6 environmental resources and sustainability

Introduction

Cupertino's long-term environmental, economic and social prosperity depends on ensuring that land use planning and development recognizes the link between the built and natural environments. Today, more than half the planet's population live in either a city or suburb, and it is projected that by 2050 more than 80 percent of all people will live within urban areas. Water and other natural resources that support cities originates in natural areas, which have become places of vast resource extraction to feed the needs of a growing human population. As a result, once "untouched" and pristine ecological systems have become strained by the enormous impact of human activity.

To support these growing urban and suburban populations, while seeking to mitigate their continued demands on our landscape, cities need to identify and systemically prioritize ways because human activity has such a large impact on the environment, cities need to identify ways to protect and restore natural ecosystems through land use decisions, building designs and resource conservation. This entails that community guardians and planners apply the principals of sustainability, only achieved by embedding social equity, economic and the environmental considerations throughout the development process, including mobility, infrastructure, water and energy use, buildings, streetscape and landscape, and land use planning.

This Element includes goals, policies and strategies that help Cupertino think more holistically about sustainability, and in doing so, improve the ecological health and the quality of life for the community.

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CONTEXT

CLIMATE CHANGE

In 2006, the California Legislature and Governor took significant steps to address climate change concerns with the passage of the Global Warming Solutions Act (AB 32). The law set a target to reduce California's greenhouse gas emissions to 1990 levels by year 2020. In addition, the Governor also signed Executive Order S-3-05 that required California to reduce greenhouse gas emissions (GHG) by 80 percent below the 1990 levels by year 2050.

Many initiatives at the State, regional and local levels are being implemented to help achieve these goals. These include:

- The Sustainable Communities and Climate Protection Act of 2008 (SB 375) supports the State's climate action goals to reduce GHG emissions through coordinated transportation and land use planning. Each of California's Metropolitan Planning Organizations must prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP) to achieve these targets. For the nine-county Bay Area, the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) have prepared the One Bay Area Plan as its SCS. This plan contains land use, housing and transportation strategies that allow the region to meet its GHG reduction targets.
- The One Bay Area Grant (OBAG) program, which implements transportation funding in coordination with the strategies in the One Bay Area Plan.
- The City is in the process of completing its Climate Action Plan (CAP), which aims to address GHG reductions per the targets set in AB 32 and S-3-05. The CAP is based on 2040 growth projections for Cupertino. It aims to capture the shortfall projected from State initiatives by identifying policies and strategies to reduce GHG at a municipal and community-wide level.

AIR QUALITY

Clean air is a basic need for human and environmental health. Air pollution comes from both mobile sources (e.g., cars, trucks, airplanes) and stationary sources (e.g., agricultural and industrial uses). Air quality standards are established by both the State Air Resources Board and the U.S. Environmental Protection Agency. The Bay Area Air Quality Management District (BAAQMD) has the responsibility to create strategies and monitor the targets set by State and Federal standards for the Bay Area. Due to air quality planning efforts, regional air quality has improved significantly over the past several decades, even though the population, traffic and industrialization have increased.

BAAQMD's 2010 Clean Air Plan works in tandem with the One Bay Area Plan and identifies strategies to address four categories of pollutants including ground-level ozone, particulate matter, air toxics and GHG. The City's CAP aims to capture the shortfall projected from State initiatives to reduce GHG at a municipal and community-wide level. While standards are a key component in improving air quality, the City's approach towards land use, mobility, infrastructure and operations can have a huge impact.

ENERGY

Energy consumption in the United States and in Cupertino is mainly fossil-fuel based (e.g., coal, oil, natural gas, etc.). The continuously rising cost of energy production, together with diminishing non-renewable fossil fuels, has necessitated a change towards reduction and efficient use of fossil fuels, and identifying and increasing the use of alternative, renewable energy sources.

Energy providers are also looking to move their portfolio towards alternative energy sources including wind turbine, nuclear and solar generation. The diminishing cost of installing smaller solar power generation systems is encouraging the increased use of such facilities by consumers. Additionally, strides in automobile technology utilizing electric batteries and improvements to the network of charging stations allows users confidence in the use of electric cars. Finally, rising energy costs and Federal and State standards on energy usage are encouraging more people to replace existing appliances and other equipment with more energy efficient equipment.

Cupertino has continued to express its commitment to conserving energy by improving municipal operations in order to reduce energy use (e.g., retrofitting or replacing street equipment, vehicles and facilities), and providing resources and information to professionals, residents, businesses and schools to achieve energy and associated cost savings.

BUILDINGS

The 2010 Greenhouse Gas Emissions Inventory for Cupertino indicates that buildings account for about 55 percent of GHG emissions in the city. This means that State and local efforts towards energy conservation in buildings can significantly affect the community's air quality. While green building strategies can effectively target GHG, they also improve the health of occupants, preserve habitat and natural landscapes, reduce water pollution and conserve other natural resources. State and local efforts to encourage green buildings include the following:

- The State routinely updates building code standards to include new energy conservation and green building concepts. The 2013 CalGreen Building Code outlines mandatory and voluntary measures to encourage sustainable practices in all aspects of construction such as planning and design; energy and water efficiency and conservation; material conservation; resource efficiency; and environmental quality.
- Cupertino has adopted a Green Building Ordinance that ensures that new buildings and renovations exceed the sustainability and ecological standards set by the State.

NATURAL RESOURCES

BIODIVERSITY

Biodiversity refers to the diversity, or variety, of plants and animals in a particular ecosystem, area or region. Cupertino's commitment to sustainability includes sustaining the diversity of species in each ecosystem as we plan for human activities that affect the use of land and natural resources. Cupertino's ecosystem ranges from the urban environment in the flatlands to semi-rural and rural environment in the western foothills of the Santa Cruz Mountains.

The City has always recognized the importance of sustaining biodiversity in the foothills and along riparian corridors. However, a commitment to sustainability will require a different way of thinking about the urban ecosystem. The City has already preserved an 18-acre site and restored creek habitat right in the city to maintain biodiversity and ecological integrity of our local natural systems. The City is now looking at opportunities in the built and natural environment to sustain and enhance biodiversity.

URBAN ECOSYSTEMS

While an urban environment can be stressful for some species due to pollution and habitat fragmentation, others may thrive in this environment because humans create favorable microhabitats or abundant resources for them. Modified habitats including greenhouses, basements, compost piles and green roofs can help certain plant and animal species thrive better than in natural environments. As Cupertino continues to change and grow, the City is committed to enhancing the urban ecosystem in the form of urban forestry management, integration of green infrastructure, treatment of parks and open space, landscape and building requirements.

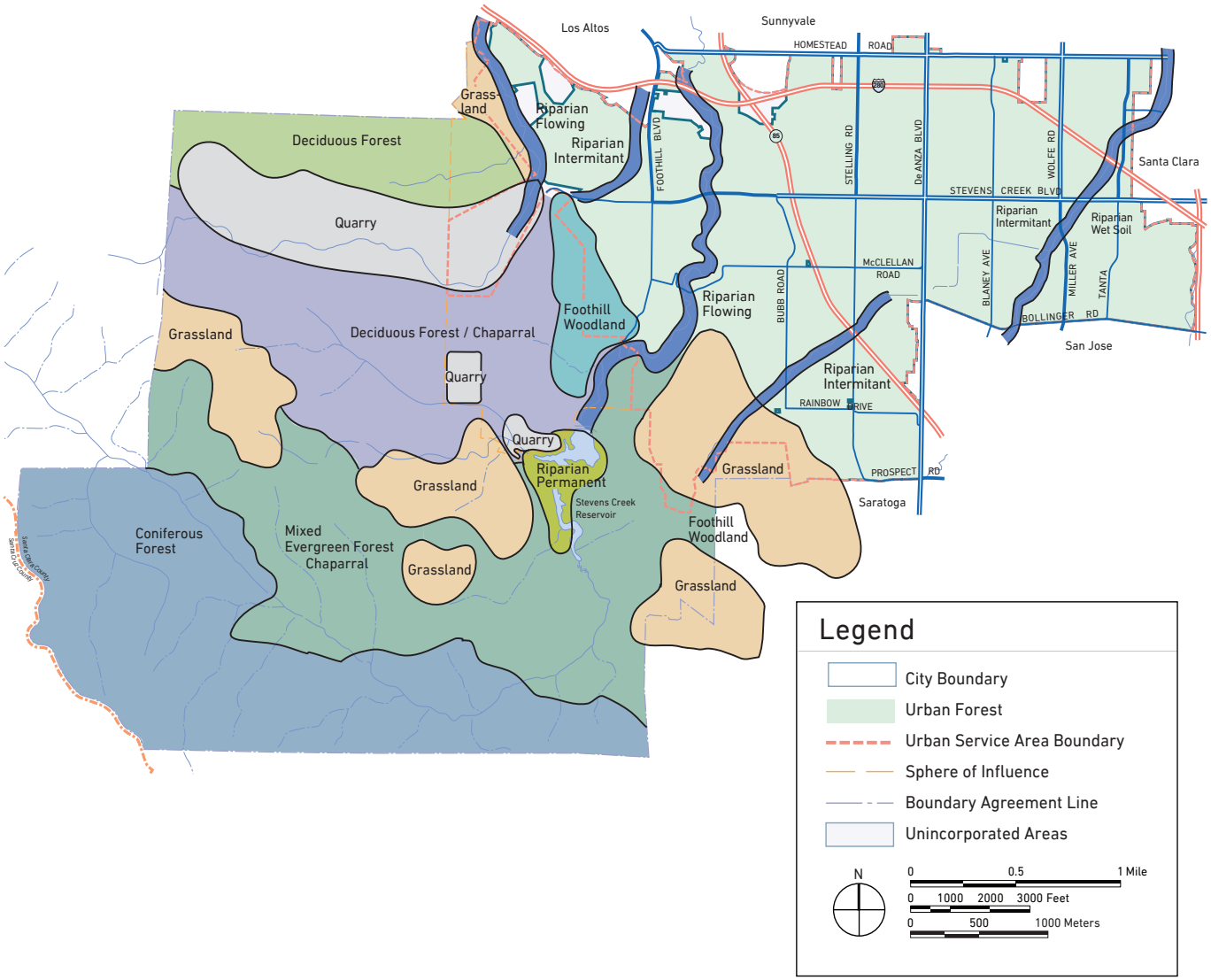
RURAL ECOSYSTEMS

Cupertino's rural plant and animal resources are located in the relatively undeveloped western foothills and mountains, near the Rancho San Antonio Open Space Preserve and along Stevens Creek. Each ecosystem of vegetation provides food and shelter to support a variety of wildlife. The diversity of plant and animal life supported in different ecosystems is identified in **Table ES-1** and **Figure ES-1**.

Table ES-1: Plant and Animal Resources

Ecosystem	Location	Plant Resources	Animal Resources
Riparian • Grows along stream courses • Valuable habitat for wildlife due to presence of water, lush vegetation and high insect populations	• Stevens Creek • Permanente Creek • Regnart Creek • Heney Creek • Calabazas Creek	• Willow • California Buckeye • Coast Live Oak • Coyote Brush • Poison Oak • California blackberry	Relatively undisturbed riparian areas support a wide variety of wildlife species including: • Amphibians • Reptiles • Birds • Mammals
Grasslands • Composed primarily of non-native grasses • Formerly used as pasture	• Occur on lower slopes of western foothills • Scattered locations on higher elevations in Montebello Ridge system	• Wild oat • Clover • Rye grass • Vetch • Spring wild flower bloom (such as California Poppy, Plantago or Owl Clover)	Reptilian and mammal species adapted to dry conditions including: • Western Fence Lizard • Western Rattlesnake • Common King Snake • Burrowing rodents (such as Meadow mice or California ground squirrel
Brushlands • Scrubby, dense vegetation that often integrates with Woodlands	• Found on dry, rocky and steep slopes	• Coyote brush • Poison oak • California sage • Ceanothus	• Mule deer • Brush rabbit • Bobcat • Coyote
Foothill Woodlands and Forests • Scattered Oak trees with an undergrowth in some areas of plants • Large trees	• Foothills • Higher elevations	• Oak trees • Mixed Hardwood trees • Evergreens including redwoods	• Insect/seed eating birds and mammals • Raptors, including owls • Large mammals including deer, coyote

FIGURE ES-1
VEGETATION



MINERAL RESOURCES

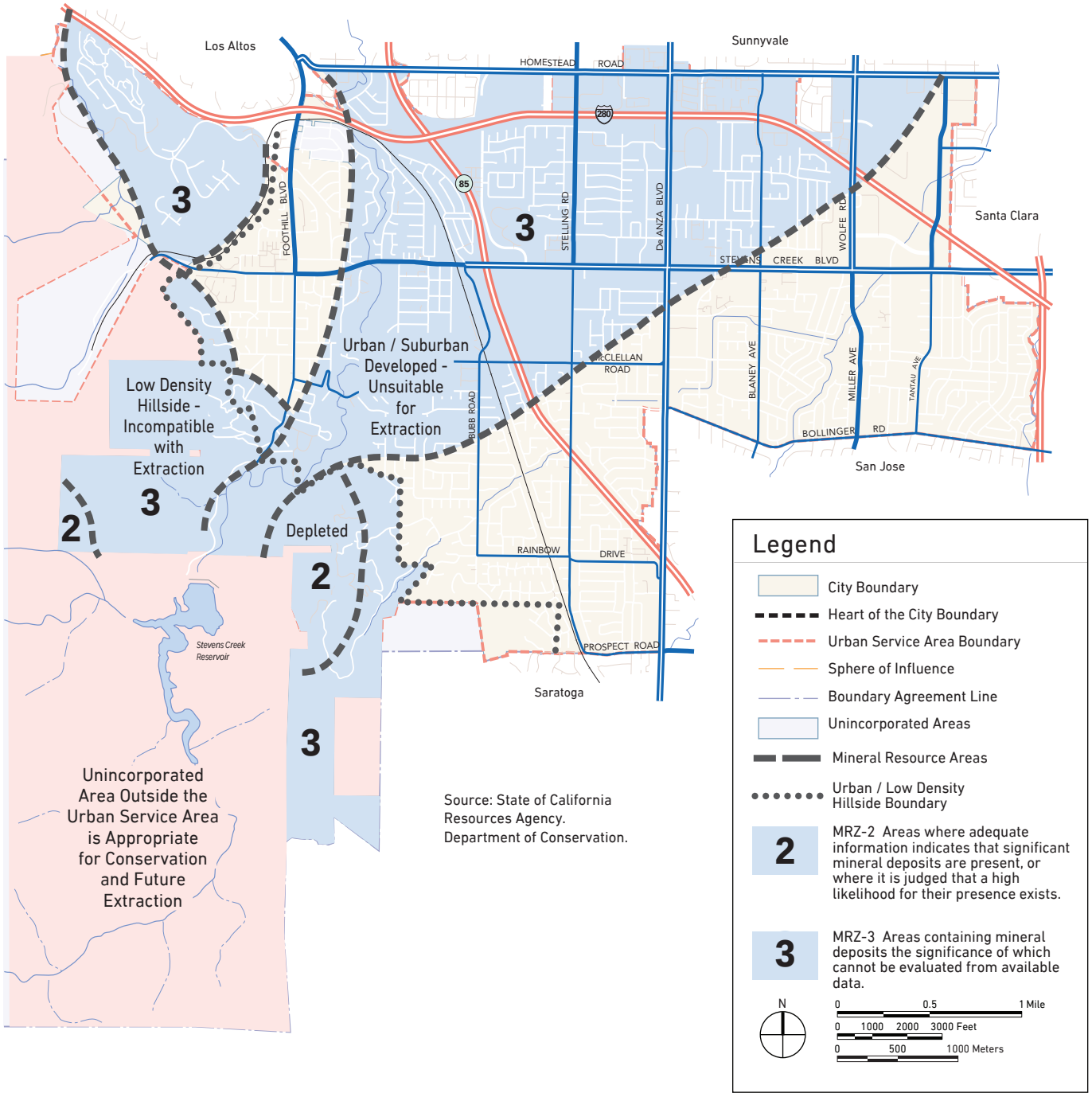
The State of California, recognizing the value of preserving mineral deposits to achieve a more sustainable future, enacted the Surface Mining and Reclamation Act (SMARA) in 1975. The objective of SMARA is to assist local governments in conserving mineral deposits for future use.

There are several mineral resource areas located both in Cupertino's sphere of influence and within the city limit. These mineral resource areas are shown in **Figure ES-2**. The figure identifies natural resource areas that will be conserved for future extraction, which are outside of the city limits.

Two quarries within the city's sphere of influence, Hanson Permanente and Stevens Creek, have been designated by the State as having mineral deposits of regional or state significance. These quarries are located in the unincorporated area outside city limits, and therefore, Santa Clara County has regulatory jurisdiction. The County's mineral resource policies are directed toward preserving existing resource areas and, where feasible, designating new areas and expanding existing sites.

The McDonald-Dorsa quarry, which used to operate south of the Deep Cliff Golf Course and Linda Vista Park, was closed in the 1970s and is not a current source of minerals. The site has since been designated as residential, while the portion that is now Linda Vista Park is designated for parks and open space. However, since it was closed prior to SMARA, redevelopment in the area should address soils stabilization and reclamation issues.

FIGURE ES-2
MINERAL RESOURCES



WATER

Cupertino's sustainable future is, in part, dependent upon the supply and use of water as well as the effective management of natural watershed resources. In recent years, water resource management has moved away from supply side efforts (e.g., creation of dams and reservoirs) to managing how water is used. In particular, this includes emphasizing conservation, stormwater treatment and efficiency in infrastructure planning, design and construction of buildings, and land use planning. The following is a list of existing State, regional and local efforts towards water conservation.

- The Santa Clara Valley Water District is the groundwater management agency in Santa Clara County. The Santa Clara Valley Groundwater sub-basin provides approximately half of the total county water demands. The District works to maximize water supply, protect the basins from contamination and ensure that groundwater supply is sustained.
- The San Francisco Bay Regional Water Quality Control Board (RWQCB) implements the Clean Water Act for the Bay Area region including the National Pollutant Discharge Elimination System (NPDES) Municipal Storm Water permit which regulates both point source and non-point source pollutants to improve ground water resources and reduce pollution in the bay. This program is discussed in detail in the Infrastructure Element.
- Senate Bill X7-7 was enacted in November 2009, requiring all water suppliers to increase water use efficiency and sets a goal of reducing per capita urban water use by 20 percent by 2020. The bill includes a short-term target of a 10 percent reduction in per capita urban water use by 2015.
- The City of Cupertino has adopted a Water Efficient Landscape Ordinance and Green Building Ordinance to ensure that the city can meet State and regional targets.

LOOKING FORWARD

Future growth and change in Cupertino provides both a challenge and an opportunity for the City and community. Cupertino is blessed with an abundance of natural and urban ecosystems. In the past, the City has relied on a limited toolkit of policies to ensure that growth and development do not negatively impact natural resources. Great strides have been made in the last decade to promote sustainability, and community support for these initiatives has been growing. In response, the City has created a suite of services and policies, to ensure our community's growth and achievement of its development potential enhances, not hinders, natural resources and bolsters, not impacts, human health. The City now has a much larger array of resources to manage growth, including sustainability practices, new planning and development tools, and performance measures to maintain or enhance natural resources and overall environmental health.

1 **REGIONAL COOPERATION.**
Federal, State and regional agencies have been at the forefront of legislation related to sustainability and environmental health. The City should strive to exceed these requirements in areas that are of priority to the community and strengthen regional partnerships to bring in resources for implementing new policies and programs.

2 **ECOSYSTEMS.**
In recent years, cities have begun to realize that urban and suburban areas can provide habitat for many plant and animal species. The City will focus policies on a citywide approach (urban and natural environments) towards sustaining and improving urban and suburban ecosystems.

3 **SUSTAINABILITY BEST PRACTICES.**
The City will use sustainability principles, striving always to balance social equity with economic and environmental health, when evaluating all aspects of new development; mobility and infrastructure improvements; building design and operation; streetscapes and landscaping; and citywide land use planning.

4 **COMMUNITY INVOLVEMENT.**
The City will encourage community participation in the planning and implementation of sustainability-related programs.

GOAL ES-1
Ensure a sustainable future for the city of Cupertino

PLANNING AND REGIONAL COORDINATION

The City seeks to coordinate its local sustainability and greenhouse gas reduction planning efforts with Federal, State and regional plans and programs to ensure a consistent, integrated and efficient approach to a sustainable future.

POLICY ES-1.1: PRINCIPLES OF SUSTAINABILITY

Incorporate the principles of sustainability into Cupertino's planning, infrastructure and development process in order to improve the environment, reduce greenhouse gas emissions and meet the needs of the community without compromising the needs of future generations.

STRATEGIES:

ES-1.1.1: Climate Action Plan (CAP). Adopt, implement and maintain a Climate Action Plan to attain greenhouse gas emission targets consistent with state law and regional requirements. This qualified greenhouse gas emissions reduction plan, by BAAQMD's definition, will allow for future project CEQA streamlining and will identify measures to:

- Reduce energy use through conservation and efficiency;
- Reduce fossil fuel use through multi-modal and alternative transportation;
- Maximize use of and, where feasible, install renewable energy resources;
- Increase citywide water conservation and recycled water use;
- Accelerate Resource Recovery through expanded recycling, composting, extended producer responsibility and procurement practices; and
- Promote and incentivize each of those efforts to maximize

community participation and impacts;

- Integrate multiple benefits of green infrastructure with climate resiliency and adaptation.

ES-1.1.2: CAP and Sustainability Strategies Implementation.
Periodically review and report on the effectiveness of the measures outlined in the CAP and the strategies in this Element. Institutionalize sustainability by developing a methodology to ensure all environmental, social and lifecycle costs are considered in project, program, policy and budget decisions.

ES-1.1.3: Climate Adaptation and Resiliency.
Conduct a climate vulnerability assessment and set preparedness goals and strategies to safeguard human health and community assets susceptible to the impacts of a changing climate (e.g., increased drought, wildfires, flooding). Incorporate these into all relevant plans, including the Emergency Preparedness Plan, Local Hazard Mitigation Plan, Dam Failure Plan, Climate Action Plan, Watershed Protection Plan, and Energy Assuredness Plan.

POLICY ES-1.2: REGIONAL GROWTH AND TRANSPORTATION COORDINATION

Coordinate with local and regional agencies to prepare updates to regional growth plans and strategies, including the Regional Housing Allocation Needs Allocation (RHNA), One Bay Area Plan, Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS).

STRATEGY:
ES-1.2.1: Local Plan Consistency with Regional Plans.
Update and maintain local plans and strategies so they are consistent with One Bay Area Plan to qualify for State transportation and project CEQA streamlining.

GOAL ES-2
Promote conservation of energy resources

ENERGY SUSTAINABILITY

Since energy consumption is the largest contributor to GHG emissions, the City seeks to conserve energy to reach state and regional emissions targets.

POLICY ES-2.1: CONSERVATION AND EFFICIENT USE OF ENERGY RESOURCES

Encourage the maximum feasible conservation and efficient use of electrical power and natural gas resources for new and existing residences, businesses, industrial and public uses.

STRATEGIES:

ES-2.1.1: Coordination.
Continue to evaluate, and revise as necessary, applicable City plans, codes and procedures for inclusion of Federal, State and regional requirements and conservation targets.

ES-2.1.2: Comprehensive Energy Management.
Prepare and implement a comprehensive energy management plan for all applicable municipal facilities and equipment to achieve the energy goals established in the City's Climate Action Plan. Track the City's energy use and report findings as part of the Climate Action Plan reporting schedule. Embed this plan into the City's Environmentally Preferable Procurement Policy to ensure measures are achieved through all future procurement and construction practices.

ES-2.1.3: Energy Efficient Replacements.
Continue to use life cycle cost analysis to identify City assets for replacement with more energy efficient technology. Utilize available tools to benchmark and showcase city energy efficiency achievements (i.e. EPA Portfolio Manager, statewide Green Business Program).

ES-2.1.4: Incentive Program.
Consider incentive programs for projects that exceed mandatory requirements and promote incentives from state, county and federal governments for improving energy efficiency and expanding renewable energy installations.

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.

ES-2.1.6: Alternate Energy Sources.
Promote and increase the use of alternate and renewable energy resources for the entire community through effective policies, programs and incentives.

ES-2.1.7: Energy Co-generation Systems.
Encourage the use of energy co-generation systems through the provision of an awareness program targeting the larger commercial and industrial users and public facilities.

ES-2.1.8: Energy Audits and Financing.
Continue to offer and leverage regional partners' programs to conduct energy audits and/or subvention programs for homes, commercial, industrial and city facilities, and recommend improvements that lead to energy and cost savings opportunities for participants and encourage adoption of alternative energy technologies. Encourage energy audits to include emerging online and application-based energy analytics and diagnostic tools. Share residential and commercial energy efficiency and renewable energy financing tools through outreach events and civic media assets.

ES-2.1.9: Energy Efficient Transportation Modes.
Continue to encourage fuel-efficient transportation modes such as alternative fuel vehicles, driverless vehicles, public transit, car and van-pooling, community and regional shuttle systems, car and bike sharing programs, safe routes to schools, commuter benefits, and pedestrian and bicycle paths through infrastructure investment, development incentives, and community education.

ES-2.1.10: Community Choice Energy.
Collaborate with regional partners to evaluate feasibility for development of a Community Choice Energy Program.

GOAL ES-3
Improve building efficiency and energy conservation

SUSTAINABLE BUILDINGS

The City seeks to improve building efficiency from planning, construction and operations to help improve indoor air quality and conserve materials and natural resources.

POLICY ES-3.1: GREEN BUILDING DESIGN

Set standards for the design and construction of energy and resource conserving/efficient building.

STRATEGIES:

ES-3.1.1: Green Building Program. Periodically review and revise the City's Green Building ordinance to ensure alignment with CALGreen requirements for all major private and public projects that ensure reduction in energy and water use for new development through site selection and building design.

ES-3.1.2: Staff Training. Continue to train appropriate City staff in the design principles, costs and benefits of sustainable building and landscape design. Encourage City staff to attend external trainings on these topics and attain relevant program certifications (e.g., Green Point Rater, Leadership in Energy & Environmental Design (LEED) Accredited Professional).

ES-3.1.3: Green Buildings Informational Seminars.
Conduct and/or participate in Green Building informational seminars and workshops for members of the design and construction industry, land development, real estate sales, lending institutions, landscaping and design, the building maintenance industry and prospective project applicants.

ES-3.1.4: Green Building Demonstration.
Pursue municipal facility retrofits, through a Green Capital Improvement Program (CIP), and new construction projects that exceed CalGreen and achieve third-party certification criteria (e.g., LEED, Living Building Challenge, Zero Net Energy) as a means of creating demonstration spaces for developer and community enrichment.

GOAL ES-4
Maintain healthy air quality levels

AIR QUALITY

The City seeks to identify ways to improve air quality in order to reduce emissions and improve overall community health.

POLICY ES-4.1: NEW DEVELOPMENT

Minimize the air quality impacts of new development projects and air quality impacts that affect new development.

STRATEGIES:

ES-4.1.1: Toxic Air Contaminants.
Continue to review projects for potential generation of toxic air contaminants at the time of approval and confer with Bay Area Air Quality Management District on controls needed if impacts are uncertain.

ES-4.1.2: Dust Control.
Continue to require water application to non-polluting dust control measures during demolition and the duration of the construction period.

ES-4.1.3: Planning.
Ensure that land use and transportation plans support air quality goals.

POLICY ES-4.2: EXISTING DEVELOPMENT

Minimize the air quality impacts of existing development.

STRATEGIES:

ES-4.2.1: Public Education Program.
Establish a citywide public education program providing information on ways to reduce and control emissions; and continue to provide information about alternative commutes, carpooling and restricting exacerbating activities on "Spare the Air" high-emissions days.

ES-4.2.2: Home Occupations.
Review and consider expanding the allowable home-based businesses in residentially zoned properties to reduce the need to commute to work.

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.

ES-4.2.4: Fuel-efficient Vehicles and Use.
Prioritize the purchase, replacement and ongoing use of fuel-efficient and low polluting City fleet vehicles. Update applicable policies and programs to require life cycle cost analyses and include alternative fueling infrastructure review and related funding allocations. Update the Vehicle Use Policy and pursue fleet management best practices to support fuel conservation, scheduled maintenance and fleet fuel tracking. Pursue available grant funding to offset the cost of implementing these programs.

ES-4.2.5: Point Sources of Emissions.
Continue to seek the cooperation of the BAAQMD to monitor emissions from identified point sources that impact the community. In addition, for sources not within the regulatory jurisdiction of the City, seek cooperation from the applicable regulatory authority to encourage reduction of emissions and dust from the point source.

POLICY ES-4.3: USE OF OPEN FIRES AND FIREPLACES

Discourage high pollution fireplace use.

STRATEGIES:

ES-4.3.1: Education.
Continue to make BAAQMD literature on reducing pollution from fireplace use available.

ES-4.3.2: Fireplaces.
Continue to prohibit new wood-burning fireplaces, except EPA certified wood stoves as allowed by the Building Code.

GOAL ES-5
Protect the city's urban and rural ecosystems

URBAN AND RURAL ECOSYSTEMS

Protecting Cupertino's natural and urban ecosystems supports the City commitment to protect ecosystems and improve sustainability.

POLICY ES-5.1: URBAN ECOSYSTEM

Manage the public and private development to ensure the protection and enhancement of its urban ecosystem.

STRATEGIES:

ES-5.1.1: Landscaping.
Ensure that the City's tree planting, landscaping and open space policies enhance the urban ecosystem by encouraging medians, pedestrian-crossing curb-extensions planting that is native, drought-tolerant, treats stormwater and enhances urban plant, aquatic and animal resources in both, private and public development.

ES-5.1.2: Built Environment.
Ensure that sustainable landscaping design is incorporated in the development of City facilities, parks and private projects with the inclusion of measures such as tree protection, stormwater treatment and planting of native, drought tolerant landscaping that is beneficial to the environment.

POLICY ES-5.2: DEVELOPMENT NEAR SENSITIVE AREAS

Encourage the clustering of new development away from sensitive areas such as riparian corridors, wildlife habitat and corridors, public open space preserves and ridgelines. New developments in these areas must have a harmonious landscaping plan approved prior to development.

STRATEGY:

ES-5.2.1: Riparian Corridor Protection.
Require the protection of riparian corridors through the development approval process.

POLICY ES-5.3: LANDSCAPING IN AND NEAR NATURAL VEGETATION

Preserve and enhance existing natural vegetation, landscape features and open space when new development is proposed within existing natural areas. When development is proposed near natural vegetation, encourage the landscaping to be consistent with the palate of vegetation found in the natural vegetation.

STRATEGIES:

ES-5.3.1: Native Plants.
Continue to emphasize the planting of native, drought tolerant, pest resistant, non-invasive, climate appropriate plants and ground covers, particularly for erosion control and to prevent disturbance of the natural terrain

ES-5.3.2: Hillsides.
Minimize lawn area in the hillsides.

POLICY ES-5.4: HILLSIDE WILDLIFE MIGRATION

Confine fencing on hillside property to the area around a building, rather than around an entire site, to allow for migration of wild animals.

POLICY ES-5.5: RECREATION AND NATURAL VEGETATION

Limit recreation in natural areas to activities compatible and appropriate with preserving natural vegetation, such as hiking, horseback riding, mountain biking and camping.

POLICY ES-5.6: RECREATION AND WILDLIFE

Provide open space linkages within and between properties for both recreational and wildlife activities, most specifically for the benefit of wildlife that is threatened, endangered or designated as species of special concern.

STRATEGIES:

ES-5.6.1: Creek and Water Course Identification.
Require identification of creeks, water courses and riparian areas on site plans and require that they be protected from adjacent development.

ES-5.6.2: Trail Easements.
Consider requiring easements for trail linkages if analysis determines that they are needed.

GOAL ES-6
Minimize impacts of available mineral resources

MINERAL RESOURCES

The City seeks to minimize the impacts of mineral resource operations on the community.

POLICY ES-6.1: MINERAL RESOURCE AREAS

Cooperatively work with Santa Clara County to ensure that plans for restoration and mining operations at Lehigh Hanson and Stevens Creek quarries consider environmental impacts and mitigations.

STRATEGIES:

ES-6.1.1: Public Participation.
Encourage Santa Clara County to engage with the affected neighborhoods when considering changes to restoration plans and mineral extraction activity.

ES-6.1.2: Recreation in Depleted Mining Areas.
Consider designating abandoned quarries for passive recreation to enhance plant and wildlife habitat and rehabilitate the land.

GOAL ES-7
Ensure protection and efficient use of all water resources

WATER

The City seeks to ensure that current and future water supplies are adequate by reducing water demand and protecting sources of water.

POLICY ES-7.1: NATURAL WATER BODIES AND DRAINAGE SYSTEMS

In public and private development, use Low Impact Development (LID) principles to manage stormwater by mimicking natural hydrology, minimizing grading and protecting or restoring natural drainage systems.

STRATEGIES:

ES-7.1.1: Public and Private Development Plans.
Continue to require topographical information; identification of creeks, streams and drainage areas; and grading plans with development proposals to ensure protection and efficient use of water resources.

POLICY ES-7.2: REDUCTION OF IMPERVIOUS SURFACES

Minimize stormwater runoff and erosion impacts resulting from development and use low impact development (LID) designs to treat stormwater or recharge groundwater

STRATEGIES:

ES-7.2.1: Lot Coverage.
Consider updating lot coverage requirements to include paved surfaces such as driveways and on-grade impervious patios to incentivize the construction of pervious surfaces.

ES-7.2.2: Pervious Walkways and Driveways.
Encourage the use of pervious materials for walkways and driveways. If used on public or quasi-public property, mobility and access for the disabled should take precedence.

ES-7.2.3: Maximize Infiltration.
Minimize impervious surface areas, and maximize on-site filtration and the use of on-site retention facilities.

POLICY ES-7.3: POLLUTION AND FLOW IMPACTS

Ensure that surface and groundwater quality impacts are reduced through development review and voluntary efforts.

STRATEGIES:

ES-7.3.1: Development Review.
Require LID designs such as vegetated stormwater treatment systems and green infrastructure to mitigate pollutant loads and flows.

ES-7.3.2: Creek Clean Up.
Encourage volunteer organizations to help clean creek beds to reduce pollution and help return waterways to their natural state.

POLICY ES-7.4: WATERSHED BASED PLANNING

Review long-term plans and development projects to ensure good stewardship of watersheds.

STRATEGIES:

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.

ES-7.4.2: Watershed Management Plans.
Work with other agencies to develop broader Watershed Management Plans to model and control the City's hydrology.

ES-7.4.3: Development.
Review development plans to ensure that projects are examined in the context of impacts on the entire watershed, in order to comply with the City's non-point source Municipal Regional Permit.

POLICY 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.

POLICY ES-7.6: OTHER WATER SOURCES

Encourage the research of other water sources, including water reclamation.

POLICY ES-7.7: INDUSTRIAL WATER RECYCLING

Encourage industrial projects, in cooperation with the Cupertino Sanitary District, to have long-term conservation measures, including recycling equipment for manufacturing and water supplies in the plant.

POLICY ES-7.8: NATURAL WATER COURSES

Retain and restore creek beds, riparian corridors, watercourses and associated vegetation in their natural state to protect wildlife habitat and recreation potential and assist in groundwater percolation. Encourage land acquisition or dedication of such areas.

STRATEGY:

ES-7.8.1: Inter-Agency Coordination.
Work with the Santa Clara Valley Water District and other relevant regional agencies to enhance riparian corridors and provide adequate flood control by use of flow increase mitigation measures, such as hydromodification controls as established by the Municipal Regional Permit.

POLICY ES-7.9: INTER-AGENCY COORDINATION FOR WATER CONSERVATION

Continue to coordinate citywide water conservation and regional water supply problem solving efforts with the Santa Clara Valley Water District (SCVWD), San Jose Water Company and California Water Company.

STRATEGY:

ES-7.9.1: Water Conservation Measures.
Implement water conservation measures and encourage the implementation of voluntary water conservation measures from the City's water retailers and SCVWD.

POLICY ES-7.10: PUBLIC EDUCATION REGARDING RESOURCE CONSERVATION

Provide public information regarding resource conservation.

STRATEGIES:

ES-7.10.1: Outreach.
Continue to send educational information and notices to households and businesses with water prohibitions, water allocations and conservation tips. Continue to offer featured articles in the Cupertino Scene and Cupertino Courier. Consider providing Public Service Announcements on the City's Channel and Cupertino Radio.

ES-7.10.2: Demonstration Gardens.
Consider including water-wise demonstration gardens in some parks where feasible as they are re-landscaped or improved using drought tolerant native and non-invasive, and non-native plants.

POLICY ES-7.11: WATER CONSERVATION AND DEMAND REDUCTION MEASURES

Promote efficient use of water throughout the City in order to meet State and regional water use reduction targets.

STRATEGIES:

ES-7.11.1: Urban Water Management Plan.
Collaborate with water retailers serving the City in the preparation of their Urban Water Management Plan, including water conservation strategies and programs.

ES-7.11.2: Water Conservation Standards.
Comply with State water conservation standards by either adopting the State standards or alternate standards that are equally efficient.

ES-7.11.3: Recycled Water System.
Continue to work with water retailers to promote and expand the availability of recycled water in the City for public and private use.

ES-7.11.4: Recycled Water in Projects.
Encourage and promote the use of recycled water in public and private buildings, open space and streetscape planting.

ES-7.11.5: On-site Recycled Water.
Encourage on-site water recycling including rainwater harvesting and gray water use.

ES-7.11.6: Water Conservation Programs.
Benchmark and continue to track the City's public and private municipal water use to ensure ongoing accountability and as a means of informing prioritization of future agency water conservation projects.

ES-7.11.7: Green Business Certification and Water Conservation.
Continue to support the City's Green Business Certification goals of long-term water conservation within City facilities, vegetated stormwater infiltration systems, parks and medians, including installation of low-flow toilets and showers, parks, installation of automatic shut-off valves in lavatories and sinks and water efficient outdoor irrigation.

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