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Subject: Cupertino Climate Change Adaptation Strategies Gap Analysis Memorandum

As part of Task 5 of the Cupertino Climate Action Plan (CAP) Update, Rincon Consultants, Inc. (Rincon) is providing this analysis highlighting gaps in City- and County-adopted¹ adaptation strategies and programs. Cupertino has adopted dozens of adaptation strategies that increase community resilience with regard to sea level rise, storm flooding, wildfire, heat, drought, and adverse air quality as well as improvements to emergency planning. These adaptation strategies are included within a variety of plans including the Cupertino General Plan, Cupertino Pedestrian Transportation Plan, Cupertino Citywide Parks and Recreation Master Plan, Cupertino Capital Improvements Plan 2021-2024. Additionally, the Santa Clara County Operational Area Hazard Mitigation Plan provides long-term and short-term policies, programs, and projects to minimize death, injury, and property damage that can result from a disaster in the Santa Clara County Operational Area, which includes Cupertino. The purpose of this analysis is to recommend revisions and additions to adaptation strategies as part of upcoming Cupertino plan update cycles (e.g., the General Plan Housing Element and the General Plan Health and Safety Element) in order to better align such strategies with the CAP Update vision statement and comply with recent legislative mandates and State guidance related to climate adaptation. The recommendations provided in this analysis will allow the City to increase community resilience by bolstering adaptation strategies across relevant plans and programs.

CAP Update Vision Statement

The City of Cupertino Sustainability Division and Sustainability Commission developed the following vision statement to guide the CAP Update:

- a. **Equity:** Activate and celebrate the multiracial character of Cupertino. Take every effort to include traditionally under-represented voices and those who might be displaced by climate hazards in the planning and selection of strategies, as well as business, faith groups, neighborhoods, and schools. Create a plan that reflects the diversity of the city and sets us on a path towards a more welcoming and inclusive City.
- b. **Innovation:** Develop measures in short-term and long-term action plans that position Cupertino as a leader in climate innovation and technological development, new ways of working and studying, and commit to educating the City on innovative strategies at least once a year.

¹ County-adopted adaptation strategies are also relevant to Cupertino, as Cupertino is a member of County and regional climate collaboratives as well as a regional hazard mitigation plan.



- c. **Urgency and Flexibility:** Establish a frequent cadence of updates to the near-term action plans, with the aim to both focus community resources and stay flexible in a fast-moving world. Work with haste commensurate with the Climate Emergency Declaration that Council adopted in 2018 and the unprecedented opportunity that climate and waste plans present to our community by taking bold steps in the early planning horizon.
- d. **Resilience and Adaptation:** Establish climate adaptation measures such as green infrastructure and protecting biodiversity that keeps Cupertino residents and businesses safe, productive, and happy while climate risks accelerate.

The aspects of the CAP Update vision statement related to equity as well as resilience and adaptation directly relate to climate adaptation planning. As such, those aspects of the CAP Update vision statement have informed recommendations presented in this analysis.

Existing Climate Change Adaptation Strategies

Local and regional plans and programs were reviewed for existing adaptation strategies and policies. Table 1 lists the reviewed plans and the primary climate change hazards,² and secondary climate change impacts³ that are addressed in each plan. The separate Cupertino Climate Change Risk and Vulnerability Assessment currently identifies the following potential primary climate hazards and secondary climate change impacts:

Primary Climate Change Hazards

- Extreme hot temperature/extreme hot days
- Extreme precipitation/rainstorm
- Flood and sea level rise/river flood
- Wildfire/forest fire

Secondary Climate Change Impacts

- Adverse air quality impacts from wildfire and increased temperature
- Drought from decreased precipitation and increased temperature.

Many of the plans reviewed include adaptation strategies and policies specific to the primary climate change hazards of storm flooding, sea level rise, extreme heat, and wildfire as well as the secondary climate change impact of drought

² A physical process or event that can harm human health, livelihoods, or natural resources (e.g., increased temperature, decreased precipitation, or wildfire).

³ A physical process or impact derived from a climate hazard (e.g., adverse air quality or drought)



Table 1 Plans Reviewed

Plan	Primary Climate Change Hazards and Secondary Climate Change Impacts Addressed
Cupertino General Plan - Health and Safety Element 2015-2040 (adopted 2014)	Sea level rise, storm flooding, wildfire, drought, emergency planning
Cupertino General Plan - Housing Element 2014-2022 (adopted 2015)	None
Cupertino General Plan - Environmental Resources and Sustainability 2015-2040 (adopted 2014)	Storm flooding, heat, adverse air quality, drought
Cupertino Emergency Operations Plan (2019)	None
Cupertino Bicycle Transportation Plan (2016)	None
Cupertino Pedestrian Transportation Plan (2018)	Storm flooding, heat, adverse air quality
Cupertino Citywide Parks and Recreation Master Plan (2019)	Storm flooding, heat, drought
Cupertino Capital Improvements Plan 2021-2024 (2020)	Heat
Santa Clara County Operational Area Hazard Mitigation Plan (2017)	Storm flooding, wildfire
Plan Bay Area 2050, Final Blueprint (2020) and Implementation Plan (in development)	Sea level rise, wildfire, heat, drought
Cupertino Climate Action Plan (2015)	Heat, drought
Cupertino Green Stormwater Infrastructure Plan (2019)	Storm flooding, heat, drought
Cupertino green@school Program (2015)	None

Adaptation strategies and policies for each of the climate change hazards identified in the Cupertino Climate Change Risk and Vulnerability Assessment were found within the local and regional plans and programs. Secondary drought impacts are addressed by many of the plans listed above, however, adverse air quality impacts related to wildfire are not addressed. Table 2 includes the relevant existing adaptation strategies from the plans listed above and summarizes which primary climate change hazards and secondary climate change impacts have been addressed. The Cupertino Housing Element, Emergency Operations Plan, Bicycle Transportation Plan, and green@school program are not included in Table 2, because those plans do not currently include any adaptation strategies or policies.



Table 2 Existing Climate Change Adaptation Strategies

Strategy/Page #	Strategy/Policy	Primary Climate Change Hazards and Secondary Climate Change Impacts Addressed
Cupertino General Plan - Health and Safety Element 2015-2040 (adopted 2014)		
HS-1.2.1	Monitor Rising Sea Level. Regularly coordinate with regional, State, and federal agencies on rising sea levels in the San Francisco Bay and major tributaries to determine if additional adaptation strategies should be implemented to address flooding hazards. This includes monitoring FEMA flood map updates to identify areas in the city susceptible to sea level rise, addressing changes to State and regional sea and bay level rise estimates, and coordinating with adjacent municipalities on flood control improvements as appropriate.	Sea level rise
HS-1.2.2	Flood Insurance Rate Maps. Provide to the public, as available, up-to-date Flood Insurance Rate Maps (FIRM) that identify rising sea levels and changing flood conditions.	Sea level rise, storm flooding
HS-3	Protect the community from hazards associated with wildland and urban fires.	Wildfire
HS-3.3	Emergency Access. Ensure adequate emergency access is provided for all new hillside development.	Wildfire
HS-3.3.1	Roadway Design. Create an all-weather emergency road system to serve rural areas.	Wildfire, storm flooding
HS-3.3.2	Dead-End Street Access. Allow public use of private roadways during an emergency for hillside subdivisions that have dead-end public streets longer than 1,000 feet or find a secondary means of access.	Wildfire
HS-3.3.3	Hillside Access Routes. Require new hillside development to have frequent grade breaks in access routes to ensure a timely response from fire personnel.	Wildfire
HS-5.2.3	Neighborhood Response Groups. Encourage participation in Community Emergency Response Team (CERT) training. Train neighborhood groups to care for themselves during disasters. Actively assist in neighborhood drills and safety exercises to increase participation and build community support.	Wildfire, storm flooding
HS-5.2.4	Dependent Populations. As part of community-wide efforts, actively cooperate with State agencies that oversee facilities for persons with disabilities and those with access and functional needs, to ensure that such facilities conform to all health and safety requirements, including emergency planning, training, exercises and employee education.	Emergency planning
HS-5.2.5	Foreign Language Emergency Information. Obtain translated emergency preparedness materials and make them available to appropriate foreign language populations.	Emergency planning
HS-7.1	Evacuation Map. Prepare and update periodically an evacuation map for the flood hazard areas and distribute it to the general public.	Storm flooding
HS-7.6	Stability of Existing Water Storage Facilities. Assure the structural integrity of water storage facilities.	Drought



Strategy/Page #	Strategy/Policy	Primary Climate Change Hazards and Secondary Climate Change Impacts Addressed
Cupertino General Plan - Environmental Resources and Sustainability 2015-2040 (adopted 2014)		
ES-2.1.5	Urban Forest. Encourage the inclusion of additional shade trees, vegetated stormwater treatment and landscaping to reduce the “heat island effect” in development projects.	Heat
ES-4.2.3	Tree Planting in Private Development. Review and enhance the City’s tree planting and landscaping program and requirements for private development to reduce air pollution levels.	Heat, adverse air quality
ES-7.4.1	Storm Drainage Master Plan. Develop and maintain a Storm Drainage Master Plan which identifies facilities needed to prevent “10-year” event street flooding and “100-year” event structure flooding and integrate green infrastructure to meet water quality protection needs in a cost-effective manner.	Storm flooding
ES-7.5	Groundwater Recharge Sites. Support the Santa Clara Valley Water District efforts to find and develop groundwater recharge sites within Cupertino and provide public recreation where possible.	Drought
Cupertino Pedestrian Transportation Plan (2018)		
Page 38	Curb extension benefits. Extended sidewalk space can be used for plantings, street furniture, or green stormwater infrastructure.	Storm flooding, heat
Page 41	Choker/Pinch Point Benefits. Stormwater and greenspace elements can be combined to calm traffic while also making the street more attractive.	Storm flooding, heat, adverse air quality
Cupertino Citywide Parks and Recreation Master Plan (2019)		
MP1: Conservation Goal 1.D. v	Embrace storm water management, incorporating green infrastructure elements such as rain gardens, bioswales, permeable pavers and detention ponds to help reduce flooding, filter pollutants and replenish groundwater during storm events.	Storm flooding
MP7: Sustainability 7.C.xii	Work with Sustainability Division staff on a long-term climate adaptation plan to prepare parks and natural resources for future climate change (increased flooding, warmer temperatures, less predictable rainfall, increased extreme heat days e.g.).	Storm flooding, heat, drought
MP2: Connection2. C. ii	Provide benches, water fountains, distance markers, and other amenities along pathways and trails to encourage walking for fitness. Add fitness stations along suitable trails and walking routes in parks.	Heat
Cupertino Capital Improvements Plan 2021-2024 (2020)		
N/A	Quinlan Preschool Shade Structure	Heat



Strategy/Page #	Strategy/Policy	Primary Climate Change Hazards and Secondary Climate Change Impacts Addressed
Santa Clara County Operational Area Hazard Mitigation Plan (2017)		
SCC-8	Develop, update, and maintain GIS inventories of essential facilities, at-risk buildings and infrastructure and prioritize mitigation projects. Ideas for Implementation: <ul style="list-style-type: none"> ▪ Identify critical facilities at risk from natural hazards events. ▪ Develop strategies to mitigate risk to these facilities, or to utilize alternative facilities should natural hazard events cause damage to the facilities in question. ▪ Identify bridges at risk from flood or earthquake hazards. 	Storm flooding, wildfire
SCC-4	Continue to promote programs that mitigate vegetation fire, such as disease tree removal, defensible space, and FireWise community programs.	Wildfire
Plan Bay Area 2050, Final Blueprint (2020) and Implementation Plan (in development)		
Page 6	Adapt to Sea Level Rise. Protect shoreline communities affected by sea level rise, prioritizing areas of low costs and high benefits and providing additional support to vulnerable populations.	Sea level rise
Page 6	Provide Means-Based Financial Support to Retrofit Existing Residential Buildings. Adopt building ordinances and incentivize retrofits to existing buildings to meet higher seismic, wildfire, water and energy standards, providing means-based subsidies to offset associated costs.	Wildfire, heat, drought
Cupertino Climate Action Plan (2015)		
Measure C-E-2-A	Continue to participate in California FIRST to make PACE financing available to commercial, industrial, multi-family residential (5+ units), and non-profit-owned buildings.	Heat
Measure C-E-3-A	Partner with Housing Division to design a low- to moderate-income targeted energy and water conservation pilot program.	Heat, drought
Measure C-E-4-A	Develop overarching energy plan for community that considers energy sources and their reliability with regards to estimated climate change impacts.	Heat
B-1	Establish Energy Efficiency Fund - The establishment of an energy efficiency fund could provide a self-sustaining source of funding to support additional future retrofit programs. This type of revolving loan fund can often leverage matching funds from utilities or other sources to help offset total startup costs.	Heat
C-2	Develop landscaping policy that promotes efficient watering schedules, high and low-priority water zones (for use during pre-drought conditions), water efficient and climate-sensitive plant selection, and compost-friendly landscape maintenance.	Drought



Strategy/Page #	Strategy/Policy	Primary Climate Change Hazards and Secondary Climate Change Impacts Addressed
D-3	Expand Parks & Recreation Green Policies, which focus on water-efficient landscaping, across all departments to prioritize Bay-friendly and efficient irrigation practices and technologies to maintain City’s landscaped facilities, parks, medians, and streetscapes, and to become more resilient to water shortages; Couple implementation of these goals with projects that also minimize impervious surfaces and ensure adequate soil drainage.	Drought
E-1	Install Graywater and Rainwater Catchment Systems in New Construction and Major Retrofit Projects.	Drought
C-G-1	Support development and maintenance of a healthy, vibrant urban forest through outreach, incentives, and strategic leadership.	Heat
B	Partner with neighborhood groups, community organizations, and business community to encourage voluntary tree planting on private property within Cupertino; identify opportunities for such organizations to assist City with maintenance of street trees planted within public rights-of-way.	Heat
C	Consider developing strategic, long-range plan to identify policies and strategies to proactively manage and grow the City’s street tree population.	Heat
D	Evaluate opportunities to expand current ordinances and codes to prioritize expansion of City’s green and cool roofs, as well as pervious and cool pavement.	Heat
Cupertino Green Stormwater Infrastructure Plan (2019)		
2.3.1	Biotreatment/bioretenion	Storm flooding
2.3.2	Stormwater tree well filters and suspended pavement systems	Storm flooding
2.3.3	Pervious pavement	Storm flooding
2.3.4	Infiltration Facilities	Storm flooding
2.3.5	Green roofs	Storm flooding, heat
2.3.6	Rainwater harvesting and use	Storm flooding, drought
2.4.1	Stevens Creek Corridor and Creek Restoration Project	Storm flooding, heat



Recommended Next Steps

Based on Rincon’s review of existing adaptation strategies and policies within local and regional plans programs already in place and applicable for the City and in keeping with the CAP Update vision statement, additional steps have been identified that Cupertino can take to improve its community-wide resilience. The upcoming update to the Cupertino General Plan Health and Safety Element offers the most comprehensive opportunity to incorporate updated and new adaptation policies and implementation programs. This is described immediately below. Following the Cupertino General Plan Health and Safety Element Update recommendations is a table of additional steps Cupertino can take to update other General Plan elements and plans.

Update to Cupertino General Plan Health and Safety Element

There are a variety of legislative mandates and State guidance documents that have recently been generated to influence a general plan safety element Update, mainly focused on wildfire resilience and more broadly on climate change.

There are six bills recently passed by the California State Legislature and approved by the Governor that require specific changes when a municipality undergoes a general plan safety element update or an update of two or more elements:

1. **Senate Bill 379. Climate Change Adaptation.** Senate Bill 379 requires all cities and counties to include climate adaptation and resiliency strategies in the safety elements of their general plans upon the next revision beginning January 1, 2017. The bill requires the climate adaptation update to include a set of goals, policies, and objectives for their communities based on the vulnerability assessment, as well as implementation measures, including the conservation and implementation of natural infrastructure that may be used in adaptation projects.
2. **Senate Bill 99. Residential Emergency Evacuation Routes.** Senate Bill 99 requires all cities and counties, upon the next revision of the housing element on or after January 1, 2020, to update the safety element to include information identifying residential developments in any hazard area identified in the safety element that do not have at least two emergency evacuation routes.
3. **Senate Bill 1035. General Plans.** Senate Bill 1035 requires cities and counties to update their safety element during a housing element or local hazard mitigation plan update cycle, but not less than once every eight years, if new information on flood hazards, fire hazards, or climate adaptation or resilience is available that was not available during the previous revision of the safety element.
4. **Senate Bill 1241. State Responsibility Areas and Very High Fire Severity Zones.** The bill requires review and update of the safety element, upon the next revision of the housing element on or after January 1, 2014, as necessary to address the risk of fire in State responsibility areas and very high fire hazard severity zones. The specific requirements are codified in GC § 65302(g)(3) and 65302.5(b).



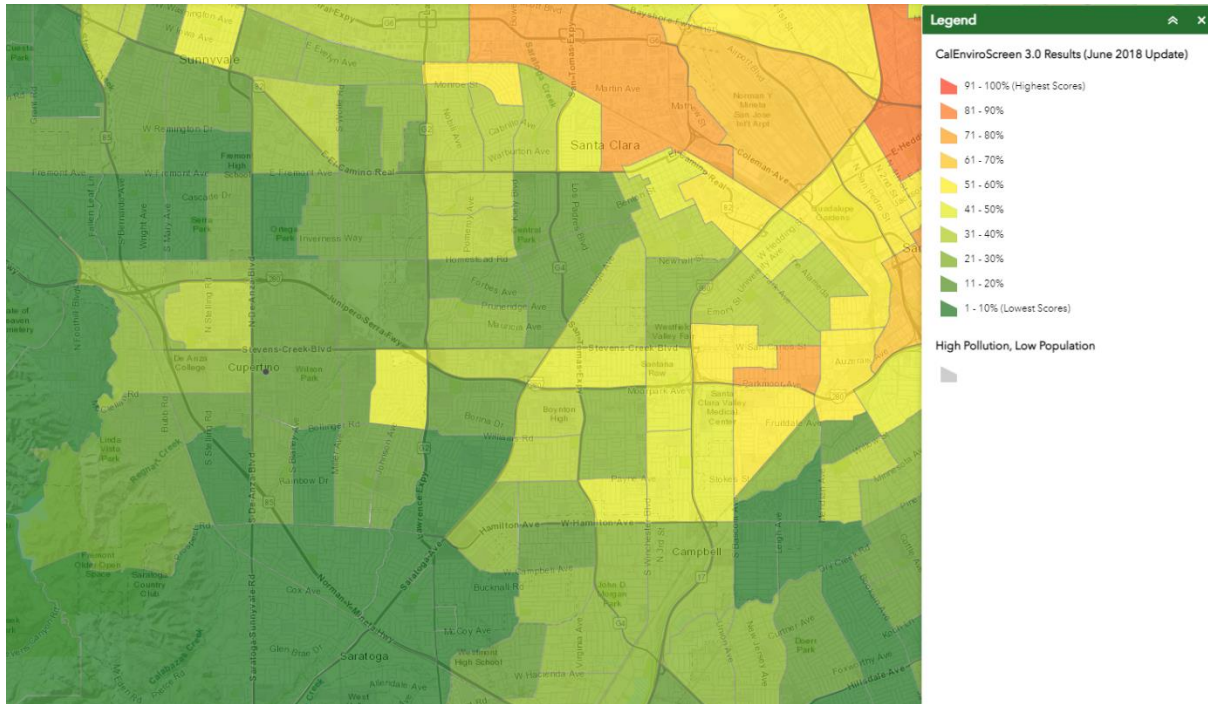
5. **Assembly Bill 747. Evacuation Routes.** Assembly Bill 747 requires all cities and counties to identify evacuation routes in the safety elements of their general plans upon the next revision of their local hazard mitigation plan, beginning on or after January 1, 2022. The bill requires evaluation of evacuations route capacity, safety, and viability under a range of emergency scenarios. The safety element can be updated based on information included in an adopted local hazard mitigation plan, emergency operation plan, or other document provided the information fulfills the goals and objectives of the assembly bill requirements.
6. **Senate Bill 1000. Environmental Justice.** Senate Bill 1000 states that revisions or adoption of two or more elements of a general plan on or after January 1, 2018 trigger a requirement to “adopt or review the environmental justice Element, or the environmental justice goals, policies, and objectives in other elements.” Per Government Code §65040.12(e), environmental justice is “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.” Environmental justice goals, policies, and objectives must aim to reduce health risks to disadvantaged communities (DACs),⁴ promote civil engagement, and prioritize the needs of these communities. Per SB 1000, the California EPA uses CalEnviroScreen, a mapping tool to identify disadvantaged communities throughout the State. CalEnviroScreen uses a variety of Statewide indicators to characterize pollution burden (the average of exposures and environmental effects) and population characteristics (the average of sensitive populations and socioeconomic factors). The model scores each of the indicators using percentiles and combines the scores to determine a CalEnviroScreen score for a given census tract relative to others in the State. Figure 1 displays CalEnviroScreen results for Cupertino; there are no DACs identified within Cupertino using CalEnviroScreen, as indicated by the regions of green and yellow showing that Cupertino is above the minimum criteria for DAC designations.⁵ Given that there are no identified DACs in Cupertino, a general plan safety element update is not required to address environmental justice issues per SB 1000; however, the City of Cupertino could consider the strategies suggested under the bill to create economic and fair housing opportunities and avoid potential discrimination within the community.

⁴ Disadvantaged communities are defined as the top 25 percent scoring areas from CalEnviroScreen along with other areas with high amounts of pollution and low-income populations.

⁵ California Office of Environmental Health and Hazard Assessment (OEHHA). 2021. SB 535 Disadvantaged Communities Map. Available: <<https://oehha.ca.gov/calenviroscreen/sb535>>. Accessed May 25, 2021.



Figure 1 CalEnviroScreen Cupertino Results



In addition, recent State guidance on general plan climate change adaptation and safety element updates include:

1. **California Adaptation Planning Guide (APG).** The California Adaptation Planning Guide (APG), was developed by the California Governor’s Office of Emergency Services (Cal OES) and is intended to support local government, regional organizations, and climate collaborative groups to integrate best practices and current science into adaptation and resilience planning efforts. In 2020, Cal OES updated the APG to meet the requirements of Assembly Bill 246, which also established the Integrated Climate Adaptation and Resiliency Program to link State climate adaptation strategies with local and regional efforts.
2. **Fire Hazard Planning Technical Advisory.** The California Governor’s Office of Planning and Research (OPR) published the November 2020 Draft Fire Hazard Planning Technical Advisory to assist cities and counties undergoing a general plan update with regard to wildfire planning. It includes model policies, detailed discussion on how to conduct a fire hazard and risk assessment, identifies example safety elements from jurisdictions throughout the State, and identifies stakeholders that should be engaged during a general plan safety element update process. The technical advisory is intended to replace the OPR Fire Hazard Planning Technical Advisory published in 2015.



Based on Rincon’s review of the currently adopted Cupertino General Plan Health and Safety Element, legislative mandates and State guidance documents, we recommend the steps shown in Table 3 be taken as part of the next Cupertino General Plan Health and Safety Element update:

Table 3 Recommended Adaptation Updates and Opportunities Related to the Cupertino General Plan Health and Safety Element

Topic	Recommended Adaptation Updates and Opportunities
Climate Change Risk and Vulnerability Assessment	<ul style="list-style-type: none"> ▪ Address recommendations in the Cupertino Climate Change Risk and Vulnerability Assessment Peer Review Memorandum dated May 18, 2021 to improve the City’s understanding of its vulnerabilities to climate change.
Increase Wildfire Resilience	<ul style="list-style-type: none"> ▪ Identify evacuation routes for all residential neighborhoods that are at risk for hazards identified in the Health and Safety Element, in coordination with emergency providers. ▪ Identify residential neighborhoods that have fewer than two emergency evacuation routes, as mandated under SB 99. ▪ Develop policies and implementation programs that target these particularly vulnerable neighborhoods with limited emergency evacuation routes, and incorporate them into the Health and Safety Element. ▪ Work with Santa Clara County during their update of the Operational Area Hazard Mitigation Plan to: <ul style="list-style-type: none"> ▪ evaluate evacuation route capacity, safety, and viability under a range of emergency scenarios, as required under AB 747 ▪ Develop policies and implementation programs that address evacuation route deficiencies ▪ Prepare a fire hazard and risk assessment in keeping with the OPR technical advisory document.
Improve Public Outreach and Engagement	<ul style="list-style-type: none"> ▪ Conduct public outreach and engagement on the Cupertino General Plan Health and Safety Element, as recommended in the OPR Fire Hazard Planning Technical Advisory and the Adaptation Planning Guide.
Increase Storm Flooding and Drought Resilience and Improve Emergency Planning Policies	<ul style="list-style-type: none"> ▪ Develop a policy to retrofit existing critical buildings and infrastructure for existing and future climate change hazards including temporary inundation from flooding, high heat days, and wildfire depending on location and risk factors. ▪ Prepare for additional climate change-induced emergencies at designated facilities. Ensure designated emergency shelters, community facilities and schools are properly outfitted with infrastructure, resources and supplies such as additional water, air conditioning and fans, backup power generation, food and basic medical supplies necessary to account for additional climate induced emergencies including high heat days, inland flooding, storm events and extended loss of power. ▪ Incorporate health threats into early warning systems. Partner with the community’s local vector control agency and local health department to develop and enhance disaster and emergency early warning systems to incorporate objective data and information for potential health threats such as heat-illness, illnesses complicated by adverse air quality, inundation and precipitation events, and vector borne diseases due to climate change hazards. These systems can provide timely and objective information to the public including measures to improve personal safety.



Topic	Recommended Adaptation Updates and Opportunities
Consistency with Other Elements	<ul style="list-style-type: none"> The Cupertino General Plan Health and Safety Element should reference adaptation strategies in other Cupertino General Plan elements including the Housing Element and Environmental Resources and Sustainability Element. The Cupertino General Plan Health and Safety Element should include environmental justice considerations.

Update to Other Plans

Table outlines recommended additions or improvements to Cupertino’s existing adaptation strategies included as part of other Cupertino General Plan elements and plans in keeping with State guidance, Cupertino’s adopted CAP Update vision statement, and best practices.

Table 4 Recommended Adaptation Updates and Opportunities Related to Other Plans

Plan	Primary Climate Change Hazards and Secondary Climate Change Impacts Addressed	Recommended Adaptation Updates and Opportunities
Cupertino General Plan – Environmental Justice Element (optional element)	N/A	<p>While not required, the City may choose to develop an Environmental Justice Element, which could include policies that increase resilience and address environmental justice, including:</p> <ul style="list-style-type: none"> Address unique or compounded health risks of climate change impacts to vulnerable communities Improve physical and financial accessibility to public transit and services Increase civic or community engagement in non-white and non-English speaking communities
Cupertino General Plan - Housing Element 2014-2022 (adopted 2015)	None	<p>Include policies that increase resilience, including:</p> <ul style="list-style-type: none"> Locate housing outside climate change hazards, ensuring that future housing opportunities, especially those for low-and moderate-income individuals, are located within areas of the community that are less prone to future flooding, wildfire, and other climate change hazards Create a loan or grant program and work with landlords to improve housing safety, especially for vulnerable populations Maintaining housing affordability with climate change adaptation regulations Identify and mitigate substandard housing in fire hazard zones Maintain wildfire buffer zones around properties
Cupertino General Plan - Environmental Resources and Sustainability 2015-2040 (adopted 2014)	Storm flooding, heat, adverse air quality, drought	No recommended adaptation updates identified.



Primary Climate Change Hazards and Secondary Climate Change Impacts		
Plan	Addressed	Recommended Adaptation Updates and Opportunities
Cupertino Emergency Operations Plan (2019)	None	Acknowledge targeted emergency outreach for vulnerable populations, especially: <ul style="list-style-type: none"> ▪ Non-English speakers ▪ Non-white communities ▪ Elderly
Cupertino Bicycle Transportation Plan (2016)	None	Including hydration stations and tree plantings along bike paths can help address impacts of extreme heat.
Cupertino Pedestrian Transportation Plan (2018)	Storm flooding, heat, adverse air quality	<ul style="list-style-type: none"> ▪ Focus pedestrian transportation improvements in vulnerable communities, including areas with a large proportion of renters, low-income areas, and in non-white communities ▪ Include hydration stations, tree canopy, rest stops along pedestrian paths Improve connections between parks, shelters, resilience hubs and residential areas
Cupertino Citywide Parks and Recreation Master Plan (2019)	Storm flooding, heat, drought	<ul style="list-style-type: none"> ▪ Focus parks and recreation adaptation-related improvements in vulnerable communities including areas with large proportion of renters, low-income areas, and in non-white communities ▪ Evaluate park plantings for extended drought resilience ▪ Ensure parks provide ample shade ▪ Extend park hours so they can serve as cooling centers during extreme heat events
Cupertino Capital Improvements Plan 2021-2024 (2020)	Heat	Consider projected climate change impacts when planning capital improvement projects, for example: <ul style="list-style-type: none"> ▪ Consider heavier storm events when planning for storm drain improvements ▪ Consider including shade structures and hydration stations when updating parks and recreation areas and as part of street improvements ▪ Consider tree species that can withstand projected climate hazards when planning park improvements ▪ Incorporate Low-Impact Development (LID) Stormwater Best Practices (BMPs), such as rain gardens and pervious pavement, where feasible ▪ Incorporate evacuation improvements, based on the Health and Safety Element update, into the Capital Improvements Plan
Santa Clara County Operational Area Hazard Mitigation Plan (2017)	Storm flooding, wildfire	<ul style="list-style-type: none"> ▪ Continue to align adaptation planning efforts with the Santa Clara County Operational Area Hazard Mitigation Plan, which provides hazards, exposure, risk and mitigation strategies. ▪ Conduct an evacuation route capacity analysis (required under AB 747). ▪ Conduct a fire hazard and risk assessment (per the Fire Hazard Planning Technical Advisory)



Primary Climate Change Hazards and Secondary Climate Change Impacts		
Plan	Addressed	Recommended Adaptation Updates and Opportunities
Plan Bay Area 2050, Final Blueprint (2020) and Implementation Plan (in development)	Sea level rise, wildfire, heat, drought	Continue to align adaptation planning efforts with the Plan Bay Area 2050, Final Blueprint (2020) and Implementation Plan.
Cupertino Climate Action Plan (2015)	Heat, drought	The adaptation-related strategies in the 2015 Climate Action Plan do not address storm flooding or wildfire impacts. Additionally, while some strategies do address low-income communities, they do not focus on the other vulnerable communities in Cupertino including children and youth, elderly, non-English speakers, renters, non-white communities, and veterans. Opportunities include: <ul style="list-style-type: none"> Targeted outreach to vulnerable communities that are culturally appropriate Develop CAP mitigation strategies that provide adaptation co-benefits
Cupertino Green Stormwater Infrastructure Plan (2019)	Storm flooding, heat, drought	Opportunities to focus green stormwater infrastructure improvements in vulnerable communities including areas with a large proportion of renters, low-income areas, and in non-white communities
Cupertino Green@school Program (2015)	None	Opportunities for adaptation to be built into the green@school handbook to reach children and youth, identified vulnerable population. This could include having students assess the adaptive capacity of their schools and develop adaptation strategies.