Governance

0. Governance

(0.1) Provide details of your jurisdiction in the table below.

Response

Administrative boundary of reporting government^
City/Municipality

Next highest level of government
County / Province

Next lowest level of government
No lower level of government

Land area of the jurisdiction boundary (in square km)^
29.29

Percentage range of land area that is green space
31-40%

Current (or most recent) population size^
63228

Population year^
2018

Projected population size
68305

Projected population year
2040

Select the currency used for all financial information reported throughout your response^
USD US Dollar

(0.2) Provide information on your jurisdiction's oversight of climate-related risks and opportunities and how these issues have impacted your jurisdiction's planning.

Response

Select the processes that reflect your jurisdiction's oversight of climate-related issues

Council (or equivalent) is informed by relevant departments, committees and/or subcommittees about climate-related issues

Provide further details on your jurisdiction's oversight of climate-related issues

The City of Cupertino has established a Council/Manager form of government. This form of government is intended to provide the best of unencumbered professional/technical staff input balanced with the collective oversight of elected officials. The City Manager takes his or her orders and instructions from the City Council when given at a public hearing. The Council retains the full power to accept, reject, amend, or otherwise guide and direct staff conduct of City business through the office of the City Manager. The Council does this with votes to set council policy.

Oversight of climate-related issues rests ultimately with the City Council. In 2015, the Council established the Sustainability Commission, which consists of five members of the public. The Commission serves in an advisory capacity to the City Council to provide expertise and guidance on major policy and programmatic areas related to the environmental, economic and societal goals noted within Cupertino's Climate Action Plan (CAP) and General Plan Environmental Resources/Sustainability Element. The Cupertino Municipal Code further states that to fulfill their mission, the Commission may involve staff in advising the Council how to strategically accelerate Cupertino's progress towards sustainability and recommend priorities to promote continued regional leadership in sustainability.

The City of Cupertino is leading an effort to take meaningful action to reduce greenhouse gas (GHG) emissions and mitigate climate change impacts while improving the wellbeing of the community via preparation of this communitywide Climate Action Plan (CAP) Update. The Cupertino CAP Update has targeted communitywide carbon neutrality by 2040 in line with the emergency climate declaration made by the City Council in 2018 and in support of State and international climate goals. In order to achieve this mission, the following targets have been set for future Cupertino emissions: 3.39 MT CO2e per person by 2030 and 0.00 MT CO2e per person by 2040. Together, the measures and actions in the CAP Update provide Cupertino with the GHG reductions necessary to achieve Cupertino's 2030 climate action target. However, the 2040 GHG emissions reductions quantified are not yet enough to meet the City's longer-term 2040 climate action target of carbon neutrality. This CAP Update aims to establish new systems that are resilient and equitable and make substantial progress towards carbon neutrality in the future. Future CAP updates past 2030 will also outline new measures and actions that Cupertino will implement to close the remaining gap to achieve the carbon neutrality target. (Source: CAP 2.0 [5.3] GHG Emissions Targets)

Describe how climate-related issues have impacted your jurisdiction's master/development planning

The climate planning process in Cupertino is influenced by two major policy documents, the Climate Action Plan, which is a City-wide greenhouse reduction and climate adaptation plan, and the General Plan, Environmental Resources and Sustainability Element. These two documents interact with a host of State and Federal regulations and guidelines in order to institute a number of climate-related considerations into normal planning processes. For example, the Climate Action Plan has an associated environmental analysis, which can be used to align development projects with the greenhouse gas reduction goals, thereby saving time and money for all parties in the planning process.

The impacts of climate change are projected to worsen over the next century if there is not a concerted global effort to address the cause of climate change by reducing greenhouse gas (GHG) emissions. The City of Cupertino recognizes the need for ambitious climate action. On September 18, 2018, the City passed Resolution No. 18-094, declaring a climate emergency. This resolution called for an emergency mobilization effort to end communitywide GHG emissions as quickly as possible, educate residents about climate change, and advocate for a mass mobilization at the local, State, national, and global levels. In 2021, the City began an update to the Climate Action Plan (CAP 2.0). The CAP 2.0 supports that resolution and builds on the progress achieved in Cupertino's 2015 CAP by providing an updated roadmap of specific actions to reduce GHG emissions (including carbon dioxide, methane, and nitrous oxide emissions), and established a target date for a carbon-neutral City by 2040 or earlier.

In addition to emission reduction strategies this CAP details strategies for Cupertino to prepare for and mitigate approaching risks and charts the course towards a prosperous and sustainable future. By achieving carbon neutrality, Cupertino will contribute its fair share to address the climate crisis and support international climate goals limiting global temperature rise to below 2 degrees Celsius this century. This target is consistent with the International Panel on Climate Change (IPCC) analysis on what is necessary to reduce the likelihood of catastrophic global climate change. Addressing climate change also presents Cupertino with an opportunity to build a vibrant future aligned with the key principles outlined below. (Source: CAP 2.0 [1] Vision and Purpose)

Describe how climate-related issues have impacted your jurisdiction's financial planning

The City of Cupertino's Sustainability team has been proactive to date in applying for and securing grant funds to support its activities. There are many sources of funding for sustainability actions from the regional, state, and federal governments. Funding requests to implement measures and actions in this plan will be brought for consideration by the City Council by the respective budget cycle. In fiscal year 2022, the City applied for more than $10 million in grant funds for climate and adaptation projects. Setting ambitious climate targets and actionable plans has proven to be a important part of successful grant applications. For example, Cupertino received more than $8 million from the State to expand the low-carbon community shuttle program.

The City of Cupertino also has established a Climate Fund, in which funds are earmarked for future investments in sustainability. Funds are earmarked utilizing first-year energy cost savings and reported in partnership with the Finance team.

Describe the risks to your jurisdiction related to the transition to a low-carbon economy

The framework provided by the Task Force for Climate Related Financial Disclosures (TCFD) showcase all of the potential climate risks. The City of Cupertino recognizes the associated risks when transitioning to a low-carbon economy such as: (1) technology, (2) policy and legal, and (3) market. Although technological improvements and innovations may impact our measures and implementation, the City will continue to develop short- and long-term action plans that position Cupertino as a leader in climate innovation and technological development. Global, Federal, State, Regional, and Local policies will continue to shape our climate action and the City is prepared to identify those changes and perform the necessary adjustments. Lastly, the way markets are affected by climate change may increase our risk, but our measures include developing market alternatives and minimizing those risks.

(0.3) Report how your jurisdiction assesses the wider environmental, social and economic opportunities and benefits of climate action.

Response

Does the jurisdiction assess the wider opportunities/benefits of climate action?
Yes, wider opportunities/benefits are assessed for all climate actions

Outline how your jurisdiction quantifies the impact of these wider opportunities/benefits
Wider opportunities/benefits are considered at the action planning stage
Wider opportunities/benefits are considered at the action implementation stage
Wider opportunities/benefits are considered at post-implementation monitoring and evaluation stage
Wider opportunities/benefits are quantitatively assessed
Wider opportunities/benefits are qualitatively assessed

Describe the wider opportunities/benefits of climate action the jurisdiction has identified
Climate action measures produce numerous co-benefits in addition to GHG emissions reductions including:
1. Enhanced public health and safety: cleaner air leading to fewer respiratory illnesses, more active, accessible, and livable neighborhoods.
2. Climate change resilience: increased ability of residents and businesses to adapt and reduce the impact of hazards such as extreme heat days and to recover quickly from hazards when unavoidable. Also, planting trees for carbon sequestration and increasing tree canopy cover helps keep streets and neighborhood cooler while also enhancing community cohesion that fosters mutually supporting behavioral changes.
3. Biodiversity and ecosystem services: healthier, biodiverse, and functional ecosystems with actions that improve the health of local ecosystems; reducing pollutants in local creeks and runoff to the bay, providing species habitat which supports a more biodiverse landscape, improving water and air quality, reducing local flood risk, and providing recreation benefits for the community's enjoyment.
4. Affordable housing and local development: facilitate local development that enhances human-centered economic corridors and the availability of affordable housing; thoughtful development that will complement the City's environmental goals and is achieved by creating a clear pathway for new development to align with the City's GHG reduction plan.
5. Jobs creation: supporting clean energy adoption and sustainable business practices are a core part of supporting the creation of high-quality, well-paid, and inclusive jobs that will in turn support Cupertino's climate targets and economy.
6. Cost savings: lower and more stable utility bills for municipal, business, and residential community members; efficiencies and waste reduction can result in project and other operations cost-savings.

Outline if and how your jurisdiction ensures the equitable distribution of climate action opportunities/benefits
Yes, the jurisdiction is designing or implementing climate actions that address the needs of frontline communities most impacted by climate change

Please provide evidence and/or more details of how your jurisdiction is ensuring inclusive/equitable climate action
The City includes actions to mitigate for potential equity impacts of other actions, such as re-investment into underserved communities, or policies and programs to protect against an increased potential for displacement or increased cost burdens in the community.

As defined for the purpose of this CAP Update, equity consists of the effort to create equitable economic and physical access to municipal services and public amenities, promote economic prosperity for all of the City's residents, protect the most vulnerable against the impacts of climate change, and improve the quality of life for all members of the community by fostering an inclusive and collaborative civic process.
To do this, the City employed multiple engagement approaches, including:
Public workshops
Stakeholder meetings
Climate Action Plan Update Subcommittee meetings
Surveys
Pop-up events
The City recognizes that some community groups—such as low-income households, people who speak limited English, elders, and communities of color—experience disproportionate burden from climate change impacts and were included in the planning and design of this CAP Update. We used the following approaches to ensure our engagement was inclusive and equitable:
Translation of materials and public surveys for Chinese-speakers in Cupertino.
Stakeholder meetings to prioritize certain groups, such as low-income households and housing advocates.
Stipends for community participants, if requested, to compensate people for their time and contributions.
(Source: CAP 2.0 [6] Community Voices)

(0.4) Report on your engagement with higher and/or lower levels of governments regarding your jurisdiction's climate action.

Climate component
Climate risk and vulnerability assessment

Level of governments engaged in the development, implementation and/or monitoring of component
State/Regional-level government

Outline the purpose of this engagement
Progress tracking and/or updates associated with this component are shared with a higher-level of government (e.g., via a digital platform)

Comment
The City of Cupertino has committed to the Global Covenant of Mayors as of 2015 along with the global coalition of mayors and city officials. As part of the network, members are supported in decreased city-level emissions, reducing vulnerability, and to enhance resilience to climate change in a manner that is consistent and complimentary with national level climate actions and efforts.

Climate component
Climate risk and vulnerability assessment

Level of governments engaged in the development, implementation and/or monitoring of component
State/Regional-level government

Outline the purpose of this engagement
Progress tracking and/or updates associated with this component are shared with a higher-level of government (e.g., via a digital platform)

Comment
Santa Clara County is currently developing the Climate Roadmap 2030 which will outline actions the County and partners will take to reduce GHG emissions. This Roadmap aligns with existing efforts to reduce GHG emissions among cities including the City of Cupertino. As the County aims to use the Roadmap as a tool to increase coordination and collaboration efforts to reach shared sustainability goals, the City of Cupertino will continue engaging with the County.

(0.5) Report your jurisdiction's most significant examples of collaboration with government, business, and/or civil society on climate-related issues.

Primary entity collaborated with

Government	Regional government

Mechanisms used to collaborate
Multi-jurisdictional regional collaboratives

Areas collaboration focused on
Emissions reduction
Adaptation
Resilience
Energy
Building and Infrastructure
Landscape and jurisdictional approaches
Ecosystem restoration
Water
Education

Description of collaboration
Santa Clara County is currently developing the Climate Roadmap 2030 which will outline actions the County and partners will take to reduce GHG emissions. The Roadmap will serve to align existing efforts to reduce GHG emissions among cities that have already adopted CAPs, prioritize actions in unincorporated areas of the County, and help leverage and facilitate regional partnerships to further encourage sustainable and resilient communities. The County aims to use the Roadmap as a tool to increase coordination and collaboration in efforts to reach shared sustainability goals. The Roadmap will include the following: (1) A countywide GHG emissions inventory and forecast, (2) An online interactive map tool that will provide a comprehensive overview of the cities, organizations, institutions, and companies working on climate action in Santa Clara County, (3) Community and partner input, and (4) An implementation roadmap.

Other entities collaborated with
Neighboring local government

Primary entity collaborated with

Business	Energy

Mechanisms used to collaborate
Multi-jurisdictional regional collaboratives

Areas collaboration focused on
Energy

Description of collaboration
Silicon Valley Clean Energy (SVCE) is the community-owned electricity provider for several south bay cities including Cupertino. SVCE developed its Decarbonization Strategy & Programs Roadmap with extensive community input to help guide community electrification, which entails switching from relying on fossil fuel use in homes, buildings, and transportation to electricity from renewable sources. By 2030, Silicon Valley Clean Energy programs aim to cut energy-related pollution in half from the 2015 baseline. That equates to preventing 2 million MT CO2e from being released into the environment each year.

Other entities collaborated with
Neighboring local government

Primary entity collaborated with

Government	Regional government

Mechanisms used to collaborate
Knowledge or data sharing
Multi-jurisdictional regional collaboratives
Policy and regulation development/ implementation

Areas collaboration focused on
Emissions reduction
Adaptation
Resilience
Ecosystem restoration
Water
Natural environment

Description of collaboration
Valley Water (Santa Clara Valley Water District) aims to provide Silicon Valley safe, clean water for a healthy life, environment, and economy. They are nationally recognized as a leader in water resources management. Since 2002, Valley Water and the City of Cupertino (along with neighboring jurisdictions) have formed the Water Resources Protection Collaborative. This collaborative effort ensures that water resources are protected for properties adjacent to streams within the city. The guidelines and standards provide instructions to property owners and developers about how to design and construct streamside development that protects both the property and the resource.

In addition to this effort, the City of Cupertino is working with Valley Water to promote (through public engagement) the water efficiency rebates offered by Valley Water. This includes educating residents on the benefits of dual-plumbing greywater systems, low-flow fixtures, and their connection to climate resilience and GHG emissions reductions. Also, public engagement will focus on households with low-income and fixed income people, historically underserved communities, elders, and individuals with disabilities to assist in access to free water conservation devices and water conservation strategies (in multiple languages). By working with Valley Water, the city aims to reduce overall per capita water consumption by 15% compared to 2019 levels by 2030 and to maintain this through 2040.

Other entities collaborated with

Neighboring local government

Assessment

1. Climate Risk and Vulnerability

(1.1) Has a climate risk and vulnerability assessment been undertaken for your jurisdiction? If not, please indicate why.
Yes, a climate risk and vulnerability assessment has been undertaken

(1.1a) Provide details on your climate risk and vulnerability assessment.

Assessment attachment and/or direct link^
https://sustainability.sccgov.org/sites/g/files/exjcpb976/files/documents/1_150803_Final Guidebook_W_Appendices.pdf
Santa Clara County Silicon Valley 2.0 Climate Adaptation Guidebook.pdf

Confirm attachment/link provided to assessment
The assessment has been attached and can be accessed (unrestricted) on the link provided

Boundary of assessment relative to jurisdiction boundary^
Larger - covers the whole jurisdiction and adjoining areas, please explain additions

Year of publication or approval^
2015

Factors considered in assessment
Assessment considers vulnerable populations
Assessment considers water security
Assessment considers nature
Identified hazards have been incorporated into the jurisdictions overall risk management framework

Primary author(s) of assessment^
Regional/ state/ provincial government

Please explain
The City conducted a local vulnerability assessment as part of its Climate Action Plan update project. We have included updated information about local climate hazards and vulnerable populations in this CAP 2.0 in this year's response.

Assessment attachment and/or direct link^
https://www.cupertino.org/home/showpublisheddocument/31683/637964240923930000

Confirm attachment/link provided to assessment
The assessment can be accessed (unrestricted) on the link provided

Boundary of assessment relative to jurisdiction boundary^
Same - covers entire jurisdiction and nothing else

Year of publication or approval^
2022

Factors considered in assessment
Assessment considers vulnerable populations
Assessment considers water security
Assessment considers nature
A process has been established for prioritizing identified hazards

Primary author(s) of assessment^
Dedicated team within jurisdiction

Please explain
The climate hazards and vulnerability assessment is attached. This assessment was published in April 2022. See Chapter 12: Adaptation and Resilience of the linked document.

(1.2) Provide details on the most significant climate hazards faced by your jurisdiction.

Climate-related hazards^
Drought

Vulnerable population groups most exposed
Children and youth
Elderly
Marginalized/minority communities
Vulnerable health groups
Low-income households

Sectors most exposed^
Water supply

Describe the impacts on vulnerable populations and sectors^
In June 2021, Valley Water Board of Directors declared a water shortage emergency condition requiring water restrictions across its service area due to extreme drought conditions: 15% reduction from 2019 levels. In July 2021, Governor Newsom issued Executive Order N-10-21 with a proclamation of a state of emergency due to drought conditions in Santa Clara County.

Drought periods are projected to increase, which may increase subsidence risk from groundwater depletion. There are seven recorded instances of drought within Santa Clara County between 1927 and 2015. The drought between 2012-2016 is the most recent to have affected Santa Clara County. Statewide precipitation during this three-year period ranked the second lowest since official measurements began in 1895. As of January 2022, to March 2022, the region has experienced the driest months on record. The Sierra Nevada snowpack was at 17% of normal levels as of May 2022. Low-income populations are disproportionately impacted by drought due to increases in their water bill, drought surcharges, and fines. Drought does not directly impact physical urban infrastructure assets in the county. While drought can potentially have significant impacts on water supply services, these services are within the domain of the Santa Clara Valley Water District (Valley Water), who is engaged in numerous collaborative water conservation efforts with communities in Santa Clara County.

Proportion of the population exposed to the hazard
90-100%

Did this hazard significantly impact your jurisdiction before this reporting year?
Yes

Current probability of hazard^
High

Current magnitude of impact of hazard^
Medium High

Expected future change in hazard intensity^
Increasing

Expected future change in hazard frequency^
Increasing

Timeframe of expected future changes^
Short-term (by 2025)

Climate-related hazards^
Heavy precipitation

Vulnerable population groups most exposed
Children and youth
Elderly
Marginalized/minority communities
Vulnerable health groups
Low-income households
Outdoor workers

Sectors most exposed^
Agriculture
Forestry
Fishing
Sewerage, waste management and remediation activities
Construction
Transportation and storage
Arts, entertainment and recreation

Describe the impacts on vulnerable populations and sectors^
While literature does not indicate a clear historical trend in the frequency and intensity of riverine flooding in the Santa Clara County region, that rainstorm recurrence intervals for larger 10-year, 25-year, and 50-year events have declined between 1890 and 2010 in the San Jose area. It should be noted that other parts of the Bay Area have seen marked increases in larger storms. While the frequency of flooding may have declined in areas of Santa Clara County, the severity of individual extreme precipitation events has been high, such as in the flooding event of 1998.

While overall annual precipitation is not projected to change by mid-century, increased precipitation is projected to occur in winter in the form of more frequent and stronger storms. Cupertino will experience, on average, one additional large precipitation event (2-day rainfall of over 2.2 inches) by mid-century under Representative Concentration Pathways (RCP) 4.5. By mid-century, the largest precipitation events are projected to increase 6-21% under RCP 4.5 (Source: National Oceanic and Atmospheric Administration 2022).

Proportion of the population exposed to the hazard
90-100%

Did this hazard significantly impact your jurisdiction before this reporting year?
Yes

Current probability of hazard^
Medium

Current magnitude of impact of hazard^
Medium

Expected future change in hazard intensity^
Increasing

Expected future change in hazard frequency^
Increasing

Timeframe of expected future changes^
Short-term (by 2025)

Climate-related hazards^
River flooding

Vulnerable population groups most exposed
Children and youth

Elderly
Low-income households

Sectors most exposed^
Agriculture
Forestry
Fishing
Water supply
Sewerage, waste management and remediation activities

Describe the impacts on vulnerable populations and sectors^
Approximately 40 instances of riverine/inland flooding have occurred in the Santa Clara County region between 1832 and 2012. Three of these flooding events (winter storms in 1963, 1997, and 1998) were declared as disasters by FEMA. The impacts of these flooding events have included dam/levee failures, inundation of roads and highways, power outages, physical damage to property and roads, evacuations, injuries, and deaths. One of the six rivers and creeks within the county that experience frequent flooding is Calabazas Creek which runs through Cupertino. In 1998, Calabazas Creek received up to seven inches of rain by the fifth day of the rainstorm. Overbanking led to the flooding of homes and businesses and the closure of major roads. A projected increase in frequency of extreme precipitation events could cause more riverine flooding.

Proportion of the population exposed to the hazard
<10%

Did this hazard significantly impact your jurisdiction before this reporting year?
No

Current probability of hazard^
Medium Low

Current magnitude of impact of hazard^
Medium

Expected future change in hazard intensity^
Increasing

Expected future change in hazard frequency^
Increasing

Timeframe of expected future changes^
Long-term (after 2050)

Climate-related hazards^
Fire weather (risk of wildfires)

Vulnerable population groups most exposed
Children and youth
Elderly
Vulnerable health groups
Low-income households
Outdoor workers
Frontline workers

Sectors most exposed^
Agriculture
Forestry
Financial and insurance activities
Arts, entertainment and recreation

Describe the impacts on vulnerable populations and sectors^
There are 64 recorded instances of major wildfires within Santa Clara County between 1978 and 2012, with the two largest fires occurring in 2003 and 2007. In August of 2020, the SCU Lightning Complex fire burned a total of 396,624 acres and spanned across five counties, including Santa Clara County. This fire was one of the top five largest California wildfires in state history. Climate change is projected to increase the frequency of wildfire events, the extent of burned areas across California, and the duration of wildfire seasons. Wildfire seasons are projected to begin earlier in the spring due to drier and warmer spring conditions on average, potentially requiring longer periods of firefighting services. Greater inter-annual variability in temperature and precipitation may also affect wildfire intensity. For example, multiple wet years can result in larger fuel buildup in landscapes. This may result in increasingly intense and frequent wildfires, if followed by drought years. Wildfire risk will also vary depending on population growth and land use characteristics, including rates of residential expansion and infrastructure into fire prone areas over the next century. Cupertino experiences secondary risks from wildfires, including air pollution from smoke and ash and potential power outages. To reduce wildfire risk, PG&E proactively shuts off access to electrical lines during extreme weather conditions, called Public Safety Power Shutoff (PSPS) events. During PSPS events, customers can be without power for several days. Cupertino contains areas that are more likely to be affected by a PSPS power outage event. Since 2019, four of the PSPS events have affected parts of Cupertino's service area.

Proportion of the population exposed to the hazard
<10%

Did this hazard significantly impact your jurisdiction before this reporting year?
Yes

Current probability of hazard^
Medium Low

Current magnitude of impact of hazard^
Medium

Expected future change in hazard intensity^
Increasing

Expected future change in hazard frequency^
Increasing

Timeframe of expected future changes^

Long-term (after 2050)

Climate-related hazards^
Air pollution

Vulnerable population groups most exposed
Children and youth
Elderly
Vulnerable health groups
Low-income households
Outdoor workers
Frontline workers

Sectors most exposed^
Agriculture
Forestry
Professional, scientific and technical activities
Education
Arts, entertainment and recreation

Describe the impacts on vulnerable populations and sectors^
In addition to the risk of wildfires, the City recognizes the major impacts wildfire smoke will have on air quality and how that may impact our most vulnerable population groups. Because of Cupertino's geography, weather, and local features such as Interstate 280, the city is already at high risk for poor air quality. From 2015 to 2019, Cupertino experienced 31 days where ozone or particulate matter levels exceeded state standards. As the climate changes, warmer temperatures will increase smog and pollutant formation while wildfires deteriorate air quality. Pollen and dust production will also increase. Poor air quality is linked to respiratory conditions such as asthma, vascular conditions such as heart attacks and stroke, and various cancers. Children, youth, seniors, and those with pre-existing health conditions, pregnant women, and outdoor workers will be the most vulnerable to these health risks and currently make up over 41% of Cupertino's population. There are fewer outdoor recreational opportunities as well.

Proportion of the population exposed to the hazard
90-100%

Did this hazard significantly impact your jurisdiction before this reporting year?
Yes

Current probability of hazard^
Medium High

Current magnitude of impact of hazard^
Medium

Expected future change in hazard intensity^
Increasing

Expected future change in hazard frequency^
Increasing

Timeframe of expected future changes^
Medium-term (2026-2050)

(1.3) Identify and describe the most significant factors impacting on your jurisdiction's ability to adapt to climate change and indicate how those factors either support or challenge this ability.

Factors that affect ability to adapt^	Degree to which this factor challenges/supports the adaptive capacity of your jurisdiction^	Describe how the factor supports or challenges the adaptive capacity of your jurisdiction^
Access to education	Supports: Significantly supports	Silicon Valley municipalities have access to a number of higher education institutions and cutting edge science and research which enhances our ability to prepare studies and plan responses to climate threats as a city and region.
Environmental conditions	Challenges: Moderately challenges	Extensive droughts, such as the five-year drought California experienced recently, put stress on our city's physical, economic, and natural resources. Severe droughts will challenge our city's ability to adapt and prepare for climate change.
Land use planning	Challenges: Somewhat challenges	Our city's land use is low- to moderate- density suburban and our built environment includes a lot of hardscape and roadways. This land use exacerbates the urban heat island effect and will challenge our city's ability to adapt and prepare for climate change. The City has very little available land and the cost of construction presents major challenges to further sustainable development activities.

2. Emissions Inventory

Emissions Inventory Methodology

(2.1) Does your jurisdiction have a community-wide emissions inventory to report?
Yes

(2.1a) Provide an attachment (in spreadsheet format) or a direct link to your community-wide emissions inventory. In addition, select the inventory year and report the jurisdiction's population for that year.

	Community-wide inventory attachment (spreadsheet) and/or link (with unrestricted access)^	Status of community-wide inventory attachment and/or direct link	Inventory year^	Population in inventory year^	Comment
Response	CDP Report and Detail Report from ClearPath attached cdp_report-2018 Baseline Inventory.xlsx inventory_detail-2018 Baseline Inventory.xlsx	The emissions inventory has been attached	2018	63228	The 2018 inventory was revised and updated in 2022 as part of the development of the Climate Action Plan Update (CAP 2.0 adopted in August 2022).

(2.1b) Provide the following information regarding your latest community-wide GHG emissions inventory.

Boundary of inventory relative to jurisdiction boundary^
Same - covers entire jurisdiction and nothing else

Primary methodology/framework to compile inventory
U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions (ICLEI USA)

Tool used to compile inventory
ClearPath

Gases included in inventory^
CO2
CH4
N2O

Source of Global Warming Potential values
IPCC Fifth Assessment Report (2013)

Has the inventory been audited/verified?
<Not Applicable>

Overall level of data quality
<Not Applicable>

Has the methodology and/or boundary used for this inventory changed when compared to the previously reported inventory?
<Not Applicable>

Additional documentation and comments
<Not Applicable>

Emissions Inventory Data

(2.1d) Provide a breakdown of your community-wide emissions in the format of the Common Reporting Framework.

	Direct emissions (metric tonnes CO2e)^	If you have no direct emissions to report, please select a notation key to explain why^	Indirect emissions from the use of grid-supplied electricity, heat, steam and/or cooling (metric tonnes CO2e)^	If you have no indirect emissions to report, please select a notation key to explain why^	Emissions occurring outside the jurisdiction boundary as a result of in-jurisdiction activities (metric tonnes CO2e)	If you have no emissions to report that are occurring outside the jurisdiction boundary as a result of in-jurisdiction activities, please select a notation key to explain why	Please explain any excluded sources, identify any emissions covered under an ETS and provide any other comments^
Stationary energy > Residential buildings^	43542.22	Please select	442.64	Please select	0	NO	Electric vehicle kWh usage estimate for passenger cars was deducted from the residential sector.
Stationary energy > Commercial buildings & facilities^	52424.07	Please select	4065.58	Please select	0	NO	"Commercial & Institutional Buildings" and "Manufacturing Industries & Construction" were combined for this inventory. Due to CPUC energy data privacy rules, PG&E was not able to provide a full breakdown of Commercial vs. Industrial electricity and natural gas usage. Thus, separating the two subsectors was not possible.
Stationary energy > Institutional buildings & facilities^	0	IE	0	IE	0	NO	"Commercial & Institutional Buildings" and "Manufacturing Industries & Construction" were combined for this inventory. Due to CPUC energy data privacy rules, PG&E was not able to provide a full breakdown of Commercial vs. Industrial electricity and natural gas usage. Thus, separating the two subsectors was not possible.
Stationary energy > Industrial buildings & facilities^	0	IE	0	IE	0	NO	"Commercial & Institutional Buildings" and "Manufacturing Industries & Construction" were combined for this inventory. Due to CPUC energy data privacy rules, PG&E was not able to provide a full breakdown of Commercial vs. Industrial electricity and natural gas usage. Thus, separating the two subsectors was not possible.
Stationary energy > Agriculture^	0	NO	0	NO	0	NO	Not occurring.
Stationary energy > Fugitive emissions^	3130.43	Please select	0	NO	0	NO	
Total Stationary Energy	99096.72	Please select	4508.22	Please select	0	NO	

	Direct emissions (metric tonnes CO2e)^	If you have no direct emissions to report, please select a notation key to explain why^	Indirect emissions from the use of grid-supplied electricity, heat, steam and/or cooling (metric tonnes CO2e)^	If you have no indirect emissions to report, please select a notation key to explain why^	Emissions occurring outside the jurisdiction boundary as a result of in-jurisdiction activities (metric tonnes CO2e)	If you have no emissions to report that are occurring outside the jurisdiction boundary as a result of in-jurisdiction activities, please select a notation key to explain why	Please explain any excluded sources, identify any emissions covered under an ETS and provide any other comments^
Transportation > On-road^	206607	Please select	26.94	Please select	0	IE	Electric vehicle emissions as indirect emissions. The origin-destination methodology was used to estimate total VMT in Cupertino. External and internal emissions are included in the In-Boundary total and not separated.
Transportation > Rail^	0	NO	0	NO	0	NO	No rail service in Cupertino.
Transportation > Waterborne navigation^	0	NO	0	NO	0	NO	No waterborne activities in Cupertino.
Transportation > Aviation^	0	NO	0	NO	0	NO	No airport within City boundaries.
Transportation > Off-road^	13990.94	Please select	0	NO	0	NO	
Total Transport	220597.94	Please select	26.94	Please select	0	IE	
Waste > Solid waste disposal^	0	NO	0	NO	15709.41	Please select	Waste is not treated within the city boundary; no landfills or open dumps within the city boundary. Waste sent to landfill outside of city boundary. The GPC methane commitment method for waste emissions was used.
Waste > Biological treatment^	0	NO	0	NO	761.04	Please select	Commercial, single family, and multifamily composting sent to facility outside of city boundary.
Waste > Incineration and open burning^	0	NO	0	NO	0	NO	Waste incineration and open burning not occurring in city boundary.
Waste > Wastewater^	0	NO	0	NO	19649.14	Please select	Wastewater is treated outside of the City boundaries. Cupertino is served by the San José-Santa Clara Regional Wastewater Facility.
Total Waste	0	NO	0	NO	36119.59	Please select	
IPPU > Industrial process	0	NE	0	NE	0	NE	Cupertino is reporting to the BASIC requirement of the GPC.
IPPU > Product use	0	NE	0	NE	0	NE	Cupertino is reporting to the BASIC requirement of the GPC.
Total IPPU	0	NE	0	NE	0	NE	Cupertino is reporting to the BASIC requirement of the GPC.
AFOLU > Livestock	0	NE	0	NE	0	NE	Cupertino is reporting to the BASIC requirement of the GPC.
AFOLU > Land use	0	NE	0	NE	0	NE	Cupertino is reporting to the BASIC requirement of the GPC.
AFOLU > Other AFOLU	0	NE	0	NE	0	NE	Cupertino is reporting to the BASIC requirement of the GPC.
Total AFOLU	0	NE	0	NE	0	NE	Cupertino is reporting to the BASIC requirement of the GPC.
Generation of grid-supplied energy > Electricity-only generation^	0	NO	0	NO	0	NO	Emissions not occurring.
Generation of grid-supplied energy > CHP generation^	0	NO	0	NO	0	NO	Emissions not occurring.
Generation of grid-supplied energy > Heat/cold generation^	0	NO	0	NO	0	NO	Emissions not occurring.
Generation of grid-supplied energy > Local renewable generation	0	NO	0	NO	0	NO	Emissions not occurring.
Total generation of grid-supplied energy	0	NO	0	NO	0	NO	Emissions not occurring.
Total Emissions (excluding generation of grid-supplied energy)	319694.66	Please select	4535.16	Please select	36119.59	Please select	

3. Sector Assessment Data

Energy Data

(3.1) Report the total annual electricity and heating and cooling consumption data (in MWh) and the percentage breakdown of this consumption by energy type for your jurisdiction.

Electricity consumption

Total annual jurisdiction-wide consumption in MWh
598488

Data source used to provide percentage breakdown of consumption by energy type
Jurisdiction-level data

Percentage of total consumption from coal
0

Percentage of total consumption from gas
0

Percentage of total consumption from oil
0

Percentage of total consumption from nuclear
2

Percentage of total consumption from hydropower
10

Percentage of total consumption from bioenergy (biomass and biofuels)
1

Percentage of total consumption from wind
3

Percentage of total consumption from geothermal
0

Percentage of total consumption from solar (PV and thermal)
4

Percentage of total consumption from waste to energy (excluding biomass component)
0

Percentage of total consumption from other renewable sources
62

Percentage of total consumption from other non-renewable sources
18

Year data applies to
2020

Comment
Electricity usage data and percentages are approximate and based on the following assumptions: Electricity usage data: Electricity consumption for residential, commercial/industrial, and municipal customers for calendar year 2020 was provided by our Community Choice Aggregator, Silicon Valley Clean Energy (SVCE) for the Cupertino community, but excluded the electricity usage for Apple. The estimate for electricity usage for Apple (374,000,000 kWh) was taken from Apple's public Environmental Progress Report covering its Fiscal Year 2020 for Apple's Cupertino campus. All Apple electricity usage was assumed to be "other renewable sources," as Apple's electricity is reported as 100% renewable. The power content percentages for SVCE-sourced electricity were derived from SVCE's 2020 Power Content Label with the following delineations: the default electricity mix (GreenStart) was applied to SVCE residential electricity usage (116,069,764 kWh), and GreenPrime for municipal electricity usage (2,578,777 kWh). Due to privacy rules, SVCE could not separate the commercial and direct access electricity usage, therefore, the remainder of the electricity usage for the community (105,839,566 kWh) was assumed to be "other non-renewable sources."

Heating and cooling consumption

Total annual jurisdiction-wide consumption in MWh
470204

Data source used to provide percentage breakdown of consumption by energy type
Jurisdiction-level data

Percentage of total consumption from coal
0

Percentage of total consumption from gas
86

Percentage of total consumption from oil
0

Percentage of total consumption from nuclear
<Not Applicable>

Percentage of total consumption from hydropower
<Not Applicable>

Percentage of total consumption from bioenergy (biomass and biofuels)
14

Percentage of total consumption from wind
<Not Applicable>

Percentage of total consumption from geothermal
0

Percentage of total consumption from solar (PV and thermal)
0

Percentage of total consumption from waste to energy (excluding biomass component)
0

Percentage of total consumption from other renewable sources
0

Percentage of total consumption from other non-renewable sources
0

Year data applies to
2020

Comment
This data is the total natural gas consumption for the Cupertino community. Data for natural gas consumption was provided by Silicon Valley Clean Energy for the whole community for 2020 (16,047,844 therms). A portion of the natural gas usage (14%) is attributed to Apple's fuel cell biogas usage, which is reported to be sourced as "renewable biogas" in Apple's 2020 Environmental Progress report (218,703 MMBtu, or 2,187,553 therms). The remainder (86%) is natural gas via pipeline distribution through PG&E.

(3.2) For each type of renewable energy within the jurisdiction boundary, report the installed capacity (MW) and annual generation (MWh).

	Installed capacity (MW)	Annual generation (MWh)	Year data applies to	Comment
Solar PV	7.25	0	2019	Installed solar capacity is an approximate total based on the reported cumulative MW capacity of 1,510 solar photovoltaic permitted systems installed in Cupertino from 2000 – 2019. Source: https://gis-cupertino.opendata.arcgis.com/ (Accessed: 07/26/22). Annual generation data was not available.
Solar thermal	0	0	2022	Not estimated.
Hydropower	0	0	2022	Not occurring.
Wind	0	0	2022	Not estimated.
Bioenergy (Biomass and Biofuels)	0	0	2022	Not estimated.
Geothermal	0	0	2022	Not estimated.
Other	0	0	2022	Not estimated.

(3.3) Report the following energy access related information for your jurisdiction.

Indicator and metric used	Indicator value	Year data applies to	Comment
Annual energy consumption per capita — MWh per person	17	2020	Estimated electricity and natural gas usage for residential, commercial, and industrial sectors divided by population for 2020.

(3.4) How many households within the jurisdiction boundary face energy poverty? Select the threshold used for energy poverty in your jurisdiction.

	Indicator used to quantify energy poverty	Percentage of households or total population within the jurisdiction boundary that face energy poverty	Threshold used for energy poverty	Comment
Response	Energy poverty not quantified	<Not Applicable>	<Not Applicable>	Not estimated.

Transport Data

(3.5) Report your jurisdiction's passenger and/or freight mode share data.

Please complete

Passenger mode share data to report
Passenger mode share as share of trips

Passenger mode share: Walking
1.2

Passenger mode share: Cycling
0.7

Passenger mode share: Micromobility (including e-scooters)
0

Passenger mode share: Buses (including Bus Rapid Transit)
2.3

Passenger mode share: Rail/Metro/Tram
0

Passenger mode share: Ferries/ River boats
0

Passenger mode share: Taxis or shared vehicles (e.g. hire vehicles)
8.9

Passenger mode share: Private motorized transport
80

Passenger mode share: Other
6.9

Total passenger mode share reported
100

Freight mode share data to report
Jurisdiction does not have mode share data for freight transport

Freight mode share: Motorcycle / Two wheeler
<Not Applicable>

Freight mode share: Light Goods Vehicles (LGV)
<Not Applicable>

Freight mode share: Medium Goods vehicles (MGV)
<Not Applicable>

Freight mode share: Heavy Goods vehicles (HGV)
<Not Applicable>

Freight mode share: Rail
<Not Applicable>

Freight mode share: Inland water transport
<Not Applicable>

Freight mode share: Other
<Not Applicable>

Total freight mode share reported
<Not Applicable>

Comment
Data source is 2015 American Community Survey reflecting commute trip mode split for Cupertino. "Carpooled" percentage was attributed to "Taxis or shared vehicles." "Worked at Home" (6.1%) and "Other" (0.8%) were combined and attributed to "Other."

Waste Data

(3.7) Report the following waste-related data for your jurisdiction.

	Data availability	Response (in unit specified)	Comment
Amount of solid waste generated (tonnes/year)	Reporting jurisdiction-level data	15750	
Percentage of the solid waste generated that is diverted away from landfill or incineration (%)	Reporting jurisdiction-level data	53	
Percentage of the diverted solid waste generated that is recycled (%)	Reporting jurisdiction-level data	36	
Percentage of the diverted solid waste generated that is utilized for waste to energy (%)	Reporting jurisdiction-level data	0	
Percentage of the diverted solid waste generated that is reused (%)	This data is not available to report	<Not Applicable>	This data is not available for 2021.
Percentage of waste collected where separation at source is taking place (%)	Reporting jurisdiction-level data	100	
Total annual amount of food waste produced in the jurisdiction (tonnes/year)	Reporting jurisdiction-level data	852	
Volume of wastewater produced within the jurisdiction boundary (megalitres/year)	This data is not available to report	<Not Applicable>	
Percentage of wastewater safely treated to at least secondary level (%)	Reporting jurisdiction-level data	100	

Public Health Data

(3.8) Report on how climate change impacts health outcomes and health services in your jurisdiction.

Health area affected by climate change
Health outcomes

Identify the climate hazard(s) that most significantly impact the selected health area
Extreme heat
Fire weather (risk of wildfires)
Air pollution

Identify the health issues driven by the selected climate hazard(s)
Heat-related illnesses
Exacerbation of non-communicable disease symptoms - respiratory disease
Exacerbation of non-communicable disease symptoms - cardiovascular disease
Mental health impacts
Direct physical injuries and deaths due to extreme weather events
Food and nutrition security
Lack of climate-informed surveillance, preparedness, early warning and response

Timeframe of impact
Medium-term (2026-2050)

Identify which vulnerable populations are affected by the selected health issue(s)
Children and youth
Elderly
Marginalized / minority communities
Vulnerable health groups
Low-income households
Outdoor workers

What factors affect your jurisdiction's ability to address the selected health issues
Lack of financial capacity and expertise/technical capacity

Comment
The California Department of Health conducted a climate / health vulnerability assessment for Santa Clara County; the above info and risks reflect county-level information from this report. Source: California Building Resilience Against Climate Effects (CalBRACE) 2017 Climate Change and Health Profile Report for Santa Clara County. Below are exerts from the report on population vulnerabilities in the County:
- Disparities in death rates among race/ethnicity groups, with the highest death rate occurring among American Indians and Pacific Islanders
- Annual average of 99 heat related emergency room visits from 2005-2010
- Climate-vulnerable groups, including children under age five, adults over 65 years old, households with limited English proficiency, low-income households, outdoor workers, households lacking air conditioning, etc.
- Increase of displacement of victims as natural disasters worsen, placing stress on resources
- Increase of violent crime during heat events
Source: https://www.cdph.ca.gov/Programs/OHE/CDPH%20Document%20Library/CHPRs/CHPR085SantaClara_County2-23-17.pdf; Accessed 7/28/21

Health area affected by climate change
Health outcomes

Identify the climate hazard(s) that most significantly impact the selected health area
Heat stress
Extreme heat
Drought
Water stress
Increased water demand

Identify the health issues driven by the selected climate hazard(s)
Heat-related illnesses
Vector-borne infections and illnesses
Water-borne infections and illnesses
Mental health impacts
Food and nutrition security
Disruption to water, sanitation and wastewater services
Lack of climate-informed surveillance, preparedness, early warning and response

Timeframe of impact
Medium-term (2026-2050)

Identify which vulnerable populations are affected by the selected health issue(s)
Children and youth
Elderly
Marginalized / minority communities
Vulnerable health groups
Low-income households
Outdoor workers
Frontline workers

What factors affect your jurisdiction's ability to address the selected health issues
Lack of financial capacity and expertise/technical capacity

Comment
Severe droughts are expected within the City of Cupertino due to increasing temperatures and changes in precipitation. The California Department of Public Health (CDPH)

report on health equity show the health outcomes due to climate hazards such as drought and water stress. California is projected to have a loss of 25% of the Sierra snowpack by 2050 and exacerbate agricultural water supply issues, thus deteriorating the quality of health and life for our most vulnerable communities. The Climate Change and Health Profile Report for Santa Clara County (2017) states that continued drought conditions will further challenge the fight against wildfires and expose associated pollutants to the community. Water quality may also be impacted due to the change in aquatic environments leading to harmful algal blooms that become a ground for waterborne and foodborne illnesses.

(3.9) Provide information on the current impact of the COVID-19 pandemic on climate action in the jurisdiction.

Response

Impact of COVID-19 on the implementation of climate action policies in your jurisdiction
Increased emphasis on climate action

Impact of COVID-19 economic response on jurisdiction's budget for financing climate action in your jurisdiction
Increased finance available for climate action

Climate-related impact of COVID-19 recovery interventions
Recovery interventions that develop or strengthen universal social protection systems that enhance resilience to shocks, including climate change

Comment
The City of Cupertino distributed one-time emergency relief grants of $5,000 to 37 eligible small businesses to help local businesses to survive through the COVID-19 pandemic and continue providing jobs to low-moderate income persons. The City partnered with the Enterprise Foundation, a 501c3 organization, to administer the program.

To help foster positive and healthy community connections during Shelter in Place, the City launched the #CupertinoCares initiative. The City posted fun "virtual recreation" activities for residents of all ages on its website and Facebook, Twitter, and Instagram accounts. These activities encourage our community to write, draw, dance, sing, and laugh together while at home. The City encourages participants to share their experiences by posting photos and videos with the hashtag #CupertinoCares. Website: cupertino.org/cupertinocares

The City Council actually increased funding for sustainability initiatives during the pandemic, including authorizing a major update to the Climate Action Plan and initiating the work to update and create a climate adaptation plan and a roadmap to a carbon-neutral City by 2040 or earlier.

(3.11) Provide details of the household access to water, sanitation services and water consumption in your jurisdiction.

Response

Data availability
Data is available for the percentage of households with access to safely managed drinking water services
Data is available for the percentage of households with access to safely managed sanitation services

Percentage of households with access to safely managed drinking water services
100

Percentage of households with access to safely managed sanitation services
100

Household water consumption (litres/capita/day)
<Not Applicable>

Comment

Food data

(3.12) What percentage of your population is food insecure and/or lives in a food desert?

	Data availability	Percentage of population that is food insecure	Percentage of population that lives in a food desert	Comment
Response	Data available for the percentage of population that is food insecure Data available for the percentage of population that lives in a food desert	20	0	The percentage of population that is food insecure is a regional average. The percentage of population that lives in a food desert is from the 2019 USDA data: https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/

Targets

4. Adaptation Goals

(4.1) Does your jurisdiction have an adaptation goal(s) in place? If no adaptation goal is in place, please indicate the primary reason why.
Yes, our jurisdiction has an adaptation goal(s)

(4.1a) Report your jurisdiction's main adaptation goals.

Select a reference ID for the goal
Adaptation goal 1

Adaptation goal^
Increase usage of natural infrastructure solutions such as bioswales, rainwater storage systems, and permeable pavements to enhance infrastructure resiliency.

Climate hazards that goal addresses^
Heat stress
Extreme heat
Drought
Water stress
Urban flooding
Heavy precipitation
Soil degradation/erosion

Base year of goal (or year goal was established if no base year)^
2022

Target year of goal^
2026

Description of metric / indicator used to track goal^
CDP-ICLEI Unified Reporting System or similar reporting platform will be used to monitor and evaluate the City's progress.

Comment
This target is part of Cupertino's Climate Action Plan 2.0. Adaptation goal 1 focuses on expanding green stormwater infrastructure throughout the city of Cupertino as actions are already in place for expansion and maintenance of natural infrastructure such as the city's urban forest and open space.

Select a reference ID for the goal
Adaptation goal 2

Adaptation goal^
Bolster emergency preparedness and response by integrating climate adaptation and improving climate-related communications

Climate hazards that goal addresses^
Heat stress
Extreme heat
Drought
Water stress
Increased water demand
Fire weather (risk of wildfires)
Urban flooding
Heavy precipitation
Air pollution

Base year of goal (or year goal was established if no base year)^
2022

Target year of goal^
2035

Description of metric / indicator used to track goal^
By 2030, the Key Performance Indicator will track pollutants from local air quality monitoring data and incorporate regular reporting of air quality KPIs into CAP reports and live interactive public dashboards. Increased education and engagement with the public on literature that covers each climate hazard identified in the vulnerability assessment within the CAP.

Comment
This target is part of Cupertino's Climate Action Plan 2.0. Adaptation goal 2 addresses the city's lower adaptive capacity in climate hazards such as poor air quality and extreme heat, therefore the goal is to bolster the City's emergency preparedness and response.

Select a reference ID for the goal
Adaptation goal 3

Adaptation goal^
Strengthen community capacity and resilience through education, resources, and policies

Climate hazards that goal addresses^
Heat stress
Extreme heat
Drought
Water stress
Increased water demand
Fire weather (risk of wildfires)
Urban flooding
Heavy precipitation
Loss of green space/green cover
Soil degradation/erosion
Infectious disease
Air pollution
Biodiversity loss

Base year of goal (or year goal was established if no base year)^
2022

Target year of goal^
2026

Description of metric / indicator used to track goal^
This target is part of Cupertino's Climate Action Plan 2.0. The Climate Action Plan 2.0 measures community resiliency through block-level climate resiliency training and resiliency hubs with an enrollment of at least 400 households by the end of Phase 2 to participate in the climate resiliency block training program. In addition to the training, public policies should allow the City to achieve Gold ratings in all categories set forth by the County of Santa Clara Healthy Cities Index.

Comment
Adaptation goal 3 addresses increasing community capacity and resilience, enhancing public health and safety, and stronger social relationships and civic engagement.

Select a reference ID for the goal
Adaptation goal 4

Adaptation goal^
Update the adaptation strategy and action plan in coordination with the County of Santa Clara

Climate hazards that goal addresses^
Heat stress
Extreme heat
Drought
Water stress
Increased water demand
Fire weather (risk of wildfires)
Urban flooding
Heavy precipitation
Loss of green space/green cover
Soil degradation/erosion
Infectious disease
Air pollution
Biodiversity loss

Base year of goal (or year goal was established if no base year)^
2022

Target year of goal^
2026

Description of metric / indicator used to track goal^
County of Santa Clara adaptation plan and Cupertino General Plan - Safety Element as required by State Bill (SB) 379.

Comment
This target is part of Cupertino's Climate Action Plan 2.0. Adaptation goal 4 addresses how climate science and projections change over time as scientific techniques, technologies, and more information becomes available, and factors such as population growth and development change. More research and novel adaptation practices may also emerge. To use the most up-to-date information and best adaptation practices, the City plans to update this adaptation strategy in partnership with the County of Santa Clara. This will allow the City to take advantage of the synergies with County adaptation plan which is currently under development, as well as access county-level projections and other information.

5. Mitigation Targets

(5.1) Does your jurisdiction have an active greenhouse gas emission reduction target(s) in place? If no active GHG emissions reduction target is in place, please indicate the primary reason why.
Yes, our jurisdiction has an active greenhouse gas emissions reduction target(s)

(5.1a) Provide details of your emissions reduction target(s).

Select a reference ID for the target
Target 1

Target type^
Base year intensity target based on emissions per capita

Boundary of target relative to jurisdiction boundary^
Same - covers entire jurisdiction and nothing else

Emissions sources covered by target^
Target covers all the emissions sources which are included in the jurisdiction inventory

Are carbon credits currently used or planned to be used to achieve this target?^
No, this target will not use carbon credits

Percentage of target to be met using carbon credits generated from outside jurisdiction or target boundary^
<Not Applicable>

Year target was established
2022

Covered emissions in year target was established (metric tonnes CO2e)
346998

Base year^
2018

Covered emissions in base year (metric tonnes CO2e)^
346998

Emissions intensity figure in base year (metric tonnes CO2e per capita or GDP)^
5.46

Target year^
2030

Estimated business as usual emissions in target year (metric tonnes CO2e)^

<Not Applicable>

Percentage of emissions reduction (including offsets and carbon dioxide removal)^
38

Net emissions in target year (after offsets and carbon dioxide removal) [auto-calculated]
<Not Applicable>

Net emissions in target year (after offsets and carbon dioxide removal) (metric tonnes CO2e)^
222867

Projected population in target year
65690

Specify if target is considered a science-based target (SBT) and the SBT methodology it aligns to

Yes, our jurisdiction considers the target to be science-based (select applicable methodology)	Other, please specify (Target is consistent with both the state and IPCC science-based targets related to GHG emissions reduction. Target is more aggressive than the state-level goals to reduce GHG emissions 40 percent below 1990 levels by 2030 (in compliance with SB 32).)

Covered emissions in most recent inventory (metric tonnes CO2e)
346998

Is this target the jurisdiction's most ambitious target?
No, but it is a mid-term target for the most ambitious target

Alignment with Nationally Determined Contribution
This target is more ambitious than the Nationally Determined Contribution

Select the conditional components of your emissions reduction target
Target is conditional on complete implementation of legislation, regulation and/or policy set by a higher level of government

Please explain^
This is a target from the City's Climate Action Plan 2.0. California Executive Order S-3-05 established a long-range GHG reduction target of 80% below 1990 levels by 2050. AB 32, the California Global Warming Solutions Act of 2006, required California to reduce statewide GHG emissions to 1990 levels by 2020. AB 32 also directed the Air Resources Board (CARB) to develop and implement regulations that reduce statewide GHG emissions. Many local governments do not have access to sufficient historical data to prepare a 1990 baseline emissions inventory, which would allow local governments to establish reduction targets that exactly mimic the state's own targets. CARB's 2017 Scoping Plan recommends that local agencies establish communitywide GHG reduction goals for local climate action plans that will help California achieve its 2030 target and longer-term goal. The scoping plan notes that it is appropriate to derive evidence-based targets or goals from local emissions sectors and population projections if this process is consistent with the framework used to develop the Statewide targets. CARB also notes that
GHG goals and targets should show a downward trend consistent with the statewide objectives. The GHG emissions reductions associated with the measures in the CAP 2.0 are sufficient to exceed the state-level target established by Senate Bill (SB) 32 and meet the City's 2030 climate action target.
Cupertino's climate action targets are to:
- Reduce the community's per capita GHG emissions to 3.39 MT CO2e per person by 2030, which equals a 50 percent reduction from 2010 per capita levels, or a 66 percent reduction from 1990 per capita levels by 2030.36
- Based on projected population growth through 2030, this is equivalent to reducing the community's mass emissions to 222,867 MT CO2e by 2030, or 45 percent below the community's 1990 GHG emissions.
- Achieve net-zero MT CO2e per person, or carbon neutrality, by 2040. Maintain carbon neutrality through 2045 and beyond.
*Note: 2022 emissions have not yet been assessed. Therefore, the 2018 emissions level was entered as a proxy for 2022 until a more recent inventory is completed.

Select a reference ID for the target
Target 2

Target type^
Base year intensity target based on emissions per capita

Boundary of target relative to jurisdiction boundary^
Same - covers entire jurisdiction and nothing else

Emissions sources covered by target^
Target covers all the emissions sources which are included in the jurisdiction inventory

Are carbon credits currently used or planned to be used to achieve this target?^
We do not know if this target will be achieved using carbon credits

Percentage of target to be met using carbon credits generated from outside jurisdiction or target boundary^
<Not Applicable>

Year target was established
2022

Covered emissions in year target was established (metric tonnes CO2e)
346998

Base year^
2018

Covered emissions in base year (metric tonnes CO2e)^
346998

Emissions intensity figure in base year (metric tonnes CO2e per capita or GDP)^
5.46

Target year^
2040

Estimated business as usual emissions in target year (metric tonnes CO2e)^
<Not Applicable>

Percentage of emissions reduction (including offsets and carbon dioxide removal)^
100

Net emissions in target year (after offsets and carbon dioxide removal) [auto-calculated]
<Not Applicable>

Net emissions in target year (after offsets and carbon dioxide removal) (metric tonnes CO2e)^
0

Projected population in target year
68305

Specify if target is considered a science-based target (SBT) and the SBT methodology it aligns to

Yes, our jurisdiction considers the target to be science-based (select applicable methodology)	WWF's One Planet City Challenge (OPCC)

Covered emissions in most recent inventory (metric tonnes CO2e)
346998

Is this target the jurisdiction's most ambitious target?
Yes

Alignment with Nationally Determined Contribution
This target is more ambitious than the Nationally Determined Contribution

Select the conditional components of your emissions reduction target
Target is conditional on complete implementation of legislation, regulation and/or policy set by a higher level of government
Target is conditional on the development or scaling up of other innovative technologies

Please explain^
This is a target from the City's Climate Action Plan 2.0. The Cupertino climate action targets are more aggressive than the state-level goals to reduce GHG emissions 40 percent below 1990 levels by 2030 (in compliance with SB 32) and to carbon neutrality by 2045 (in compliance with EO B-55-18). The CAP 2.0 contains measures and actions that will enable Cupertino to meet the 2030 GHG reduction target and make substantial progress towards the 2040 goal of carbon neutrality. *Note: 2022 emissions have not yet been assessed. Therefore, the 2018 emissions level was entered as a proxy for 2022 until a more recent inventory is completed.

6. Sector Targets

(6.1) Provide details of your jurisdiction's energy-related targets active in the reporting year. In addition, you can report other climate-related targets active in the reporting year.

Target type

Building specific emissions reduction target	Residential buildings emissions reduction target

Target description
Electrify existing residential buildings to reduce annual residential natural gas usage from 129 therms per person in 2018 to at most 71 therms per person in 2030 and 16 therms per person in 2040. This target is part of Cupertino's Climate Action Plan 2.0.

Boundary of target relative to jurisdiction boundary
Same - covers entire jurisdiction and nothing else

Year target was established
2022

Base year
2018

Metric used to measure target (renewable energy or energy efficiency target)
<Not Applicable>

Metric used to measure target
Annual consumption of natural gas in therms per person

Metric value in base year
129

Target year
2030

Metric value in target year
71

Metric value in most recent year data is available
129

Percentage of total energy that is renewable in target year
<Not Applicable>

Is this target publicly available?
Yes, provide link/attachment (https://www.cupertino.org/home/showpublisheddocument/31683/637964240923930000)

Comment
This target is included in the Climate Action Plan 2.0. See Table ES-2, pg. 9-10 for the targets listing. Implementation of this measure contributes to Cupertino achieving its 2030 target of 3.39 MT CO2e per person. Each measure is supported by a suite of actions that will help to achieve the completion of that measure. The measures and

actions have been designed using principles called key pillars that ensure that changes are robust, effective, and inclusive. Key pillars include partnerships, equity, financing, structural change, and engagement and are discussed in more detail in Section 7.4 of the CAP 2.0.

Target type

Building specific emissions reduction target	Commercial emissions reduction target

Target description
Electrify existing commercial buildings to reduce annual commercial natural gas usage from 119 therms per person in 2018 to at most 90 therms per person in 2030 and 54 therms per person in 2040. This target is part of Cupertino's Climate Action Plan 2.0.

Boundary of target relative to jurisdiction boundary
Same - covers entire jurisdiction and nothing else

Year target was established
2022

Base year
2018

Metric used to measure target (renewable energy or energy efficiency target)
<Not Applicable>

Metric used to measure target
Annual consumption of natural gas in therms per person

Metric value in base year
119

Target year
2030

Metric value in target year
90

Metric value in most recent year data is available
119

Percentage of total energy that is renewable in target year
<Not Applicable>

Is this target publicly available?
Yes, provide link/attachment (https://www.cupertino.org/home/showpublisheddocument/31683/637964240923930000)

Comment
This target is included in the Climate Action Plan 2.0. See Table ES-2, pg. 9-10 for the targets listing. Implementation of this measure contributes to Cupertino achieving its 2030 target of 3.39 MT CO2e per person. Each measure is supported by a suite of actions that will help to achieve the completion of that measure. The measures and actions have been designed using principles called key pillars that ensure that changes are robust, effective, and inclusive. Key pillars include partnerships, equity, financing, structural change, and engagement and are discussed in more detail in Section 7.4 of the CAP 2.0.

Target type

Building specific emissions reduction target	New buildings emissions reduction target

Target description
Require new residential and commercial development to be all-electric at time of construction. This target is part of Cupertino's Climate Action Plan 2.0.

Boundary of target relative to jurisdiction boundary
Same - covers entire jurisdiction and nothing else

Year target was established
2022

Base year
2020

Metric used to measure target (renewable energy or energy efficiency target)
<Not Applicable>

Metric used to measure target
Residential and commercial annual natural gas usage in therms

Metric value in base year
16460590

Target year
2030

Metric value in target year
17285175

Metric value in most recent year data is available
16460590

Percentage of total energy that is renewable in target year
<Not Applicable>

Is this target publicly available?
Yes, provide link/attachment (https://www.cupertino.org/home/showpublisheddocument/31683/637964240923930000)

Comment
This target is included in the Climate Action Plan 2.0. See Table ES-2, pg. 9-10 for the targets listing. Implementation of this measure contributes to Cupertino achieving its 2030 target of 3.39 MT CO2e per person. Each measure is supported by a suite of actions that will help to achieve the completion of that measure. The measures and actions have been designed using principles called key pillars that ensure that changes are robust, effective, and inclusive. Key pillars include partnerships, equity, financing, structural change, and engagement and are discussed in more detail in Section 7.4 of the CAP 2.0.

Target type

Transport target	Modal share targets

Target description
Develop and implement an Active Transportation Plan to achieve 15% of active transportation mode share by 2030 and 23% by 2040. This target is part of Cupertino's Climate Action Plan 2.0.

Boundary of target relative to jurisdiction boundary
Same - covers entire jurisdiction and nothing else

Year target was established
2022

Base year
2015

Metric used to measure target (renewable energy or energy efficiency target)
<Not Applicable>

Metric used to measure target
Bicycle mode share percentage

Metric value in base year
1

Target year
2030

Metric value in target year
15

Metric value in most recent year data is available
1

Percentage of total energy that is renewable in target year
<Not Applicable>

Is this target publicly available?
Yes, provide link/attachment (https://www.cupertino.org/home/showpublisheddocument/31683/637964240923930000)

Comment
This target is included in the Climate Action Plan 2.0. See Table ES-2, pg. 9-10 for the targets listing. Implementation of this measure contributes to Cupertino achieving its 2030 target of 3.39 MT CO2e per person. In order to estimate the mode shift potential associated with actions supporting this target, other cities with similar buildouts (bike network mileage versus road network mileage) were compared. Results from significant investment in bicycle infrastructure in California suggest that bicycle mode share can be increased on par with leading bicycle cities in the state. The City of Davis leads the state with 23.2% bicycle mode share in 2019 followed by the City of Berkeley with 9.7% bicycle mode share in 2019 (see Table 9). GHG emissions quantification in 2030 for these actions conservatively estimates the average of the two (15%), while quantification in 2040 estimates a mode shift close to the maximum. A 15% bicycle mode share translates approximately to a 3% decrease in passenger vehicle miles traveled.

Target type

Transport target	Modal share targets

Target description
Implement public and shared transit programs to achieve 29% of public transit mode share by 2030 and maintain through 2040. This target is part of Cupertino's Climate Action Plan 2.0.

Boundary of target relative to jurisdiction boundary
Same - covers entire jurisdiction and nothing else

Year target was established
2022

Base year
2015

Metric used to measure target (renewable energy or energy efficiency target)
<Not Applicable>

Metric used to measure target
Transit mode share percentage

Metric value in base year
2

Target year
2015

Metric value in target year
29

Metric value in most recent year data is available
2

Percentage of total energy that is renewable in target year
<Not Applicable>

Is this target publicly available?
Yes, provide link/attachment (https://www.cupertino.org/home/showpublisheddocument/31683/637964240923930000)

Comment
This target is included in the Climate Action Plan 2.0. See Table ES-2, pg. 9-10 for the targets listing. Implementation of this measure contributes to Cupertino achieving its 2030 target of 3.39 MT CO2e per person. In order to estimate the mode shift potential associated with actions supporting this target, other cities with similar levels and types of public transit investment were compared. Success in other cities suggests that significant investment in public transit can increase public transit mode share on par with those cities. The City of San Francisco leads the state with 26% transit mode share in 2017 (pre-COVID). The City of Seattle has documented significant increases in public transit mode share to 48% in 2017 (pre-COVID). Quantification estimates that given full implementation of the public transit improvement actions, the average of Seattle and San Francisco's public transit mode share (29%) is achievable for Cupertino in 2030, given the barriers to public transit that Cupertino currently faces. This would be equivalent to a 16% decrease in passenger VMT from public transit.

Target type

Transport target	Consumption of renewable energy in transportation

Target description
Increase zero-emission vehicle (ZEV) adoption to 35% for passenger vehicles by 2030 and 100% for all vehicles by 2040. This target is part of Cupertino's Climate Action Plan 2.0.

Boundary of target relative to jurisdiction boundary
Same - covers entire jurisdiction and nothing else

Year target was established
2022

Base year
2020

Metric used to measure target (renewable energy or energy efficiency target)
<Not Applicable>

Metric used to measure target
Passenger electric vehicle adoption rate - percentage of vehicles registered in Cupertino that are zero emission vehicles

Metric value in base year
8

Target year
2030

Metric value in target year
35

Metric value in most recent year data is available
8

Percentage of total energy that is renewable in target year
<Not Applicable>

Is this target publicly available?
Yes, provide link/attachment (https://www.cupertino.org/home/showpublisheddocument/31683/637964240923930000)

Comment
This target is included in the Climate Action Plan 2.0. See Table ES-2, pg. 9-10 for the targets listing. Implementation of this measure contributes to Cupertino achieving its 2030 target of 3.39 MT CO2e per person. Adding and supporting the addition of electric vehicle chargers within Cupertino will be the main mechanism through which the City will encourage zero-emission vehicle (ZEV) adoption within the community. The state has established a goal of putting 5 million ZEVs on the road by 2030. However, the recent passing of executive order N-79-20 calls for 100% of passenger vehicle sales to be all-electric by 2035. This new executive order puts the total number of ZEVs on the road by 2035 at approximately 15 million. Based on the current number of vehicles registered in California and a 2% growth rate per year, 15 million ZEV's accounts for 35% of total passenger vehicles in 2035. The City has established its own goal in line with this and aims to reach 35% ZEV adoption by 2030, 5 years ahead of the state, and 100% by 2040. As of 2020, 8% of passenger vehicles in Cupertino were ZEVs.

Target type

Water target	Target to increase water use efficiency

Target description
Reduce per capita water consumption 15% compared to 2019 levels by 2030 and maintain through 2040. This target is part of Cupertino's Climate Action Plan 2.0.

Boundary of target relative to jurisdiction boundary
Same - covers entire jurisdiction and nothing else

Year target was established

2022

Base year
2019

Metric used to measure target (renewable energy or energy efficiency target)
<Not Applicable>

Metric used to measure target
Annual water consumption in gallons per person

Metric value in base year
40368

Target year
2030

Metric value in target year
34313

Metric value in most recent year data is available
42397

Percentage of total energy that is renewable in target year
<Not Applicable>

Is this target publicly available?
Yes, provide link/attachment (https://www.cupertino.org/home/showpublisheddocument/31683/637964240923930000)

Comment
This target is included in the Climate Action Plan 2.0. See Table ES-2, pg. 9-10 for the targets listing. While only a small part of the City's GHG emissions, water conservation and decarbonized wastewater treatment are important aspects of a community's overall sustainability and resiliency.

Target type

Waste target	Target to increase the diversion rate away from landfill and incineration

Target description
Achieve and maintain 80% waste diversion by 2025. This target is part of Cupertino's Climate Action Plan 2.0.

Boundary of target relative to jurisdiction boundary
Same - covers entire jurisdiction and nothing else

Year target was established
2022

Base year
2018

Metric used to measure target (renewable energy or energy efficiency target)
<Not Applicable>

Metric used to measure target
Waste diversion rate from landfill (%)

Metric value in base year
73

Target year
2025

Metric value in target year
80

Metric value in most recent year data is available
73

Percentage of total energy that is renewable in target year
<Not Applicable>

Is this target publicly available?
Yes, provide link/attachment (https://www.cupertino.org/home/showpublisheddocument/31683/637964240923930000)

Comment
This target is included in the Climate Action Plan 2.0 - see page 92. The City has an overall goal of reaching and maintaining 80 percent waste diversion by 2025. The diversion rate is calculated using CalRecycle's Diversion rate equivalent formula (Cupertino's waste diversion rate as of 2018 is 73 percent). Working toward zero waste requires two main strategies. First, maximizing waste diversion (including recycling and composting) and second, minimizing waste generation. Cupertino's zero waste measures align with these strategies. They are:
Measure W-1: Implement SB 1383 requirements and reduce communitywide landfilled organics 75% by 2025 and inorganic landfilled waste 35% by 2030. Reduce all landfilled waste 90% by 2040.
Measure W-2: Reduce overall waste disposed to garbage, recycling, and compost per capita by 15% by 2035.
Measure W-3: Meet or exceed the SB 1383 recycled organics products procurement requirements and sequester or avoid at least 0.018 MT CO_2e per person by 2045.

Target type

AFOLU target	Other AFOLU target type, please specify (Carbon sequestration target)

Target description
Meet or exceed the SB 1383 recycled organics products procurement requirements and sequester or avoid at least 0.018 MT CO2e per person by through 2045. Carbon sequestration by 2030 is 1,209 MT CO2e per year and 0.018 MT CO2e per capita per year. This target is part of Cupertino's Climate Action Plan 2.0.

Boundary of target relative to jurisdiction boundary
Same - covers entire jurisdiction and nothing else

Year target was established
2022

Base year
2022

Metric used to measure target (renewable energy or energy efficiency target)
<Not Applicable>

Metric used to measure target
Tons of compost procured per year

Metric value in base year
4692

Target year
2030

Metric value in target year
5255

Metric value in most recent year data is available
0

Percentage of total energy that is renewable in target year
<Not Applicable>

Is this target publicly available?
Yes, provide link/attachment (https://www.cupertino.org/home/showpublisheddocument/31683/637964240923930000)

Comment
This target is included in the Climate Action Plan 2.0. See Table ES-2, pg. 9-10 for the targets listing. SB 1383 requires each jurisdiction in California to procure recycled organics products to meet specific procurement targets, as notified by CalRecycle by 2022. The City expects to meet these requirements through the procurement of compost, which may be applied through a compost trading program in the County and adjacent counties, resulting in carbon sequestration benefits for Cupertino. Guidance from CalRecycle has set the procurement target for Cupertino in 2022 at 4,692 tons of compost, based on Cupertino's population. Based on this procurement target, Cupertino's population, and the carbon sequestration potential per ton of mixed organics compost, the carbon sequestration potential for Cupertino's compost procurement through 2040 was calculated.

Planning

7. Planning

Climate Action Planning

(7.1) Does your jurisdiction have a climate action plan or strategy?
Yes, our jurisdiction has a climate action plan or strategy

Original Climate Action Plan was adopted in 2015. City has adopted CAP 2.0 in August 2022.

(7.1a) Report details on the climate action plan or strategy that addresses climate mitigation and/or climate adaptation (resilience) in your jurisdiction.

Climate action plan type^
Integrated climate plan (addressing mitigation, adaptation and energy access and/or energy poverty)

Attachment/link and name of plan^
https://www.cupertino.org/home/showpublisheddocument/31683/637964240923930000 City of Cupertino Climate Action Plan 2.0
Cupertino 2022 Climate Action Plan 2.0.pdf

Confirm attachment/link provided to plan
The plan has been attached and can be accessed (unrestricted) on the link provided

Boundary of plan relative to jurisdiction boundary^
Same (jurisdiction-wide) covers entire jurisdiction and nothing else

Processes for monitoring evaluation and updates of plan^
Monitoring: Information on progress of plan is monitored and publicly reported annually
Evaluation: Evaluation of plan takes place annually
Update: Updates to the plan are published annually

Funding sources and financial instruments to finance plan
Jurisdiction's own resources
Other, please specify source (Grants, Alternative funding mechanisms)

Stakeholders engaged^
State/regional government(s) and/or agencies
Local government (s) and/or agencies
Citizens
Vulnerable population groups
Academia
Business and private sector

Describe if and how climate-related scenarios have informed the plan
This plan has been informed by the United Nations Intergovernmental Panel on Climate Change (IPCC) projections that show that a reduction in GHG emission to carbon neutrality by mid-century is required to limit warming trends to 1.5 degrees Celsius and avoid the worst impacts of climate change. The plan has been further informed by the State of California's Adaptation Planning Guide and associated data analysis. The vulnerability assessment uses time horizons to 2050 and 2100 and Representative Concentration Pathway (RCP) 4.5 and 4.8 to inform climate hazards assessment.

Primary author(s) of plan^
Dedicated team within jurisdiction
Consultant

Assessment of co-benefits, trade-offs, and synergies of actions included in plan^
Plan assesses co-benefits of actions
Plan assesses trade-offs of actions
Plan assesses synergies of actions

Year of formal approval of plan^
2022

End year of plan
2030

Total cost of implementation of plan (in currency specified in 0.1)

Sectors covered by action plan
Agriculture
Forestry
Fishing
Manufacturing
Electricity, gas, steam and air conditioning supply
Water supply
Sewerage, wastewater management and remediation activities
Waste management
Administrative and support service activities
Public administration and defence; compulsory social security
Conservation
Construction
Wholesale and retail trade; repair of motor vehicles and motorcycles
Transportation and storage
Accommodation and food service activities
Information and communication
Financial and insurance activities
Real estate activities
Professional, scientific and technical activities
Education
Human health and social work activities
Arts, entertainment and recreation

Comment

Sector Action Planning

(7.2) Report details on the other climate-related plans, policies and/or strategies in your jurisdiction.

Area of plan and/or strategy
Energy

Attachment/ link and name of plan
https://www.cupertino.org/home/showpublisheddocument/31679/637964240901130000. Appendix E Existing Programs and Accomplishments

Current status of plan
In implementation

Boundary of plan relative to jurisdiction boundary
Same – covers entire jurisdiction and nothing else

Year of formal approval of plan
2015

End of year plan
2040

Comment
The City of Cupertino has a Sustainable Energy Portfolio with 20 Measures completed. Most notably are: Municipal Solar Project, removing barriers for new solar, community clean energy with SVCE, and sustainable funding with savings from past projects funding future projects.

Area of plan and/or strategy
Energy

Attachment/ link and name of plan
https://www.cupertino.org/home/showpublisheddocument/31679/637964240901130000. Appendix E Existing Programs and Accomplishments

Current status of plan
In implementation

Boundary of plan relative to jurisdiction boundary
Same – covers entire jurisdiction and nothing else

Year of formal approval of plan
2015

End of year plan
2040

Comment
The City of Cupertino has completed 18 Measures to address building energy use. Most notably are: New construction electrification ordinance, building decarbonization plan, Data for change, and community outreach for personal climate action.

Area of plan and/or strategy
Sustainable urban mobility

Attachment/ link and name of plan
https://www.cupertino.org/home/showpublisheddocument/31679/637964240901130000. Appendix E Existing Programs and Accomplishments

Current status of plan
In implementation

Boundary of plan relative to jurisdiction boundary
Same – covers entire jurisdiction and nothing else

Year of formal approval of plan
2015

End of year plan
2040

Comment
The City of Cupertino has completed 18 Measures to address alternative transportation and fuel emissions reductions with 16 Measures listed as ongoing. Most notably are: the Bike Plan Implementation, Bicycle-Friendly Community, Electric Vehicle Infrastructure, Diesel free by 2033, Electric and Renewable Diesel Fleet, and Vehicle Miles Traveled (VMT) Reduction Ordinance.

Area of plan and/or strategy
Water security

Attachment/ link and name of plan
https://www.cupertino.org/home/showpublisheddocument/31679/637964240901130000. Appendix E Existing Programs and Accomplishments

Current status of plan
In implementation

Boundary of plan relative to jurisdiction boundary
Same – covers entire jurisdiction and nothing else

Year of formal approval of plan
2015

End of year plan
2040

Comment
The City of Cupertino has completed 12 Measures for water conservation. Most notably are: the Municipal Water Savings, Drought Tolerant Demo Garden, Adopted Water Budget, and Water Efficient Landscape Ordinance.

Area of plan and/or strategy
Green infrastructure

Attachment/ link and name of plan
https://www.cupertino.org/home/showpublisheddocument/25018/637025100485100000 City of Cupertino Storm Drain Master Plan

Current status of plan
Monitoring and evaluation in progress

Boundary of plan relative to jurisdiction boundary
Same – covers entire jurisdiction and nothing else

Year of formal approval of plan
2015

End of year plan
2018

Comment
In 2018 the City completed a Stormwater Infrastructure plan which identifies facilities needed to prevent “10-year” event street flooding, “100-year” event structure flooding, and green infrastructure to meet water quality protection needs in a cost-effective manner. The plan also provides low impact development (LID) principles to manage stormwater by mimicking natural hydrology, minimizing grading and protecting or restoring natural drainage systems on both public and private developments.

Area of plan and/or strategy
Other, please specify (Reducing Solid Waste)

Attachment/ link and name of plan
https://www.cupertino.org/home/showpublisheddocument/31679/637964240901130000. Appendix E Existing Programs and Accomplishments

Current status of plan
In implementation

Boundary of plan relative to jurisdiction boundary
Same – covers entire jurisdiction and nothing else

Year of formal approval of plan
2015

End of year plan
2040

Comment
The City of Cupertino has completed 14 Measures addressing solid waste reduction measures with 5 ongoing. Most notable are: the Waste Diversion & Zero-Waste Policy, Organics Waste and Food Recovery Ordinance, Free Compost Bins for Residents, Construction and Demolition Debris, Paperless Office Policy, Commercial Organics Ordinance, Foam Food ware Container Ordinance, and the Reusable Bag Ordinance.

Area of plan and/or strategy
Biodiversity

Attachment/ link and name of plan
https://www.cupertino.org/home/showpublisheddocument/31679/637964240901130000. Appendix E Existing Programs and Accomplishments

Current status of plan
In implementation

Boundary of plan relative to jurisdiction boundary
Same – covers entire jurisdiction and nothing else

Year of formal approval of plan
2015

End of year plan
2040

Comment
The City of Cupertino's Tree Division is actively participating in the County of Santa Clara's program to encourage voluntary planting on private property and street tree maintenance. The City is currently responsible for maintaining over 20,000 trees throughout the community.

Finance

(7.4) Describe any planned climate-related projects within your jurisdiction for which you hope to attract financing.

Project area
Buildings

Project title
Building Decarbonization

Stage of project development
Project structuring

Status of financing
Project partially funded and seeking additional funding

Identified financing model
Public finance - own budget

Project description and attach project proposal
Based on the experiences of nearby agencies, the City plans to explore investment from the private sector in building decarbonization. The City is actively pursuing alternative financing for a portfolio of sustainable infrastructure projects at municipal-owned facilities, for example: exploring the use of performance contracting to decarbonize one of the City community centers. This project was authorized by City Council in the fiscal year 2020 capital improvements program.

Total cost of project (in currency specified in 0.1)

Total investment cost needed if relevant (in currency specified in 0.1)

Actions

8. Adaptation Actions

(8.1) Describe the outcomes of the most significant adaptation actions your jurisdiction is currently undertaking. Note that this can include those in the planning and/or implementation phase.

Action^

Technological actions	Water saving technologies (including rainwater harvesting)

Climate hazard(s) that action addresses^
Drought
Fire weather (risk of wildfires)
River flooding
Heavy precipitation

Action description and web link to further information^
Santa Clara Valley Water District (Valley Water) offers a Landscape Rebate Program for residents and businesses to convert lawns or pools to drought tolerant landscaping and receive $3 per square foot. This rebate amount is made possible by the City of Cupertino's agreement with Valley Water to add an additional $1 per square foot to the District's existing $2 per square foot rebate. The City also matches rain barrel and cistern rebates offered by Valley Water. The City hosts free graywater information workshops for residents on how to qualify for Valley Water's $200 Laundry to Landscape Rebate Program and matches the graywater rebate for Cupertino residents.

In 2020, Cupertino launched a pilot project known as Climate Victory Gardens to support residents, multifamily owners, and nonprofit organizations with project management services to convert lawn area to drought tolerant landscaping. The $332,600 total cost reflected below includes $230,500 total for the cost share agreement with Valley Water for rebate matching and $102,100 for the pilot Climate Victory Gardens project. The $230,500 is the City of Cupertino's contribution to the rebate funding; additional funding comes from the water district.
Over the course of the last 10 years (2010-2020), Cupertino has created an estimated 9 million gallons of annual water savings in the community with the funding and promotion of these incentive programs.

Sectors adaptation action applies to^
Water supply
Conservation
Education
Human health and social work activities

Co-benefits realised^
Reduced costs
Reduced natural resource depletion
Increased water security
Improved education and public awareness on climate issues
Improved mental wellbeing/quality of life
Improved air quality
Reduced GHG emissions
Improved water/soil quality
Increased/improved green space
Protected/improved biodiversity and ecosystem services

Timeframe for which increased resilience is expected to last

Long-term (after 2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action
90-100%

Hectares (ha) of natural systems with increased resilience due to adaptation action
0.278

Funding source(s)
Jurisdiction's own resources
Other, please specify source(s) (Water rate payer funds set aside for conservation projects)

Status of action in the reporting year^
Action in operation (jurisdiction-wide)

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)
332600

Action^

Engineered and built environment actions	Cooling centres, pools, water parks/plazas

Climate hazard(s) that action addresses^
Fire weather (risk of wildfires)

Action description and web link to further information^
The City provides information on locations of City-run cooling centers on its website and social media accounts during heat events. The City also advertises advice and tips for staying cool and healthy during heat events. This information is posted on Facebook, NextDoor, Twitter, and the City's website. As this communication is rolled into normal operations, no specific cost is allocated to this project at this time.

Sectors adaptation action applies to^
Human health and social work activities

Co-benefits realised^
Increased security/protection for poor/vulnerable populations

Timeframe for which increased resilience is expected to last
Long-term (after 2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action
90-100%

Hectares (ha) of natural systems with increased resilience due to adaptation action

Funding source(s)
Jurisdiction's own resources

Status of action in the reporting year^
Action in operation (jurisdiction-wide)

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Action^

Educational/Informational actions	Public preparedness (including exercises/drills)

Climate hazard(s) that action addresses^
Drought
Fire weather (risk of wildfires)
River flooding

Action description and web link to further information^
Strong communities have greater resilience and disaster recovery. Social relationships can provide community members with emotional support, empower them to prepare for disasters, spread essential information, and promote problem-solving. Strong communities care for each other and can supplement government response during an emergency. By building community capacity, communities are empowered to learn about and adapt to climate hazards to protect their families and each other. To increase community education and emergency preparedness, the City will educate communities about the health risks of climate hazards and engage them in strengthening community resilience such as block-level climate resilience training and resilience hubs. Also, enrollment of 400 households by the end of the second phase to allow participation in the climate resiliency block training program. The curriculum will include household preparedness planning as well as basic education on climate hazard awareness. Lastly, policies will be brought to City Council to consider that would achieve Gold ratings in all categories set forth by the County of Santa Clara Healthy Cities Index.

Sectors adaptation action applies to^
Information and communication
Education
Human health and social work activities

Co-benefits realised^
Increased security/protection for poor/vulnerable populations
Improved education and public awareness on climate issues

Reduced disaster/disease/contamination-related health impacts

Timeframe for which increased resilience is expected to last
Long-term (after 2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action
90-100%

Hectares (ha) of natural systems with increased resilience due to adaptation action

Funding source(s)
Jurisdiction's own resources

Status of action in the reporting year^
Action in operation (jurisdiction-wide)

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)
0

Action^

Educational/Informational actions	Flood mapping

Climate hazard(s) that action addresses^
River flooding
Heavy precipitation

Action description and web link to further information^
Flood zones, as designated by the Federal Emergency Management Agency (FEMA), have been mapped for planning and emergency preparedness purposes. Flood zones include areas subject to inundation by the 1-percent-annual-chance flood event, areas where there are possible but undetermined flood hazards, areas of minimal flood hazard, areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between one and three feet, areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet, and areas with 0.2% annual chance flood. Some areas have been determined using approximate methodologies and other using detailed hydraulic analyses. These maps are available in an online format and in print form. This action is part of normal city operations and thus a project cost was not determined.

Sectors adaptation action applies to^
Water supply
Information and communication

Co-benefits realised^
Improved mobility and access
Increased security/protection for poor/vulnerable populations
Improved education and public awareness on climate issues
Reduced health costs

Timeframe for which increased resilience is expected to last
Long-term (after 2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action
<10%

Hectares (ha) of natural systems with increased resilience due to adaptation action

Funding source(s)
Jurisdiction's own resources

Status of action in the reporting year^
Action in operation (jurisdiction-wide)

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Action^

Government policies and programs actions	Disaster planning and preparedness

Climate hazard(s) that action addresses^
Drought
Fire weather (risk of wildfires)
River flooding
Heavy precipitation

Action description and web link to further information^
Cupertino's Office of Emergency Services, the Santa Clara County Fire Department and teams of volunteer responders ensure that emergency preparedness and disaster response resources are in place for our community. This effort is part of normal city operations and thus there is not specific project budget.

Sectors adaptation action applies to^
Information and communication
Human health and social work activities

Co-benefits realised^
Improved mobility and access
Increased security/protection for poor/vulnerable populations
Improved mental wellbeing/quality of life
Improved preparedness for health service delivery

Timeframe for which increased resilience is expected to last
Long-term (after 2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action
90-100%

Hectares (ha) of natural systems with increased resilience due to adaptation action

Funding source(s)
Jurisdiction's own resources

Status of action in the reporting year^
Action in operation (jurisdiction-wide)

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Action^

Government policies and programs actions	Air quality initiatives

Climate hazard(s) that action addresses^
Fire weather (risk of wildfires)

Action description and web link to further information^
The City is exploring the use of an application, Aclima Pro, to measure and report on air quality for the community. This program is currently in the pilot phase. By 2023, create Key Performance Indicators (KPIs) to track pollutants from local air quality monitoring data and incorporate regular reporting of air quality KPIs into CAP reports and live interactive public dashboards. Providing wildfire smoke guidance and protocols for municipal employees to ensure their safety when air quality is poor. Integrate the vulnerability assessment results into emergency preparedness management, response, and early warning systems. Partner with the County of Santa Clara Vector Control District and Public Health Department to develop and enhance disaster and emergency early warning systems that incorporate objective data and information for potential health threats such as heat-illness, illnesses complicated by adverse air quality, inundation, and precipitation events. Developing new educational materials that cover the climate hazards identified in the vulnerability assessment and providing educational materials in at least three different languages and several formats to reach the widest audience.

Sectors adaptation action applies to^
Information and communication
Education
Human health and social work activities

Co-benefits realised^
Increased energy security
Business/technological innovation
Reduced natural resource depletion
Reduced congestion
Increased security/protection for poor/vulnerable populations
Increased transparency and accountability
Improved education and public awareness on climate issues
Improved physical health
Improved mental wellbeing/quality of life
Improved air quality
Reduced disaster/disease/contamination-related health impacts
Reduced health costs
Reduced GHG emissions

Timeframe for which increased resilience is expected to last
Long-term (after 2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action
90-100%

Hectares (ha) of natural systems with increased resilience due to adaptation action

Funding source(s)
Jurisdiction's own resources
Public-private partnerships

Status of action in the reporting year^
Implementation underway with completion expected in less than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)
50000

Action^

Laws and regulations actions	Water use restrictions

Climate hazard(s) that action addresses^
Drought

Action description and web link to further information^
The City is an active member of the Santa Clara Valley Water District's Water Conservation Subcommittee, made up of municipal water program staff, water retailers, and the water district staff. The Subcommittee coordinates outreach activities and program development for water conservation in Valley Water's service area. Recently, the Subcommittee is serving to coordinate the member cities and retailers' response to the local emergency water shortage declaration and water restrictions.
*Participation in the Subcommittee is part of normal city operations, no separate project cost is determined.

Sectors adaptation action applies to^
Water supply

Co-benefits realised^
Increased water security
Increased security/protection for poor/vulnerable populations
Increased social inclusion, equality and justice
Improved education and public awareness on climate issues
Improved water/soil quality
Protected/improved biodiversity and ecosystem services

Timeframe for which increased resilience is expected to last
Long-term (after 2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action
90-100%

Hectares (ha) of natural systems with increased resilience due to adaptation action

Funding source(s)
Regional funds and programmes

Status of action in the reporting year^
Action in operation (jurisdiction-wide)

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Action^

Technological actions	Renewable energy technologies

Climate hazard(s) that action addresses^
Fire weather (risk of wildfires)

Action description and web link to further information^
The City's designated mass care and shelter facility and a major cooling center is currently lacking in sufficient emergency power backup services. The City Council directed staff to carry out a Sustainable Infrastructure capital improvement program which combines an Energy Services Program to address needed upgrades to the facility and generate energy cost savings, but also to deploy clean power backup services to reduce reliance on diesel backup generators. The Silicon Valley Clean Energy Authority has provided a $240,000 grant to pursue clean resilient power such as a solar microgrid system at this facility. In addition to this funding, the Sustainability Division and the Office of Emergency Services has secured additional funding to address Planned Safety Power Shutdown (PSPS) events in the region and from the City General Fund.

Sectors adaptation action applies to^
Electricity, gas, steam and air conditioning supply

Co-benefits realised^
Increased energy security
Reduced disruption of energy, transport, water or communications networks
Increased security/protection for poor/vulnerable populations
Increased social inclusion, equality and justice
Reduced health impacts from extreme heat or cold weather
Reduced GHG emissions

Timeframe for which increased resilience is expected to last
Long-term (after 2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action
90-100%

Hectares (ha) of natural systems with increased resilience due to adaptation action

Funding source(s)
Jurisdiction's own resources
Regional funds and programmes

Status of action in the reporting year^
Action in operation (jurisdiction-wide)

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)
240000

Action^

Engineered and built environment actions	Storm and wastewater management

Climate hazard(s) that action addresses^
River flooding
Heavy precipitation

Action description and web link to further information^
One innovative feature of the comprehensive set of water conservation programs is to partner with our Environmental Services team to also promote resilient stormwater infrastructure. By incentivizing the removal of hardscapes, we deploy the use of creek protection and clean water fees that are collected in the property tax roll. Projects that reduce or remove impervious surfaces, such as removing a concrete driveway and installing a paver system or installing a rainwater capture system, are eligible for enhanced rebates and incentives as part of our water conservation program. These promote environmental benefits such as fewer pollutant runoffs into our creeks, and reduce risk of overwhelming our stormwater system in the event of intense storms.

Sectors adaptation action applies to^
Water supply
Conservation
Construction

Co-benefits realised^
Reduced costs
Increased water security
Improved water/soil quality
Protected/improved biodiversity and ecosystem services

Timeframe for which increased resilience is expected to last
Long-term (after 2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action
90-100%

Hectares (ha) of natural systems with increased resilience due to adaptation action

Funding source(s)
Jurisdiction's own resources
Other, please specify source(s) (Stormwater improvement local fees)

Status of action in the reporting year^
Action in operation (jurisdiction-wide)

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

9. Mitigation Actions

(9.1) Describe the outcomes of the most significant mitigation actions your jurisdiction is currently undertaking. Note that this can include those in the planning and/or implementation phases.

Primary emissions sector addressed and action type^

Generation of grid-supplied energy	Low or zero carbon energy supply generation

Action description and web link to further information^
The City of Cupertino is a founding member of Silicon Valley Clean Energy (SVCE), a community choice energy agency. SVCE became the default electricity provider for Cupertino businesses and residents in 2017. SVCE provides carbon-free electricity to the community. The City of Cupertino has opted up to 100% renewable electricity for municipal electricity accounts. SVCE invests proceeds back into the community, providing rebates, resources, and tools to help residents and businesses switch to efficient, all-electric appliances and vehicles. SVCE supports the City of Cupertino and its other member cities with technical assistance and funding for integrating energy resiliency into critical assets and infrastructure.
Emissions, savings, and other participation stats for SVCE in 2021:
31,079,00 lbs of emissions avoided in Cupertino in 2021 from using carbon-free electricity from SVCE
$432,000 in on-bill savings for Cupertino customers in 2021 ($4,158,000 in on-bill savings for Cupertino customers since launch in 2017)
$64,660 in cash payments to Cupertino customers for generating surplus solar energy in 2021
22,700 Cupertino households and businesses receiving clean electricity from carbon-free sources in 2021
96% reduction in Cupertino electricity related emissions compared to 2015
96% SVCE participation rate in 2021 (for all 13 communities served by SVCE)
*Estimated emissions reduction of 14,097 MT CO2e is based on community-wide electricity emissions avoided compared to 2015.
Total cost: SVCE purchases carbon-free electricity on behalf of the entire community and individual customers pay for their own electricity usage. This measure has saved Cupertino community $4,158,000 in on-bill savings since SVCE's launch in 2017, as the community choice aggregator supplies clean electricity at a cost discount compared to the traditional utility retail rate.
Website: www.svcleanenergy.org

Start year of action
2017

Year for which mitigation is expected to last
2051 or later

Impact indicators measured^
Estimated annual emissions reductions due to action

Estimated annual emissions reductions (metric tons CO2e/year)^
14097

Estimated annual energy savings (MWh/year)^
<Not Applicable>

Estimated annual renewable energy generation (MWh/year)^
<Not Applicable>

Co-benefits realised^
Reduced costs
Increased energy security
Enhanced climate change adaptation
Enhanced resilience to shocks and disasters

Funding source(s)
Other, please specify source(s) (SVCE purchases carbon-free electricity on behalf of the entire community and individual customers pay for their own electricity usage.)

Status of action in the reporting year^
Action in operation (jurisdiction-wide)

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Primary emissions sector addressed and action type^

Transportation	Improve walking, cycling and integrated transit access

Action description and web link to further information^
These actions are included in the CAP 2.0 under Measure TR-1: Develop and implement an Active Transportation Plan to achieve 15 percent of active transportation mode share by 2030 and 23 percent by 2040:
Continue to implement the 2018 Pedestrian Plan and the 2016 Bicycle Transportation Plan's prioritized list of projects, with accelerated completion of all planned bike paths by 2030.
Re-stripe arterial, minor collector, and major collector roads (as mapped in the 2016 Bicycle Transportation Plan) without existing designated bike lanes to include bike lanes and reduce the width of existing car lanes/travel where determined by the bicycle and pedestrian plans. Conduct a pilot program, including a plan for pilot implementation, that designates the road space on select streets specifically for bikes and is closed to through-traffic motor vehicles.
As part of the plan, consider location and extent of pilot program based on transportation data analysis, and develop success tracking metrics to inform potential pilot expansion.
*Estimated annual emissions reductions are based on annual reduction potential by 2040.

Start year of action
2022

Year for which mitigation is expected to last
2040

Impact indicators measured^
Estimated annual emissions reductions due to action

Estimated annual emissions reductions (metric tons CO2e/year)^
4822

Estimated annual energy savings (MWh/year)^
<Not Applicable>

Estimated annual renewable energy generation (MWh/year)^
<Not Applicable>

Co-benefits realised^
Job creation
Reduced costs
Improved road safety
Improved mental wellbeing/quality of life
Improved air quality

Funding source(s)
Other, please specify source(s) (Funding sources have not yet been identified. The CAP 2.0 proposes to establish a program for researching and obtaining grant funding for bike and pedestrian network expansion.)

Status of action in the reporting year^
Scoping

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Primary emissions sector addressed and action type^

Transportation	Advance micromobility transportation

Action description and web link to further information^
These actions are included in the CAP 2.0 under Measure TR-2: Implement public and shared transit programs to achieve 29% of public transit mode share by 2030 and maintain through 2040:
Include public transit in the designated streets pilot program in Measure TR-1.
Aggressively expand Via-Cupertino Shuttle program to meet shared transit goals and support vulnerable populations: secure funding to support transition to an all-electric fleet, maintain bike racks on all fleet vehicles, increase service and coverage, wheelchair accessibility, and offer free or deeply subsidized passes to students attending Cupertino schools and low-income individuals.
Partner with VTA and neighboring cities to develop high-capacity transit service along the Stevens Creek Boulevard/I-280 corridor.
*Estimated annual emissions reductions are based on annual reduction potential by 2040.

Start year of action
2022

Year for which mitigation is expected to last
2040

Impact indicators measured^
Estimated annual emissions reductions due to action

Estimated annual emissions reductions (metric tons CO2e/year)^
17516

Estimated annual energy savings (MWh/year)^
<Not Applicable>

Estimated annual renewable energy generation (MWh/year)^
<Not Applicable>

Co-benefits realised^
Job creation
Reduced costs
Improved road safety
Improved mental wellbeing/quality of life
Improved air quality

Funding source(s)
Other, please specify source(s) (The CAP 2.0 proposes to establish a program for researching and obtaining grant funding for bike and pedestrian network expansion; the City received an $8 million grant from the State to expand this program into a neighboring jurisdiction.)

Status of action in the reporting year^
Scoping

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Primary emissions sector addressed and action type^

Transportation	Electric vehicle charging points and infrastructure

Action description and web link to further information^
These actions are included in the CAP 2.0 under Measure TR-3: Increase zero-emission vehicle (ZEV) adoption126 to 35% for passenger vehicles and 20% for commercial vehicles by 2030 and 100% for all vehicles by 2040:
Conduct a survey of existing publicly accessible electric vehicle chargers, their locations, and their kW hour charging speed, and identify a prioritized list of locations for new electric vehicle charging stations with particular consideration for equitable distribution of chargers to residents of multi-family homes, low-income and fixed income people, communities of color, elders, and disabled individuals with access needs.
Leverage public and private partnerships to add 719 new publicly accessible Level 2 and 3 electric vehicle charging stations to the City by 2030.
*Estimated annual emissions reductions are based on annual reduction potential by 2040.

Start year of action
2022

Year for which mitigation is expected to last
2040

Impact indicators measured^
Estimated annual emissions reductions due to action

Estimated annual emissions reductions (metric tons CO2e/year)^
86301

Estimated annual energy savings (MWh/year)^
<Not Applicable>

Estimated annual renewable energy generation (MWh/year)^
<Not Applicable>

Co-benefits realised^
Reduced costs
Improved air quality

Funding source(s)
Regional funds and programmes
Public-private partnerships

Status of action in the reporting year^

Scoping

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Primary emissions sector addressed and action type^

Transportation	Improve fuel economy and reduce CO2 emissions from trucks

Action description and web link to further information^
These actions are included in the CAP 2.0 under Measure TR-3: Increase zero-emission vehicle (ZEV) adoption126 to 35% for passenger vehicles and 20% for commercial vehicles by 2030 and 100% for all vehicles by 2040:
Investigate commercial vehicle fleets in Cupertino and identify businesses/employers to target for accelerating zero emission vehicle (ZEV) adoption.
Work and collaborate with local businesses/employers to develop and implement a plan for City-supported accelerated fleet electrification. As part of the plan, identify opportunities for accelerated fleet electrification and promote zero-emission vehicle (ZEV) adoption within major private and employee fleets in the city.
*Estimated annual emissions reductions are based on annual reduction potential by 2040.

Start year of action
2022

Year for which mitigation is expected to last
2040

Impact indicators measured^
Estimated annual emissions reductions due to action

Estimated annual emissions reductions (metric tons CO2e/year)^
47589

Estimated annual energy savings (MWh/year)^
<Not Applicable>

Estimated annual renewable energy generation (MWh/year)^
<Not Applicable>

Co-benefits realised^
Reduced costs
Improved air quality

Funding source(s)
Other, please specify source(s) (Funding sources have not yet been identified. The CAP 2.0 proposes to identify and implement incentives for commercial fleet electrification. This could include local tax breaks.)

Status of action in the reporting year^
Scoping

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Primary emissions sector addressed and action type^

Stationary energy	Energy efficiency/ retrofit measures addressing existing commercial, residential and/or municipal buildings

Action description and web link to further information^
These actions are included in the CAP 2.0 under Measure BE-2: Electrify existing residential buildings to reduce annual residential natural gas usage from 129 therms per person in 2018 to at most 71 therms per person in 2030 and 16 therms per person in 2040:
Adopt an electrification ordinance for existing residential buildings by 2023 to be implemented through the building permit process which bans expansion of natural gas infrastructure and requires either electrification of appliances or a disconnect from the gas system.
Define equity metrics for ordinance enforcement based on feedback from low-income and fixed income people, communities of color, elders, disabled individuals with access needs and structure the ordinance and permitting compliance program to meet these metrics. Equity metrics should be designed to prevent displacement and ensure that end-user energy costs for low-income populations will not be greater after electrification than before. Design compliance support programs such as technical assistance to help permit applicants with compliance.
Enforce ordinance compliance through a comprehensive permitting compliance program, to be developed based on the results of the feasibility study in Action 1. Structure the program to include, as determined necessary, routine training of staff, dedicating staff time to building inspections, charging fees for noncompliance, providing easy to understand compliance checklists online and with permit applications, and facilitating permitting online. Evaluate the effectiveness of the program on a biannual basis to avoid potential issues such as reduced permit application rates.
Actively participate in regional permit streamlining efforts for all-electric building upgrades, EV charging, and battery storage.
*Estimated annual emissions reductions are based on annual reduction potential by 2040.

Start year of action
2023

Year for which mitigation is expected to last
2040

Impact indicators measured^
Estimated annual emissions reductions due to action

Estimated annual emissions reductions (metric tons CO2e/year)^
38660

Estimated annual energy savings (MWh/year)^
<Not Applicable>

Estimated annual renewable energy generation (MWh/year)^
<Not Applicable>

Co-benefits realised^
Job creation
Reduced costs
Improved physical health
Other impacts from climate actions (Affordable housing and local development)

Funding source(s)
Other, please specify source(s) (Funding sources have not yet been identified. The CAP 2.0 proposes to create a new staff position dedicated to understanding, streamlining, and expanding energy and electrification turnkey, rebate, and financing programs.)

Status of action in the reporting year^
Scoping

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Primary emissions sector addressed and action type^

Stationary energy	Energy efficiency/ retrofit measures addressing existing commercial, residential and/or municipal buildings

Action description and web link to further information^
These actions are included in the CAP 2.0 under Measure BE-3: Electrify existing commercial buildings to reduce annual commercial natural gas usage from 119 therms per person in 2018 to at most 90 therms per person in 2030 and 54 therms per person in 2040:
Adopt an electrification ordinance for existing commercial buildings by 2024 to be implemented through the building permit process, which bans expansion of natural gas infrastructure, requires electrification of natural gas appliances at time of major renovation and time of replacement where technologically feasible (exceptions can be made where all-electric alternatives to do not exist or are a significant cost burden, to be further defined based on results of the commercial building electrification strategy).
Enforce ordinance compliance through the same permitting compliance program and with same staff as for residential building electrification.
*Estimated annual emissions reductions are based on annual reduction potential by 2040.

Start year of action
2024

Year for which mitigation is expected to last
2040

Impact indicators measured^
Estimated annual emissions reductions due to action

Estimated annual emissions reductions (metric tons CO2e/year)^
25031

Estimated annual energy savings (MWh/year)^
<Not Applicable>

Estimated annual renewable energy generation (MWh/year)^
<Not Applicable>

Co-benefits realised^
Job creation
Reduced costs
Improved mental wellbeing/quality of life

Funding source(s)
Regional funds and programmes
Other, please specify source(s) (Funding sources have not yet been identified. The CAP 2.0 proposes to work with SVCE and PG&E to develop or expand commercial rebate program and incentivize commercial all-electric retrofits and battery storage installations.)

Status of action in the reporting year^
Scoping

Inclusion in climate action plan and/or jurisdiction development/master plan^
Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Further Information

(10.1) Use this field to provide any additional information or context that you feel is relevant to your jurisdiction's response. Please note that this field is optional and is not scored/assessed.

Submit your response

Please provide the following details about the amendments you have made to your response.

What language are you submitting your response in?

English

Please read and accept our Terms and Conditions

I have read and accept the Terms and Conditions

Please confirm how your response should be handled by CDP.

	Public or non-public submission
I am submitting my response	Publicly (recommended)