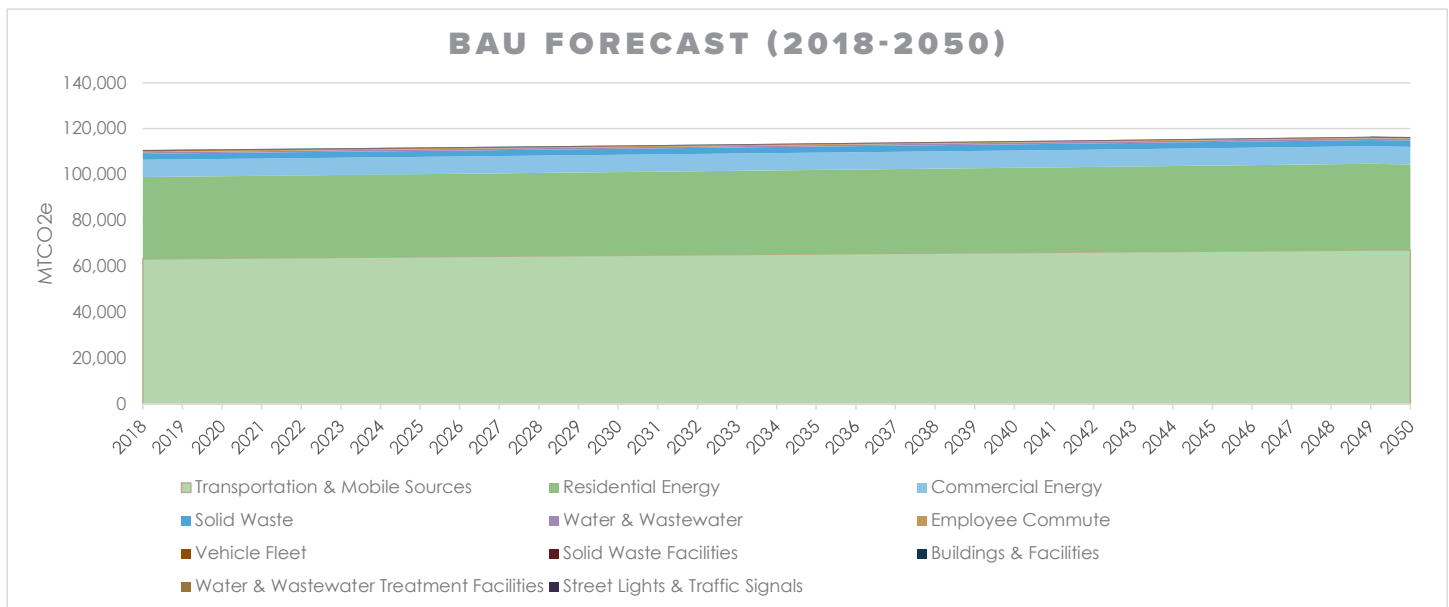
system, and the energy grid on which we depend. Executive Summary Figure 3 shows the forecasted change in expected temperatures in Los Altos. The complete Vulnerability Assessment is included as Appendix E.

## Looking to 2050

To determine what the City's emissions might look like in 2050, a series of emissions forecasts were developed. First a Business-As-Usual (BAU) forecast was developed to estimate the City's emissions without any additional action from Federal, State, or local governments. The City's Business As-Usual emissions are expected to increase from 111,320 metric tons in 2018 to 116,346 metric tons in 2050. Executive Summary Figure 4 shows the results of the City's BAU forecast.



**Executive Summary Figure 3**  
Annual average maximum temperatures in Los Altos (image from Cal-Adapt)



**Executive Summary Figure 4** Business-as-usual forecast

# Executive Summary CONTINUED

To project the City’s emissions in 2050 including the expected impacts of State and local actions, an Adjusted Business-As-Usual (ABAU) forecast was developed which includes expected increases in fuel economy and building energy efficiency in California, increased EV adoption in Los Altos specifically, and the expected increase in air conditioning use due to increased temperatures related to climate change. This forecast shows that, with the inclusion of these additional factors, the City’s emissions are expected to decline from 111,320 metric tons in 2018 to 70,800 metric tons in 2050. Executive Summary Figure 5 shows the results of the City’s ABAU forecast.

Based on the current and forecasted greenhouse gas emissions, implementation of Los Altos’ 2013 Climate Action Plan, and guidance from City government and the community, the CAAP is based on pursuing a goal of **Carbon Neutrality by 2035**. Reducing

EMISSIONS TIMELINE BY SCENARIO (MTCO <sub>2</sub> e)				
Scenario	2005 <sup>1</sup>	2018 <sup>1</sup>	2030 <sup>2</sup>	2035 <sup>2</sup>
BAU	184,725	-	112,670	113,650
ABAU	-	-	83,025	75,700
ABAU+Existing CAP '13	-	111,320	75,885	67,160
CAAP 2022	-	-	25,835	3,144

<sup>1</sup>Historic Data (data for 2006-2017 not available; 111,320 MTCO<sub>2</sub>e used as the baseline for all scenarios)  
<sup>2</sup>Projected data based on models

Executive Summary Table 1 Emissions Timeline by Scenario

as many GHG emissions produced by the City and its residents as possible and sequestering the remaining emissions through nature-based solutions, innovative carbon sequestration solutions, community-based sequestration projects, and local carbon offsets will be required to reach Carbon Neutrality by 2035.

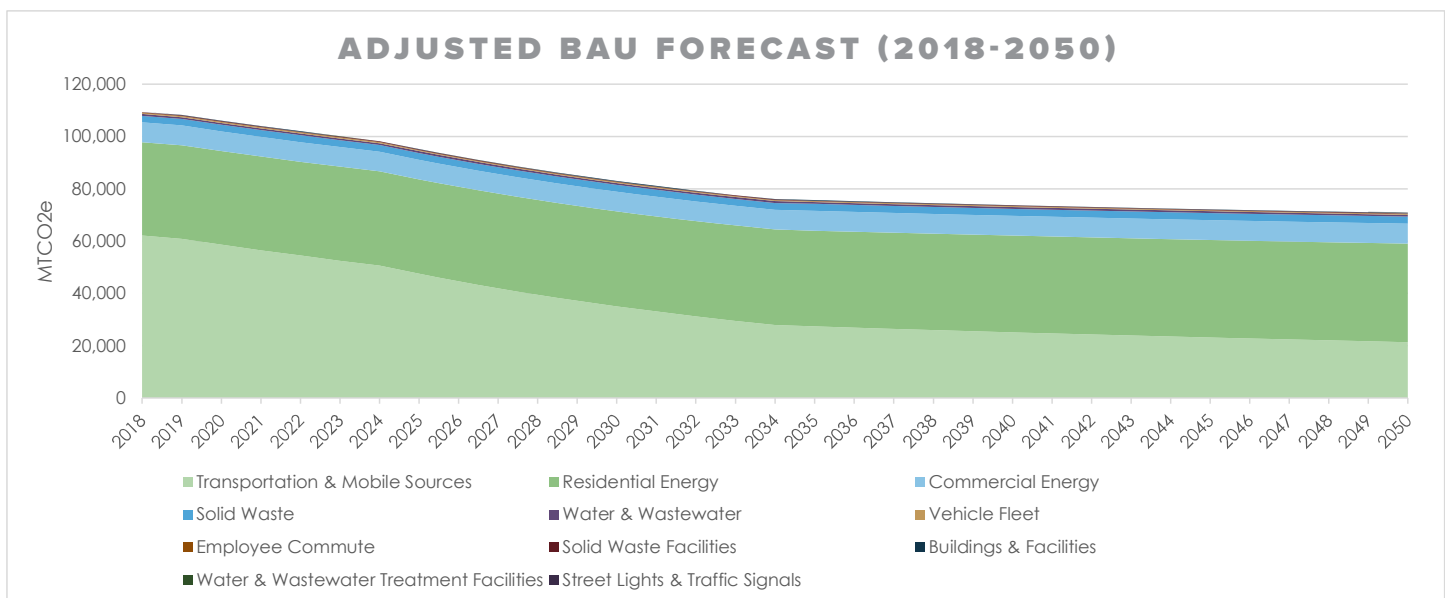
After factoring in the impacts of the 2021 Reach Codes and 2013 CAP actions not included or modified in this update, we will need to reduce our net emissions by an additional 60,000 metric tons by 2030 and a further 15,000 metric tons by 2035 to reach our carbon neutrality goal. Executive Summary Table

1 summarizes the historical and projected emissions for Los Altos.

## Strategic roadmap

To help Los Altos be more resilient and carbon neutral, a roadmap of Strategies, Goals and Actions was developed. This roadmap defines the actions, their schedule, estimated cost and expected benefits. The roadmap is broken into three sections:

- **Greenhouse gas mitigation strategies**
- **Climate adaptation strategies**
- **Cross-cutting strategies (ones that deliver both mitigation and adaptation outcomes)**



Executive Summary Figure 5 Adjusted business-as-usual forecast

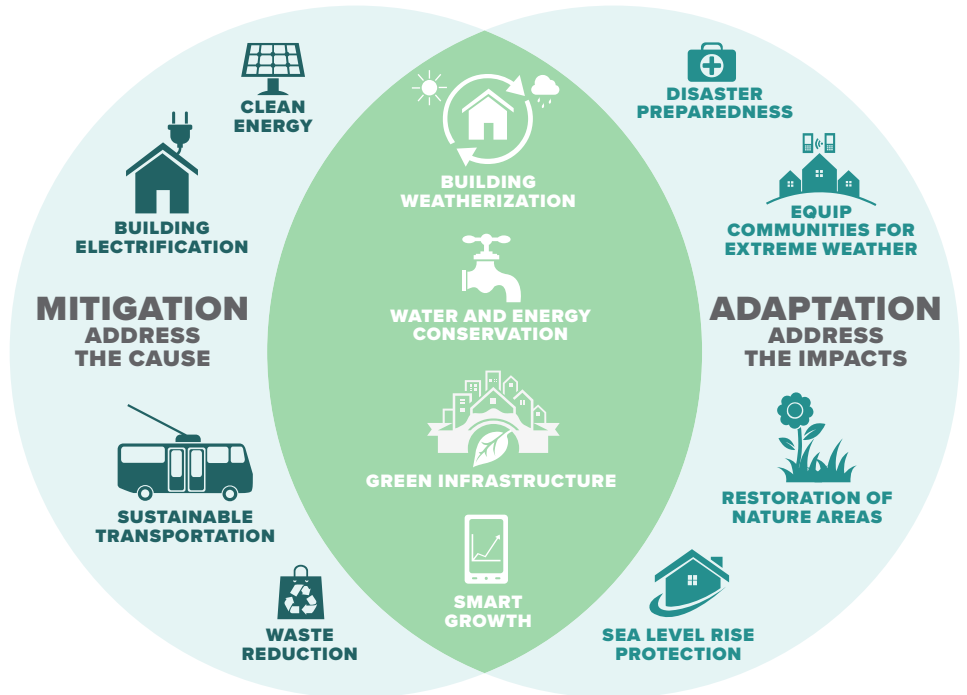
# Executive Summary CONTINUED

Executive Summary Figure 6 shows the relationship of these three types of strategies to each other. Some of the strategies build on existing efforts within Los Altos like the 2013 CAP, the 2018 Green Infrastructure Stormwater Management Plan, or the Complete Streets Master Plan. Most are new strategies adopted or altered from other California CAAPs and programs beyond California. Others were developed in discussion with different stakeholders.

Through quantitative and qualitative analysis, stakeholder engagement, and survey of best practices, 68 actions were identified and prioritized. The Strategic Roadmap section of this plan contains a summary of the proposed Strategies, Goals and Actions grouped by Focus Area, as well as the strategy development process and a detailed description of each action. Executive Summary Table 2 lists CAAP strategies by Focus Area.

Executive Summary Figure 7 shows Los Altos’ forecasted pathway to carbon neutrality by Focus Area. Note that approximately 3,144 MTCO<sub>2</sub>e remain in 2035 that will need to be eliminated through the sequestration solutions mentioned above.

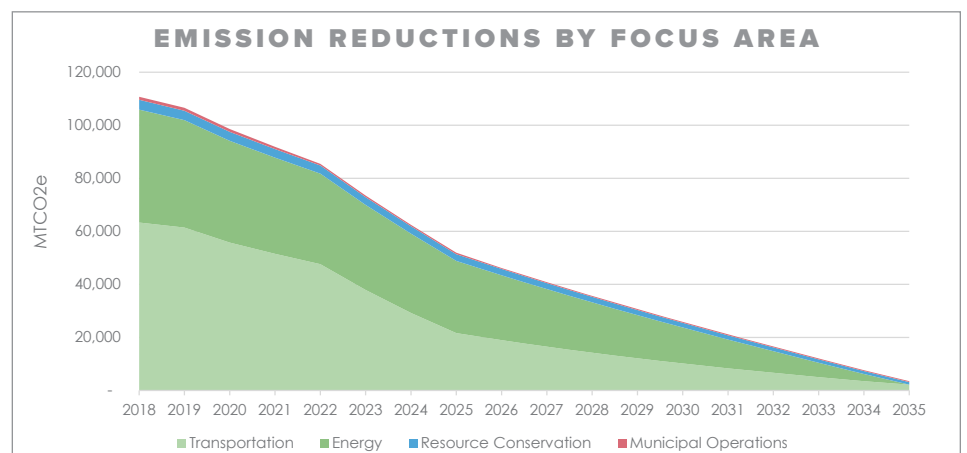
The CAAP strategies entail transforming the urban landscape to make it more walkable, bikeable, and livable; supporting green transportation options; switching to clean, renewable energy in our buildings; reducing consumption and waste; promoting green infrastructure and nature-based solutions; understanding and reducing climate risks; and leading through example by addressing municipal operations.



Executive Summary Figure 6 Relationship between mitigation and adaptation actions

STRATEGIES BY FOCUS AREA	
Focus Area	Strategies
Transportation	Reduce City-Wide Vehicle Miles Traveled by 25% by 2035 Electrify Transportation Electrify Off-Road Mobile Sources
Energy	Reduce Emissions from Energy Consumption Facilitate Building Decarbonization Increase Solar Energy Production
Resource Conservation	Reduce Consumption and Waste
Municipal Operations	Operate Sustainable Municipal Buildings Promote Green Municipal Practices Reduce Municipal VMT Integrate Climate Action and Adaptation into City Functions
Green Community	Develop Nature-Based Solutions
Climate Risk	Understand and Reduce Physical Risk
Emergency Management	Integrate Adaptation into Emergency Preparedness and Response
Resilient Community	Educate and Protect Residents

Executive Summary Table 2 Strategies by Focus Area



Executive Summary Figure 7 Emissions reductions by Focus Area

# Executive Summary CONTINUED

## Priority Actions

Because most of the CAAP actions support or reinforce the objectives of other actions, essentially all the CAAP actions need to be implemented, monitored, and achieved to reach our goal of Carbon Neutrality by 2035. However, all actions cannot be implemented at once. To assist policy makers and staff in the allocation of City resources:

- **Each action includes a priority rating (Priority 1 being the highest)**
- **Each action includes an assessment of the action's Co-Benefits (Cost Effectiveness, Community Benefits, Economic Benefits, Aligns with State and Local Policies, Promotes Equity & Climate Justice)**
- **The final page of each action Focus Area contains a timeline for implementing the highest priority actions within the Focus Area.**

A summary of key action items is presented in the Priority Actions by Focus Area section of the CAAP.

## Implementing the CAAP

City policies and resources must first be directed to Priority 1 Actions in the Transportation and Energy Focus Areas. The faster and larger the GHG reductions made in these Focus Areas, the better chance Los Altos will have in meeting its Carbon Neutrality goal. Progress on selected Priority 1 Actions in the other Focus Areas is important while maintaining attention on Transportation and Energy. Timelines for each action are not specified in the CAAP for several reasons. Available capital

investments budget, available staff, secured outside funding, committed community partnerships and resident support for CAAP actions will determine which and how many Priority 1 Actions will be initiated and maintained each year.

The CAAP contains detailed information to assist Los Altos policy makers and staff in prioritizing and selecting actions including:

- **Anticipated GHG reductions for each action (Appendix D)**
- **Methods and assumptions made in determining GHG reductions, cost and staff requirements (Appendix E)**
- **Recommended leaders, partners, estimated cost and potential funding sources and programs (Appendix F)**
- **A general timeline, key performance indicators and performance monitoring (Appendix G)**

Maintaining flexibility in implementing the CAAP will be important. As technologies, business models, funding and political will evolve, Los Altos will need to remain flexible in when and how it implements the actions in the CAAP. Los Altos must evaluate and adjust course as necessary.

## Monitoring & Reporting

Although actions may have different milestones to completion and benchmarks of success, monitoring and reporting allow implementation to be evaluated and tracked by City departments, elected officials, and the public. Monitoring the

progress towards goals and reporting on results is a critical step in implementing the CAAP.

As progress towards key targets is tracked, Los Altos may need to scale up or down its efforts depending on the results observed. The City should update the CAAP in 2025 and 2030, and report every two years on greenhouse gas emissions and progress towards goals. For monitoring and evaluation of adaptation actions, the City should conduct a debrief within one year of all hazardous events such as floods, wildfires, and severe air pollution, then adjust actions as necessary based on those findings. The City's Environmental Commission should be able to update the CAAP during its life cycle.

## Conclusion

The goals of this plan are to set the City on a path towards carbon neutrality and climate resilience. The goals are ambitious, but ones that we believe we can achieve. If we achieve these goals - carbon neutrality, equity, sustainability, resilience - we will create a community that is healthy, connected, and vibrant. Please fully participate in implementing this CAAP, and see Appendix A presenting personal actions, entitled "What Can I Do Now?" to find suggestions for simple actions each individual can take to help.





**03**  
**EXECUTIVE  
SUMMARY**

Los Altos have been planning for the sustainable use of energy, waste, water and land resources.



**15**  
**LETTER  
FROM THE  
MAYOR**

The Los Altos community has worked together to shape this vision through 2035.



**21**  
**EQUITY  
AND  
CLIMATE  
JUSTICE**

It's important for the City to reduce its emissions so as to not adversely affect vulnerable communities

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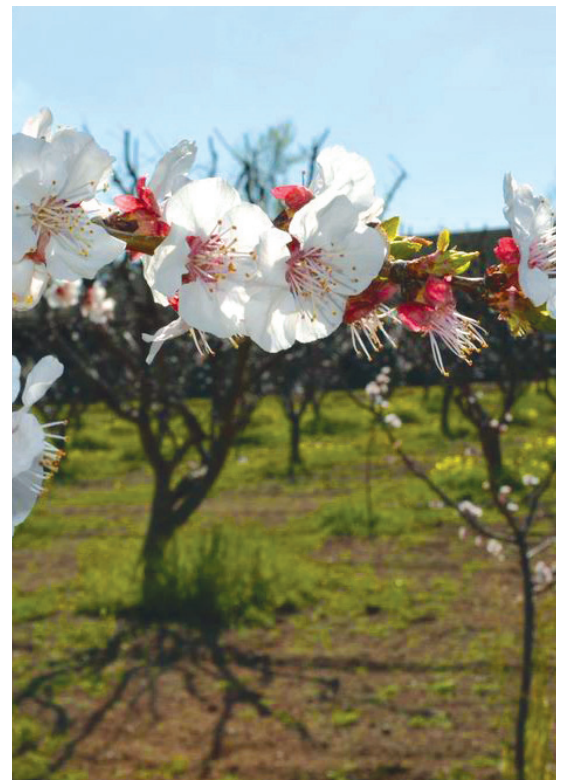


## 93 CONCLUSION

The ambitious goals of this plan are to set the City on a path towards carbon neutrality and climate resilience.

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# Acronyms

**ABAG**

Association of Bay Area Governments

**ABAU**

Adjusted Business-As-Usual

**ADU**

Accessory Dwelling Unit

**BAAQMD**

Bay Area Air Quality Management District

**BAU**

Business-As-Usual

**CAAP**

Climate Action and Adaptation Plan

**CAP**

(2013) Climate Action Plan

**CARB**

California Air Resources Board

**CBI**

Consumption-Based Inventory

**CCA**

Community Choice Aggregation

**CSMP**

Complete Streets Master Plan

**DCFC**

Direct Current Fast Charger

**EC**

Environmental Commission

**EV**

Electric Vehicle

**EVSE**

Electric Vehicle Supply Equipment

**FEMA**

Federal Emergency Management Agency

**FIRM**

Flood Insurance Rate Map

**GHG**

Greenhouse Gas

**GWP**

Global Warming Potential

**HVAC**

Heating, Ventilation and Air Conditioning

**ICLEI**

International Council for Local Environmental Initiatives

**IPCC**

Intergovernmental Panel on Climate Change

**MTC**

Metropolitan Transportation Commission

**MTCO2e**

Metric Tons of Carbon Dioxide Equivalent

**NGO**

Non-Governmental Organization

**OES**

California Office of Emergency Services

**OPR**

California Office of Planning and Research

**PSPS**

Public Safety Power Shutoff

**RCP**

Representative Concentration Pathway

**SB 379**

California Senate Bill No. 379

**SVCE**

Silicon Valley Clean Energy

**VA**

Vulnerability Assessment

**VMT**

Vehicle Miles Traveled

**UWMP**

Utility Water Master Plan

**ZNE**

Zero Net Energy

# Acknowledgments

## CITY COUNCIL

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Los Altos Property Owners Downtown

Los Altos Village Association

Los Altos Chamber of Commerce

LAYCAT  
(Los Altos Youth Climate Action Team)

Los Altos High School  
(Green Team Student Club)

Los Altos History Museum

LAUSD Outdoor Educator

Orchard Commons Committee

BATS Block Action Team

Grass Roots Ecology

Los Altos Rotary Club

Parks & Recreation  
Commission Liaison

Youth Commission Liaison

Complete Streets Commission Liaison

Senior Commission Liaison

## THANKS TO

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## CONSULTANTS

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Fehr & Peers

Urban Planning Partners

Baseline Environmental Consulting

# Letter from Mayor Enander

California has a long history of variable climate, drought, and wildfires. The impact of human activity is profound, and, together with the continued population growth expected in the Bay Area, compels us to act to mitigate those impacts.

The health and safety of our residents must be foremost in the actions of local government. We face several immediate needs. We must improve water conservation and find better ways to manage that precious resource. Rising sea level will impact our storm- and wastewater treatment systems and compel us to work cooperatively with the City of Palo Alto on changes needed to keep our shared wastewater treatment plant functioning. Because a single wildland fire can negate the substantial positive actions on carbon reduction, we must encourage proper management of adjacent wildlands and prevent the spread of fire into our city. In planning for significant population growth as mandated by the State of California, new ways to work and to commute are key to making continued progress on reducing GHG emissions. Increasing our tree canopy and enhancing our green spaces are essential strategies for mitigating temperature increases and sequestering carbon.

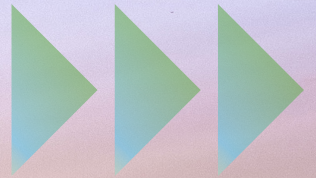


This Climate Action and Adaptation Plan documents the tremendous progress Los Altos has made since 2005, having achieved a 40 percent reduction in GHG against a target of 15 percent reduction. Our success is attributable in the government sector largely to changes in work schedule/commute and to adoption of efficient lighting and energy consumption in city buildings. Notable in this effort was the opening of our new Community Center, built to LEED Gold standard. The Center provides an incredible community resource that demonstrates the possibilities with sustainable construction and operation. Our community also contributed with huge reductions

from changes in transportation and energy, the latter resulting substantially from the move to sustainable energy production through Silicon Valley Clean Energy.

The combination of mitigation and adaptation strategies recommended in the CAAP show the breadth of actions needed for the future. The plan wisely shows that both strategies are needed as we strive to reduce our adverse impacts and adapt to changes we cannot directly control.

The Los Altos community has worked together to shape this vision through 2035. City government can lead some efforts, but many depend on the actions of individual residents. Only through the combined actions of both can we achieve the goals set out here. Los Altos has demonstrated it can achieve what we, as a community, want to achieve. There is something here for each of us to contribute to creating a healthy, environmentally sustainable community.



# Introduction

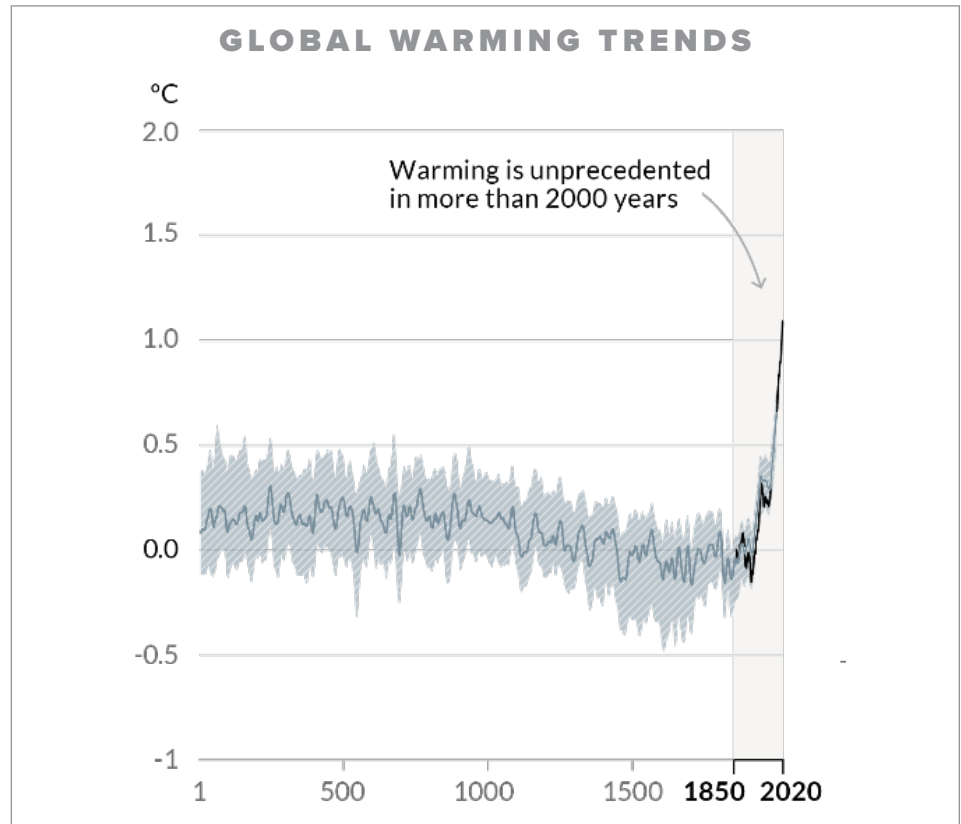


# Introduction

## CALL TO ACTION

The citizens and government of Los Altos have a long history of bold and forward-looking climate action. Since the adoption of the City's first Green Building Ordinance in 2007, Los Altos have been planning for the sustainable use of energy, waste, water and land resources. In 2013, Los Altos' first Climate Action Plan was released, calling for a 15% reduction in GHG emissions by 2020 as compared to 2005 levels. This update to the City's Climate Action Plan includes an adaptation section to prepare for the local impacts of climate change and represents the next step in the journey towards a sustainable, healthy, equitable future.

The next few years are incredibly important in limiting global temperature increase to 1.5°C and avoiding the most catastrophic impacts of climate change. As Figure 1 shows, warming of the planet is unprecedented since the middle of the 19th Century, and has been accelerating since the 1950s. As of 2020, the planet has already warmed by 1.1°C<sup>1</sup>. Figure 3 shows the impacts this warming has already had on our planet. By 2030 global emissions need to be halved, and carbon neutrality achieved before 2050. The longer we wait to take action, change will become increasingly expensive and will eventually be impossible.



**Figure 1** Global Warming trends  
Source: IPCC Sixth Assessment Report, pg. SPM-7.

According to the most recent report from the Intergovernmental Panel on Climate Change (IPCC), the Earth has warmed 1.09°C since 1850 and many changes such as sea-level rise and glacier and arctic ice melt are now virtually irreversible<sup>1</sup>. Global temperatures are likely to increase to a total of 1.5°C by the mid-2040's which will further stress our environmental systems and result in Los Altos experiencing more

frequent and more intense heat waves, winter floods, drought and wildfire air pollution events. On a global level, we are rushing to find solutions, but the most effective solutions that will be developed are at the local level. Although Los Altos has taken action to mitigate emissions produced locally, we can do more and need to do more.

Here in Los Altos, we are already

<sup>1</sup> IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press. In Press.

# Introduction CONTINUED

facing periods of severe drought, heat waves, and poor air quality more frequently. We've seen wildfires in the hills and the air darkened with smoke. We are not insulated. While some responses will need to be coordinated regionally, it is important for Los Altos to take quick and effective action locally if we want to maintain our quality of life. The good news is that strong and sustained transition from combustion engines and moving away from methane gas for heating our buildings could quickly make air quality better and in 20 to 30 years global temperatures could stabilize.

A five-step Climate Action Planning process was described in the 2013 CAP, which has been followed here and is shown in Figure 2. By including a Vulnerability Assessment and climate adaptation strategies in this plan, the City now has a comprehensive set of actions designed to both reduce our greenhouse gas emissions and prepare our community for the future impacts of climate change. This updated Climate Action and Adaptation Plan (CAAP), will help guide the City's actions into the coming decade and beyond.

In the end, we believe Los Altos can achieve its climate goals within the next 15 years if we take an aggressive approach. Following the guidance in this plan, we need to commit wholeheartedly to these actions and get them underway as soon as

possible. To guide this effort, the City has developed these Vision and Mission statements.

## VISION

"To place Los Altos on an accelerated, sustainable path to carbon neutrality by advancing bold and effective climate policies."

## MISSION

"The mission of our Climate Action and Adaptation Plan is to preserve the unique character of Los Altos and enhance its natural environment while improving the quality of life and health of its people by supporting transformative change in the areas of climate action, resilience and equity."

## THE FIVE-STEP CLIMATE ACTION PLANNING PROCESS



Figure 2 The Five-Step Climate Action Planning Process

# Introduction CONTINUED

## BACKGROUND

The City’s 2013 Climate Action Plan was designed to serve as a guiding document towards GHG reductions, both in municipal operations and community-wide. It was designed as a comprehensive strategy to reduce emissions in a manner consistent with state guidelines and regulations, and to identify cost-effective opportunities for existing and future residents, businesses, and development projects for a more sustainable community. At the same time, the CAP provided a framework for environmental leadership and an educational resource to the community.

This update provides a pathway to the City’s bolder GHG reduction

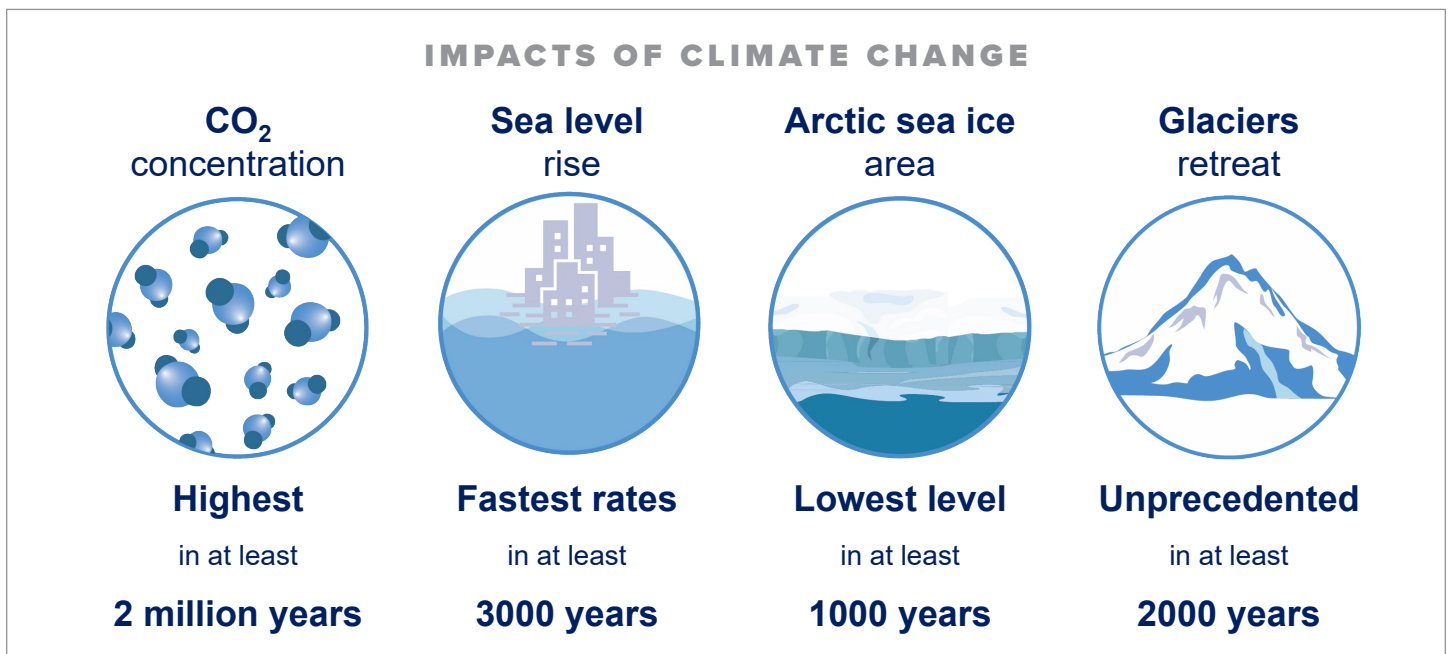
target, as well as a framework for a climate-resilient community. The goals of this CAAP are:

- **Reduce greenhouse gas (GHG) emissions**
- **Increase climate resilience (SB 379 compliance)**
- **Demonstrate leadership**

The Los Altos Sustainability Coordinator and Environmental Commission (EC) oversaw the development of the CAAP. In addition, a City-led climate Task Force made up of department heads and City employees was assembled to provide expert input and guidance. Together, these groups helped ensure the CAAP is realistic, feasible, and relevant to the residents of Los Altos.

## POLICY BACKDROP

There are many international, national, State, and local policies and regulations designed to affect climate change and sustainability, and this CAAP was developed with those policies and regulations as a guide. This way, the City ensures it’s doing its part to help meet larger-scale goals and support science-based targets. By developing the Vulnerability Assessment and Adaptation Framework included in this plan, the City also helps meet its SB 379 compliance requirements. Table 1 describes the most relevant State policies affecting climate action planning for cities.



**Figure 3** The impacts of climate change. Source: IPCC Sixth Assessment Report Working Group 1– The Physical Science Basis presentation, slides 9.

# Introduction CONTINUED

STATE POLICIES			
Legislation	Year	Name	Description
AB 32	2006	CA Global Warming Solutions Act of 2006	Requires CARB to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020.
SB 32	2016	CA Global Warming Solutions Act: emissions limit	Requires CARB to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030.
EO B-55-18	2018	Executive Order to Achieve Carbon Neutrality	Calls for carbon neutrality by 2045.
EO B-16-12	2012	ZEV Mandate	Requires State agencies to facilitate the rapid commercialization of zero-emission vehicles (ZEVs).
EO B-30-15	2015	Executive Order Establishing 2030 Emissions Target	Sets interim target of greenhouse gas emissions 40% less than 1990 levels by 2030.
AB 1493 (Pavley I)	2002	Automobile Emission Standards	State law requiring the first set of greenhouse gas emission standards for passenger vehicles.
SB 379	2015	Climate Adaptation and Resiliency Strategy	Requires all cities and counties to include climate adaptation and resiliency strategies in the safety elements of their general plans.
SB 350	2015	Clean Energy and Pollution Reduction Act of 2015	Requires electricity providers, investor-owned utilities, and CCAs to increase their procurement of renewable generated electricity to 50% by 2030.
SB 100	2018	CA Renewables Portfolio Standard	Sets a target of 100 percent carbon-free electricity by 2045.
SB 1383	2016	Short-Lived Climate Pollutant Reduction Strategy	Legislation requiring reductions in emissions of short-lived climate pollutants (like methane) by 40-50% below 2013 levels by 2030.
AB 398	2017		Law extending California's cap-and-trade program through 2030
SB 535	2012		Legislation requiring the state to direct at least 25% of state cap-and-trade revenues to go to projects that benefit disadvantaged communities
SB 375	2008	Sustainable Communities and Climate Protection Act	Directs CARB to set regional targets for GHG reductions from passenger vehicles
SB 743	2013		Updates the way transportation impacts are measured in California for new development projects

**Table 1** Relevant State policies affecting climate planning in California.

# Introduction CONTINUED

## ALIGNMENT WITH CITY PLANS AND POLICIES

The CAAP was designed to be consistent with the City's General Plan and other relevant planning documents, including the Complete Streets Master Plan, Downtown Vision, Emergency Operations Plan, Green Stormwater Infrastructure Masterplan and Local Hazard Mitigation Plan. This document builds off the policies and programs in those plans.

In addition, the CAAP must be updated periodically to remain consistent with updates to the City's General Plan Elements and other plan and policy updates.

## DEVELOPING THE CAAP

The CAAP was developed through a multi-stakeholder process involving the Los Altos Environmental Commission, heads of City Divisions and Departments, and the public. Community input and feedback were crucial to the climate action and adaptation planning process, and the City conducted a robust outreach and engagement process to solicit input and feedback. The City hosted a series of focus groups and workshops, administered surveys, and embarked on a public education campaign through existing communication channels. Feedback from the focus groups, surveys, and community workshop showed that most Los Altos residents are concerned about the effects of climate change and support climate action, with 74% of respondents saying they were very concerned about climate change.

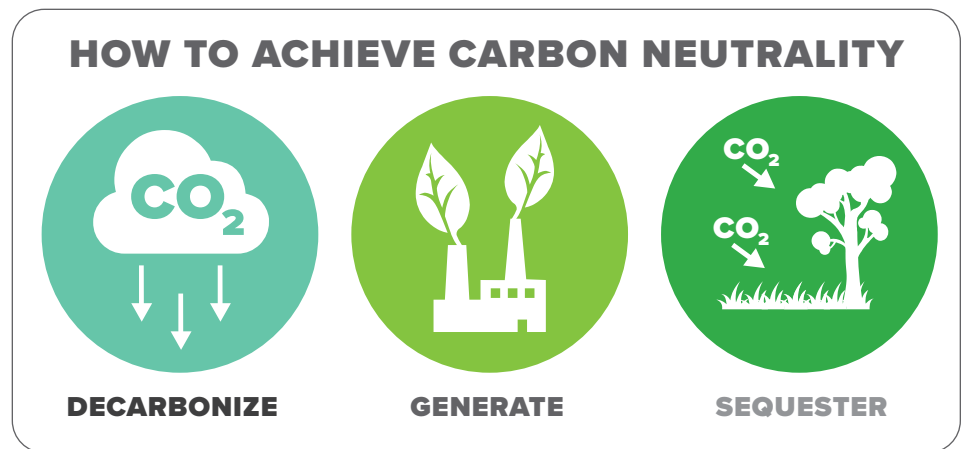


Figure 4 Achieving carbon neutrality

Based on the City's current and forecasted greenhouse gas emissions, guidance from City government, and community input, the City has elected to pursue a goal of **Carbon Neutrality by 2035**.

This will entail reducing as many emissions as possible produced by the City and its residents, sequestering as many remaining emissions as possible through nature-based solutions, and utilizing innovative carbon sequestration solutions, community-based sequestration projects, and local carbon offsets to reach zero net emissions. A bold goal aligns us with the latest science and puts us on a path for a sustainable, equitable, healthy future. Figure 4 displays the steps needed to achieve carbon neutrality.

## EQUITY AND CLIMATE JUSTICE

Equity and climate justice are important considerations as the City sets about pursuing its goals. There

are several populations within Los Altos that are more vulnerable to the effects of climate, including:

- **Senior citizens**
- **Children**
- **Individuals with mobility issues**
- **Individuals with language barriers**
- **Day workers**
- **Homeless populations**
- **Individuals with chronic respiratory or heart conditions**

It's also important to note that the impacts of climate change are not evenly distributed. Globally, the effects of air and water pollution, extreme heat, and sea level rise fall disproportionately on disadvantaged communities who are largely not responsible for creating the majority of the GHG emission. Therefore, it's important for the City to reduce its emissions so as to not adversely affect these communities.



# Our Impacts

# Our Impacts

The City's 2013 Climate Action Plan detailed 41 actions which, taken together, were designed to reduce emissions 15% by 2020 compared to 2005 levels. 1990 is the baseline year used by the State of California, but as municipalities often lack high-quality data going this far back, 2005 is often chosen as the baseline year. The progress of these actions was tracked and, to date, we have begun or fully implemented 29 actions and designated two other actions for

future implementation. Some actions were deemed infeasible and have either been revisited for this update or removed from the list.

An updated greenhouse gas inventory was conducted as part of this update, the purpose of which was to understand the present state of environmental impacts and to establish a baseline for the forecasting of future emissions. Los Altos' 2018 inventory is actually

composed of two inventories, one for the community and one for municipal operations. ICLEI - Local Governments For Sustainability provides protocols for both, which were used for these inventories. Table 2 describes the activity data and sources of data used. Details of the data, methodology and calculations used in the 2018 inventory can be found in Appendix E.

## 2018 DATA SOURCES

COMMUNITY SECTOR	ACTIVITY DATA	UNITS	SOURCES
Residential electricity	80,391,486	kWh	SVCE, PG&E
Residential natural gas	6,640,225	therms	PG&E
Commercial electricity	58,760,342	kWh	SVCE, PG&E
Commercial natural gas	1,329,206	therms	PG&E
On-Road transportation	166,865,877	VMT	SVCE
Off-Road transportation	6,725	MTCO <sub>2e</sub>	SVCE
Municipal solid waste	9,273	tons	MTWS, R3
Water energy	5,596,927	kWh	Cal Water
Wastewater electricity	2,257	kWh	City of Palo Alto
Wastewater natural gas	9,794,797	scf	City of Palo Alto
GOVERNMENT SECTOR	ACTIVITY DATA	UNITS	SOURCES
Electricity use	4,634,143	kWh	SVCE
Natural gas use	25,355	therms	PG&E
Street lighting	220,386	kWh	SVCE
Traffic control	56,891	kWh	SVCE
Fleet fuel use	39,679	gallons	City of Los Altos
Employee commutes	1,599,147	VMT	City of Los Altos
Municipal solid waste	278	tons	MTWS, R3
Water energy	12,970	kWh	Cal Water
Wastewater energy	724	therms	City of Palo Alto
Process & fugitive emissions	0.013	metric tons	Scaled based on households growth

Table 2 Greenhouse gas inventory data sources

# Our Impacts CONTINUED

As Table 3 shows, emissions were reduced from 184,725 metric tons in 2005 to 111,320 metric tons in 2018, a reduction of 40 percent. This far exceeds the 15 percent target

reduction outlined in the 2013 plan. These reductions can be attributed to the actions taken by the City such as supporting energy efficiency and the

adoption of electric vehicles, as well as the City becoming a member of Silicon Valley Clean Energy in 2017.

**EMISSIONS COMPARISON TABLE**

GOVERNMENT SECTOR	2005 EMISSIONS	2018 EMISSIONS	% CHANGE	EMISSIONS REDUCTION (MTCO <sub>2</sub> e)
Buildings & Facilities	428	134	-69%	294
Street Lights & Traffic Signals	130	<1	100%	130
Vehicle Fleet	420	351	-16%	69
Employee Commute	697	445	-36%	252
Solid Waste Facilities	197	172	-13%	25
Water & Wastewater Treatment Facilities	3	5	67%	(2)
Process & Fugitive Emissions	20	21	5%	(1)
<b>Government total</b>	<b>1,895</b>	<b>1,128</b>	<b>-40%</b>	<b>767</b>
COMMUNITY SECTOR	2005 EMISSIONS	2018 EMISSIONS	% CHANGE	EMISSIONS REDUCTION (MTCO <sub>2</sub> e)
Transportation & Mobile Sources	96,610	63,280	-34%	33,330
Solid Waste	3,950	2,653	-33%	1,297
Water & Wastewater	2,250	1,063	-53%	1,187
Commercial Energy	20,070	7,535	-62%	12,535
Residential Energy	59,950	35,661	-41%	24,289
<b>Community total</b>	<b>182,830</b>	<b>110,192</b>	<b>-40%</b>	<b>72,638</b>
<b>TOTAL</b>	<b>184,725</b>	<b>111,320</b>	<b>-40%</b>	<b>73,405</b>
<b>2020 TARGET</b>		<b>155,410</b>	<b>-15%</b>	<b>43,660</b>

Table 3 Emissions comparison table



# Our Impacts CONTINUED

Table 4 provides an overview of the most impactful actions from the 2013 CAP, measured in terms of projected 2020 GHG reductions.

## GHG REDUCING ACTIONS

CAP 2013 ACTION	TARGET GHG REDUCTION
Construct all bikeways and implement all programs identified in the 2012 Bicycle Transportation Plan by 2020	-2580
Develop and fully implement a pedestrian master plan with specific focus on local vehicle trip reduction by 2020	-860
Continue to pursue and implement Safe Routes to School Projects	-230
Continue to implement the City's Complete Streets policy and traffic calming plans and projects	-860
Work with the Santa Clara Valley Transit Authority (VTA) to seek opportunities to expand local service to improve connectivity to regional transit options.	-1050
Encourage alternative-fuel vehicle charging stations in existing private development.	-1100
Amend the Green Building Ordinance to include EV prewiring requirements and encourage EV charging installations in residential development.	-330
Amend the Green Building Ordinance to require EV charging stations in nonresidential projects greater than 10,000 square feet.	-140
Provide outreach and educational materials for energy conservation and renewable energy programs targeted at outdoor amenities (e.g., lighting, swimming pools, hot tubs).	-530
Ensure city residents are eligible to participate in and actively promote and support energy efficiency financing for residential and commercial properties.	-2410
Continue to encourage the installation of energy-efficient indoor and outdoor appliances and equipment (e.g., pool pumps).	-750
Maintain and expand food waste diversion programs.	-950
Continue to encourage recycling and reuse of building materials.	-160
Continue to support implementation of the 2010 UWMP through enforcement of the Water Efficient Landscape Ordinance (LAMC 12.36) and distribution of greywater/rainwater harvesting guides.	-180
Audit appropriate City facilities and conduct comprehensive energy efficiency upgrades, including installing energy-efficient lighting, appliances, and heating, ventilation, and air conditioning systems.	-120
Adopt a zero-waste policy for City facilities and City Sponsored events.	-160

**Table 4** Most impactful GHG reducing actions from 2013 CAP

# Our Impacts CONTINUED

Figures 5-8 below show the breakdown of emission sources in 2005 and 2018 for municipal operations and the community. Overall, emissions associated with transportation make up a slightly larger share in 2018 as emissions from energy use and other sectors have declined.

**2005 GOVERNMENT**

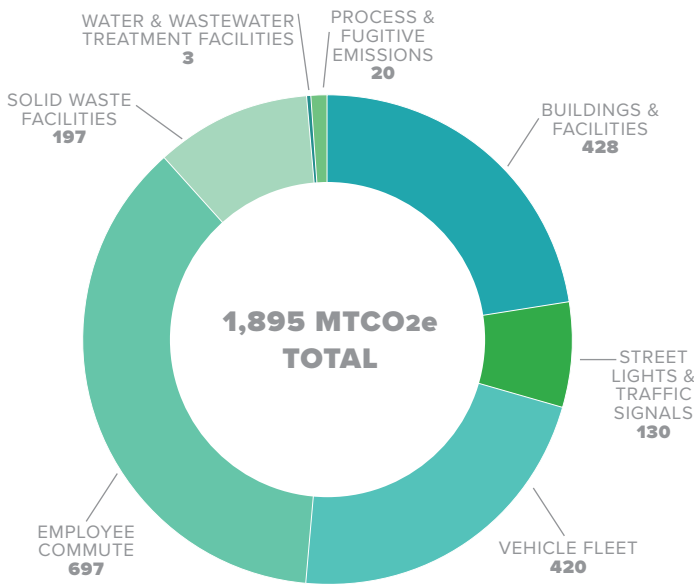


Figure 5 2005 Government emissions sources

**2018 GOVERNMENT**

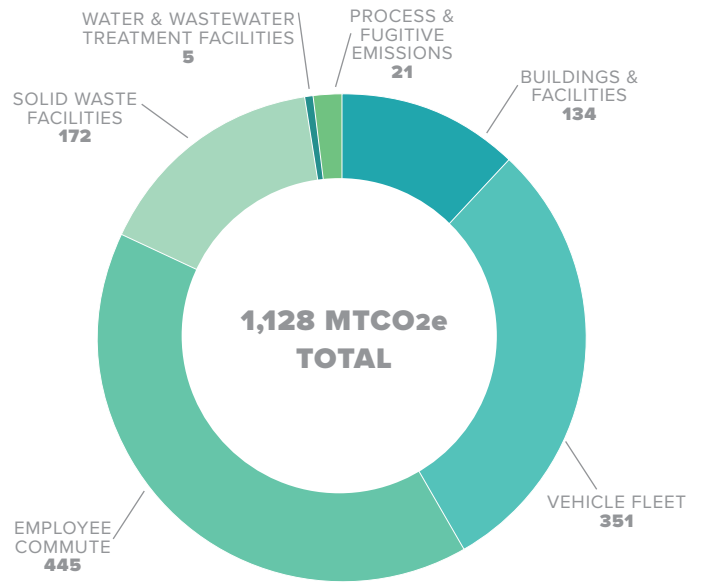


Figure 7 2018 Government emissions sources

**2005 COMMUNITY**

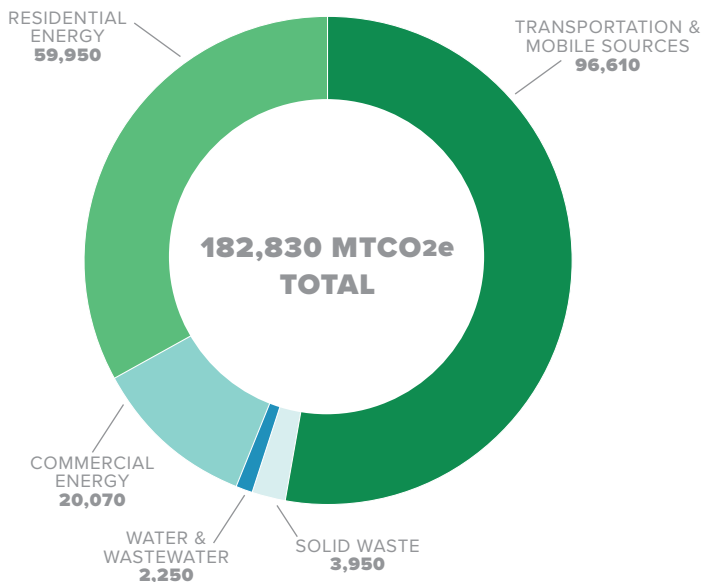


Figure 6 2005 Community emissions sources

**2018 COMMUNITY**

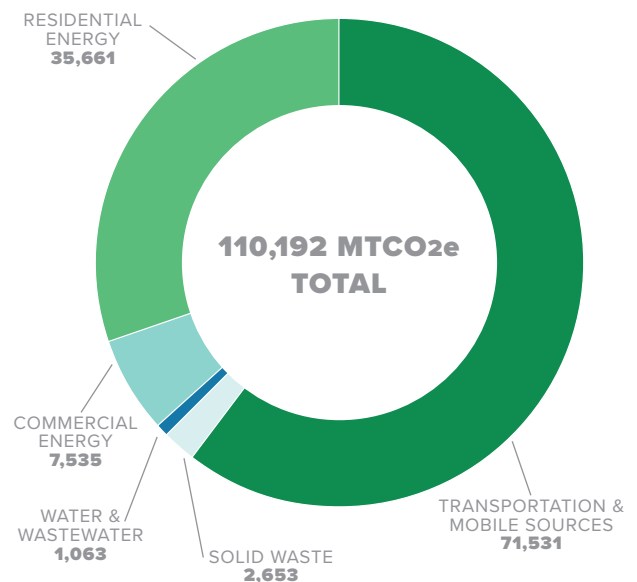


Figure 8 2018 Community emissions sources



# Climate Impacts

# Climate Impacts

A climate Vulnerability Assessment was conducted to determine the increasing climate threats the City is likely to face, as well as assess the City’s preparedness and capacity to address those threats. Following International, U.S., and California Climate Assessments, this report is the first to consider Los Altos on its own. The Vulnerability Assessment is included in this report as Appendix H.

To assess Los Altos’ expected climate changes, global climate models developed by the scientific community and recommended by the California Governor’s Office of Emergency Services (OES) were used. The online Cal-Adapt tool was used to create local outputs and predict how the frequency and intensity of climate hazards are changing. This was cross-referenced against California’s Fourth Climate Assessment Bay Area Report, other scientific and government papers, and the local knowledge of the Environmental Commission CAAP Subcommittee members and focus group participants.

Even with the bold emissions reductions at a local level detailed in the CAAP, Los Altos is subject to how significantly or poorly emissions are reduced globally. The increase in global emissions will cause Los Altos to experience increased heat waves, floods, drought, and poor air quality from wildfires in the region. Because Los Altos is not coastal it will not experience sea level rise, and because of our proximity to the

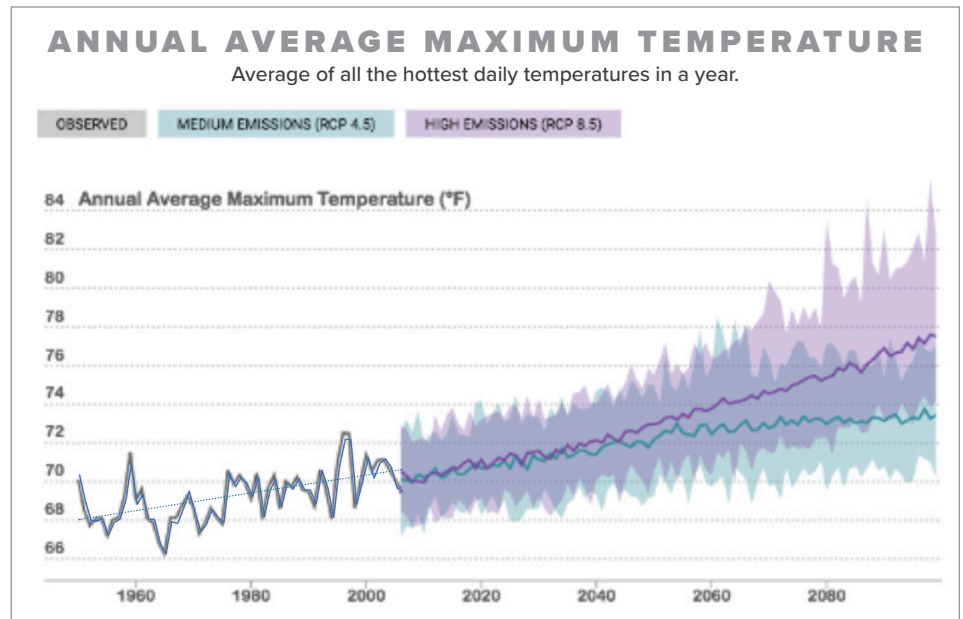


Figure 9 Annual average maximum temperatures in Los Altos (image from Cal-Adapt)

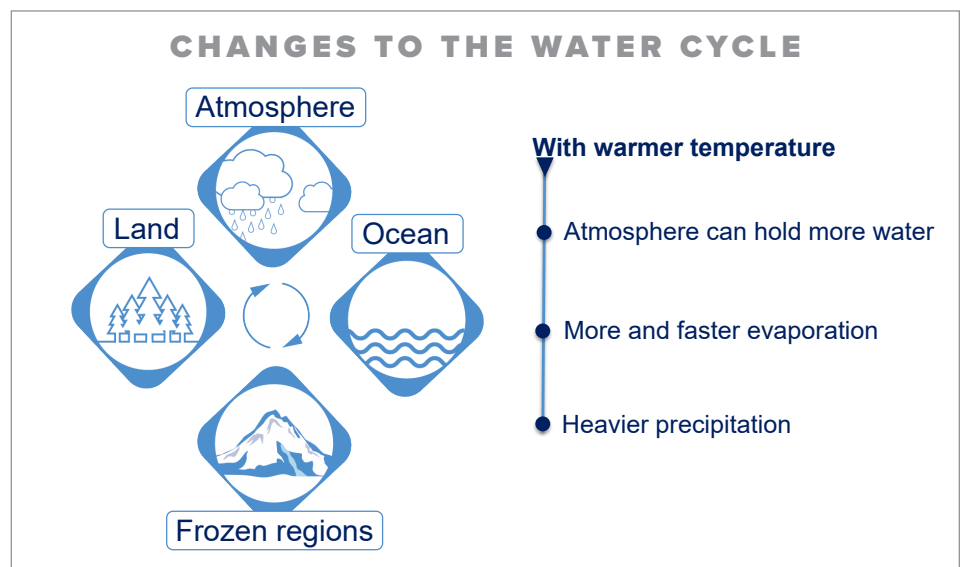


Figure 10 Changes to the water cycle due to climate change.

Source: IPCC Sixth Assessment Report Working Group 1– The Physical Science Basis presentation, slides 35.

Pacific Ocean and San Francisco Bay, we will continue to benefit from the climate moderating influences of those water bodies. As a result, Los Altos will not suffer some of

the extremes of climate change as directly as some other areas in California.

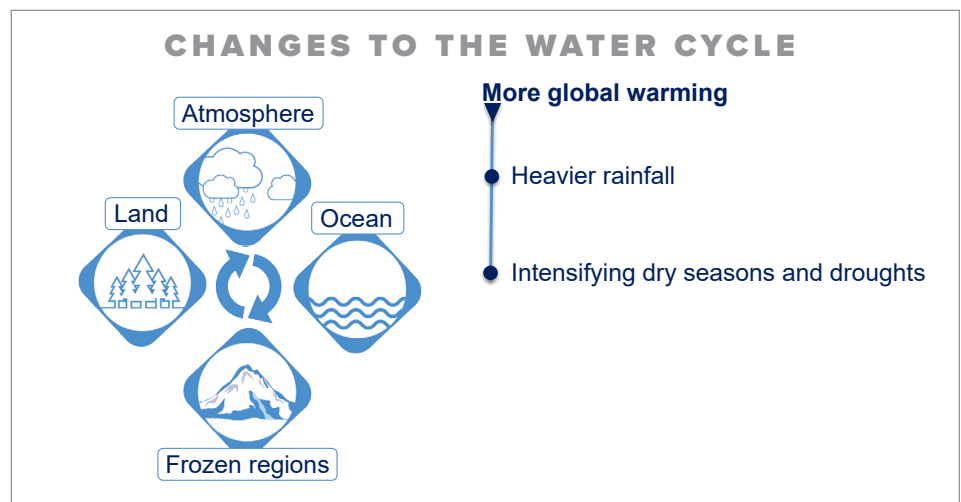
# Climate Impacts

CONTINUED

Instead, Los Altos will experience the reverberations from the impacts of climate change on the natural environment, the water supply system, air quality, and the energy grid which are beyond the municipal boundary but on which we depend. So the availability and affordability of water and energy within Los Altos are likely to be jeopardized by climate change across the Bay Area and California as a whole. Figure 9 displays the temperature change projections for Los Altos, and Figure 10 describes expected global changes to the water cycle.

Within Los Altos itself, by mid-century particularly under a high emissions scenario, the number of extreme heat days are projected to increase substantially, from an average of 4 days/year from 1961-1990 to as many as 20 days/year. Heat and poor air quality from wildfires outside of Los Altos are likely to impact the quality of life, particularly for vulnerable populations, and increase energy demands for additional building air cooling and filtering. Extreme heat, poor air quality, and blackouts or Public Safety Power Shutoffs (PSPS) that occur simultaneously will present novel emergency situations that have the potential to strain or overwhelm City resources.

Similarly but more uncertain will be the resilience of Los Altos' natural and maintained landscapes. The annual precipitation amounts in Los Altos are not likely to change, but will become less consistent. As a recent example, Sacramento recorded 7.87 inches during the 2020-2021 water year



**Figure 11** Changes to the water cycle due to climate change continued.  
Source: IPCC Sixth Assessment Report Working Group 1—  
The Physical Science Basis presentation, slides 36.

which ended on October 1, 2021, only to receive a daily record 5.44 inches on October 25, 2021. Such seasonal whiplash shows the limits of reading only annual averages. In combination with expected temperature increases, the amount of water that plants will need during extended, dry summers will also increase, possibly changing the vegetation composition of the area. Considering pressures on the shared water supply system which Los Altos relies on, it is likely that water customers will face financial incentives and regulatory pressure to reduce daily water use.

In the winter and spring, seasonal storms which Los Altos has experienced in the past are likely to continue. Extreme precipitation events (1-day maximums) that used to occur once every several years are projected to occur multiple times a year by the end of the century, increasing the need for maintenance and repair of stormwater

infrastructure on building sites and across the City, as well as increasing the risk of flooding requiring more acute management of potential flood zones. Figure 5 displays the projected number of yearly extreme precipitation events in Los Altos in a high-emissions scenario.

After living through years of drought and the COVID pandemic, Los Altos' government, residents, and businesses have unfortunately become familiar with environmental hazards. Emergency preparedness and hazards requiring large-scale adjustment and intervention in some ways will help Los Altos adapt to climate change. The scale of climate change and the need to reach new vulnerable populations during heat waves, unsafe air quality days or power outages present new challenges, though. These challenges are addressed through a suite of adaptation strategies and the Implementing the CAAP section of this plan.



# Looking to 2050

# Looking to 2050

To determine what the City’s emissions might look like in 2050, a series of emissions forecasts were developed. First a Business-As-Usual (BAU) forecast was developed to forecast the City’s emissions without any additional action from federal, State, or local governments. A series of growth factors such as population

and household growth were applied to the City’s baseline emissions, with the results shown below.

Without any additional action, the City’s emissions are expected to increase from 111,320 metric tons in 2018 to 116,346 metric tons in 2050.

To project the City’s emissions in 2050 including the expected impacts of State and local actions, an Adjusted Business-As-Usual (ABAU) forecast was developed. This forecast, shown in Figure 13, includes expected increases in fuel economy and building energy efficiency in California, increased EV adoption

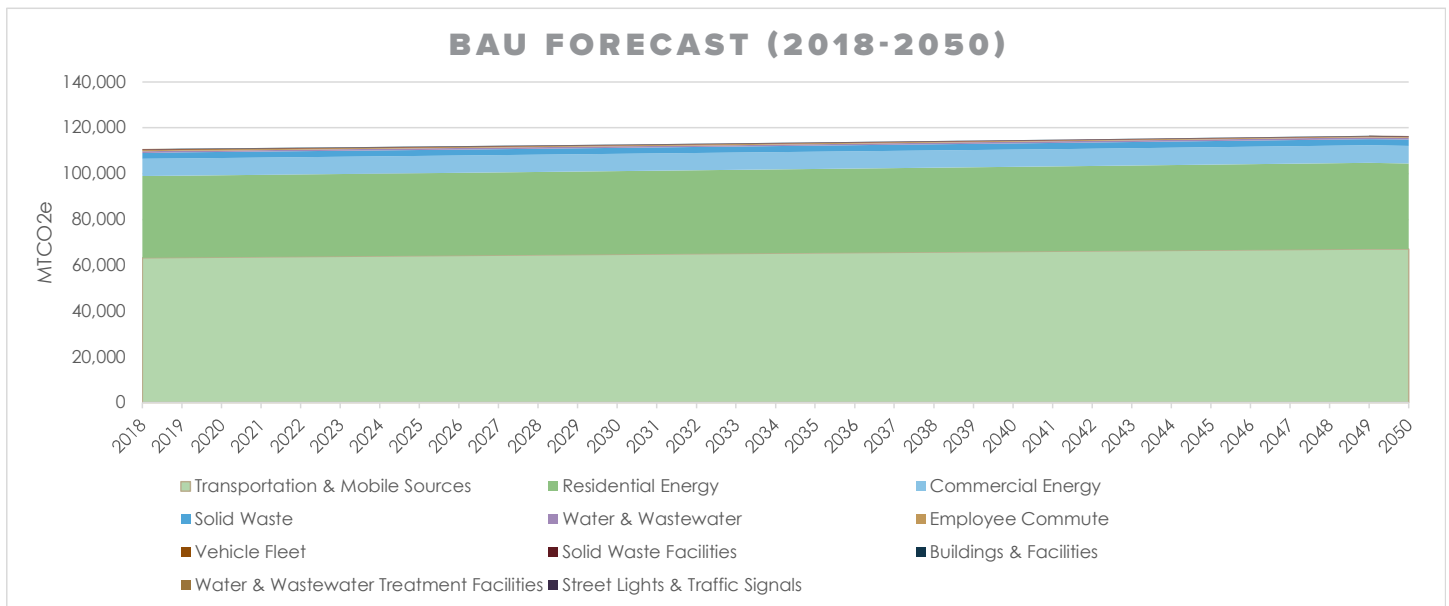


Figure 12 Business-as-usual forecast

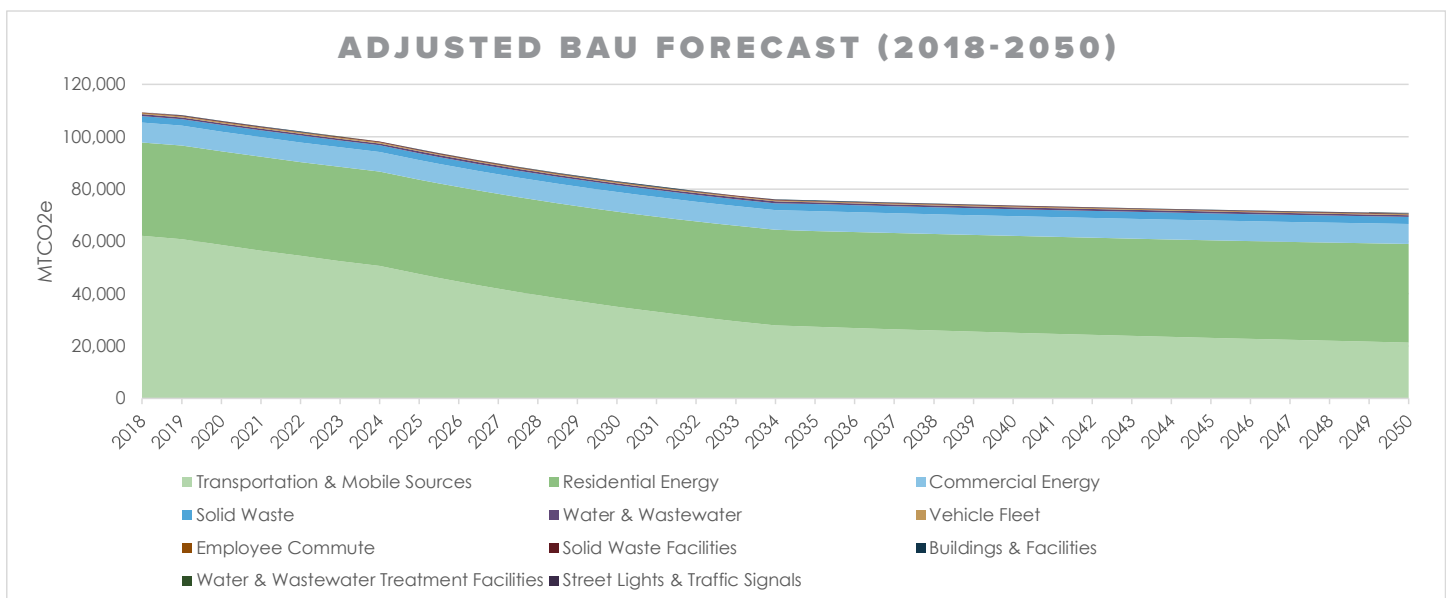


Figure 13 Adjusted business-as-usual forecast

# Looking to 2050 CONTINUED

in Los Altos, and the expected increase in air conditioning use due to increased temperatures related to climate change.

This figure shows that, with the inclusion of State and local actions, electric vehicle adoption increases, and increase in AC use, the City's emissions are expected to decline from 111,320 metric tons in 2018 to 70,800 metric tons in 2050.

Including the impacts of 2013 CAP actions, we will need to reduce our emissions by approximately 67,000 metric tons by 2035 to reach our carbon neutrality goal. Table 5 below shows historic and projected emissions under different scenarios, and Figure 14 displays the emissions reductions expected to be achieved in each Focus Area if the CAAP is fully implemented.

EMISSIONS TIMELINE BY SCENARIO (MTCO2E)				
Scenario	2005 <sup>1</sup>	2018 <sup>1</sup>	2030 <sup>2</sup>	2035 <sup>2</sup>
BAU	184,725	-	112,670	113,650
ABAU	-	-	83,025	75,700
ABAU+Existing CAP '13	-	111,320	75,885	67,160
CAAP 2022	-	-	25,835	3,144

<sup>1</sup>Historic Data (data for 2006-2017 not available; 111,320 MTCO2e used as the baseline for all scenarios)  
<sup>2</sup>Projected data based on models

Table 5 Emissions by Scenario (2030 & 2035)

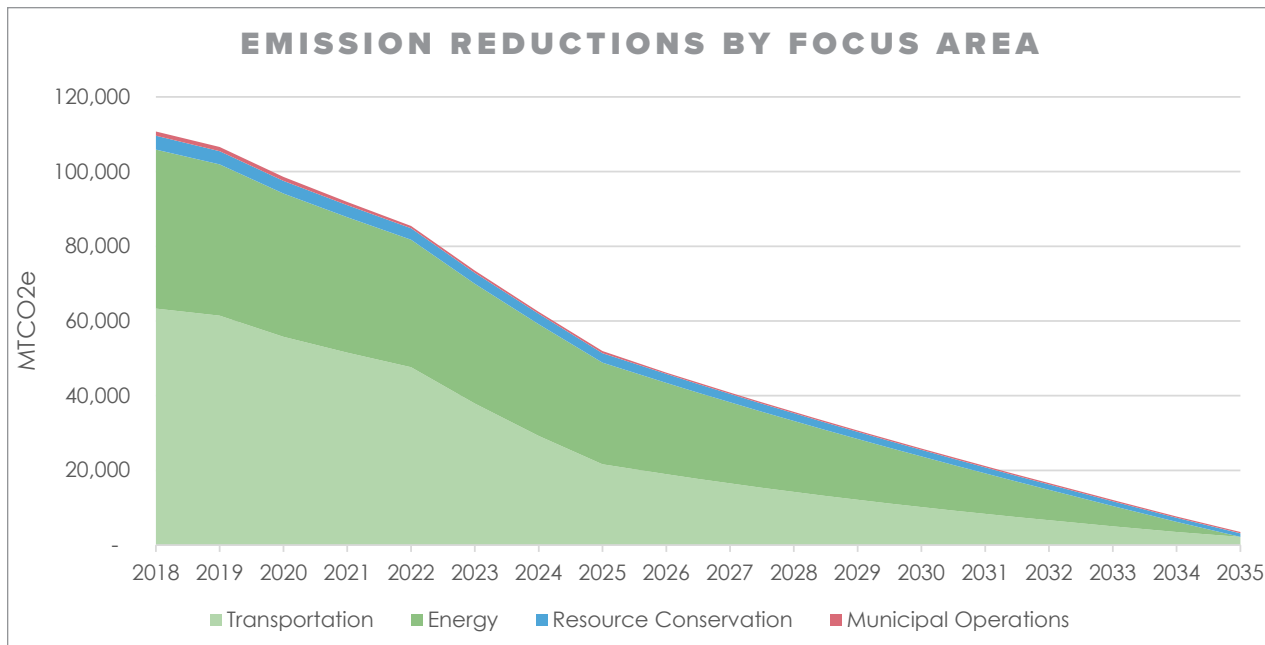


Figure 14 Emissions reductions by Focus Area





# Strategic Roadmap

# Strategic Roadmap

To propel the City towards its goals of becoming more resilient and carbon neutral, a strategic roadmap of Strategies, Goals and Actions was developed. This roadmap is intended to guide us through the priorities, action steps, when to take them, and the level of effort and benefits that can be achieved by implementing them.

**The roadmap is broken into three sections:**

- **Mitigation strategies**
- **Cross-cutting strategies (that deliver both mitigation and adaptation outcomes)**
- **Adaptation strategies**

Mitigation strategies are aimed at reducing the sources of emission that arise from within the City’s borders. This includes emissions from energy consumed, transportation, waste

created, and resources used. To achieve global climate goals, richer countries will need to do more on average than poorer countries. This is not only equitable, but richer countries have the means to do so. Within richer countries, more affluent communities are expected to do even more. Within Los Altos, the lack of heavy industry and large office buildings will make reducing GHG emissions easier to achieve.

By reducing the sources and intensity of the emissions, we hope to align with and go beyond global climate goals in order to reverse the harmful effects of climate change.

While mitigation aims to lessen GHG emissions, thereby reducing climate change, adaptation aims to lessen the impact of climate change. In other words, mitigation addresses the cause

of climate change and adaptation addresses the impacts of climate change - the effect of heat, drought, air pollution and extreme storms on Los Altos. Mitigation and adaptation are inclusive, as everything interacts with climate.

Cross-cutting efforts address both mitigation and adaptation. Many actions the City can take, like increasing the urban tree canopy, reducing water use, and developing community microgrids reduce the source of emissions and help prepare the City for climate change impact or emergencies. Similarly, the effects of climate change can have the opposite effect if increases in heat or drought lead to increased energy use or resource intensity. Figure 15 describes the relationship between mitigation, adaptation, and cross-cutting strategies.

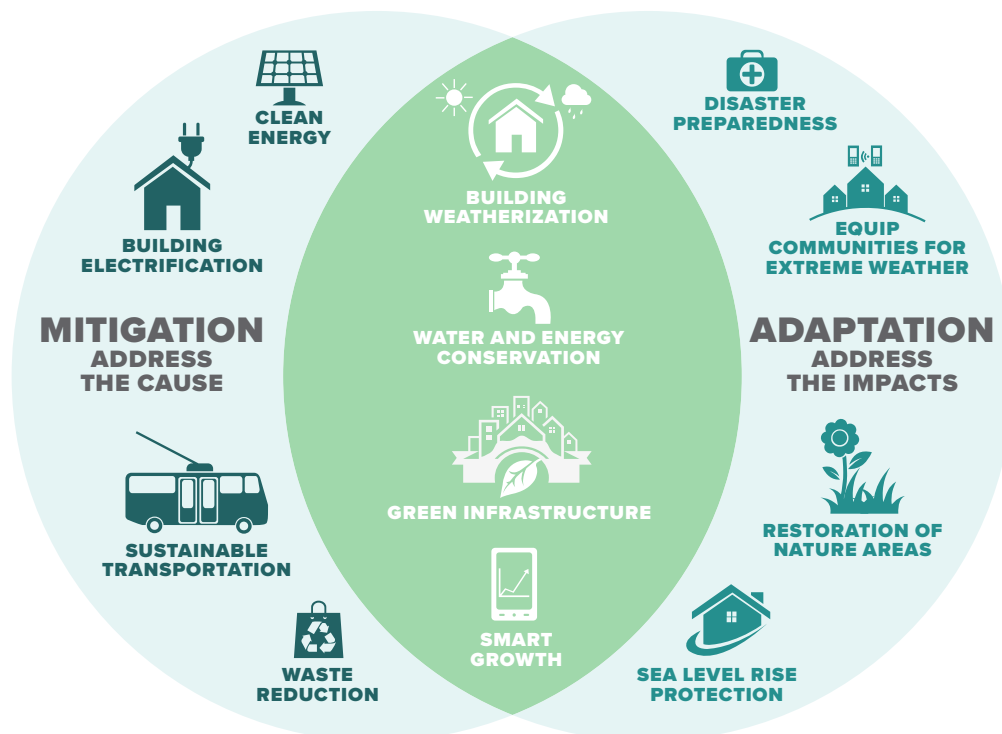


Figure 15 Relationship between mitigation and adaptation actions

# Strategic Roadmap CONTINUED

In general, mitigation and adaptation strategies should be viewed as two sides of the same coin. Together, they represent a comprehensive set of actions to address climate change.

## DEVELOPMENT & METHODOLOGY

Through quantitative and qualitative analysis, stakeholder engagement, and a survey of best practices, 68 actions were identified. Some of the actions build off existing efforts within Los Altos like the 2013 CAP and the 2018 Green Infrastructure Stormwater Management Plan. Most are new strategies adopted and altered from other California CAAPs and programs beyond California. Others were developed based on discussions with different stakeholder groups.

### CAAP Strategy Development Process:

- **Preliminary mitigation and adaptation strategies identified and agreed upon**
- **Development of "Long List" of CAAP actions to implement each strategy**
- **Community and stakeholder feedback**
- **Development of "Short List" of CAAP actions**
- **Quantify emission reductions from actions**

Figure 16 displays the Focus Areas encompassing mitigation, adaptation, and cross-cutting strategies. The mitigation strategies were selected using a multi-factor scoring system, as well as through qualitative evaluation. The strategies were modeled using ICLEI's ClearPath tool, which allows



Figure 16 CAAP Focus Areas

rapid scenario analysis of different actions and implementation times.

All of the adaptation strategies respond to the vulnerabilities determined in the Vulnerability Assessment - that is the climate events that Los Altos is expected to experience and the ability of the people, businesses, environment, and government of Los Altos to manage those events. As an example, it was determined that some of Los Altos' population are seniors who are vulnerable to wildfire-induced Public Safety Power Shutoffs (PSPS) because of a combination of health conditions and mobility limitations. Actions

to address this population include developing an early warning system for air pollution, conducting outreach specifically to vulnerable populations, and developing resilience hubs, as described in the Climate Adaptation Strategies section.

The adaptation strategies were catalogued according to the climate hazard they addressed (drought, heat, flood, wildfire & air pollution), as well as their feasibility, their cost effectiveness, whether they would promote equity, the potential for greenhouse gas reductions, their alignment with City priorities, and other factors.

# Mitigation Strategies

These greenhouse gas mitigation strategies are designed to cover all sources of emissions from within the City, including transportation, energy, resource conservation, green community, and municipal operations. Although the sectors vary in the amount of emissions created, a comprehensive, broad-based set of strategies addressing all sectors will improve the effectiveness of the plan and increase co-benefits.

A series of **Prioritization Scores** were developed based on a number of factors including community impact, feasibility, GHG reductions, and projected cost and FTE requirements.

These scores indicate the relative importance of the action, 1 being the highest and 3 being the lowest, and can be found underneath each action description.

Important information and details on each action for each goal within each strategy and Focus Area are contained in the Appendices, found under separate cover.

- Appendix A: "What Can I Do Now?" guide
- Appendix B: CAAP Fact Sheet
- Appendix C: Glossary
- Appendix D: Actions List
- Appendix E: Technical Appendix
- Appendix F: Implementation Leads, Partners, Costs, and Funding Sources
- Appendix G: Implementation Timeline and KPIs
- Appendix H: Vulnerability Assessment



# ATTACHMENT FOCUS AREA 1 TRANSPORTATION

Transportation is the largest source of emissions within Los Altos (58% of all emission), therefore reducing fossil fuel vehicle travel is imperative. By increasing active transit and helping create a walkable and bikeable city, public health and social connectivity will be increased. The strategies and actions in this section are designed to make alternatives to single-occupant, fossil fuel trips easy, convenient, and

attractive to residents and visitors. The remaining vehicle travel, over time, will shift to a majority electric. Figure 17 describes the life cycle benefits of EVs.

As the City has set an aggressive VMT reduction target, participation by all community members will be required to achieve it.

## STRATEGY 1

### Reduce Single-Occupancy Vehicle Travel

Reduce 2018 fossil fuel VMT generated by Los Altos by 25% by 2035

## STRATEGY 2

### Electrify Transportation

Increase EV component of all light duty vehicles in Los Altos to 80% by 2035

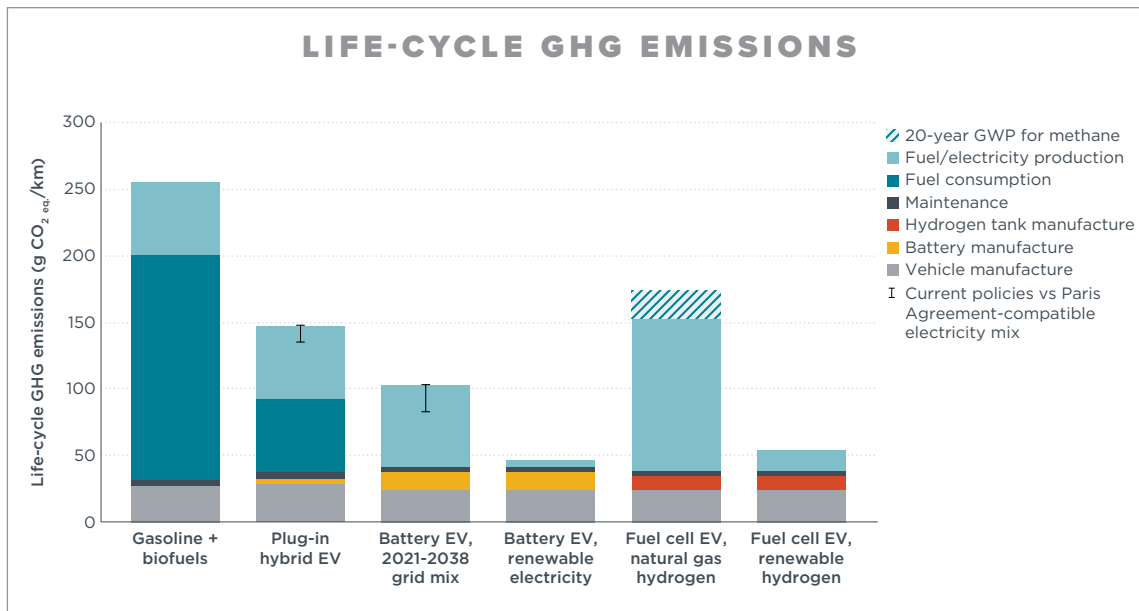
## STRATEGY 3

### Electrify Off-Road Mobile Sources

Eliminate Off-Road fossil fuel engines



## CO-BENEFITS KEY















**Figure 17** Life-cycle GHG emissions of passenger car segment gasoline ICEVs, PHEVs, BEVs, and FCEVs registered in the United States in 2021. Source: International Council on Clean Transportation, A Global Comparison of the Life-Cycle Greenhouse Gas Emissions of Combustion Engine and Electric Passenger Cars, pg. 33.

TRANSPORTATION






**GOAL 1.1** CREATE A WALKABLE AND BIKEABLE CITY

- |              |  |  |
|--------------|--|--|
| <b>1.1 A</b> | <p><b>Fully implement the 2022 Complete Streets Master Plan by 2035 and make adjustments as needed to comply with VMT reduction objectives</b></p> | <p>Work closely with Complete Streets commission to fully implement the 2022 Complete Streets Master Plan by 2035, with a focus on specific measures to reduce VMT. Reassess the development of specific citywide protected bike corridors. Maintain and expand access to businesses while promoting slow streets with biking and walking access. Improve the safety and attractiveness of walking downtown through traffic calming, dedicated pedestrian trails and streets, accelerating the development of green downtown plazas, and other strategies. Fully implement all Safe Routes to School programs in the CSMP. Consider an ordinance to reduce speed limits.</p> |
|              | <p><b>PRIORITY: 2</b></p>  | <p><b>CO-BENEFITS:</b>  </p>   |
| <b>1.1 B</b> | <p><b>Create a pedestrian-friendly Downtown and other community and commercial spaces throughout the city</b></p>                                  | <p>Create safe, sheltered, outdoor areas for pedestrians and increase the number of bicycle racks for cyclists.</p>  |
|              | <p><b>PRIORITY: 1</b></p>  | <p><b>CO-BENEFITS:</b>   </p>   |
| <b>1.1 C</b> | <p><b>Develop and implement a new Parking Management Plan that supports strategic VMT reduction</b></p>  | <p>Develop and implement a community-wide Parking Management Plan that reduces minimum requirements and sets upper limits on parking spaces for new development. Ensure the strategy is based on three principles: increasing dedicated EV and handicapped parking spaces in key commercial areas, reducing the parking footprint (turn into green space), and add specific drop-off and pick up zones at strategic locations. Plan for street and parking lot changes to accommodate conversion to passenger pick-up and drop-off stops at commercial and other public land use locations.</p>  |
|              | <p><b>PRIORITY: 1</b></p>  | <p><b>CO-BENEFITS:</b>   </p>   |
| <b>1.1 D</b> | <p><b>Pilot shared bike, ebike, and scooter programs, and partner with adjacent cities to improve first/last mile options</b></p>                  | <p>Develop pilot bike, ebike and scooter sharing programs by 2025. Expand programs by 2030 based on lessons learned. Explore regulations to promote the safe and responsible operation of ebikes and scooters including issuing permits to private companies and designating dedicated parking spaces at key locations. Partner with adjacent cities to enable first/last mile travel shuttles to train stations/commuter hubs, including regional networks of ebike, scooter, shuttle, and Transit Network Company routes.</p>  |
|              | <p><b>PRIORITY: 2</b></p>  | <p><b>CO-BENEFITS:</b>    </p>   |

TRANSPORTATION



**GOAL 1.2** PROMOTE SMART GROWTH STRATEGIES

	<b>ACTION</b>
<b>1.2 A</b>	<p><b>Support Transit-Oriented Development</b></p> <p>Require increased residential and commercial density and diversity along main corridors and commercial areas, including affordable multi-family housing and mixed-use developments. Encourage Transit-Oriented Development along major bus routes within and outside of the City to attract new employers and better serve the daily needs of residents and employees. Set a target of at least a 20% increase in the percent of the city’s population living in high-density Transit-Oriented Development by 2035. Integrate with the City’s Housing Element (ensure meeting RHNA commitments encourages high-density &amp; affordable housing in transit-accessible/walkable areas).</p> <p><b>PRIORITY: 1</b></p> <p><b>CO-BENEFITS:</b> </p>
<b>1.2 B</b>	<p><b>Encourage Live Near Work incentives</b></p> <p>Work with Los Altos employers and schools to develop a plan to provide affordable housing or rent assistance for employees to live close to work. Ensure new low-income and multi-use development is high density housing located no more than a 10-minute walk or bike ride from transit stops.</p> <p><b>PRIORITY: 1</b></p> <p><b>CO-BENEFITS:</b> </p>
<b>1.2 C</b>	<p><b>Promote Work From Home policies and infrastructure</b></p> <p>Require new multifamily residential developments with 10 or more units to provide Work From Home spaces. Support future conversion of commercial developments to residential uses as appropriate. Work with local Wi-Fi providers to expand coverage and speed.</p> <p><b>PRIORITY: 1</b></p> <p><b>CO-BENEFITS:</b> </p>





TRANSPORTATION









**GOAL 1.3** SUPPORT SHARED MOBILITY




**ACTION**




- 1.3 A****Develop an electric shuttle program as an alternative to SOV travel****Work with local public and private organizations to develop an electric shuttle program for cross-town traffic, including "short hops" along main streets and key commercial areas. Explore autonomous options when the program is mature and expand as needed.**

**PRIORITY: 1****CO-BENEFITS:**    
- 1.3 B****Expand transit service, connectivity, and transit stop amenities****Engage with transportation partners like VTA to expand zero emission transit service in City limits. Explore the creation of shaded and green commuter amenities and increased bicycle parking in order to help promote a public transit culture. Develop a green mobility app that allows users to check on EV shuttle routes and arrival times, see where available bikes and scooters are and potentially reserve directly on the app. Include VTA transit routes and schedule, location of EV chargers and whether they're free. Provide City funding or seek other funding sources to support these efforts.**

**PRIORITY: 2****CO-BENEFITS:**   
- 1.3 C****Require commercial Transportation Demand Management programs****Implement, mandate, enforce, actively promote, and use Transportation Demand Management strategies (TDM is defined as a set of strategies aimed at maximizing traveler choices). Require new nonresidential developments greater than 10,000 square feet or anticipated to include businesses with more than 50 employees to reduce VMT through TDM programs.**

**PRIORITY: 2****CO-BENEFITS:**   
- 1.3 D****Work with Los Altos School Districts to reduce VMT****Support a rotating car-free day program at local schools and as part of other local events to raise awareness about school commute alternatives. Encourage partnerships with private schools to develop and implement school bus programs that reduce school-related SOV commutes. Work with School Districts in Los Altos and surrounding cities (Mountain View, Palo Alto, Cupertino, Los Altos Hills) to encourage EV shuttle service for students living >1mile from their neighborhood schools.**

**PRIORITY: 3****CO-BENEFITS:**   
- 1.3 E****Develop and promote community carshare and carpool programs****Explore opportunities with carsharing companies to add or expand service in Los Altos. Develop a target number of shared cars available to individuals. Mandate that all shared vehicles be EV. Follow progress of shared autonomous vehicle testing regionally and consider developing ordinances and policies to guide shared AV use in City limits.**

**PRIORITY: 2****CO-BENEFITS:**   



TRANSPORTATION



**GOAL 1.4** REACH 80% COMMUNITY-WIDE ELECTRIC VEHICLE ADOPTION BY 2035

- ACTION**
- 1.4 A** **Increase education and awareness of available EV resources and incentive programs**  
**PRIORITY: 2**

Develop a yearly EV fair with participation from local dealerships and owners. Develop a map of the city charging network and available dedicated parking spaces. Create a webinar series on EV ownership. Promote all available incentive programs and encourage their use.

**CO-BENEFITS:**
  - 1.4 B** **Actively promote EV adoption and require EV-only parking**  
**PRIORITY: 1**

Negotiate a discount program with local car dealerships to offer rebates or other incentives to car buyers purchasing new or used EVs. Require businesses to set aside a percentage of parking spaces for EVs.

**CO-BENEFITS:**

**GOAL 1.5** ACCELERATE COMMUNITY-WIDE ELECTRIC VEHICLE SUPPLY EQUIPMENT SUFFICIENT TO SUPPORT 80% EVs

- ACTION**
- 1.5 A** **Increase the number of available Level 2 EV charging stations in workplace, commercial and multifamily areas**  
**PRIORITY: 2**

Increase the number of available Level 2 EV charging stations at businesses with >50 employees, multifamily homes of >10 units, and in commercial areas. Adopt an Electric Vehicle Supply Equipment Master Plan to identify number and location of EVSE.

**CO-BENEFITS:**
  - 1.5 B** **Create a citywide network of DC Fast Charging (DCFC) stations**  
**PRIORITY: 2**

Create a network of DC Fast Charging (DCFC) stations Downtown and in other commercial areas, as well as along major vehicle corridors. Set a 1-mile target for DCFC stations. Engage local gas stations to explore conversion to DCFC centers.

**CO-BENEFITS:**
  - 1.5 C** **Double the current Electric Vehicle charging and pre-wiring requirements in future Reach Code updates**  
**PRIORITY: 1**

Continue the current requirements for EV pre-wiring and Level 2 charging in new single-family development and extend to include large remodels and additions, and double the requirements for new multi-family and commercial development as part of future Reach Code updates.

**CO-BENEFITS:**
  - 1.5 D** **Identify grants and incentives to install residential EV charging including DCFC, solar EV charging, and paired EV charging + battery storage systems**  
**PRIORITY: 2**

Identify grants and incentives available through State, federal, or local agencies that may be used to support DCFC, solar EV charging and battery storage. Work with SVCE to expand existing EV resources and programs.

**CO-BENEFITS:**

TRANSPORTATION



**GOAL 1.6** ELIMINATE OFF-ROAD FOSSIL FUEL ENGINES

**1.6 A**

**ACTION**

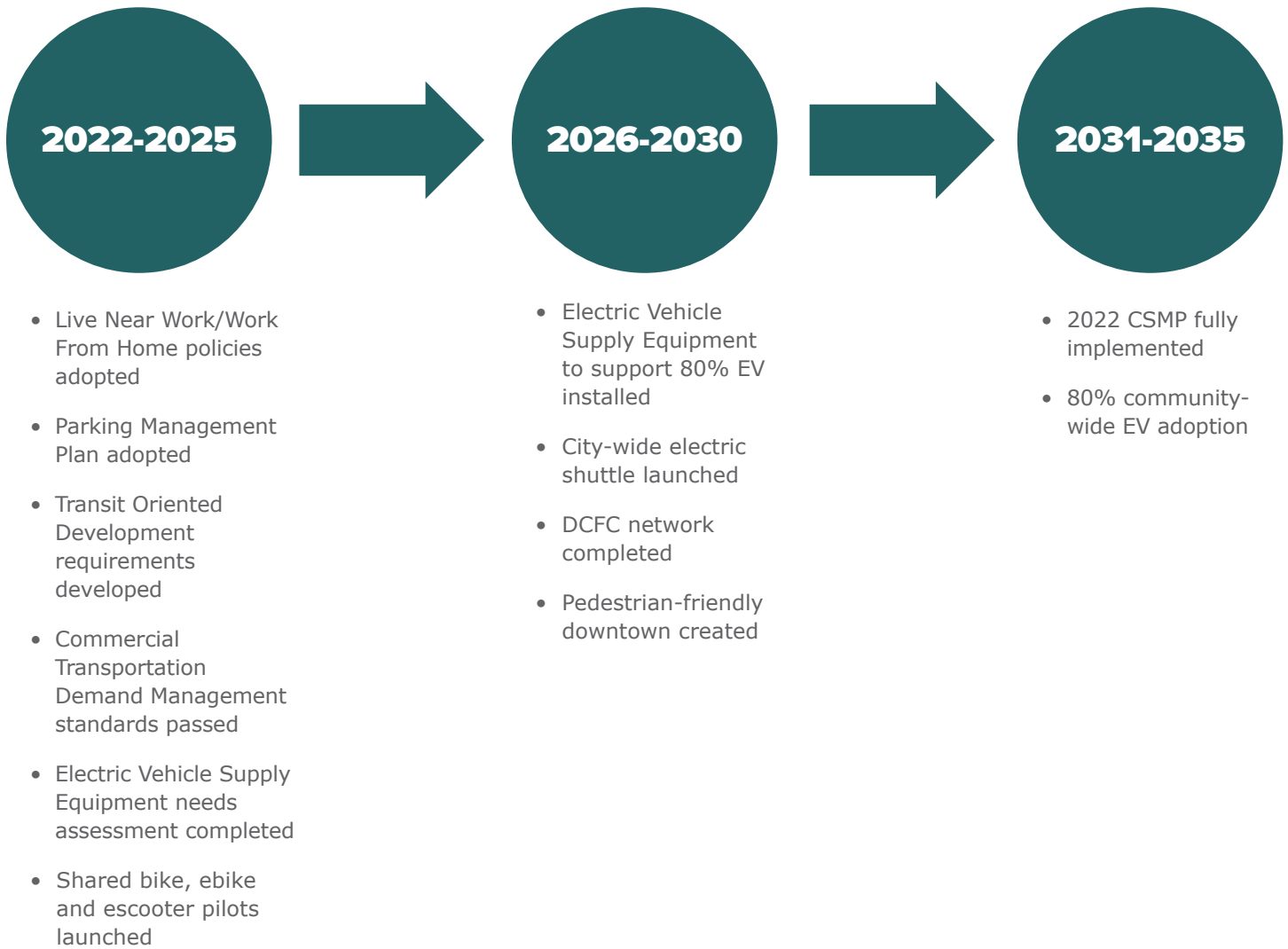
**Phase out off-road fossil fuel engines such as landscaping equipment**

Accelerate phase-out of small off-road fossil fuel engines such as landscaping equipment through bans, replacement ordinances, and/or incentives for electric alternatives. Work to reduce construction-related emissions. Form an Environmental Commission subcommittee to develop rules and/or ordinances.

**PRIORITY: 1**

**CO-BENEFITS:** 

# ATTACHMENT FOCUS AREA 1 TRANSPORTATION TIMELINE



# ATTACHMENT 1 FOCUS AREA 2 ENERGY

Energy is the second-largest source of emissions within Los Altos (39% of all emissions). As the City has a larger-than-average per-capita residential energy footprint, this represents an area of opportunity for the City. Since most residents and businesses use low- or zero-carbon electricity from Silicon Valley Clean Energy, the majority of emissions in this category are from methane gas use. Similar to the transportation sector, a shift from fossil fuels to clean electricity or alternative fuels will be necessary to meet the City's climate goals.

The strategies and actions in this section focus on improving

## STRATEGY 1 Reduce Emissions from Energy Consumption

Reduce the amount of electricity and methane gas used in homes and businesses 20% by 2035

community-wide energy efficiency, increasing community solar and battery storage capacity, preventing new methane gas appliance and equipment installation, discouraging the use of methane gas in existing buildings, and ultimately replacing most or all methane gas appliances and equipment in existing buildings.

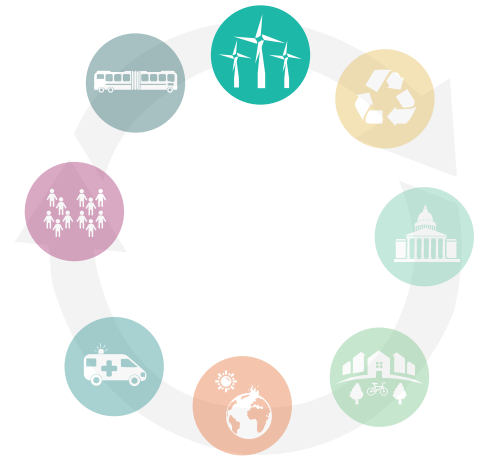
Electrifying transportation and buildings will increase electrical energy consumption in the near term but reduces GHG emissions as methane gas use is reduced. Over time, due to the increasing energy efficiency of electric vehicles and building equipment, electricity consumption will also be reduced.

## STRATEGY 2 Facilitate Building Decarbonization

Reduce or eliminate methane gas use in homes and businesses by 2035

## STRATEGY 3 Increase Solar Energy Production

Facilitate the installation of new solar capacity and expand battery storage on new and existing buildings community-wide



### CO-BENEFITS KEY



**COST EFFECTIVENESS**



**COMMUNITY BENEFITS**



**ECONOMIC BENEFITS**



**ALIGNS WITH STATE AND LOCAL POLICIES**



**PROMOTES EQUITY & CLIMATE JUSTICE**

ENERGY



**GOAL 2.1** ENCOURAGE ENERGY CONSERVATION MEASURES IN HOMES AND BUSINESSES

**ACTION**

**2.1 A** Support third party residential and commercial energy audits

Provide resources to support energy audits including listing of approved providers, listing of incentive programs, and other resources. Work with approved providers to perform energy audits.

**PRIORITY: 1**

**CO-BENEFITS:** 

**2.1 B** Increase residential and commercial energy efficiency

Develop a program to increase energy efficiency in existing residential buildings including wall and ceiling insulation, roof replacements, new ducting and windows, lighting upgrades, and outdoor amenities upgrades. Identify outside funding to perform upgrades identified in energy audits performed under action 2.1 A, and ensure eligible residents and businesses take advantage of all available energy efficiency incentive programs.

**PRIORITY: 1**

**CO-BENEFITS:** 

ENERGY



**GOAL 2.2** REQUIRE ALL-ELECTRIC NEW BUILDINGS AND MAJOR RETROFITS

**2.2 A**

**ACTION**

**Adopt evolving Reach Codes and expand to include large additions and major remodels**

**PRIORITY: 1**

Adopt Reach Codes that go beyond Title 24 standards during every code cycle, including Zero Net Energy (ZNE) requirements. Expand new building codes to include large additions and major remodels.

**CO-BENEFITS:**   

ENERGY



**GOAL 2.3** REDUCE OR ELIMINATE METHANE GAS USE IN EXISTING BUILDINGS BY INCREASING FUEL SWITCHING

**ACTION**

- 2.3 A** **Accelerate residential HVAC replacements**

Develop a program to replace methane gas HVAC (heating, ventilation, and air conditioning) units in existing residential buildings with electric alternatives. Require permits and enforce compliance for HVAC replacements. Develop a "Replace upon Burnout" and "Replace upon Sale/Remodel" ordinance for HVAC units. Adopt an ordinance making it mandatory to replace all methane gas HVAC units with electric alternatives by 2035, with exemptions for low-income residents and Seniors. Provide education and outreach to residents and property owners.

**PRIORITY: 1**

**CO-BENEFITS:**  
- 2.3 B** **Accelerate residential water heater replacements**

Develop a program to replace methane gas hot water heaters in existing residential buildings with electric alternatives. Require permits and enforce compliance for water heater replacements. Develop a "Replace upon Burnout" and "Replace upon Sale/Remodel" ordinance for water heaters. Adopt an ordinance making it mandatory to replace all methane gas water heaters with electric alternatives by 2035, with exemptions for low-income residents and Seniors. Provide education and outreach to residents and property owners.

**PRIORITY: 1**

**CO-BENEFITS:**  
- 2.3 C** **Accelerate commercial HVAC replacements**

Develop a program to replace methane gas HVAC units in existing commercial buildings with electric alternatives. Require permits and enforce compliance for HVAC replacements. Waive permit fees for electric HVAC units. Develop a "Replace upon Burnout" and "Replace upon Sale/Remodel" ordinance for HVAC units. Adopt an ordinance making it mandatory to replace methane gas HVAC units with electric alternatives by 2035, with exemptions for low-income residents and Seniors. Provide education and outreach to residents and property owners.

**PRIORITY: 1**

**CO-BENEFITS:**  
- 2.3 D** **Accelerate commercial water heater replacements**

Develop a program to replace methane gas hot water heaters in existing commercial buildings with electric alternatives. Require permits and enforce compliance for water heater replacements. Waive permit fees for electric water heaters. Develop a "Replace upon Burnout" and "Replace upon Sale/Remodel" ordinance for water heaters. Adopt an ordinance making it mandatory to replace methane gas water heaters with electric alternatives by 2035, with exemptions for low-income residents and Seniors. Provide education and outreach to residents and property owners.

**PRIORITY: 1**

**CO-BENEFITS:**  

ENERGY



GOAL 2.4 DISINCENTIVIZE METHANE GAS

2.4 A

ACTION

Establish a fee or penalty on the use of methane gas

Work with PG&E and community partners to develop or expand a fee on the use of methane gas within City limits. Set up a City-led Task Force in 2022 to lead this effort. Funds collected will be used to fund incentives for electric appliance adoption. Potential estimated funds available each year of at least \$500k.

PRIORITY: 2

CO-BENEFITS: 



ENERGY



**GOAL 2.5** EXPAND COMMUNITY SOLAR AND BATTERY STORAGE

**ACTION**

**2.5 A** Increase community solar capacity

Increase solar panel requirements in new construction from 4kW to 6kW minimum, and add solar panel requirement for large additions and remodels (>4kW). Ensure residents and businesses are aware of and take advantage of incentive programs for solar panels.

**PRIORITY: 2**

**CO-BENEFITS:**  

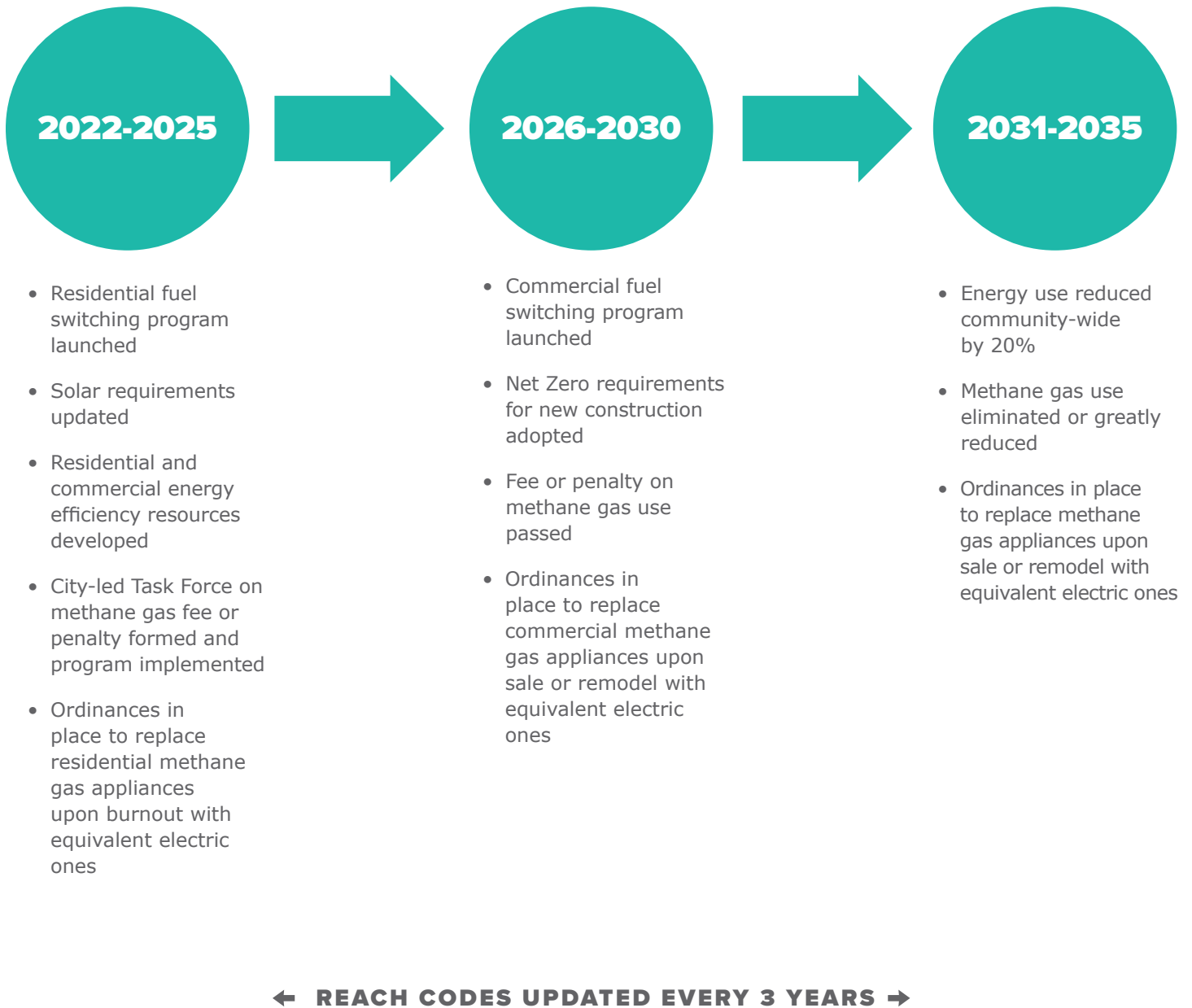
**2.5 B** Adopt Net Zero Building requirements for new construction by 2030

Adopt Net Zero Building requirements following New Building Institute guidelines by 2030. Add solar requirements sufficient to power Net Zero homes to future Reach Code updates. Encourage battery storage systems of 10 kWh or more through promotion of incentive or rebate programs, educational campaigns, and/or pilot programs. Encourage participation in demand response programs to improve grid resiliency.

**PRIORITY: 1**

**CO-BENEFITS:**  

# ATTACHMENT 1 FOCUS AREA 2 ENERGY TIMELINE



While waste disposal, water use, and operation of labor-saving equipment are all essential activities in the community, consuming and/or disposing of natural resources generates community GHG emissions. The effects of these activities can be reduced by diverting waste from

the landfill, conserving water, and promoting sustainable consumption patterns. The following strategy and actions identify the City's goals in reducing the amount of resources consumed and disposed of.

**STRATEGY 1**  
**Reduce Consumption and Waste**

Increase landfill diversion, reduce water use, and promote sustainable lifestyles



**CO-BENEFITS KEY**



**COST EFFECTIVENESS**



**COMMUNITY BENEFITS**



**ECONOMIC BENEFITS**



**ALIGNS WITH STATE AND LOCAL POLICIES**



**PROMOTES EQUITY & CLIMATE JUSTICE**

RESOURCE CONSERVATION





**GOAL 3.1** DECREASE LANDFILL WASTE 15% AND ELIMINATE SINGLE-USE PLASTICS AND CONSTRUCTION WASTE BY 2035

- 3.1 A** **Increase the landfill diversion rate**





**ACTION**

Increase landfill diversion rate to 90% by 2030 and 95% by 2035, negotiated in the next Franchise Agreement. Launch an education and awareness campaign for residents and businesses to help promote best practices.

**PRIORITY: 1**      **CO-BENEFITS:**  
- 3.1 B** **Eliminate non-essential single-use plastics**



**ACTION**

Adopt a new ordinance to eliminate non-essential single-use plastics and prioritize reusable foodware and utensils. Ensure all new single-use foodware and utensils are compostable per guidelines from the Franchise Waste Hauler.

**PRIORITY: 1**      **CO-BENEFITS:**    
- 3.1 C** **Reduce waste from demolition, construction and building materials**

**ACTION**

Develop an ordinance requiring the deconstruction of old buildings instead of demolition and the recycling/re-use of materials. Provide incentives to builders for the use of environmentally friendly construction materials.




**PRIORITY: 1**      **CO-BENEFITS:**  

**GOAL 3.2** REDUCE WATER USE 15% BY 2030

- 3.2 A** **Increase community-wide water efficiency**

**ACTION**

Increase education and awareness of water efficiency programs through Calwater and other organizations. Continue to support implementation of the 2015 UWMP through enforcement of the 2015 Model Water Efficient Landscape Ordinance. Develop an ordinance requiring conversion of grass lawns to low-water landscaping. Consider an update to the building code prohibiting new grass lawns.


**PRIORITY: 1**      **CO-BENEFITS:**   

**GOAL 3.3** PROMOTE A CIRCULAR ECONOMY

- 3.3 A** **Promote sustainable food choices**

**ACTION**

Expand consumer education and awareness of sustainable and plant-based food choices through City media channels, speaker series, and other methods. Work with the current vendor to expand the farmers market into a year-round event. Work with local restaurants to increase organic, vegetarian, and farm-to-table menu options and reduce food waste.

**PRIORITY: 2**      **CO-BENEFITS:**    
- 3.3 B** **Encourage responsible goods and services consumption**

**ACTION**

Increase education & awareness of circular economy concepts, including responsible purchasing habits and the promotion of a Repair, Reuse, Recovery, and Refurbishment economy. Provide support and resources to help local businesses participate in green business programs.

**PRIORITY: 2**      **CO-BENEFITS:** 



While City activities represent a small part of overall GHG emissions in the community, the Municipal Operations focus area is the City’s opportunity to lead by example. Emissions reduction measures may also reduce the cost of City operations by decreasing energy, fuel, and other material consumption at City facilities.



### STRATEGY 1 Operate Sustainable Municipal Buildings

Increase efficiency, resiliency, and renewable energy at City-owned buildings and facilities

### STRATEGY 2 Reduce Municipal VMT

Reduce commute fossil fuel VMT and eliminate City fleet fossil fuel VMT

### STRATEGY 3 Promote Green Municipal Practices

Create and promote efficient practices

### STRATEGY 4 Integrate Climate Action and Adaptation into City Functions

Incorporate Climate Action and Adaptation into City Policy, Budget, Planning, & Internal Standards

#### CO-BENEFITS KEY



**COST  
EFFECTIVENESS**



**COMMUNITY  
BENEFITS**



**ECONOMIC  
BENEFITS**



**ALIGNS WITH  
STATE AND  
LOCAL POLICIES**



**PROMOTES  
EQUITY &  
CLIMATE  
JUSTICE**

MUNICIPAL OPERATIONS



**GOAL 4.1** REDUCE MUNICIPAL BUILDING ENERGY USE BY 30% BY 2035

4.1 A

**ACTION**

**Audit appropriate City facilities and conduct comprehensive energy efficiency upgrades**

**PRIORITY: 2**

Audit appropriate City facilities and conduct comprehensive energy efficiency upgrades focusing on energy-efficient lighting, motion sensors, appliances, and HVAC systems. Develop a 10-year phase-out program in which all existing methane gas appliances are replaced with comparable electric alternatives.

**CO-BENEFITS:**

**GOAL 4.2** INSTALL SOLAR AND BATTERY STORAGE AT CITY FACILITIES

4.2 A

**ACTION**

**Build new City buildings to Net Zero standards**

**PRIORITY: 1**

Ensure all new buildings are Net Zero and all-electric with solar panels, battery storage and electric efficient appliances. Align with CA Public Utilities Commission Zero Net Energy goals and definitions.

**CO-BENEFITS:**

4.2 B

**Develop battery storage options and evaluate microgrids for cost savings and resilience**

**PRIORITY: 2**

Install ground- or roof-mounted solar panels at select City buildings and facilities. Explore options for microgrids capable of going into "island mode" and serving as resilience hubs during power outages.

**CO-BENEFITS:**

MUNICIPAL OPERATIONS



**GOAL 4.3** CONVERT 100% OF THE CITY'S FLEET TO ELECTRIC VEHICLES BY 2030

4.3 A

**ACTION**

**Develop a phase-out schedule to replace all City-owned fleet vehicles with electric vehicles**

Develop a phase-out schedule to replace all City-owned fleet vehicles with comparable electric versions by 2030. Conduct a feasibility study to determine the optimal number and location of municipal and public chargers at City facilities and properties, and install sufficient Level 2 charging to charge EV fleet and staff-owned EVs.

**PRIORITY: 1**

**CO-BENEFITS:**  

**GOAL 4.4** DEVELOP GUIDELINES FOR SUSTAINABLE EMPLOYEE COMMUTE AND BUSINESS TRAVEL

4.4 A

**ACTION**

**Improve City staff use of commute alternatives to single-occupant vehicles**

Increase options for commute alternatives, including information and materials that identify available transit and alternative transportation routes. Encourage staff to buy and use EVs through incentives, free charging at City facilities, and other means.

**PRIORITY: 2**

**CO-BENEFITS:**  

4.4 B

**Expand Work From Home and flexible schedule policies**

Expand the current policy to facilitate alternative work schedule or telecommuting options for City staff to reduce daily commute trips. Evaluate flexible employee schedules that allow for at least 50% remote work while maintaining City hours of operation.

**PRIORITY: 1**

**CO-BENEFITS:**  



MUNICIPAL OPERATIONS

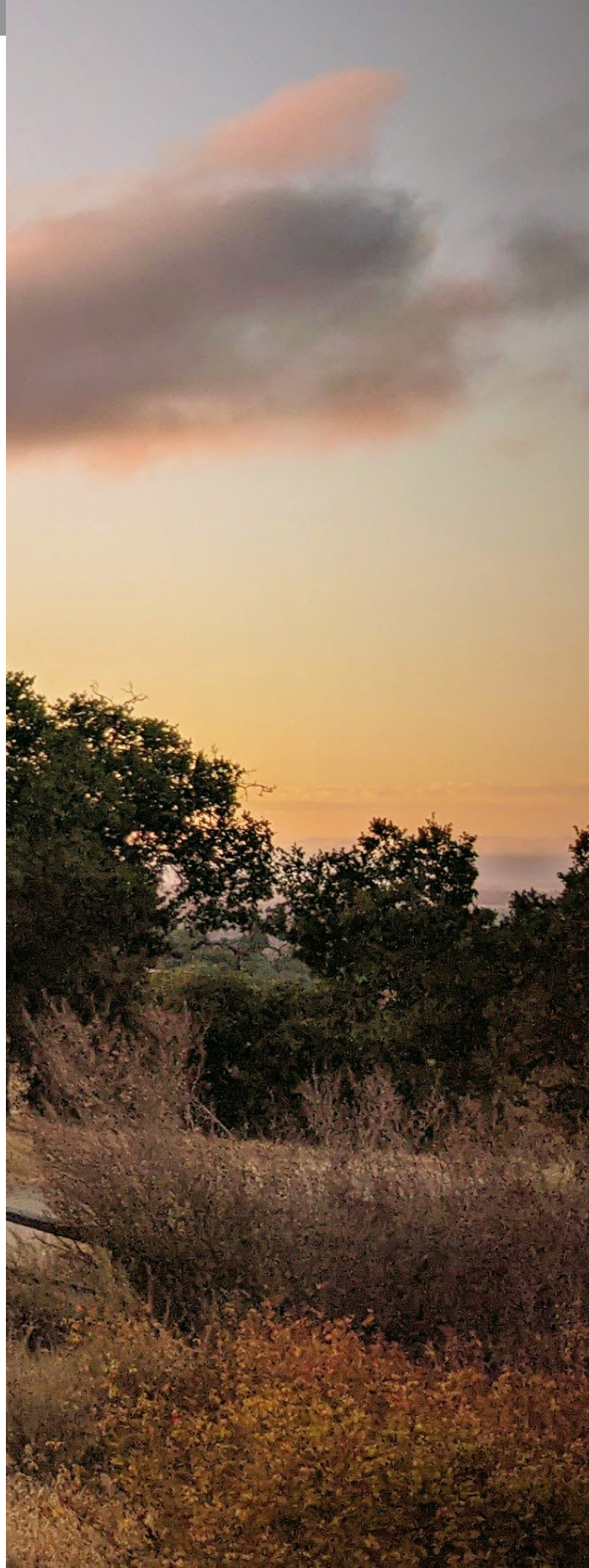


**GOAL 4.5** PROMOTE GREEN MUNICIPAL PRIORITIES

	<b>ACTION</b>	
<b>4.5 A</b>	<b>Adopt a zero-waste policy for City facilities and City-sponsored events</b>	Adopt a policy that requires City-owned buildings and facilities to be zero waste. Develop an action plan to eliminate waste through diversion and recycling. Work with event vendors and participants to eliminate waste at City-sponsored events. <b>CO-BENEFITS:</b>
<b>4.5 B</b>	<b>Continue to allow virtual participation in public meetings</b>	Decrease community Vehicle Miles Traveled by continuing to allow virtual participation at all public meetings. Allow for public comment by virtual participants. <b>CO-BENEFITS:</b>

# Cross-Cutting Strategies

These strategies address both the sources and impacts of climate change within Los Altos. These strategies include the remaining Municipal Operations strategies, as well as Green Community and Climate Risk strategies.



MUNICIPAL  
 OPERATIONS







**GOAL 4.6** INCORPORATE CLIMATE ACTION AND ADAPTATION INTO CITY POLICY, BUDGET, PLANNING, & INTERNAL STANDARDS



**ACTION**

- 4.6 A** **Account for climate change in all new City projects**


Establish an interdepartmental working group to integrate climate preparedness in planning, maintenance, and capital improvements through the development of work plans, screening of capital improvements, and cross-sector collaboration. Establish protocols for mitigating public health impacts from heat and air quality with regional agencies and partners.

**PRIORITY: 1**      **CO-BENEFITS:**    
- 4.6 B** **Incorporate climate preparedness into City programs, operations, and maintenance protocols**

Ensure that maintenance reflects expected future climate conditions and variability and not historical climate data for all City buildings, facilities, structures, and infrastructure.

**PRIORITY: 1**      **CO-BENEFITS:**  
- 4.6 C** **Integrate CAAP goals into City projects as an order of business**

Integrate annual CAAP report goals during the budget review process at the direction of the City Manager. Plan to inventory City GHG emissions every two years using ClearPath and track against targets.

**PRIORITY: 1**      **CO-BENEFITS:** 



# ATTACHMENT 1 FOCUS AREA 5 GREEN COMMUNITY

Many projects in Los Altos contribute to an improved quality of life by providing economic, social, and environmental benefits for the community. These projects also indirectly reduce GHG emissions.

While the measures and actions in this focus area identify only minor direct emissions reductions, they support the reduced energy or fuel consumption goals underlying numerous other CAAP strategies.

## STRATEGY 1 Develop Nature-Based Solutions

Favor and implement nature-based solutions in the community



### CO-BENEFITS KEY



**COST  
EFFECTIVENESS**



**COMMUNITY  
BENEFITS**



**ECONOMIC  
BENEFITS**



**ALIGNS WITH  
STATE AND  
LOCAL POLICIES**



**PROMOTES  
EQUITY &  
CLIMATE  
JUSTICE**

GREEN COMMUNITY



**GOAL 5.1** EXPAND GREEN INFRASTRUCTURE AND IMPROVE WATER RESILIENCE

**ACTION**

5.1 A

**Create water-efficient buildings and landscapes**

Update building code to incentivize rainwater harvesting and greywater recycling. Install systems at municipal facilities. Develop resources to help residents purchase water-saving equipment, and encourage rainwater harvesting strategies. Adopt mandatory guidelines requiring a set of stormwater and greywater management features in new construction. Utilize reissuance of City’s National Pollution Discharge Elimination System (NPDES) permit starting July 2022 to lower threshold for regulation. Partner with local and global organizations to identify space and resources to enhance the natural environment and rural feel of the city.

**PRIORITY: 1**

**CO-BENEFITS:**

5.1 B

**Develop a partnership with the Regional Water Quality Control Plant to use recycled water from the plant**

Work with the Wastewater Treatment Plant to implement upgrades to increase the amount of recycled water production, add desalination and treatment to provide a drought resilient, potable water supply. Work with the RWQCP to reduce process-related emissions.

**PRIORITY: 3**

**CO-BENEFITS:**

**GOAL 5.2** SEQUESTER ALL REMAINING CARBON BY 2035

**ACTION**

5.2 A

**Increase urban tree canopy**

Set a goal of at least 10,000 new City trees by 2035. Develop a city-wide Urban Tree Master Plan.

**PRIORITY: 1**

**CO-BENEFITS:**

5.2 B

**Expand parks and natural wooded spaces**

Work with community partners to expand the number and size of parks and wooded spaces within City limits.

**PRIORITY: 2**

**CO-BENEFITS:**

5.2 C

**Pilot carbon farming opportunities**

Identify land to plant intensive urban forests following the Miyawaki Method. Explore opportunities to develop carbon farming pilots for carbon sequestration. Partner with local organizations with available greenspace.

**PRIORITY: 2**

**CO-BENEFITS:**

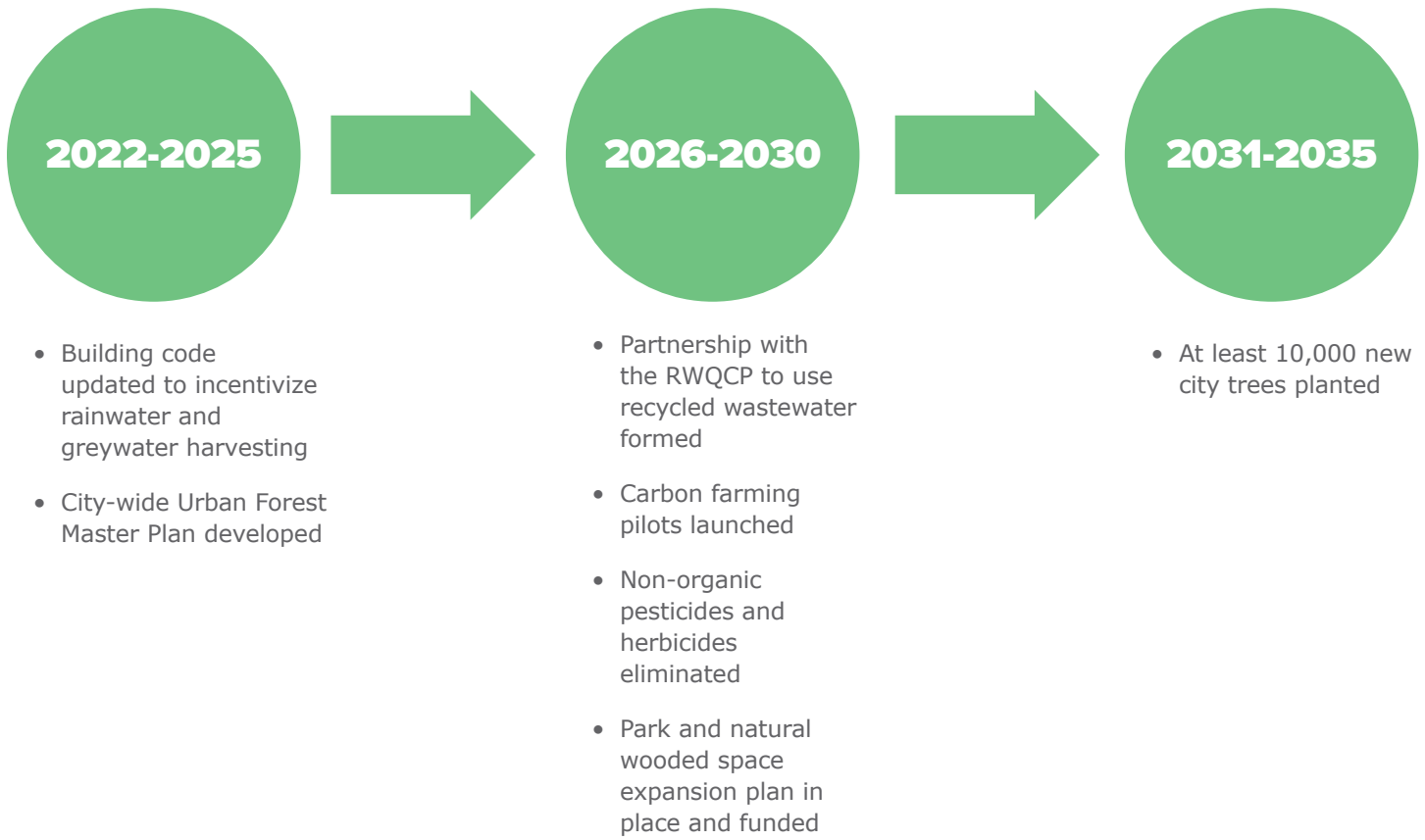
5.2 D

**Eliminate the use of non-organic pesticides and herbicides**

Ban the use of non-organic pesticides and herbicides throughout City green spaces. Develop education and incentivization programs for residents about use of alternatives to synthetic pesticides and herbicides. Develop organic community gardens, pollinator friendly planting programs and encourage bee farms in residents’ gardens through partnerships with local organizations.

**PRIORITY: 1**

**CO-BENEFITS:**



The risk of flooding and extreme heat can be reduced by first understanding which areas of Los Altos are most likely to experience flooding and/or heat. Vegetation, pavements and other conditions at ground level influence both flood and heat risk. The city can't stop the rain or the heat, but it can magnify - or damper - their impacts.

## STRATEGY 1

### Understand and Reduce Physical Risk

Reduce flood and heat risk



#### CO-BENEFITS KEY



**COST  
EFFECTIVENESS**



**COMMUNITY  
BENEFITS**



**ECONOMIC  
BENEFITS**



**ALIGNS WITH  
STATE AND  
LOCAL POLICIES**



**PROMOTES  
EQUITY &  
CLIMATE  
JUSTICE**



CLIMATE RISK







GOAL 6.1 REDUCE FLOOD RISK

ACTION

- 6.1 A** **Update city-wide flood risk assessment and capital and policy recommendations**



The hydraulic analyses that form FEMA's FIRM (Flood Insurance Rate Map) are decades old. Hire a company to perform hydraulic analyses of existing creek crossings and culverts to determine how many, if any, are undersized based on changing precipitation patterns (climate is typically based on 30-year data cycles). Replace/rebuild undersized culverts and creek crossings as needed. Work with FEMA to update the FIRMs.

**PRIORITY: 3**      **CO-BENEFITS:**    

---

- 6.1 B** **Develop and implement comprehensive riparian ecosystem restoration plan and relevant floodplain management policies**




Work with Valley Water to revitalize and restore creeks, learning from case studies like Adobe Creek Reach 5 Restoration. Restore the riparian ecosystem of creeks flowing through Los Altos, add managed ponds and dams to slow the flow of water, and increase percolation to the ground. Increase natural floodplain management through policies and education to establish "Buffer Zones" and limit new construction.

**PRIORITY: 3**      **CO-BENEFITS:**  

---

- 6.1 C** **Expand green infrastructure program to reduce impermeable surface areas and capture runoff from paved areas**

Implement porous paving in sidewalks, parking lots and driveways, and other water percolation methods like bioswales to reduce stormwater runoff to streets.








**PRIORITY: 1**      **CO-BENEFITS:**   

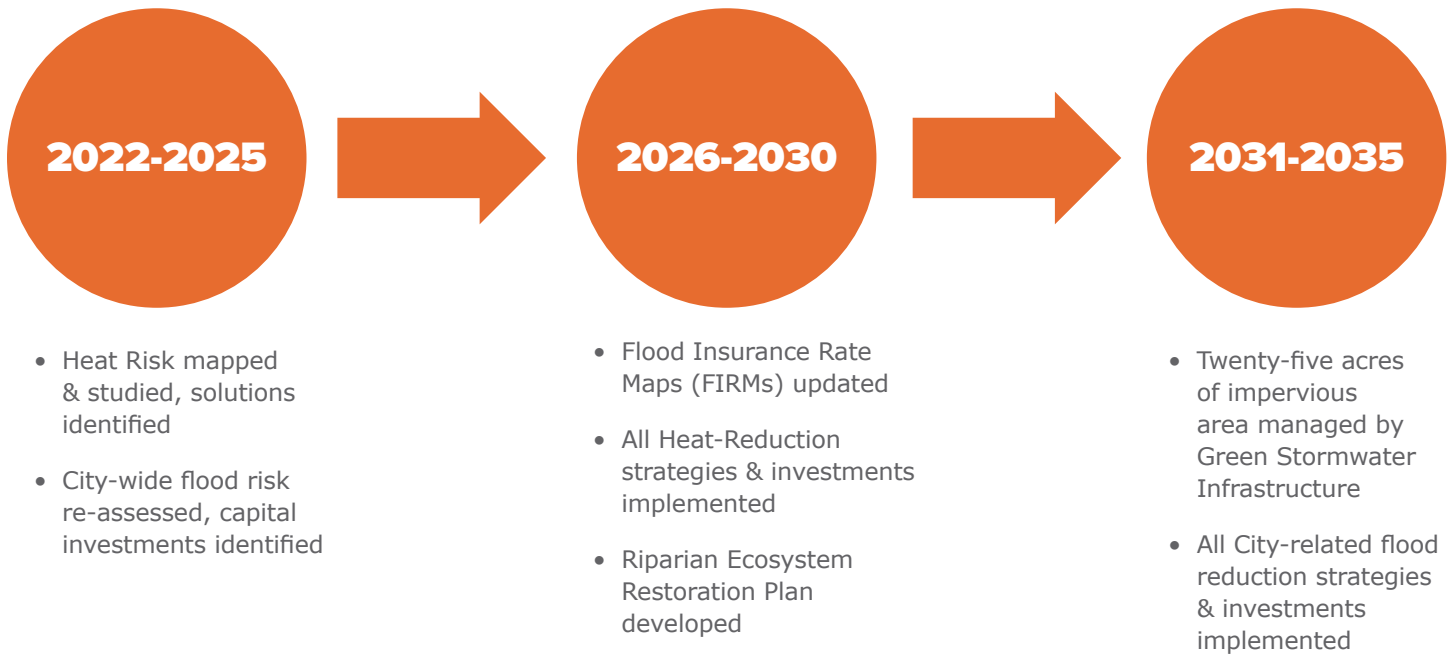
CLIMATE RISK



**GOAL 6.2** REDUCE HEAT RISK

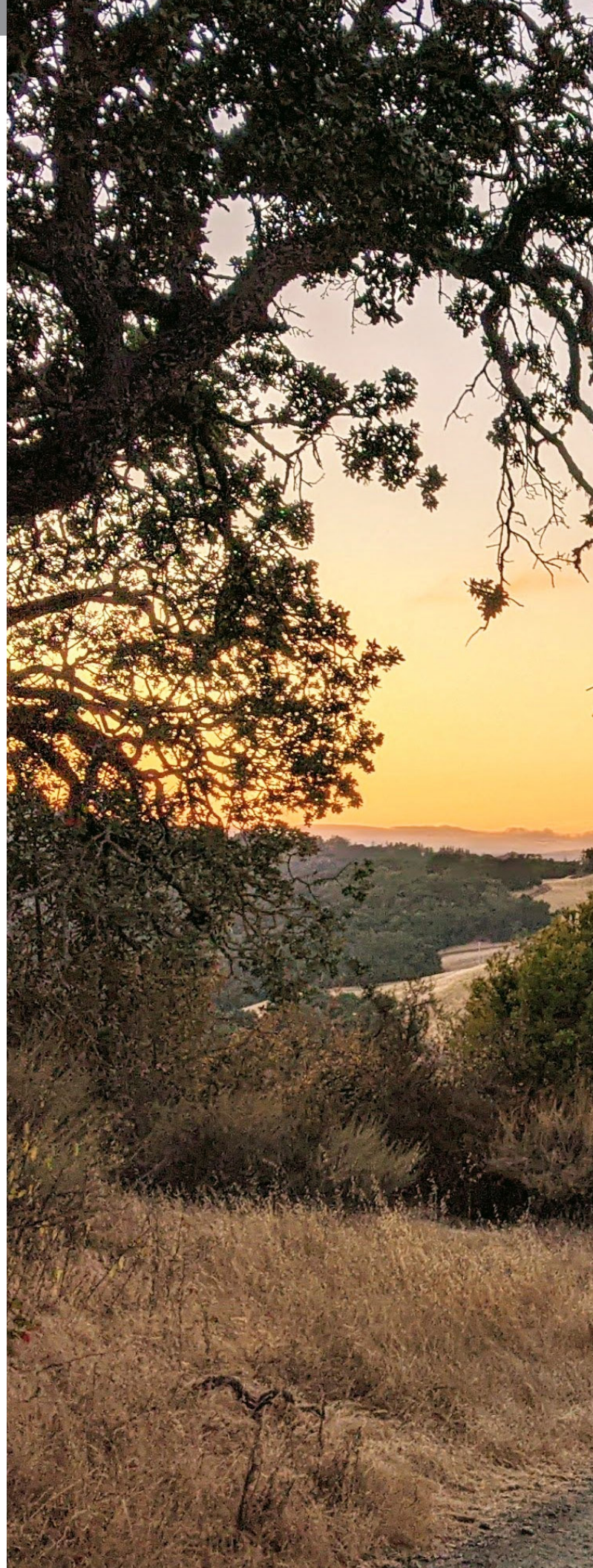
**ACTION**

- |              |   |  |
|--------------|---|--|
| <b>6.2 A</b> | <p><b>Conduct heat study/ mapping to identify areas of Urban Heat Island</b></p> <p><b>PRIORITY: 3</b></p>  | <p>Conduct heat study/mapping to identify areas of Urban Heat Island and address with capital and policy recommendations.</p> <p><b>CO-BENEFITS:</b> </p>   |
| <b>6.2 B</b> | <p><b>Enact reflectivity standards for asphalt and ground level surfaces; enact reflectivity/green roof standards for roofs</b></p> <p><b>PRIORITY: 2</b></p> | <p>Require light-colored roofs and/or a minimum specified reflectance for commercial roofs when new or at replacement. Explore and implement guidelines to resurface streets and sidewalks with heat reflective surfaces.</p> <p><b>CO-BENEFITS:</b>   </p> |
| <b>6.2 C</b> | <p><b>Promote alternative building cooling strategies; enact standards</b></p> <p><b>PRIORITY: 2</b></p>  | <p>Promote alternative cooling strategies like shade trees, green roofs, and building awnings. Determine and enact standards for new buildings</p> <p><b>CO-BENEFITS:</b>   </p>  |



# Adaptation Strategies

The adaptation strategies presented below are a range of programs, investments, studies, and policies to help Los Altos prepare for and adapt to changes in climate. Since the impacts of climate change are a combination of climate events (like heat and extreme storms) and their effect on the environment and people, some of the strategies reduce how climate events cause damaging impacts. For instance, strategies that provide more shade and means of cooling can help Los Altos adapt to increasing temperatures. Other strategies are meant to prepare Los Altos and its residents and businesses for a less certain future with climate emergencies and discomforts by creating safe resilience hubs that are protected when other pieces of infrastructure are rendered unusable.

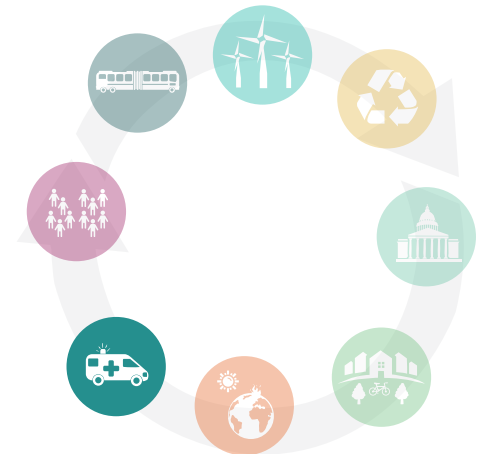


Los Altos already prepares for earthquakes and other emergency situations. By integrating growing climate hazards into its planning, the City can be prepared for these new emergencies.

## STRATEGY 1

### Integrate Adaptation Into Emergency Preparedness and Response

Ensure public safety during extreme heat, wildfire, and unhealthy air events



#### CO-BENEFITS KEY



**COST  
EFFECTIVENESS**



**COMMUNITY  
BENEFITS**



**ECONOMIC  
BENEFITS**



**ALIGNS WITH  
STATE AND  
LOCAL POLICIES**



**PROMOTES  
EQUITY &  
CLIMATE  
JUSTICE**

EMERGENCY  
 MANAGEMENT



**GOAL 7.1** ENSURE SAFETY  
 DURING EXTREME  
 HEAT

**ACTION**

**7.1 A**

**Develop temperature/heat safety protocols for outdoor work; determine education and enforcement mechanisms**

Adjust construction policies to allow extended work hours (earlier or later than usual) to avoid peak daytime heat. Adjust/extend construction hours in Ordinance 6.16 Noise Control, Section 70 Prohibited Acts during heat waves to avoid peak daytime heat. Work with community groups and residents to determine best methods of outreach and communication with outdoor workers. Educate employers and workers about existing worker rights and protections and ways to protect outdoor workers from the effects of extreme heat.

**PRIORITY: 2**

**CO-BENEFITS:**   

**7.1 B**

**Adjust/extend park and public facility hours during heat waves**

Adjust park and facility hours to discourage active recreation during peak periods and extend open hours to early morning/late evening. Develop community cooling centers at City and non-City sites. Ensure temporary shade structures are provided for community events.

**PRIORITY: 1**

**CO-BENEFITS:**  

**7.1 C**

**Expand public drinking fountains/refillable water stations**

Locate at bus stops, Downtown shopping areas, trailheads, community centers, and sport courts/fields.

**PRIORITY: 2**

**CO-BENEFITS:** 

EMERGENCY  
MANAGEMENT



**GOAL 7.2** ENSURE SAFETY DURING WILDFIRES AND UNHEALTHY AIR EVENTS

**ACTION**

**7.2 A**

**Update wildfire warning and evacuation protocols**

**PRIORITY: 1**

Ensure existing alert systems and safety measures are updated to address increasing climate risk and vulnerable, not easily mobile populations.

**CO-BENEFITS:**  

**7.2B**

**Develop an early warning system for air quality alerts**

**PRIORITY: 2**

Partner with regional agencies to make wildfire and air quality prediction data widely used and accessible to all, including through an early warning system. If not feasible, develop Los Altos-specific warning system based on available and accessible data.

**CO-BENEFITS:**  

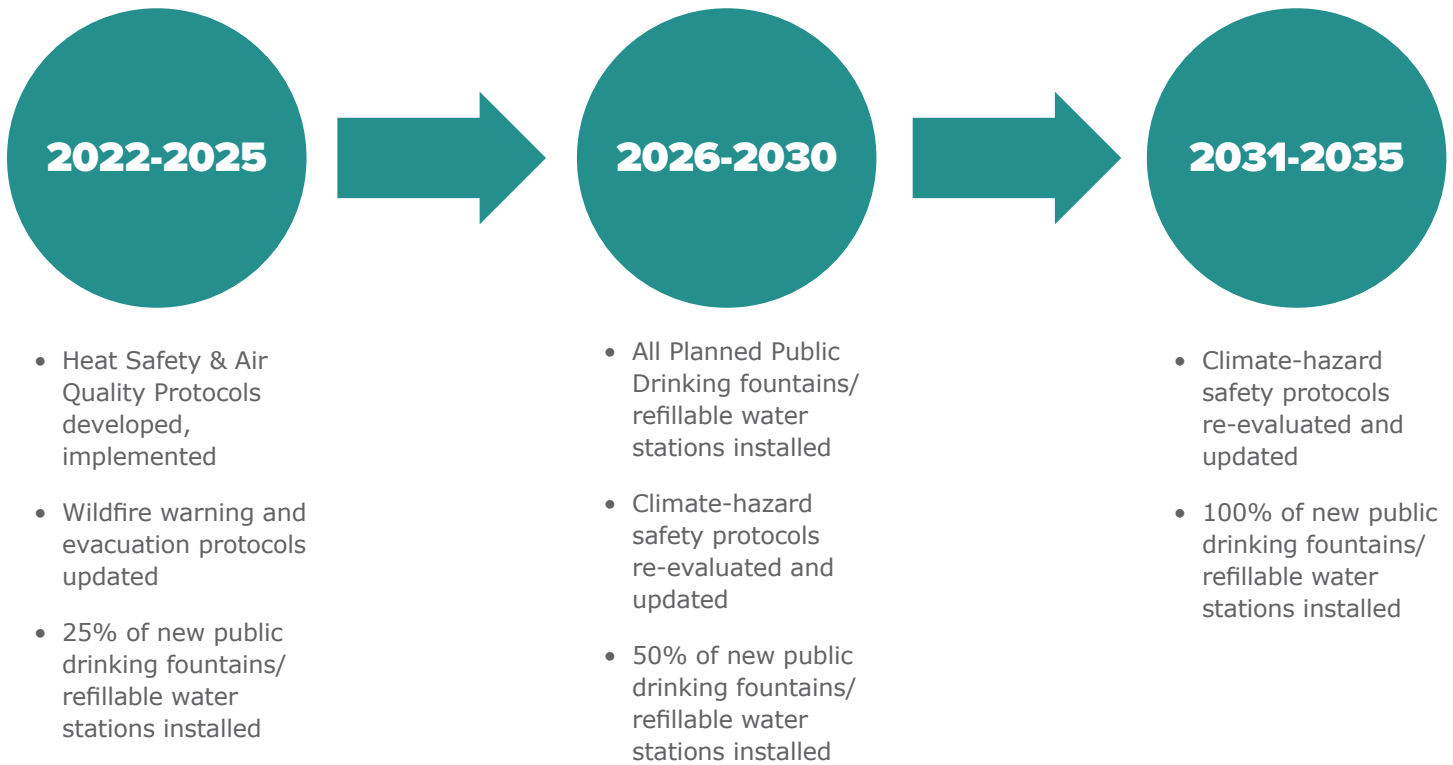
**7.2C**

**Ensure high-air-quality indoor spaces and purchase and distribute N-95 masks to vulnerable outdoor populations**

**PRIORITY: 1**

Two-pronged strategy to retrofit and/or install air filtration systems on resilience hubs, schools, and other facilities. Separately, provide face masks to filter air for outdoor workers and other vulnerable populations who need to be outdoors before and during bad-air-quality days.

**CO-BENEFITS:**  





# ATTACHMENT 1 FOCUS AREA 8 RESILIENT COMMUNITY

Like changes with emergency preparedness, Los Altos needs to find new ways to communicate with and ensure the comfort and safety of its residents. Since not every home, business, and government building

can be made completely safe and operational during extreme weather, Los Altos needs to create or enhance the capacity of existing buildings to shelter groups of residents.

## STRATEGY 1 Educate and Protect Residents

Increase public health and resilience



### CO-BENEFITS KEY



**COST  
EFFECTIVENESS**



**COMMUNITY  
BENEFITS**



**ECONOMIC  
BENEFITS**



**ALIGNS WITH  
STATE AND  
LOCAL POLICIES**



**PROMOTES  
EQUITY &  
CLIMATE  
JUSTICE**

RESILIENT COMMUNITY



**GOAL 8.1** ESTABLISH RESILIENCE HUBS

8.1 A

**ACTION**

**Identify, fund, and prepare existing and new public facilities to serve as resilience hubs**

Conduct interviews with facility staff to determine their resilience to extreme heat, power outages, floods, and poor air quality. Compile and analyze to help prioritize investments and coordination. Identify suitable locations for/upgrade evacuation centers to serve as resilience hubs, safe zones, cooling centers, etc., depending on the event, with the capabilities to provide disaster assistance.

**PRIORITY: 2**

**CO-BENEFITS:**   

**GOAL 8.2** IDENTIFY AND PROTECT VULNERABLE COMMUNITY MEMBERS

8.2 A

**ACTION**

**Develop outreach to and comprehensive care strategy for vulnerable populations**

Conduct survey of and outreach to vulnerable populations (e.g. isolated seniors, outdoor workers, long-term care residents) and the people and institutions that care for them. Collaborate with community-based organizations to develop an inventory of locations with isolated seniors and develop a plan for a social support network during heat waves, bad air quality days, and other emergencies. Plan should include orders of assistance, including temporarily moving vulnerable populations to and from resilience hubs.

**PRIORITY: 2**

**CO-BENEFITS:**    

**GOAL 8.3** IMPROVE CLIMATE LITERACY AND RISK UNDERSTANDING

8.3 A

**ACTION**

**Update Community Emergency Response Training (CERT) to include growing climate hazards**

Form partnerships with neighborhood-based organizations and businesses to develop Neighborhood Resilience Hub programs and prepare residents and respond to climate change. Develop community outreach and engagement materials.

**PRIORITY: 1**

**CO-BENEFITS:**  

8.3 B

**Launch a 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.

**PRIORITY: 2**

**CO-BENEFITS:**  



# Priority Actions by Focus Area

## TRANSPORTATION

- **1.1 B** Create a pedestrian-friendly Downtown and other community and commercial spaces throughout the city
- **1.1 C** Develop and implement a new Parking Management Plan that supports strategic VMT reduction
- **1.2 A** Support Transit-Oriented Development
- **1.2 B** Encourage Live Near Work incentives
- **1.2 C** Promote Work From Home policies and infrastructure
- **1.3 A** Develop an electric shuttle program as an alternative to SOV travel
- **1.4 B** Actively promote EV adoption and require EV-only parking
- **1.5 C** Expand the current Electric Vehicle charging and pre-wiring requirements in future Reach Code updates
- **1.6 A** Phase out off-road fossil fuel engines such as landscaping equipment

## ENERGY

- **2.1 A** Support third party residential and commercial energy audits
- **2.1 B** Increase residential and commercial energy efficiency
- **2.2 A** Adopt evolving Reach Codes and expand to include large additions and major remodels
- **2.3 A** Accelerate residential HVAC replacements
- **2.3 B** Accelerate residential water heater replacements
- **2.3 C** Accelerate commercial HVAC replacements
- **2.3 D** Accelerate commercial water heater replacements
- **2.5 B** Adopt Net Zero Building requirements for new construction by 2030

## RESOURCE CONSERVATION

- **3.1 A** Increase the landfill diversion rate
- **3.1 B** Eliminate non-essential single-use plastics
- **3.1 C** Reduce waste from demolition, construction and building materials
- **3.2 A** Increase community-wide water efficiency

## MUNICIPAL OPERATIONS

- **4.2 A** Build new City buildings to Net Zero standards
- **4.3 A** Develop a phase-out schedule to replace all City-owned fleet vehicles with electric vehicles
- **4.4 B** Develop Work From Home and flexible schedule policies
- **4.5 A** Adopt a zero-waste policy for City facilities and City-sponsored events
- **4.6 A** Account for climate change in all new City projects
- **4.6 B** Incorporate climate preparedness into City programs, operations, and maintenance protocols
- **4.6 C** Integrate CAAP goals into City projects as an order of business

## GREEN COMMUNITY

- **5.1 A** Create water-efficient buildings and landscapes
- **5.2 A** Increase urban tree canopy
- **5.2 D** Eliminate the use of non-organic pesticides and herbicides

## CLIMATE RISK

- **6.1 C** Expand green infrastructure program to reduce impermeable surface areas and capture runoff from paved areas

## EMERGENCY MANAGEMENT

- **7.1 B** Adjust/extend park and public facility hours during heat waves
- **7.2 A** Update wildfire warning and evacuation protocols
- **7.2 C** Ensure high-air-quality indoor spaces and purchase and distribute N-95 masks to vulnerable outdoor populations

## RESILIENT COMMUNITY

- **8.3 A** Update Community Emergency Response Training (CERT) to include growing climate hazards



# Implementing the CAAP

# Implementing the CAAP

## IMPLEMENTATION OVERVIEW

Implementation will be overseen by the Department of Community Development, but rely on other departments as well as NGOs, businesses, and members of the public. Implementing the plan’s strategies and actions will depend in part on the leadership of City government and the specifics of each action. Sustainability and adaptation are inherently wide

ranging and not every action can be implemented at once.

Actions geared toward municipal operations can be started immediately. Other actions like policies and regulations involve City staff time “up front,” but in the long run instead rely on the activity of the private sector. Still other actions including capital investments involve a common series of steps from project scoping, fundraising and procurement,

to planning, design, and construction. Figure 18 displays the steps and circular nature of the mainstreaming of climate investments.

Although actions may have different milestones to completion and benchmarks for success, they can all benefit from monitoring and reporting which allow implementation to be evaluated and tracked by City departments, elected officials, and the public.

## MAINSTREAMING CLIMATE INVESTMENTS

### MAINTENANCE

- Consider climate impacts when restoring and retrofitting infrastructure assets.
- Assess opportunities for resilience and risk mitigation.

### OPERATIONS

- Evaluate vulnerabilities to climate impacts including disaster events.
- Develop plan to adapt operations.

### PROCUREMENT & CONSTRUCTION

- Select climate-resilient building methods and materials.



### PLANNING & FINANCE

- Integrate climate projections into needs assessments.
- Use systems thinking to address multiple needs and maximize funding options.
- Engage vulnerable populations.
- Minimize GHG emissions from operations.

### DESIGN

- Ensure design parameters reflect adaptation to changing climate impacts.
- Evaluate and maximize multiple benefits.

Source: Adapted from Jamesine Rogers Gibson, *Built to Last Challenges and Opportunities for Climate- Smart Information in California*, Union of Concerned Scientists, November 2017.

Figure 18 Mainstreaming climate investments

# Implementing the CAAP

CONTINUED

Actions that are new capital investments and program updates and expansions will require new funding, in some cases to support new staff or hire private entities. Meanwhile, integration and interagency coordination will be needed to address climate change requiring low-cost changes to City planning, budgeting, operations, and programs. At minimum, the CAAP goals should be integrated into future iterations of the following plans:

- **Los Altos General Plan, Natural Environment and Hazards Element, and Housing Element**
- **Capital Improvements Plan**
- **Emergency Operations Center Plan/Manual**
- **Santa Clara County Hazard Mitigation Plan - Los Altos Annex**
- **Downtown Vision Plan**
- **Complete Streets Master Plan**

The CAAP will also need community support and broad-based partnerships to be effectively implemented. Stakeholder groups should be addressed across the board, from youth to our Seniors. A non-exhaustive list of stakeholders that should be considered for the process include:

- **GreenTown Los Altos**
- **Los Altos Chamber of Commerce**
- **Los Altos High School Green Team**
- **Los Altos Village Association**
- **Los Altos Mountain View Community Foundation**

In addition, public-private partnerships should be evaluated.

Businesses and those who invest in the City should understand the benefits that the actions in the CAAP could bring them. Support in terms of time and resources will be needed, and changes in lifestyle and behavior may be necessary. Not everything will necessarily be easy or work perfectly the first time, and sustained energy and perseverance will be important.

It will also be important to maintain flexibility in implementing the CAAP. As technologies, business models, and political will at various levels of government evolve, Los Altos will need to remain flexible in when and how it implements the actions in this plan. As costs and feasibility change, the City will periodically evaluate and adjust course as necessary.

Similarly, as progress towards key targets is tracked the City may need to scale up or down its efforts depending on the results observed. The City should update the CAAP in 2025 and 2030, and report every two years on greenhouse gas emissions and progress towards goals. For monitoring and evaluation of adaptation actions, the City should conduct a debrief within one year of all hazardous events such as floods, wildfires, and air pollution and adjust actions as necessary based on those findings.

Unlike mitigation, there are no universal metrics, targets, or measurement systems for adaptation. This is in part because climate mitigation has global benefits, while adaptation actions produce local benefits. It is also because there is no system to measure baseline adaptation.

Instead, Appendix G lays out when actions can be expected to be completed and describes metrics for measuring progress.

## BUDGET

Costs or cost ranges were estimated for the implementation of each action and can be found in Tables 6-8. Based on these estimates, a total of approximately \$14,981,000 will be needed to implement all mitigation actions, including approximately \$4.1M between 2022-2025, \$5.4M between 2026-2030, and \$5.0M between 2031-2035. As quality data on adaptation actions was unavailable, cost ranges were used for adaptation and some cross-cutting actions. In addition, it's estimated that 2 new FTE will need to be added between 2022-2025, 2026-2030, and 2031-2035. Some costs will fall under other plan implementations budgets, such as those for the 2022 Complete Streets Master Plan.

The cost of inaction is much higher. In addition, investments in sustainability and clean infrastructure reduce costs for homeowners and businesses, promote growth in local jobs and the economy, and reduce recovery costs from climate-related disasters.

A number of tools and resources are provided in the next sections below to help the City take advantage of existing funding streams. By leveraging existing and future funding streams, costs to the City, residents, and businesses can be substantially reduced.

**MITIGATION BUDGET**

Focus Area	Action #	Action	Estimated cost	Funding source(s)
Transportation	1.1 A	Fully implement the 2022 Complete Streets Master Plan by 2035 and make adjustments as needed to comply with VMT reduction objectives	n/a (costs included in CSMP implementation budget)	Caltrans U.S. DOT Calbike
	1.1 B	Create a pedestrian-friendly Downtown and other community and commercial spaces throughout the city	\$215,000	BAAQMD Caltrans
	1.1 C	Develop and implement a new Parking Management Plan that supports strategic VMT reduction	\$400,000	BAAQMD
	1.1 D	Pilot shared bike, ebike, and scooter programs, and partner with adjacent cities to improve first/last mile options	\$135,000	
	1.2 A	Support Transit-Oriented Development	\$300,000	Metropolitan Transportation Commission
	1.2 B	Encourage Live Near Work incentives	\$380,000	
	1.2 C	Promote Work From Home policies and infrastructure	\$110,000	
	1.3 A	Develop an electric shuttle program as an alternative to SOV travel	\$250,000	BAAQMD Caltrans Caltrans
	1.3 B	Expand transit service, connectivity, and transit stop amenities	\$140,000	Metropolitan Transportation Commission
	1.3 C	Require commercial Transportation Demand Management programs	\$650,000	
	1.3 D	Work with Los Altos School Districts to reduce VMT	\$200,000	
	1.3 E	Develop and promote community carshare and carpool programs	\$5,000	
	1.4 A	Increase education & awareness of available EV resources and incentive programs	\$15,000	
	1.4 B	Actively promote EV adoption and require EV-only parking	\$160,000	Silicon Valley Clean Energy (technical assistance) CARB U.S. DOT
	1.5 A	Increase the number of available Level 2 EV charging stations in workplace, commercial and multifamily areas	\$140,000	CA Energy Commission U.S. DOE
	1.5 B	Create a citywide network of DC Fast Charging (DCFC) stations	\$1,350,000	CA Energy Commission U.S. DOE
	1.5 C	Double the current Electric Vehicle charging and pre-wiring requirements in future Reach Code updates	\$10,000	
	1.5 D	Identify grants and incentives to install residential EV charging including DCFC, solar EV charging, and paired EV charging + battery storage systems	\$50,000	Silicon Valley Clean Energy (informational resource)
	1.6 A	Phase out off-road fossil fuel engines such as landscaping and construction equipment	\$150,000	Caltrans

Table 6 Mitigation Budget



**MITIGATION BUDGET TABLE CONTINUED**

Focus Area	Action #	Action	Estimated cost	Funding source(s)
Energy	2.1 A	Support 3rd party residential and commercial energy audits	\$900,00	PG&E PG&E BayREN Santa Clara County BRACE Grants U.S. Dept. of Energy CA Public Utilities Commission
	2.1 B	Increase residential and commercial energy efficiency	\$63,000	PG&E PG&E BayREN Santa Clara County BRACE Grants U.S. Dept. of Energy CA Public Utilities Commission
	2.2 A	Adopt evolving Reach Codes and expand to include large additions and major remodels	\$10,000	Silicon Valley Clean Energy BayREN
	2.3 A	Accelerate residential HVAC replacements	\$305,000	EPA CA Energy Commission
	2.3 B	Accelerate residential water heater replacements	\$305,000	BayREN
	2.3 C	Accelerate commercial HVAC replacements	\$305,000	BayREN
	2.3 D	Accelerate commercial water heater replacements	\$305,000	BayREN
	2.4 A	Establish a fee or penalty on the use of methane gas	\$130,000	Silicon Valley Clean Energy CA Energy Commission
	2.5 A	Increase community solar capacity	\$65,000	Silicon Valley Clean Energy CA Energy Commission
	2.5 B	Adopt Net Zero Building requirements for new construction by 2030	\$65,000	
Resource Conservation	3.1 A	Increase the landfill diversion rate	\$20,000	
	3.1 B	Eliminate non-essential single-use plastics	\$10,000	
	3.1 C	Reduce waste from demolition, construction and building materials	\$63,000	
	3.2 A	Increase communitywide water efficiency	\$100,000	CalWater
	3.3 A	Promote sustainable food choices	\$130,000	
	3.3 B	Encourage responsible goods & services consumption	\$130,000	
Municipal Operations	4.1 A	Audit appropriate City facilities and conduct comprehensive energy efficiency upgrades	\$600,000	
	4.2 A	Build new City buildings to Net Zero standards	\$10,000	California Energy Commission
	4.2 B	Develop battery storage options and evaluate microgrids for cost savings and resilience	\$2,200,000	
	4.3 A	Develop a phase-out schedule to replace all City-owned fleet vehicles with electric vehicles	\$700,000	BAAQMD
	4.4 A	Improve City staff use of commute alternatives to single-occupant vehicles	\$75,000	
	4.4 B	Expand Work From Home and flexible schedule policies	\$5,000	
	4.5 A	Adopt a zero-waste policy for City facilities and City-sponsored events	\$5,000	
	4.5 B	Continue to allow virtual participation in public meetings	<\$50k	

Table 6 Mitigation Budget (continued from page 80)

**CROSS-CUTTING BUDGET**

Focus Area	Action #	Action	Estimated cost	Funding source(s)
Municipal Operations	4.6 A	Account for climate change in all new City projects	<\$50k	
	4.6 B	Incorporate climate preparedness into City programs, operations, and maintenance protocols	<\$50k	
	4.6 C	Integrate CAAP goals into City projects as an order of business	<\$50k	
Green Community	5.1 A	Create water-efficient buildings and landscapes	\$65,000	Water Resources Control Board Valley Water
	5.1 B	Develop a partnership with the Regional Water Quality Control Plant to use recycled water from the plant	\$50-\$500k	Natural Resources Agency
	5.2 A	Increase urban tree canopy	\$3,650,000	CA Natural Resources Agency CAL FIRE CA ReLeaf
	5.2 B	Expand parks and natural wooded spaces	>\$500k	CA Natural Resources Agency CAL FIRE CA ReLeaf
	5.2 C	Pilot carbon farming opportunities	\$100,000	
	5.2 D	Eliminate the use of non-organic pesticides and herbicides	\$5,000	
	Climate Risk	6.1 A	Update city-wide flood risk assessment and capital and policy recommendations	Cost for analysis likely to be \$50,000 - \$500,000. Design/construction order of magnitude more.
6.1 B		Develop and implement comprehensive riparian ecosystem restoration plan and relevant floodplain management policies	\$50-\$500k	Department of Water Resources Wildlife Conservation Board
6.1 C		Expand green infrastructure program to reduce impermeable surface areas and capture runoff from paved areas	\$1.5 M to construct systems to manage 5 acres of runoff/5 year period, beyond what is already funded	Natural Resources Agency Wildlife Conservation Board Water Resources Control Board
6.2 A		Conduct heat study/mapping to identify areas of Urban Heat Island	<\$50k	Office of Planning and Research
6.2 B		Enact reflectivity standards for asphalt and ground level surfaces; enact reflectivity/green roof standards for roofs	<\$50k	California Transportation Commission
6.2 C		Promote alternative building cooling strategies; enact standards	<\$50k	California Energy Commission

Table 7 Cross-Cutting Budget

**ADAPTATION BUDGET**

Focus Area	Action #	Action	Estimated cost	Funding source(s)
Emergency Management	7.1 A	Develop temperature/heat safety protocols for outdoor work. Determine education and enforcement mechanisms.	\$50-\$500k	Office of Planning and Research
	7.1 B	Adjust/extend park and public facility hours during heat waves	<\$50k	
	7.1 C	Expand public drinking fountains/refillable water stations	\$50-\$500k	
	7.2 A	Update wildfire warning and evacuation protocols	\$50-\$500k	Public Information Officer
	7.2 B	Develop an early warning system for air quality alerts	\$50-\$500k	Office of Planning and Research
	7.2 C	Ensure high-air-quality indoor spaces and purchase and distribute N-95 masks to vulnerable outdoor populations	\$50-\$500k	
Resilient Community	8.1 A	Identify, fund, and prepare existing and new public facilities to serve as resilience hubs	\$50-\$500k	Office of Planning and Research
	8.2 A	Develop outreach to and comprehensive care strategy for vulnerable populations.	\$50-\$500k	Office of Planning and Research
	8.3 A	Update Community Emergency Response Training (CERT) to include growing climate hazards	<\$50k	Office of Planning and Research
	8.3 B	Launch a Community Climate Action Grant	<\$50k	

**Table 8** Adaptation Budget

# Implementing the CAAP

CONTINUED

## IMPLEMENTATION TOOLS

The City has several tools at its disposal to help implement the CAAP. Some are less costly and take longer to develop, yet provide long-term benefits in the form of partnerships and engagement. Others, like innovative funding or financing options, are more costly and can provide immediate impact. The City will consider the following tools in CAAP implementation:

### Form Relationships, then

**Alliances:** By developing relationships with a broad base of community partners, the City can reduce its risk and help gain public support and trust. The relationships can be built into alliances that can be used as testing grounds for pilot projects. The City will consider developing relationships with organizations such as:

- ▶▶▶ **The David & Lucile Packard Foundation**
- ▶▶▶ **Stanford Healthcare**
- ▶▶▶ **Silicon Valley Clean Energy**
- ▶▶▶ **PG&E**
- ▶▶▶ **Santa Clara Valley Transportation Authority**
- ▶▶▶ **Santa Clara County**
- ▶▶▶ **Valley Water**
- ▶▶▶ **Acterra**
- ▶▶▶ **Metropolitan Transportation Commission**
- ▶▶▶ **Association of Bay Area Governments**
- ▶▶▶ **Bay Area Air Quality Management District**
- ▶▶▶ **Caltrans**

- ▶▶▶ **Resilient by Design: Bay Area Challenge**
- ▶▶▶ **Silicon Valley Bicycle Coalition**
- ▶▶▶ **Silicon Valley 2.0**
- ▶▶▶ **Manzanita Works**
- ▶▶▶ **Joint Venture Silicon Valley**
- ▶▶▶ **Neighboring Jurisdictions**
- ▶▶▶ **Existing** relationships including among all the stakeholders who participated in the plan development

**Develop Innovative Pilots:** The City can work independently or with community partners to launch pilots for new or unproven technologies and practices. These opportunities can be used for trial-and-error and information-gathering before scaling up programs, as well as increasing public awareness and engagement. A typical pilot schedule includes:

- ▶▶▶ **YEAR 1: Launch pilot and collect stakeholder feedback**
- ▶▶▶ **YEAR 2: Roll out incentives that resonated with stakeholders**
- ▶▶▶ **YEAR 3: Report out on results of pilot (case study) and identify the 2nd level of implementation**

### Increase Public Engagement and Marketing:

Working with City staff or a consultant, increase public awareness and participation in CAAP efforts and pilot programs. The following steps can be used to report progress and promote successes:

- ▶▶▶ **Capture data-** collect data on energy savings, water savings, and other metrics from pilot projects
- ▶▶▶ **Evaluate data in-house-** calculate energy, water, cost savings, etc. and conduct financial analysis to determine cost-effectiveness
- ▶▶▶ **Internalize data-** understand data in terms of broader CAAP goals
- ▶▶▶ **Display data-** share data with the public on City website and other channels

### Explore Gamification

**Opportunities:** Simple and inexpensive apps can be used to create fun and engaging activities that reduce greenhouse gas emissions. The following types of contests can be used to drive engagement:

- ▶▶▶ **Neighborhood vs Neighborhood**
- ▶▶▶ **City vs City**
- ▶▶▶ **Apps to record commitments and spark action**

**City-Funded Incentives:** Funding targeted programs is a good way for the City to demonstrate commitment and help spur action. The City will look for opportunities to fund programs or supplement funding available through other sources.

**City-Led Innovative Financing:** The City can explore innovative financing opportunities for the community such as Green Revolving Funds or Climate Impact Funds to create a dedicated funding stream for CAAP actions.

# Implementing the CAAP

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## MONITORING AND REPORTING

Monitoring the progress towards goals and reporting on results is a critical step in implementing the CAAP. The approach to monitoring climate mitigation and adaptation actions are different but both involve collecting information and data, analyzing results, and sharing those results with internal and public stakeholders.

## MITIGATION MONITORING AND REPORTING

There are two approaches to monitoring and reporting of mitigation actions that the City will take. The first is a bottom-up approach, in which individual actions will be tracked for performance. This approach can help answer questions related to whether an action had its intended impact, whether it did so in a cost-effective manner, and other lessons learned from its implementation. This view is highly useful to further inform decision making on where to invest in future emissions reduction strategies.

However, within the limited view of an individual action or group of actions, changes occurring at the citywide scale or some other higher level may obscure the impact of those actions when looking at the aggregate change in emissions. A top-down approach tracks the City's progress towards its high-level targets like energy use and vehicle miles traveled reductions. This is important for understanding if we are on track to meet our goals, or if

we need to consider adjusting any of the programs. Regular performance of emissions re-inventories are a necessary part of performance monitoring to provide the top down perspective.

Taken together these two approaches will inform the scale of the effort required to continue upon the reduction pathways required to meet our targets, as well as the type of actions that are proving to be the most effective.

To support monitoring activities, the City will utilize the ClearPath platform developed by ICLIE. Monitoring records will be created to record information about the implementation and impact of actions, and reports designed to utilize the data contained in those records will reveal the individual achievements of actions and overall progress.

ClearPath, which contains the City's 2005 and 2018 inventory records and was used to forecast emissions and develop the CAAP actions, will be used to produce a series of reports for the purposes of implementation and monitoring. Reports available in ClearPath include implementation details, status, progress, and efficacy, as well as reports on projected-to-actual comparisons and indicator monitoring. The City will utilize these reports to track and communicate progress, both internally and to the broader community.

## ADAPTATION MONITORING AND REPORTING

Since there are no overarching adaptation targets like greenhouse gas emissions, monitoring adaptation as a whole requires more qualitative assessments. The number of actions taken can be measured and metrics for each action serve as a useful baseline, but the degree to which Los Altos has or has not adapted cannot be measured quantitatively. As an example, the city will identify sites for installation of water fountains/refilling stations, track progress in installing the water fountains, and track their use. To track their use requires purchasing or upgrading water fountains with, at minimum, metering that is logged daily. Such data could be compared against extreme heat days, at minimum. A more sophisticated study would require surveys or interviews to determine how the water fountains help populations at risk from heat exhaustion. For instance, if vulnerable populations do not use the water fountains ever, and other populations use the fountains at times, but never during high heat events, then water fountains are not a successful strategy for ensuring safety during extreme heat.

For this reason, the Environmental Commission will receive updates from responsible parties implementing adaptation strategies and discuss how progress is made. If actions have not been taken, the Commission will discuss the reasons for shortcomings. Similarly, the Environmental Commission needs to

# Implementing the CAAP CONTINUED

determine whether actions that are successful by their internal metrics actually achieve the true goal of adaptation.

Additionally, annual meetings will incorporate information about the occurrence, impacts, and responses to hazardous climate risks like droughts, wildfires, and heat waves. The City and Environmental Commission should be able to amend the CAAP during its life cycle.

One of the most difficult aspects of climate change is that adaptation will likely not be completed in our lifetimes, but instead be an ongoing process. As such, the plan as a document and a guide for action needs to be re-evaluated and adjusted

in light of climate events and lessons learned from implementation.

### ALIGNMENT WITH FUNDING RESOURCES

New costs associated with the implementation of this plan are expected to come in the form of capital investments, equipment, staff time, and professional services contracts. The funding sources listed in this section are intended to act as starting points to help consider financing options for actions.

The California legislature has passed significant new funding for climate action signed by the Governor. The requirements for disbursement of these funds have not yet been created, however the City will work with State

agencies and local legislators to prepare for many grant programs. At the time of this writing, infrastructure and climate spending at the Federal level has not been decided. The City must also consider funding projects itself if outside funding can't be secured. It's important to note that, although not quantified in this plan, the costs of inaction on climate change can be substantial and often far outweigh the costs of mitigation and adaptation. An analysis by the National Institute of Building Sciences found that for every \$1 spent on mitigating natural hazards, \$6 is saved.

Figure 19 shows the relationship between different funding sources and stakeholder groups.

## FUNDING OPTIONS ANALYSIS: BENEFICIARIES AND LEVERAGE

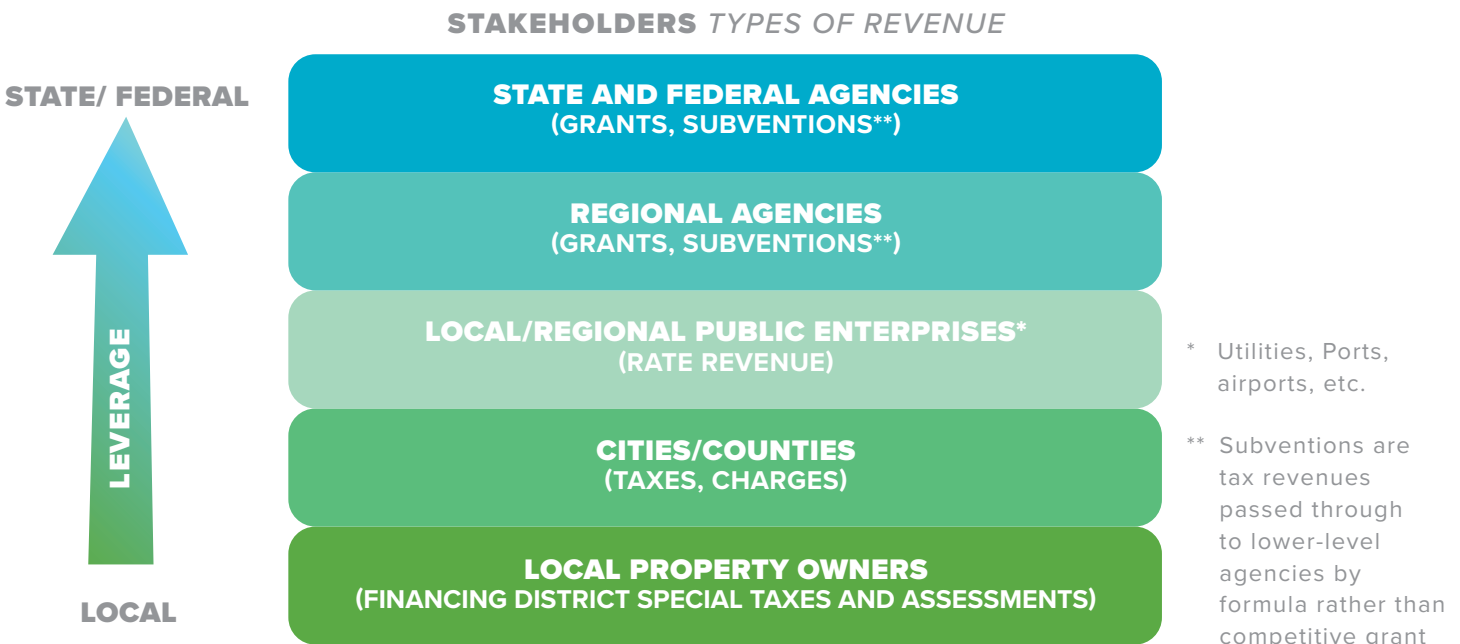


Figure 19 Funding options hierarchy

# Implementing the CAAP

CONTINUED

## FUNDING IMPLEMENTATION

Funding is available and can be obtained from local taxes and fees, utility fees, and regional, State, and federal grants. Table 9 describes several sources of funding that Los Altos has the prerogative to create or adjust.

### LOCAL FUNDING MECHANISMS

Type	Examples	Description
Financing District	Special Benefit-Based Assessments	Levied on property owners in a neighborhood, business area, or defined geographic area in order to provide a benefit which that area receives.
	Community Services/Facilities District Special Taxes	
	Property Tax Increment	
Tax	Property Tax	Existing City tax on real estate, based on value of land and improvements
	Utility User Tax	Cities and counties may impose UUTs on users' consumption of certain utility services such as utility delivered methane gas
Fees	Parking Fee	User fees that can generate ongoing revenue, but may disincentive activities. For instance, a congestion pricing program set up to reduce driving may have a different structure than a program meant to raise funds. Enterprise funds require voter approval.
	Enterprise Fund	
	Development Fee	
	Carbon Development Impact Fee	
	Congestion Pricing	
Bond		Bond measures are exclusively for capital improvements and require financing.

Table 9 Local funding mechanisms

# ATTACHMENT 1 Implementing the CAAP CONTINUED

## MITIGATION FUNDING SOURCES

Table 10 lists the primary funding sources for greenhouse gas mitigation actions. They range from utilities to regional organizations, to State and national opportunities. Each funding source will have specific

types of actions it can be used for, and consideration will be given to each when implementing actions. In addition, the City will continuously monitor these and new funding streams to assist in CAAP implementation.

### FUNDING SOURCES

Geography/ Agency	Entity	Program(s)	Funding Amount/Description
Utility	Silicon Valley Clean Energy	<a href="#">eHub</a>	Informational resource for home and vehicle electrification
Utility	Silicon Valley Clean Energy	<a href="#">FutureFit Program</a>	\$1,000-2,000 for heat pump water heaters
Utility	Silicon Valley Clean Energy	<a href="#">FutureFit Assist</a>	Technical assistance for EVSE for commercial and multifamily property owners
Utility	Silicon Valley Clean Energy	<a href="#">Lights On Silicon Valley</a>	\$500 rebates for solar+storage
Utility	PG&E	<a href="#">Residential Rebates (thermostats, water heaters, etc.)</a>	\$50-\$1,000 rebates for home energy efficiency and resilience
Utility	PG&E	<a href="#">Business Rebates (lighting, refrigeration, energy efficiency, etc.)</a>	Rebate programs for various types of businesses
Utility	CalWater	<a href="#">Residential and Commercial water efficiency rebate programs</a>	\$5-\$300 rebates for water efficient fixtures and appliances
County	Santa Clara County	<a href="#">BRACE Grants</a>	Funding of up to \$1.5 million for resilience building project activities from September 2021 through August 2026.
Bay Area	BayREN	<a href="#">Home Energy Advisor program</a>	Free energy efficiency resources for homes, commercial, and multifamily properties
Bay Area	BayREN	<a href="#">Single-family and multi-family electrification programs</a>	Funding varies depending on programs
Bay Area	BayREN	<a href="#">Water + Energy Efficiency program</a>	Varies depending on fixture/appliance

Table 10 Mitigation funding sources



# ATTACHMENT 1 Implementing the CAAP CONTINUED

## FUNDING SOURCES CONTINUED FROM PAGE 88

Geography/ Agency	Entity	Program(s)	Funding Amount/Description
Bay Area	Santa Clara Valley Water District	<a href="#">Landscape Rebate Program</a>	\$3,000 for residential sites, \$5,000 for commercial sites
Bay Area	Santa Clara Valley Water District	<a href="#">Greywater Rebate Program</a>	\$200-\$400 for Laundry to landscape program
Bay Area	Santa Clara Valley Transportation Authority (VTA)	<a href="#">Transit Oriented Development Program</a>	Partnership program
Bay Area	Metropolitan Transportation Commission	<a href="#">Transportation project grants</a>	Multiple programs
Bay Area	BAAQMD	<a href="#">Vehicle Trip Reduction Grant Program</a>	\$2M for FYE 2022 cycle
Bay Area	BAAQMD	<a href="#">Carl Moyer Program</a>	\$40 million-plus for on-road fleet vehicles, school buses, and off-road vehicles
State of California	<a href="#">California Climate Investments</a>	Clean mobility, urban greening, and community preparedness grants	Funding varies by program
State of California	CA Public Utilities Commission	<a href="#">Energy Upgrade California</a>	Energy efficiency funding and resources
State of California	California Energy Commission	<a href="#">California Electric Vehicle Infrastructure Project (CALeVIP)</a>	Funding varies by product
State of California	California Energy Commission	Energy Conservation Assistance Act <a href="#">Low Interest Loans</a>	Funding for Energy Efficiency and Energy Generation projects
State of California	California Energy Commission	<a href="#">CEC grants</a>	List of current grant funding opportunities
State of California	Caltrans	<a href="#">Active Transportation Program</a>	Alternative transportation, bicycle, and Safe Routes to School grants

Table 10 Mitigation funding sources (continued from page 88)

# Implementing the CAAP CONTINUED

## FUNDING SOURCES CONTINUED FROM PAGE 89

Geography/Agency	Entity	Program(s)	Funding Amount/Description
State of California	Caltrans	<a href="#">Sustainable Transportation Planning Grants</a>	\$34M statewide for FY 22/23
State of California	Calbike (nonprofit)	<a href="#">Funding Sources list</a>	Various funding sources
State of California	CA Air Resources Board	<a href="#">Clean Vehicle Rebate Project</a>	Up to \$7,000 rebate for purchase or lease of new EV
State of California	CAL FIRE	<a href="#">Urban and Community Forestry Grant Program</a>	Grant opportunities
State of California	California ReLeaf	<a href="#">urban forestry grant programs</a>	Grant opportunities
Federal	U.S. DOE	<a href="#">Property Assessed Clean Energy (PACE) Financing</a>	Funding varies by program
Federal	U.S. DOE	<a href="#">Electric Vehicle Supply Equipment Loan and Rebate Program (small businesses)</a>	Rebate of 50% of the loan loss reserve amount
Federal	EPA	<a href="#">Solar Energy System tax credits</a>	Tax credits for solar water heaters and PV systems
Federal	U.S. Dept. of Transportation	<a href="#">Surface Transportation Block Grant Program</a>	Funding for projects on public road, pedestrian and bicycle infrastructure, and transit capital projects
Federal	U.S. Dept. of Transportation	<a href="#">RAISE grants</a>	Grants for transportation projects (\$1BN for FY 21)

Table 10 Mitigation funding sources (continued from page 89)

# Implementing the CAAP CONTINUED

## ADAPTATION FUNDING SOURCES

Table 11 contains sources of grants from government sources that fund activities that align with adaptation programs. Grants have the advantages of being “free cash,” but the disadvantages are that they are typically competitive, have funding criteria that may not align exactly with the desired adaptation action, and reporting requirements. Grants are typically one-time or multi-year and not available for long-term

actions. In California, many State grants are tied to specific ballot propositions (like Proposition 1, Proposition 68) and annual Budget Allocations. In September, 2021, Governor Newsom signed a budget for California Comeback Plan’s with over \$15 billion in climate change-related funding, including \$3.69 billion for climate resilience. Much of the funding will be for grants as part of programs run by state agencies and intended for disbursements to local governments for planning

studies and one-time capital investments. These sources can be substantial.

Additional funding resources in the form of searchable databases are also available to the City, including the Cool California (CARB) Funding Wizard and the California Grants Portal offered by the State of California. These databases will be monitored regularly to take advantage of all available funding opportunities.

### FUNDING SOURCES

Geography/ Agency	Entity	Program	2021-22 Funding (in millions)
Bay Area	San Francisco Bay Restoration Authority	<a href="#">Competitive Grant Round and Community Grants Program</a>	\$10-25
State of California	California Coastal Conservancy	<a href="#">State Coastal Conservancy Grant Program</a>	250*
State of California	Cal Fire	<a href="#">Urban and Community Forestry</a>	\$10
State of California	California Ocean Protection Council	<a href="#">Rotating Grant Program</a>	

Table 11 Adaptation funding sources

# ATTACHMENT 1 Implementing the CAAP CONTINUED

## FUNDING SOURCES CONTINUED FROM PAGE 91

Geography/ Agency	Entity	Program	2021-22 Funding (in millions)
State of California	California Transportation Commission	Transportation Improvement Fees (Highway Users Tax Account (0062))	\$238
State of California	Department of Parks & Recreation	<a href="#">Land and Water Conservation Fund Grants</a>	
State of California	Department of Water Resources	Habitat Restoration	\$125*
State of California	Department of Water Resources	Urban Water Management Grants	\$500
State of California	Strategic Growth Council	Transformative Climate Communities	\$115
State of California	Strategic Growth Council	Regional Climate Collaboratives	\$10
State of California	Natural Resources Agency	Water Resilience Projects	\$165
State of California	Natural Resources Agency	Urban Greening Program	\$50
State of California	Office of Planning and Research	Climate Adaptation & Resilience Planning Grants	\$10
State of California	Office of Planning and Research	Regional Climate Resilience	\$25
State of California	Water Resources Control Board	<a href="#">Division of Financial Assistance</a>	

Table 11 Adaptation funding sources (continued from page 91)

# Implementing the CAAP CONTINUED

## A NOTE ON CONSUMPTION-BASED INVENTORIES

A Consumption-Based Inventory is a method used to calculate emissions from the goods and services we consume. These sources can include land management, the production of buildings, vehicles, food, and

consumer goods and services. Figure 20 describes the relationship between emissions included in Consumption-Based and Sector-Based inventories. According to ICLEI, 45 percent of global emissions are directly linked to our lifestyles. As an affluent community, we in

Los Altos have a responsibility to be aware of the impact our actions have and consider changing our habits based on that impact.

Conducting a Consumption-Based Inventory helps provide a complete picture of emission caused not only

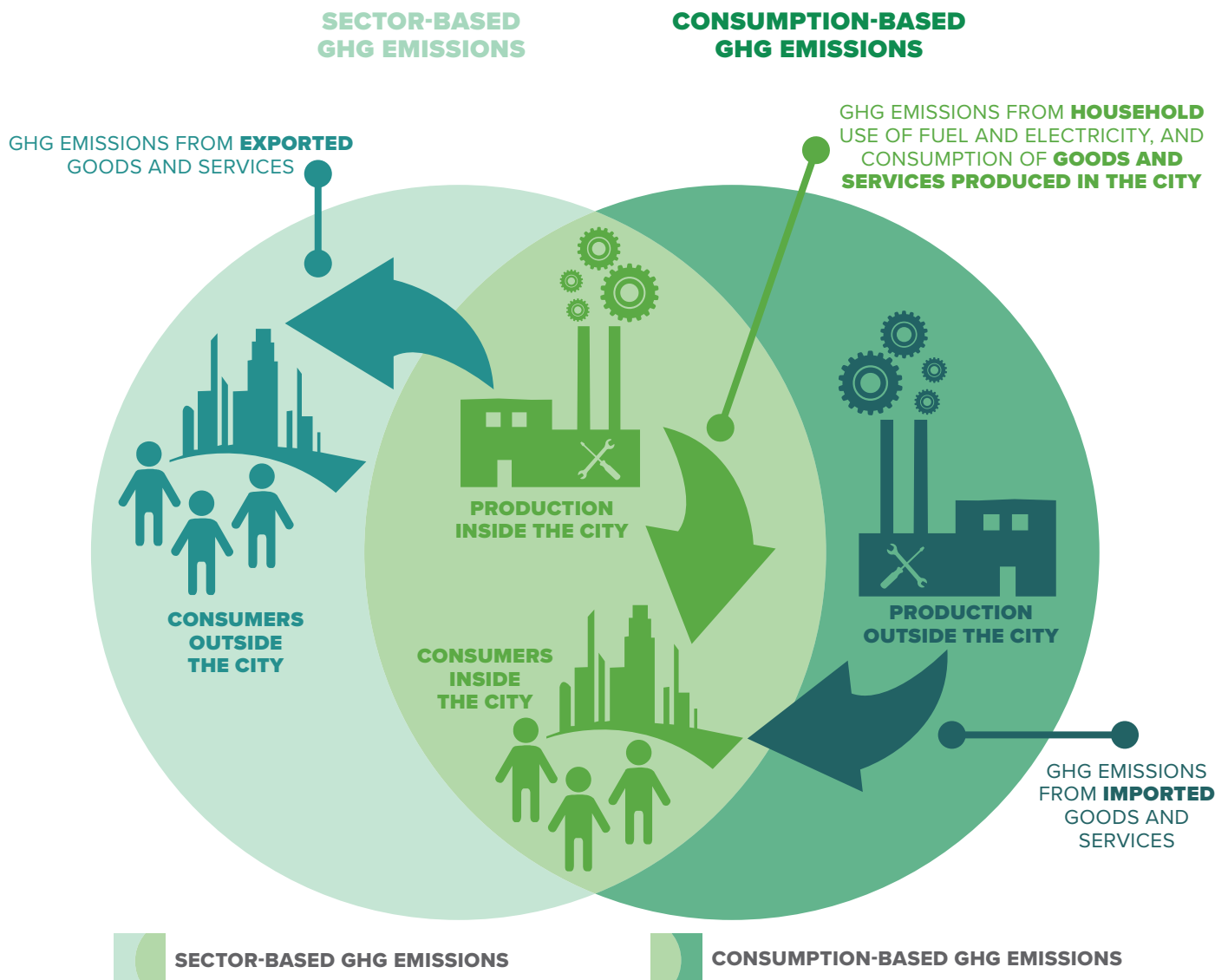


Figure 20 Consumption-based inventories explained

# Implementing the CAAP

CONTINUED

by activities within the City, but also emissions caused by consumption habits, and provides useful insights to inform a holistic sustainability strategy. Consumption-Based Inventories are gaining traction among local, regional and state governments across the country. This approach encompasses the full lifecycle emissions of goods and services, including those from production, pre-purchase transportation, wholesale and retail, use, and post-consumer disposal.

Estimating consumption-based emissions helps cities illustrate the strong link between consumption and climate change and provides them with a platform for addressing consumption in climate action planning efforts. Specifically, this type of analysis provides a method for designing local programs that reduce emissions through:

- **Targeting carbon-intensive consumption categories**
- **Targeting lifecycle phases (e.g. production, use) with the highest emissions**
- **Supporting shifts in consumption to those activities with lower emissions**

Although a Consumption-Based Inventory (CBI) was beyond the scope of this update, Los Altos will consider conducting a CBI in the future to capture all emissions, both direct and caused by consumption patterns that arise as a result of our daily activities. Such an inventory will give a clearer picture of our impact, and further improve our community's sustainability.

## CONCLUSION

The goals of this plan are to set the City on a path towards carbon neutrality and climate resilience. The goals are ambitious, but ones that we believe we can achieve. There will undoubtedly be twists and turns on this path, and we will need to stay flexible and adaptive along the way. But if we can achieve these goals - carbon neutrality, equity, sustainability, resilience - we believe that we can create a community that is healthy, connected, and vibrant. Please fully participate in implementing this CAAP and see Appendix A presenting personal actions, entitled "What Can I Do Now?" to find suggestions for simple actions each individual can take to help, as well as referring to the Fact Sheet in Appendix B for a summary of key information.