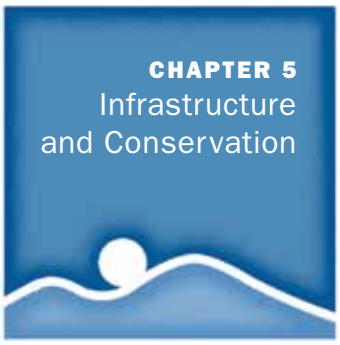
# CHAPTER 5
# Infrastructure and Conservation




Mountain View's infrastructure–water, sewer, storm drain and street systems–and its natural resources–creeks, habitats, and water and energy resources–are crucial parts of everyday community life. Though these fundamental systems often go unnoticed, residents, businesses and visitors rely on them to continue Mountain View's exceptional quality of life. This Element intends to ensure that the city's infrastructure is well planned, regularly maintained and replaced to support community needs and that Mountain View conserves, maintains and protects its natural resources.

The city's infrastructure and the conservation of its natural resources are integral to helping it become more environmentally sustainable. Innovative conservation strategies will help the City save water and energy, reduce waste, promote greener and healthier buildings, improve air and water quality and reduce greenhouse gas emissions. In accomplishing these improvements, the City will create a more sustainable future for itself, its neighbors and the region.

The Element begins with a Context section, followed by a Looking Forward section (page 126) that highlights opportunities, challenges and key strategies. The final section outlines the specific goals and policies (page 128) for each topic area.

## Context

The General Plan's goals and policies for infrastructure and conservation are based on the City's vision for a sustainable future and an outstanding quality of life. They respond to existing conditions while anticipating potential issues the City will face in coming years.

The Context section is organized according to these topics:


- Citywide Infrastructure (page 120)
- Water, Wastewater and Stormwater (page 120)
- Telecommunications (page 121)
- Solid Waste and Recycling (page 121)
- Climate Change (page 122)
- Energy Production and Consumption (page 123)
- Green Building (page 123)
- Species and Habitat (page 123)
- Watershed and Floodplain Management (page 124)
- Soil and Groundwater Contamination (page 125)
- Integrated Pest Management (page 125)
- Air Quality (page 125)


### Citywide Infrastructure

Every other year, the City prepares a Five-Year Capital Improvement Program (CIP). The CIP identifies capital projects and considers options for financing them. It is the City's primary mechanism for building and maintaining citywide infrastructure such as roads, the stormwater and sanitary sewer systems, most of the water distribution system and other key infrastructure such as City facilities, trails and bridges.

Much of Mountain View's infrastructure was built before or during the city's last major growth period in the 1950s and 1960s. Most of the infrastructure is aging, so planning for its replacement will be critical to providing high-quality services to the community. Identifying sustainable funding sources is an important General Plan strategy to ensure that infrastructure improvements can be carried out to meet community needs.

### Water

Mountain View maintains a diverse water supply portfolio to minimize the effects on customers during drought, natural disaster and operational shutdowns. Potable supplies include a combination of locally pumped groundwater and purchased water from the San Francisco Public Utilities Commission and the Santa Clara Valley Water District. Water infrastructure functions well during normal use, although minor upgrades are necessary for periods of high demand and to provide additional firefighting capacity. In addition to the city's potable water supply, there is a recycled water system in the city's North Bayshore Change Area. The City estimates that recycled water will be used for irrigation and will offset up to 10% of citywide potable water use by 2030.

### Wastewater

Mountain View's wastewater–including domestic, commercial and industrial sources–is treated at the Palo Alto Regional Water Quality Control Plant (PARWQCP). Sewage generated through groundwater clean-up is conveyed through the collection system to the plant. Treated effluent is then discharged into San Francisco Bay. General Plan strategies to reduce or eliminate the volume of wastewater leaving a site can reduce demand on public infrastructure, reduce energy and chemicals required to treat wastewater and reduce infrastructure costs.

### Stormwater

Comprehensive stormwater management can reduce pollution and erosion, prevent flooding, and recharge aquifers with clean water. Unmanaged urban stormwater runoff from cities with tribu-

taries to the Bay can diminish its water quality.

The Mountain View storm drain system currently operates adequately, with some targeted upgrades or improvements likely over the next 20 years. There is only localized flooding in the storm drain system, limited primarily to unimproved streets.

The City, along with 76 other agencies throughout the Bay Area, is regulated by the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (MRP). The MRP, which is issued by the California Regional Water Quality Control Board, requires the City to carry out a comprehensive stormwater pollution prevention program. Municipal maintenance operations required by the MRP include street sweeping, storm drain cleaning, water utility operations and spill response activities. The City is also required to conduct stormwater pollution prevention inspections at industrial and commercial facilities and construction sites and to require stormwater pollution control measures at development sites. Additionally, the City contributes to regional MRP requirements, including water-quality monitoring. This set of regulations will likely evolve to include more stringent future stormwater pollution prevention requirements.

### Telecommunications

Mountain View is located in a region–Silicon Valley–that is famous for its innovation and technological achievements. The city is home to some of the leading technology and software companies in the world. Ensuring that excellent, efficient and widely accessible telecommunications services are available to local residents and businesses will enable the city to continue its leadership in these areas. While the City does not directly supply telecommunications utilities, it plays an important role by coordinating with providers, allowing access to public rights-of-way and ensuring that improvements or changes in service are well integrated into the community.

### Solid Waste and Recycling

Waste uses up limited landfill space, often releases toxins into the environment and creates greenhouse gas emissions that contribute to climate change. While reduced consumption is the most effective initial strategy to reduce waste, diverting waste from landfills through recycling and reuse is also an effective approach. In 2006, Mountain View diverted 72% of its waste, by weight, from landfills, which is among the highest diversion rates of any city in the state.

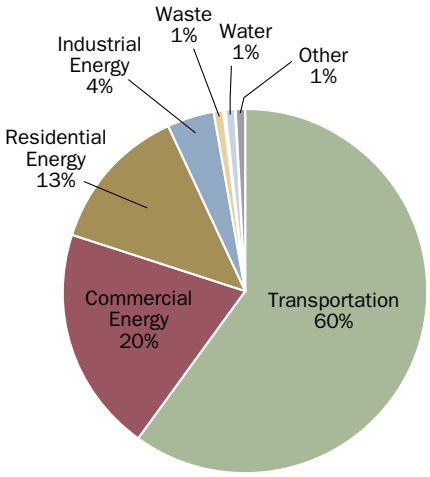
The City's contracted solid waste services include curbside garbage, recycling and yard waste pickup for homes, businesses and schools. These collected materials are taken to the Sunnyvale Materials Recovery and Transfer Station (SMaRT Station®), which the City shares with Sunnyvale

and Palo Alto. The SMaRT Station also accepts refuse, recycling, yard waste and electronic waste if hauled by Mountain View residents or businesses. Household hazardous waste is disposed at the Santa Clara County Household Hazardous Waste Facility. Non-recyclable waste from the SMaRT Station is transported to the Kirby Canyon Landfill in San Jose.

### Climate Change

Climate change is a growing concern within California and throughout the world. The California Global Warming Solutions Act of 2006 requires the state to reduce greenhouse gas emissions to 1990 levels by 2020. Executive Order S-03-05 established further statewide targets to reduce emissions by 80% from 1990 levels by 2050. The Air Resources Board finalized a statewide Climate Change Scoping Plan in 2008, describing the

*Figure 5.1: Greenhouse Gas Emissions By Sector*




*Source: AECOM*

various strategies California will use to reduce statewide greenhouse gas emissions by approximately 28% from projected 2020 emission levels. While most elements of the Scoping Plan fall under the jurisdiction of state government, local governments are essential partners in achieving statewide emission reduction goals and are advised to establish reduction targets for their municipal operations and community-wide activities.

In 2005, Mountain View released approximately 796,987 metric tons of carbon dioxide equivalent (CO2e) emissions. The transportation sector was the largest emitter (Figure 5.1).

A Greenhouse Gas Reduction Program accompanies this General Plan. It identifies a baseline greenhouse gas emissions level and establishes a target for reducing emissions over time. The program also provides specific greenhouse gas reduction measures for various sectors of the community, including the City's municipal operations. It is an implementation measure for General Plan policies, and is intended to be updated as necessary.

## Energy Production and Consumption

The local and regional economy and everyday lifestyles depend on energy, often in vast quantities. However, many current sources of energy come from finite resources and extracting and producing them can harm the environment. Mountain View has taken steps to increase the use of renewable energy sources and conserve energy in its municipal operations in recent years. These steps have included using more low-emission vehicles, producing energy with methane gas captured from closed City landfills and installing more energy-efficient infrastructure and equipment in many municipal buildings and facilities.

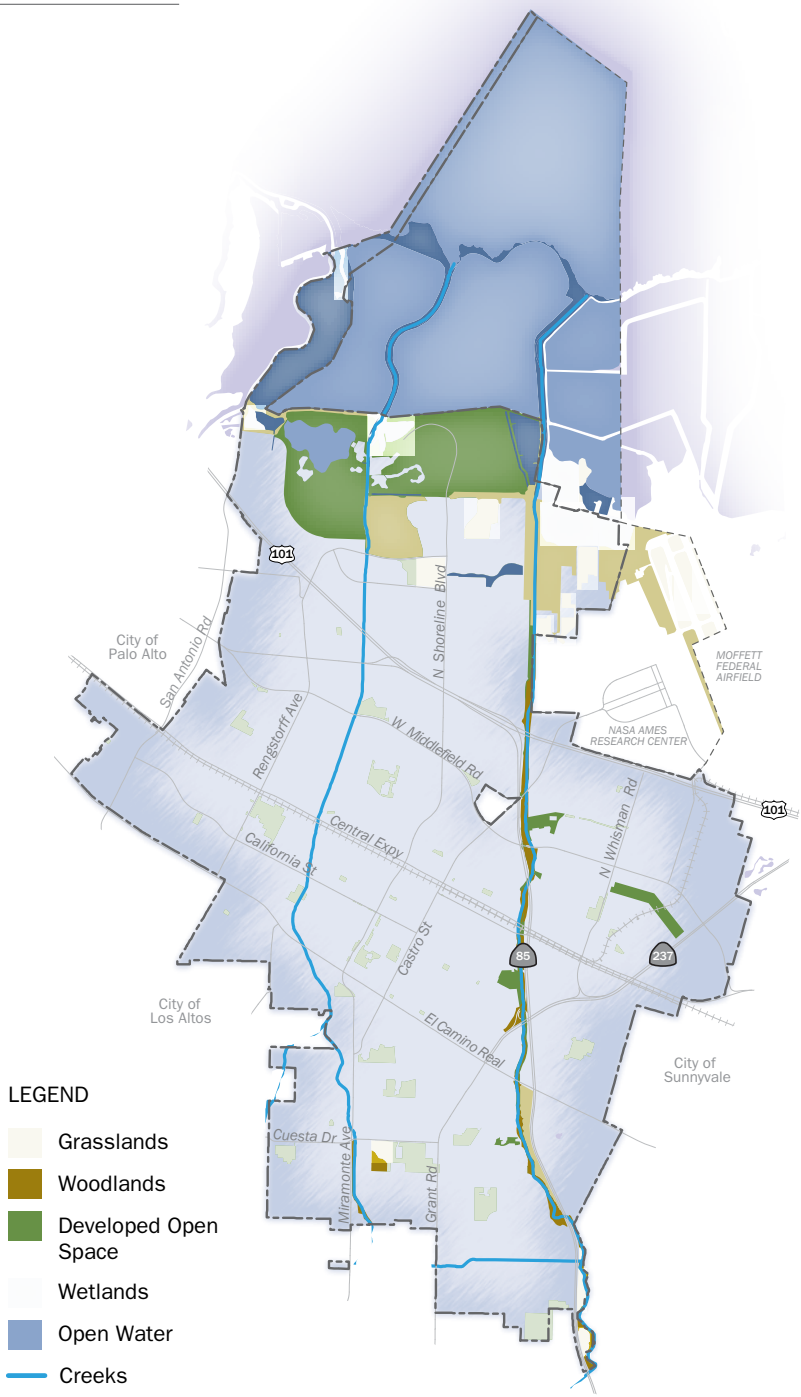
## Green Building

"Green" building strategies can reduce waste, improve the health of occupants, preserve habitat and natural landscapes, reduce air and water pollution and save energy, water and other natural resources. Retrofitting existing buildings using green building strategies can have immediate financial and environmental benefits. Using these strategies in new buildings can have accumulated long-term benefits as the local building stock is slowly replaced. The City has a green building program and requirements, including its Green Building Code, which will continue to be updated based on evolving regulatory and industry practices.

## Species and Habitat

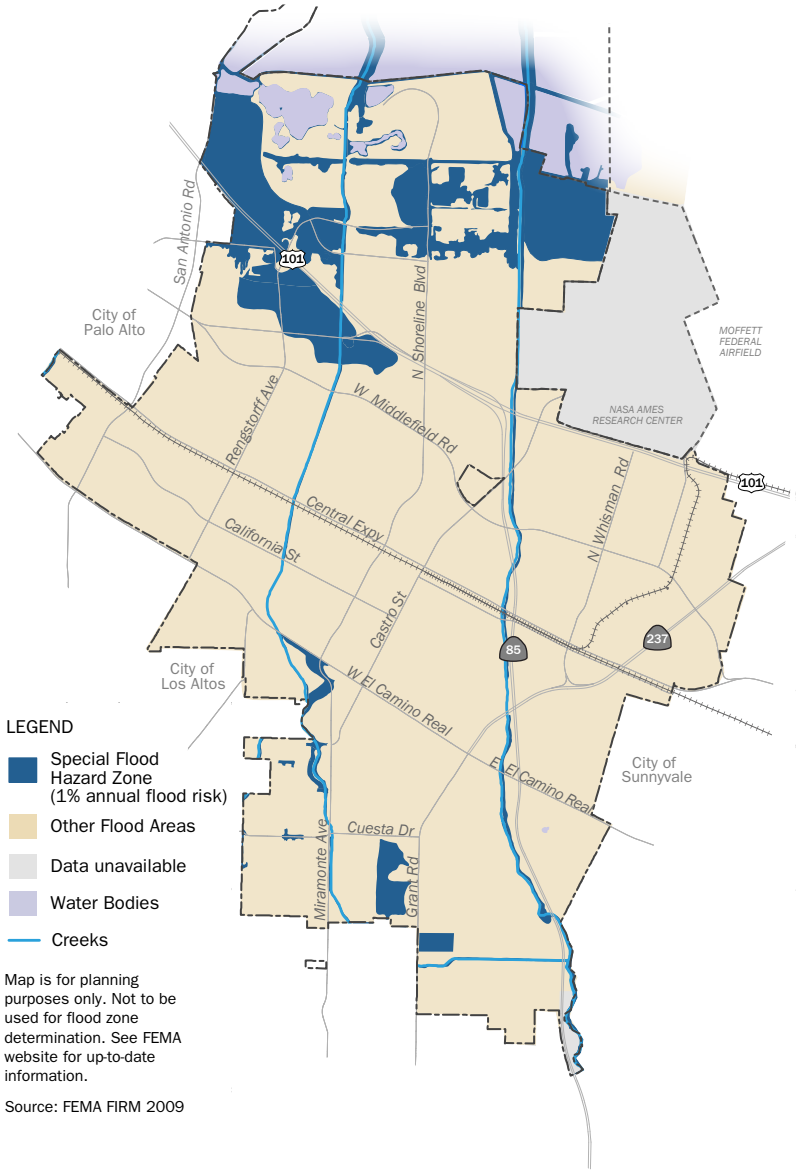
Native species are essential to a sustainable ecological system. In an urban environment like Mountain View, wildlife habitat is limited but highly valued. There are a number of sensitive habitat areas, special-status species and other native species in Mountain View, many of them close to the Bay

*Figure 5.2: Habitats*




Source: LSA Associates, Inc.

*Figure 5.3: Flood Zones*






and near creeks. State or federal law protects some of these species and habitat areas. Shoreline at Mountain View Regional Park, Charleston Slough and City parks provide habitat for a variety of protected and other species.

Mountain View's creeks–Stevens, Permanente, Adobe and Hale, and the neighboring San Francisco Bay–also provide areas for species and habitat, in addition to offering valuable open space. Multiple regional partners, including the U.S. Army Corps of Engineers, are currently working in and around the Bay to carry out the South Bay Salt Pond Restoration Project, the largest tidal wetland restoration project on the West Coast. It is anticipated that this long-term project will restore vital habitat around the Bay.

## Watershed Management

Mountain View and its creeks, groundwater and wetlands are located within the Lower Peninsula Watershed Area, which drains into San Francisco Bay. Sustainable and prudent management of the watershed is important for issues including groundwater recharge, protecting surface water quality, stormwater management, protecting the potable water supply, preserving habitat and species and protecting property and the public from flooding. The watershed is an integrated ecosystem with different interrelated parts that affect each other. Maintaining an integrated approach to watershed management is important to long-term watershed health.

## Floodplain Management

The Federal Emergency Management Agency (FEMA) and its National Flood Insurance Program regulate floodplains in the United States. Some areas of the city are designated within special flood hazard areas according to FEMA Flood Insurance Rate Maps. These areas can be flooded during large storms, including the 1% annual storm event, commonly referred to as the 100-year flood. This means that certain flood-prone areas of the city are inappropriate for some types of development and may not be able to receive

federal flood insurance. Since 2002, the City of Mountain View has participated in FEMA's Community Rating System, which includes incentives for comprehensive floodplain management, including development measures in floodplain areas.

### Soil and Groundwater Contamination

There are several hazardous-material Superfund sites located within or next to city limits. There are also hazardous-material release sites in the city related to spills and leaks of industrial solvents, which can reduce soil and groundwater quality. The City regularly communicates with county, state and federal agencies on the monitoring, remediation and reporting of its contaminated soil and groundwater sites.

### Integrated Pest Management

Invasive species, weeds and pests can damage native plants and animals and be a nuisance and health risk to people. Chemical pesticides and herbicides were the primary ways to manage them for much of the 20th century. However, these can contaminate water, air and food. They breed resistance in pests and have widespread harmful health effects on plants, animals and people. Since June 2003, the City has followed a forward-looking "integrated pest management" approach, which emphasizes use of natural forces or combinations of measures to counteract pests, rather than eradicate them. The City's Integrated Pest Management Plan focuses on pest management "that reduces or eliminates chemical pesticide use to the maximum extent feasible and practical." In many instances, this management strategy has proven to be successful and more beneficial to the ecosystem in the long term than conventional chemical pest control.

### Air Quality

Clean air is a basic part of human and environmental health. Polluted air can cause eye irritation, sore throats and coughing, as well as increased rates of asthma and respiratory disease. Air pollution comes from either mobile sources–such as cars, trucks or buses–or stationary sources–such as specific industrial uses. In general, the closer someone is to a pollution source or concentration of pollutants, and the longer they are exposed, the greater their health risk. This is especially true for sensitive populations such as children and the elderly, who are particularly susceptible to the harmful health effects from air pollution. Air quality is further addressed in the General Plan's Environmental Impact Report.

## Looking Forward

Following are some distinct opportunities and challenges the City of Mountain View is likely to face over the life of the General Plan, and key strategies for addressing them. These strategies should be top priorities to advance the Infrastructure and Conservation Element goals and policies described in the next section and inform decision making over the life of the General Plan.

*Citywide infrastructure.* Much of Mountain View's infrastructure is aging and needs to be maintained, repaired or replaced. Addressing this aging infrastructure is an important part of everyday City operations. Making the replacement of aging infrastructure a top priority and ensuring there is a sustainable funding source for doing so will be crucial to the city's future.

*A sustainable water and sewer system.* The City will continue its comprehensive, communitywide efforts at maintaining a sustainable water and sewer system. These include actively monitoring and protecting the potable water supply, continuing water efficiency and conservation efforts and expanding the scope and quality of the recycled water system. It also includes ensuring that sewer infrastructure both has sufficient capacity and adheres to environmental protection best practices. Limited demand and a reliable water supply will be particularly important as regional water supplies are reduced or become more erratic due to climate change or other factors.

*Proactive stormwater management.* Mountain View will continue to be proactive and forward-thinking in its approach to stormwater management by anticipating new regional and national regulations. This will also mean continuing to require post-construction stormwater treatment controls in new development and redevelopment and encouraging low-impact development approaches such as rainwater capture and re-use, infiltration and biotreatment.

*Continued high rates of waste diversion.* The city's high rate of diverting waste from the landfill through recycling, composting and waste reduction is a notable success. General Plan strategies underscore more opportunities to reduce waste citywide and ensure the city's level of waste production decreases over time.

*Climate change mitigation.* Mountain View is taking a proactive approach to addressing climate change by setting a greenhouse gas emission reduction target and tracking its progress towards this target. Integrated efforts to further address climate change will be pursued in areas such as transportation, community design, energy, water use, waste and recycling and even community engagement. These areas are addressed throughout this General Plan as well as in the accompanying Greenhouse Gas Reduction Program.

*Energy conservation and renewable energy.* The City will continue its efforts to promote sustainable energy production and consumption, both at the municipal and communitywide levels. Strategies include increased conservation and efficiency in buildings, increased use and installation of renewable energy sources, more efficient public infrastructure, reduced waste, reductions in energy used for transportation and other integrated measures.

*Green building.* Mountain View's Green Building Code addresses the sustainable design, construction and operation of new and existing buildings to improve the health of building occupants, reduce the use of resources such as water and energy and support healthy ecological systems. While this Element provides broad green-building strategies, the Code will continue to carry out green building in the city.

*Habitat and species protection.* The General Plan's coordinated strategy for protecting special habitat and species includes conservation, active land management and maintenance and coordination with other governmental agencies. This will support a healthy, diverse and sustainable local ecosystem.

*A healthy watershed.* Continuing to maintain the health and natural hydrology of the watershed, avoiding or requiring special strategies for development within flood-prone areas and protecting residents from flood hazards will improve the overall long-term safety within the community. Eliminating sources of watershed pollution is also an important long-term strategy.

*Contamination prevention and remediation*. Mountain View will continue to take steps to remediate contaminated sites with active oversight by regulating agencies, including the Environmental Protection Agency, the Regional Water Quality Control Board, the Department of Toxic Substances Control, the Santa Clara County Hazardous Materials Compliance Division and other agencies.

*Air quality protection.* The City will continue to protect air quality through strategies such as discouraging air pollution sources, requiring air pollution mitigations on new development, and encouraging walking, bicycling and pollution-reduction technologies.

## Goals and Policies

Infrastructure and Conservation (INC) goals are broad statements describing the City's future direction. Policies are more specific direction to achieve each goal. Actions for putting these goals and policies into effect are detailed separately in the General Plan's Action Plan.

### Citywide Infrastructure

Citywide Infrastructure policies outline the City's approach to providing infrastructure in the future and to ensuring the continued operation of infrastructure at all times.

***Goal INC-1:*** *Citywide infrastructure to support existing development and future growth.*

***Policies***

*INC 1.1: Infrastructure management.* Manage the city's aging infrastructure.

*INC 1.2: Funding.* Ensure sustainable funding levels for maintaining infrastructure in the city.

*INC 1.3: Utilities for new development.* Ensure adequate utility service levels before approving new development.

*INC 1.4: Existing capital facilities.* Maintain and enhance existing capital facilities in conjunction with capital expansion.

*INC 1.5: Utility service.* Coordinate with all utility providers to ensure safe and adequate utility services.

*INC 1.6: Sustainable materials.* Promote the use of sustainable or green materials and products.

***Goal INC-2:*** *Infrastructure systems planned and designed to function during interruptions, emergencies or disasters.*

***Policies***

*INC 2.1: Emergency preparedness.* Ensure that the City is well-prepared for natural and human-induced disasters and emergencies.

*INC 2.2: Emergency service providers.* Ensure long-term reliability from service providers and suppliers, especially in the case of an emergency or natural disaster.

*INC 2.3: Emergency-prepared infrastructure design.* Require the use of available technologies and earthquake-resistant materials in the design and construction of all infrastructure projects, whether constructed by the City or others.

*INC 2.4: Emergency preparedness and critical infrastructure.* Ensure emergency preparedness for all critical infrastructure including potable water, wastewater, stormwater, recycled water, telecommunications, energy and streets.

***Goal INC-3:*** *Functional, safe and well-maintained public rights-of-way that promote environmental sustainability.*

***Policies***

***INC 3.1: Citywide rights-of-way maintenance.*** Maintain City streets, sidewalks and other public rights-of-way in good condition, while promoting and adhering to environmental best practices.

***INC 3.2: Traffic signals.*** Maintain and operate the City's traffic signal system.

***INC 3.3: Street design for stormwater.*** Encourage street designs that reduce stormwater flows and accomplish other City stormwater goals.

***INC 3.4: Right-of-way regulations.*** Ensure that right-of-way regulations comply with relevant street and highway codes while still prioritizing multi-modal transportation in all right-of-way design.

***INC 3.5: Undergrounding utility lines.*** Fund and execute efforts and programs to place overhead utility lines underground, including programs administered by other organizations.

***INC 3.6: Utility separation.*** Preserve adequate separations between utilities and reserve future City pipeline corridors in public streets to maintain and continue to provide public utilities.

***INC 3.7: Recycled water separation.*** Ensure that expansion of recycled water infrastructure in the public right-of-way with other utilities adheres to separation criteria provided by the California Department of Public Health.

## Water, Wastewater and Stormwater

### *Potable Water Supply*

Policies for the city's potable water supply focus on balancing demand with supply and continuing to provide functional and efficient water infrastructure and service.

***Policies***

***Goal INC-4:*** *A sustainable water supply with sufficient supply and appropriate demand management.*

***INC 4.1: Water supply.*** Maintain a reliable water supply.

***INC 4.2: Participating in regional organizations.*** Participate in regional water supply organizations, support their efforts to maintain and improve the water supply and monitor statewide and regional water supplies.

***INC 4.3: Prioritizing existing facilities.*** Prioritize maintenance and enhancement of existing capital facilities in conjunction with capital expansion.

***INC 4.4: Expanding water service area.*** Provide water service to areas outside the City service area if it is mutually beneficial for the City and prospective new users.

### *Water Conservation*

Water conservation policies focus on City-led programs and outreach and reducing per capita water use.

***Goal INC-5:*** *Effective and comprehensive programs utilizing water use efficiency, water conservation and alternative water supplies to reduce per capita potable water use.*

#### *Policies*

*INC 5.1: Community awareness.* Raise community awareness about water use efficiency and water conservation.

*INC 5.2: Citywide water conservation.* Reduce water waste and implement water conservation and efficiency measures throughout the city.

*INC 5.3: Water reuse.* Remove barriers and provide guidance for the use of rainwater and graywater as alternative water supplies.

*INC 5.4: Smart water meters.* Encourage water meter technologies that provide water usage feedback to customers.

*INC 5.5: Landscape efficiency.* Promote water-efficient landscaping including drought-tolerant and native plants, along with efficient irrigation techniques.

*INC 5.6: Indoor efficiency.* Promote the use of water-efficient fixtures and appliances.

*INC 5.7: Leadership in City facilities.* Provide leadership by promoting water use efficiency, water conservation and the use of recycled water at City-owned facilities.

### *Wastewater*

Wastewater policies promote a functional, efficient, healthy and environmentally sustainable wastewater system, reduce pollution and support citywide service.

***Goal INC-6:*** *A coordinated wastewater collection system that protects the community's health and safety.*

#### *Policies*

*INC 6.1: Citywide wastewater.* Ensure high-quality wastewater collection services and a well-maintained wastewater system.

*INC 6.2: Pollution source control.* Implement an effective and comprehensive industrial pretreatment program and industrial, commercial and residential pollution source control programs.

*INC 6.3: Wastewater treatment partnership.* Partner with the Palo Alto Regional Water Quality Control Plant to ensure high-quality water treatment.

*INC 6.4: Discharge regulations.* Coordinate with partners and other local agencies to monitor changing rules and regulations regarding wastewater discharge from the Palo Alto Regional Water Quality Control Plant.

### *Recycled Water*

Recycled water policies guide the expansion and continued use of recycled water throughout Mountain View, contributing to the City's water conservation and environmental sustainability efforts.

***Goal INC-7:*** *A reliable, safe and extensive recycled water infrastructure system.*

#### *Policies*

***INC 7.1: Citywide recycled water use.*** Promote, require or offer incentives for using recycled water as an alternative to potable water.

***INC 7.2: Recycled water system.*** Expand the use and availability of recycled water throughout the city.

***INC 7.3: Recycled water in parks.*** Promote the use of recycled water at City parks and open spaces or where available.

***INC 7.4: Recycled water and trees.*** Promote appropriate tree and landscape species irrigated by recycled water.

***INC 7.5: Rights-of-way and infrastructure.*** Design public rights-of-way to accommodate recycled water infrastructure.

### *Stormwater*

Stormwater policies balance feasibility and cost-effectiveness with the need for forward-looking stormwater management practices, stormwater runoff pollution prevention practices, reduction of runoff flow to minimize erosion and compliance with relevant laws and regulations.

***Goal INC-8:*** *An effective and innovative stormwater drainage system that protects properties from flooding and minimizes adverse environmental impacts from stormwater runofff.*

#### *Policies*

***INC 8.1: Citywide stormwater system.*** Maintain the stormwater system in good condition.

***INC 8.2: National Pollutant Discharge Elimination System Permit.*** Comply with requirements in the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (MRP).

***INC 8.3: Cost-effective strategies.*** Encourage stormwater strategies that minimize additional City administrative and maintenance costs.

***INC 8.4: Runoff pollution prevention.*** Reduce the amount of stormwater runoff and stormwater pollution entering creeks, water channels and the San Francisco Bay through participation in the Santa Clara Valley Urban Runoff Pollution Prevention Program.

***INC 8.5: Site-specific stormwater treatment.*** Require post-construction stormwater treatment controls consistent with MRP requirements for both new development and redevelopment projects.

***INC 8.6: Green streets.*** Seek opportunities to develop green streets and sustainable streetscapes that minimize stormwater runoff, using techniques such as on-street bio-swales, bio-retention, permeable pavement or other innovative approaches.

***INC 8.7: Stormwater quality.*** Improve the water quality of stormwater and reduce flow quantities.

***INC 8.8: Stormwater infrastructure funding.*** Develop permanent and ad hoc sources of funding to implement stormwater best practices in the city.

### Telecommunications

Telecommunications policies encourage excellent service for the community and reinforce the City's role in supporting telecommunications services.

***Goal INC-9:*** *A comprehensive network of telecommunication services that meets community needs.*

***Policies***

***INC 9.1: Citywide telecommunications.*** Work with telecommunication service providers to ensure high-quality products and services for Mountain View residents and businesses.

***INC 9.2: Emerging technologies.*** Develop guidelines for the deployment of wireless and emerging communications technologies.

### Solid Waste and Recycling

Solid waste and recycling policies encourage efficient use of natural resources and continue the City's leadership in environmental sustainability, with a focus on supply-chain management and advocacy as well as high-quality services and programs.

***Goal INC-10:*** *Reduced waste through supply-chain management, advocacy and outreach to reduce waste.*

***Policies***

***INC 10.1: Zero waste.*** Pursue a citywide goal of zero waste.

***INC 10.2: Producer responsibility.*** Support extended producer responsibility to reduce waste and toxicity at the manufacturing level.

***INC 10.3: Source reduction.*** Encourage and promote source reduction behavior such as utilizing reusable, returnable and repairable goods.

***INC 10.4: Construction waste reuse.*** Encourage building deconstruction and reuse and construction waste recycling.

***INC 10.5: Reuse.*** Encourage product reuse through venues such as garage sales, lending libraries and Internet-based sharing and reuse forums.

***INC 10.6: Recovered materials.*** Encourage uses for recovered materials that save energy, avoid releasing toxic substances and extend the useful life of recovered materials.

***INC 10.7: Recycled material demand.*** Promote increased demand for recycled materials.

***INC 10.8: Toxic products.*** Discourage the use of toxic products throughout the city.

***INC 10.9: Preferential purchasing.*** Give preference in City purchasing to products that minimize packaging, can be reused and are non-toxic.

***INC 10.10: Single-use products.*** Discourage the use of single-use products.

***Goal INC-11:*** ***Services and programs that continue to reduce waste and promote environmental responsibility.***

***Policies***

***INC 11.1: Waste diversion and reduction.*** Meet or exceed all federal, state and local laws and regulations concerning solid waste diversion and implementation of recycling and source reduction programs.

***INC 11.2: Recycling.*** Maintain and expand recycling programs.

***INC 11.3: Composting.*** Provide productive reuse or composting services or both for all discarded organic materials in the city, including all food and green waste.

***INC 11.4: Solid waste.*** Ensure all municipal solid waste generated within the city is collected, transported and disposed of in a manner that protects public health and safety.

***INC 11.5: Hazardous waste.*** Provide convenient household hazardous waste and e-waste disposal services.

***INC 11.6: Regional collaboration.*** Consider opportunities to provide more cost-effective solid waste management by collaborating with surrounding cities and agencies.

## Climate Change

Climate change policies outline a municipal and citywide commitment to reducing greenhouse gas emissions and adapting to the long-term effects of climate change, relying on integrated City efforts as well as General Plan policies and implementation actions, including the City's Greenhouse Gas Reduction Program and other planning documents.

***Goal INC-12:*** ***Environmental stewardship that recognizes the importance of addressing climate change and community commitment to sustainability.***

***Policies***

***INC 12.1: Emissions reduction target.*** Maintain a greenhouse gas emissions reduction target.

***INC 12.2: Emissions reduction strategies.*** Develop cost-effective strategies for reducing greenhouse gas emissions.

***INC 12.3: Adaptation strategies.*** Develop strategies for adapting to climate change in partnership with local and regional agencies.

### Energy Production and Consumption

Energy policies reduce the negative environmental impacts of energy use, focusing on sustainable consumption through efficiency, conservation and sustainable production through increased use of renewable energy.

***Goal INC-13:*** ***Increased energy efficiency and conservation throughout the city.***

***Policies***

***INC 13.1: Energy efficiency and conservation.*** Increase energy efficiency and conservation in public buildings and infrastructure.

***INC 13.2: Alternatives to gasoline.*** Promote and increase the use of new technologies as alternatives and supplements to gasoline in vehicles throughout the community.

***INC 13.3: Coordinating efforts.*** Support regional and local efforts and programs to reduce energy use.

***INC 13.4: Education.*** Educate the public about energy conservation and efficiency best practices.

***INC 13.5: Smart utility meters.*** Encourage utility meter technologies that provide feedback about energy usage to customers.

***Goal INC-14:*** ***Sufficient renewable sources of energy to meet current and future demand.***

***Policies***

***INC 14.1: Renewable energy.*** Promote the deployment of renewable energy technologies throughout the city.

***INC 14.2: Solar energy.*** Encourage active and passive solar energy use.

***INC 14.3: Regional renewable energy.*** Participate in regional initiatives to encourage and develop renewable energy sources.

***INC 14.4: Renewable energy advocacy.*** Support legislation to facilitate and increase renewable energy choices for community residents such as green utility power options or distributed generation.

## Green Building

Green building policies encourage green building approaches to reduce negative environmental impacts and improve human health.

***Goal INC-15:*** *A built environment that supports ecological and human health.*

***Policies***

***INC 15.1: Green building program.*** Administer a forward-looking green building program that promotes best practices for green building in new and existing buildings.

***INC 15.2: Green building education.*** Raise community awareness regarding green building methods, incentives and benefits.

***INC 15.3: Citywide green building.*** Support green building technologies and innovations throughout the city.

## Species and Habitat

Species and habitat policies protect and sustainably manage the unique biological resources within the city.

***Goal INC-16:*** *Rich and biologically diverse ecological resources which are protected and enhanced.*

***Policies***

***INC 16.1: Natural areas.*** Work with regional agencies to protect and enhance natural areas.

***INC 16.2: Shoreline at Mountain View.*** Manage Shoreline at Mountain View Regional Park to balance the needs of recreational, open space, habitat, commercial and other uses.

***INC 16.3: Habitat.*** Protect and enhance nesting, foraging and other habitat for special-status species and other wildlife.

***INC 16.4: Invasive species.*** Contain and reduce the amount of invasive species.

***INC 16.5: Wetland habitat.*** Collaborate with and support regional efforts to restore and protect wetlands, creeks, tidal marshes and open-water habitats adjacent to San Francisco Bay.

***INC 16.6: Built environment habitat.*** Integrate biological resources, such as green roofs and native landscaping, into the built environment.

### Watershed and Floodplain Management

Watershed management policies promote an integrated approach to sustainable watershed management while recognizing the different roles watershed management plays in protecting surface water quality, stormwater management, protecting the potable water supply, protecting valuable biological resources and protecting property and public safety from the threat of flooding. Watershed management policies address protection of surface water and groundwater recharge.

***Goal INC-17:*** *A healthy and well-managed watershed that contributes to improved water quality and natural resource protection.*

***Policies***

***INC 17.1: Flood prevention.*** Provide and maintain City infrastructure to reduce localized flooding and protect community health and safety.

***INC 17.2: Natural hydrology in watersheds.*** Promote an ecologically sensitive approach to flood protection, encouraging natural hydrology and preserving habitat and ecology within watercourses.

***INC 17.3: Floodway preservation.*** Preserve floodways as a natural flood control mechanism.

***INC 17.4: National Flood Insurance Program.*** Participate in the National Flood Insurance Program administered by the Federal Emergency Management Administration.

### Soil and Groundwater Contamination

Soil and groundwater contamination policies protect human and ecological health by preventing new sources of pollution and supporting efforts to clean up contaminated locations.

***Goal INC-18:*** *Prevention and remediation of contamination in groundwater, surface water, soil and from soil vapor and vapor intrusion.*

***Policies***

***INC 18.1: Contamination prevention.*** Protect human and environmental health from environmental contamination.

***INC 18.2: Contamination clean-up.*** Cooperate with local, state and federal agencies that oversee environmental contamination and clean-up.



### Integrated Pest Management

Integrated pest management policies promote a balanced, environmentally sustainable approach to pest control in the city that reduces the use of toxic substances while counteracting invasive species and harmful pests.

***Goal INC-19:*** *Effective and ecologically sensitive programs to control invasive species and plants.*

***Policies***

***INC 19.1: Municipal integrated pest management.*** Control and prevent invasive weeds and pests using integrated pest management on all City property, including the following principles:

- A focus on control of pests at established acceptable levels, instead of eradication.
- Preventive cultivation practices appropriate for local conditions.
- Monitoring.
- Mechanical controls such as hand-picking, barriers, traps and disruption.
- Biological controls such as beneficial insects or biological insecticides.
- Chemical controls only as required or during targeted times during a pest's life cycle.

***INC 19.2: Herbicides and pesticides.*** Discourage the use of herbicides and pesticides on City property.

***INC 19.3: Citywide integrated pest management.*** Encourage and educate residents and businesses to implement integrated pest management principles and reduce the use of pesticides and herbicides.

## Air Quality

Air quality policies protect human and ecological health by reducing sources of pollution and human exposure to them.

***Goal INC-20:*** ***Clean, breathable air and strongly controlled city sources of air pollution.***

***Policies***

***INC 20.1: Pollution prevention.*** Discourage mobile and stationary sources of air pollution.

***INC 20.2: Collaboration.*** Participate in state and regional planning efforts to improve air quality.

***INC 20.3: Pollution-reduction technologies.*** Encourage the use of non-fossil fuels and other pollution-reduction technologies in transportation, machinery and industrial processes.

***INC 20.4: Freight routes.*** Identify and maintain primary freight routes that provide direct access to industrial and commercial areas.

***INC 20.5: Truck access.*** Plan industrial and commercial development to avoid truck access through residential areas, and minimize truck travel on streets designated primarily for residential access by the General Plan.

***INC 20.6: Air quality standards.*** Protect the public and construction workers from construction exhaust and particulate emissions.

***INC 20.7: Protect sensitive receptors.*** Protect the public from substantial pollutant concentrations.

***INC 20.8: Offensive odors.*** Protect residents from offensive odors.