



# 6

## ENVIRONMENTAL RESOURCES AND CONSTRAINTS

A rich diversity of life around us offers greater opportunities for healthy living, economic prosperity, and adaptive responses to growing challenges such as climate change. At the same time, the environment around us poses risks to human health and property that are compounded by the warming of the climate, which is bringing hotter average daytime temperatures, increased rainfall, and more extreme weather events. As Sacramento continues to grow and evolve, the General Plan seeks not only to preserve and enhance environmental resources in and around the city, but also to provide protection from natural hazards and to build communitywide resilience to climate change.

This Element satisfies the statutory requirements for the Noise Element of the General Plan in full and the statutory requirements for the Conservation and Safety Elements in part. Water supply is addressed in the Public Facilities and Safety Element, along with police, fire, and emergency evacuation and response. Protection from hazards related to pollution exposure is addressed in the Environmental Justice Element.



# Environmental Resources

The City of Sacramento is committed to the protection of its environmental resources, which are crucial to the welfare of current and future generations. This section includes policies that provide framework for the preservation and maintenance of these environmental resources. The environmental resource topics covered in this section include water quality, wildlife and habitat, urban forest, air quality, and the conservation of water and energy.

## WATER RESOURCES

As urban development in the city and the region continues, a continued focus on water quality protection and pollution prevention will be essential. Water quality in the Sacramento and American Rivers is influenced by numerous natural and human activity-related sources including from soil erosion, runoff, and pollution. Additionally, groundwater basins can be overdrawn without proper management, leading to less storage capacity, poor water quality, less overall available water, and even ground subsidence, in which less water in the ground causes soil to compact and sink. Groundwater levels can also be impacted by urban places that contain extensive impermeable surfaces like asphalt and concrete, which restrict water infiltration into the soil. California's groundwater is regulated under the 2014 Sustainable Groundwater Management Act, which requires preparation and maintenance of a groundwater sustainability or management plan. Clean water is essential in sustaining present and future generations, as well as fisheries, plants, and animals that are part of the ecosystem, and the City's continued participation in regional groundwater initiatives will help to ensure that Sacramento's groundwater remains a clean, sustainable water resource. Policies in this section support effective stewardship of water resources through a framework for protecting and enhancing surface and groundwater quality.

## GOAL AND POLICIES

ERC-1

**Responsible management of water resources that preserves and enhances water quality and availability.**

**ERC-1.1 Clean Water Programs.** The City shall promote environmental stewardship and pollution prevention activities with outreach, assistance, and incentives for residents and businesses.

**ERC-1.2 Clean Watershed.** The City shall continue ongoing Sacramento and American River source water protection efforts (e.g., Pups in the Park, Keep Our Waters Clean), based on watershed sanitary survey recommendations, in partnership with private watershed organizations and local, State, and federal agencies.

**ERC-1.3 Runoff Contamination.** The City shall protect surface water and groundwater resources from contamination from point (single location) and non-point (many diffuse locations) sources, as required by federal and State regulations.

**ERC-1.4 Construction Site Impacts.** The City shall require new development to protect the quality of water bodies and natural drainage systems through site design (e.g., cluster development), source controls, stormwater treatment, runoff reduction measures, best management practices (BMPs), Low Impact Development (LID), and hydromodification strategies to avoid or minimize disturbances of natural water bodies and natural drainage systems caused by development, implement measures to protect areas from erosion and sediment loss, and continue to require construction contractors to comply with the City's erosion and sediment control ordinance and stormwater management and discharge control ordinance.





**ERC-1.5 Drinking Water Data.** The City shall continue to maintain the Drinking Water Quality Data Portal and provide public notification of water quality issues.

**ERC-1.6 Groundwater Management.** The City shall promote sustainable groundwater management practices through continued participation in regional initiatives and relevant Groundwater Sustainability Agencies.

## BIOLOGICAL RESOURCES

Even within the urban context of Sacramento, there are important natural habitats that support valuable plant and wildlife species, particularly along the river and creek corridors and within the Natomas Basin. In the surrounding area there are also annual grasslands, riparian woodlands, oak woodlands, ponds, freshwater marshes, seasonal wetlands, and vernal pools. Conservation and protection of these important biological resources are integral to a healthy human population and contribute to regional economic advantages such as quality of life. Policies in this section seek to preserve, restore, and protect Sacramento's diverse biological resources, including open spaces, habitat, biodiversity, and sensitive species.

*Please see the Land Use and Placemaking Element for policies that also preserve and protect these resources through regulation of land use and site design standards.*

## GOAL AND POLICIES

### ERC-2

**Thriving rivers, wildlife, and natural open spaces that contribute to public health, livability, and protection of the environment for future generations.**

**ERC-2.1 Conservation of Water Resources in Open Space Areas.** The City shall continue to preserve, protect, and provide appropriate access to designated open space areas along the American and Sacramento Rivers, floodways, and undevelopable floodplains, provided access would not disturb sensitive habitats or species, and shall support efforts to conserve and, where feasible, create or restore areas that provide important water quality and habitat benefits such as creeks, riparian corridors, buffer zones, wetlands, open space areas, levees, and drainage canals for the purpose of protecting water resources and habitats in the city's watersheds, creeks, and the Sacramento and American Rivers.

**ERC-2.2 Biological Resources.** The City shall ensure that adverse impacts on sensitive biological resources, including special-status species, sensitive natural communities, sensitive habitat, and wetlands are avoided, minimized, or mitigated to the greatest extent feasible as development takes place.



**ERC-2.3 Onsite Preservation.** The City shall encourage new development to preserve and restore onsite natural elements that contribute to the community's native plant and wildlife species value. For sites that lack existing natural elements, encourage planting of native species in preserved areas to establish or re-establish these values and aesthetic character.

**ERC-2.4 Native and Climate-Adapted Plants.** The City shall promote regenerative landscape practices, including use of native/climate-appropriate or climate-adapted plants, and focus education efforts to homeowners and design/construction professionals.

**ERC-2.5 Environmental Awareness.** The City should partner with the Water Forum, public agencies and non-profit groups to offer programs that foster local environmental awareness and encourage the protection and restoration of natural resources. A particular focus of these efforts should be on connecting youth from lower-income communities of color with nature in both urban and non-urban contexts.

**ERC-2.6 Wetland Protection.** The City shall preserve and protect wetland resources including creeks, rivers, ponds, marshes, vernal pools, and other seasonal wetlands, to the extent feasible. If not feasible, the mitigation of all adverse impacts on wetland resources shall be required in compliance with State and Federal regulations protecting wetland resources, and if applicable, threatened or endangered species. Additionally, the City shall require either on- or off-site permanent preservation of an equivalent amount of wetland habitat to ensure no-net loss of value and/or function.

**ERC-2.7 Annual Grasslands.** The City shall preserve and protect native grasslands and vernal pools that provide habitat for rare and endangered species. If not feasible, the mitigation of all adverse impacts on annual grasslands shall comply with State and Federal regulations protecting foraging habitat for those species known to utilize this habitat.

**ERC-2.8 Wildlife Corridors.** The City shall preserve, protect, and avoid impacts to natural, undisturbed habitats that provides movement corridors for sensitive wildlife species. If corridors are adversely affected, damaged habitat shall be replaced with habitat of equivalent value or enhanced to enable the continued movement of species.

**ERC-2.9 Habitat Assessments.** The City shall consider the potential impact on sensitive plants and wildlife for each project requiring discretionary approval. If site conditions are such that potential habitat for sensitive plant and/or wildlife species may be present, the City shall require habitat assessments, prepared by a qualified biologist, for sensitive plant and wildlife species. If the habitat assessment determines that suitable habitat for sensitive plant and/or wildlife species is present, then either:

1. Protocol-level surveys shall be conducted (where survey protocol has been established by a resource agency), or, in the absence of established survey protocol, a focused survey shall be conducted consistent with industry-recognized best practices; or
2. Suitable habitat and presence of the species shall be assumed to occur within all potential habitat locations identified on the project site. Survey Reports shall be prepared and submitted to the City and the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Service (USFWS) (depending on the species) for further consultation and development of avoidance and/ or mitigation measures consistent with state and federal law.

**ERC-2.10 Agency Coordination.** The City shall coordinate with State and Federal resource agencies (e.g., California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers, and United States Fish and Wildlife Service (USFWS)) to protect areas containing rare or endangered species of plants and animals.





**ERC-2.11 Natomas Basin Habitat Conservation Plan.** The City shall continue to participate in and support the policies of the Natomas Basin Habitat Conservation Plan for the protection of biological resources in the Natomas Basin.

**ERC-2.12 Support Habitat Conservation Plan Efforts.** The City shall encourage and support regional habitat conservation planning efforts to conserve and manage habitat for special status species. New or amended Habitat Conservation Plans should provide a robust adaptive management component sufficient to ensure that habitat preserves are resilient to climate change effects/impacts and to ensure their mitigation value over time. Provisions should include, but are not limited to: greater habitat ranges and diversity; corridors and transition zones to accommodate retreat or spatial shifts in natural areas; redundant water supply; elevated topography to accommodate extreme flooding; and flexible management and fee structure.

**ERC-2.13 Climate Change-related Habitat Shifts.** The City shall support the efforts of The Natomas Basin Conservancy and other habitat preserve managers to adaptively manage wildlife preserves to ensure adequate connectivity, habitat range, and diversity of topographic and climatic conditions are provided for species to move as climate shifts.

**ERC-2.14 Climate Change-related Habitat Restoration and Enhancement.** The City shall support active habitat restoration and enhancement to reduce impact of climate change stressors and improve overall resilience of habitat within existing parks and open space in the city. The City shall support the efforts of Sacramento County to improve the resilience of habitat areas in the American River Parkway.

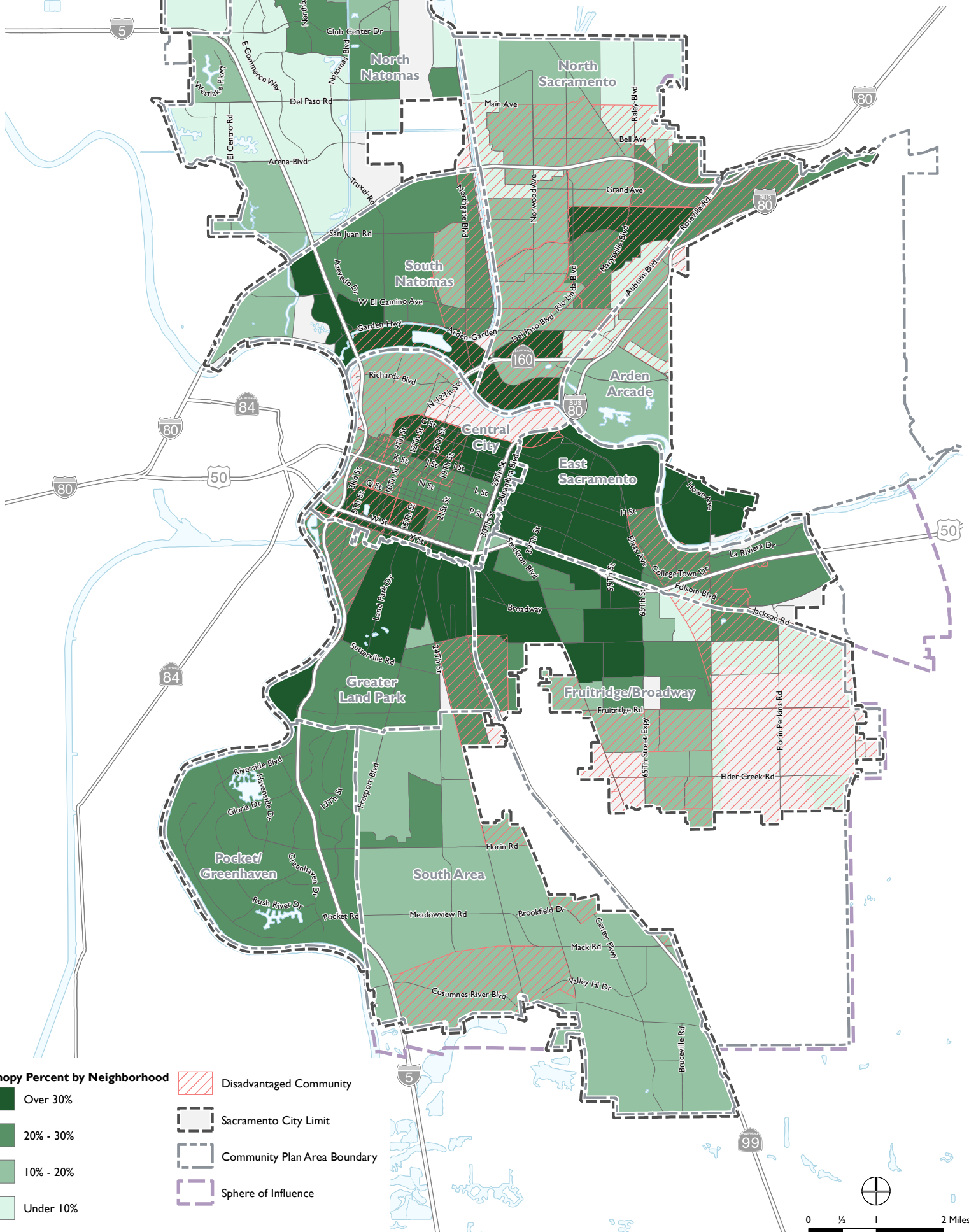
## URBAN FOREST

The benefits of trees are vast and well-established. Trees cool the streets and the city which reduces the urban heat island effect; help conserve energy; improve air quality, and absorb and sequester carbon dioxide from the atmosphere and produce oxygen; help capture rainwater; prevent erosion; protect the quality of surface waters; provide habitat; make it more pleasant to exercise and play outside; reduce stress; beautify streetscapes and spaces; and have economic benefits for the community. As shown on **Map ERC-1**, tree canopy varies greatly across Sacramento neighborhoods. This variation is based on many factors, including predominant land use, housing tenure, when the neighborhood was developed, streetscape design, and proximity and extent of parks and open spaces. Higher levels of tree canopy have been shown to increase property values, and wealthier neighborhoods in Sacramento typically have higher tree canopy levels.

A healthy urban forest, comprised of public and privately maintained trees throughout the community, is an integral component of a sustainable and equitable city. Yet trees in cities face a variety of threats, including increasing summer heat and frequent droughts, pests, storm events, challenges in funding maintenance costs, soil compaction and extensive paving which damage their longevity, and some conflicts with underground and overhead utilities and development activity. Policies in this section intend to sustain and enhance the city's urban forest, a valuable environmental resource that distinguishes Sacramento as a "City of Trees" and greatly benefits city residents.



# Map ERC-1: Tree Canopy



## GOAL AND POLICIES

ERC-3

**A well-maintained, resilient, healthy, expansive and equitable urban forest for an environmentally sustainable future.**

**ERC-3.1 Urban Forest Plan.** The City shall maintain and implement an Urban Forest Plan.

**ERC-3.2 Tree Canopy Expansion.** The City should strive to achieve a 25 percent urban tree canopy cover by 2030 and 35 percent by 2045. Prioritize tree planting and tree maintenance in areas with the lowest average canopy cover and explore strategies to reduce barriers to tree planting in disadvantaged communities and improve tree health.

**ERC-3.3 Tree Protection.** The City shall encourage public agencies and require private development projects to consider alternatives to removals of healthy trees whenever feasible and to evaluate the longer-term consequences of the inability to meet tree canopy objectives when conducting project analyses and environmental documents. Ensure adequate protections during construction to protect existing tree roots and structure.

**ERC-3.4 Private Streets.** The City shall, when private streets are approved, require inclusion of trees unless clearly infeasible. If

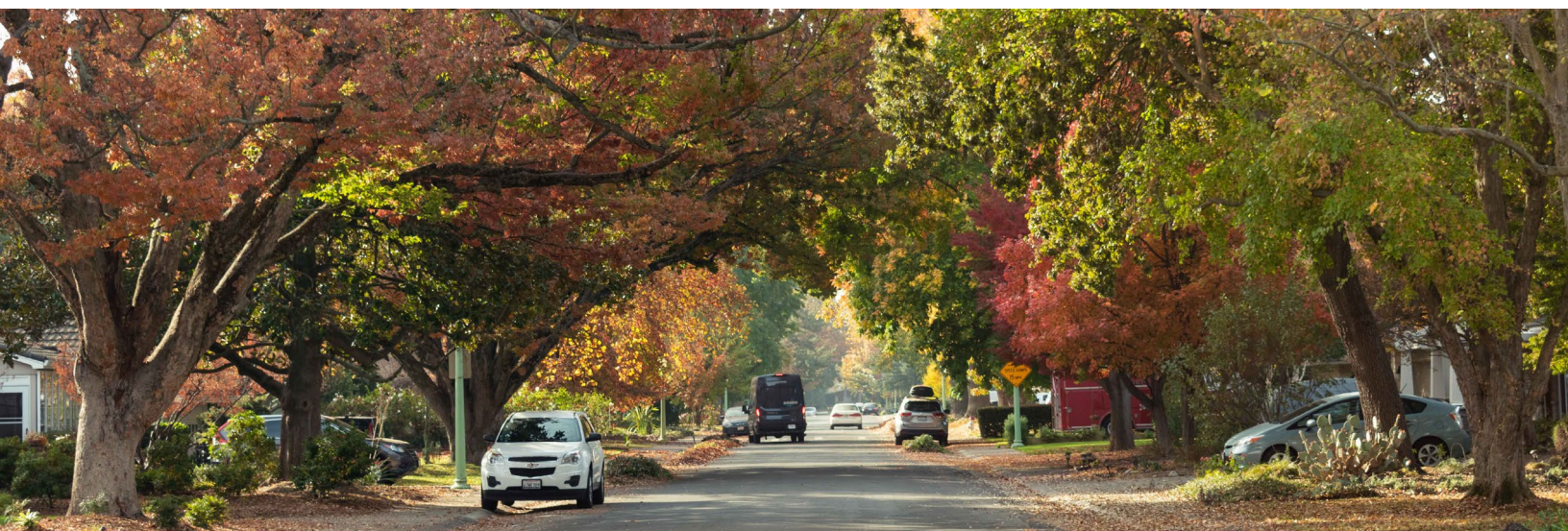
street trees are not feasible, locations within the development should be identified for inclusion of green space and tree canopy.

**ERC-3.5 Tree List.** The City shall maintain and update a list of desirable trees that suit soil and climate conditions in specific areas of Sacramento. Consider carbon sequestration potential of selected species. Select tree species that demonstrate adaptiveness to projected climate change impacts, including the ability to thrive:

- In higher temperatures;
- With reduced water use;
- With grey and recycled water; and
- With increased pest and disease prevalence.

**ERC-3.6 Urban Forest Maintenance.** The City shall continue to plant, manage, and care for all trees on City property and within the public right-of-way to maximize their safe and useful life expectancy and continue to prioritize the selection of tree species that are adapted to future climate conditions.

**ERC-3.7 Trees of Significance.** The City shall promote stewardship of city trees and private protected trees and ensure that the design of development projects provides for the retention of these trees where possible. Where removal cannot be avoided, the City shall require replacement or appropriate remediation.





**ERC-3.8 Public Education.** The City should collaborate with community-based organizations and neighborhood organizations, particularly in underserved areas, to facilitate tree plantings and promote the importance and benefits of trees and of the urban forest through awareness, partnerships, and efforts that educate residents on the best practices for planting and maintaining trees.

**ERC-3.9 Watering and Irrigation.** The City shall encourage appropriate watering practices and irrigation to minimize needed water use and support healthy tree growth; support responsible tree irrigation during droughts to minimize tree stress and loss; and convert irrigation in parks and streetscapes where needed.

**ERC-3.10 Parking Lot Shading.** The City shall review and amend the Parking Lot Shading Design and Maintenance Guidelines and Parking Lot Shading Ordinance as needed to promote tree health, growth, and maintenance of trees to reduce urban heat island impacts.

**ERC-3.11 Planting.** The City shall encourage development to provide trees with appropriate irrigation methods and adequate growing space; site trees to reduce building heat and provide shade to public walkways to the extent feasible; and include appropriate soil treatment methods to promote healthy thriving trees.

## AIR QUALITY

Sacramento is located in a valley bounded by the Northern Coast Mountain Ranges to the west and the Northern Sierra Nevada Mountains to the east, which creates a barrier to airflow that can trap air pollutants in the valley. Residents are exposed to a variety of air pollutants, including diesel exhaust from trucks and cars, smoke from residential wood combustion, and emissions and particulate matter

from vehicle travel along freeways and major arterials. Smoke from wildfires is also a periodic source of air pollution and can exacerbate ambient conditions.

Policies in this section seek to ensure clean, fresh air for all residents by supporting and expanding existing work undertaken by the City and other regional agencies. These efforts include promoting construction materials and requiring construction measures that minimize pollution, minimizing pollution exposure near sensitive receptors, monitoring, publicizing air quality data, and continuing to collaborate and coordinate with regional agencies.

*For air quality policies intended to reduce the compounded health risks in disadvantaged communities, please see the Environmental Justice Element. Supporting increased use of zero- and low-emission vehicles is also a strategy for improving air quality and achieving long-term climate action objectives; for policies on zero and low-emission vehicles, please see the Mobility Element.*

## GOAL AND POLICIES

ERC-4

### Collaborative action to address air pollution.

**ERC-4.1 Regional Coordination.** The City shall support air quality planning efforts led by other local, regional, and State agencies while simultaneously leveraging City authority and resources to focus on reducing air pollution burden in disadvantaged communities.

**ERC-4.2 Air Quality Awareness.** The City shall cooperate with the Sacramento Metropolitan Air Quality Management District (SMAQMD), Sacramento Area Council of Governments (SACOG), Sacramento Municipal Utility District (SMUD), and other groups to promote public access to air quality monitoring data and awareness about impacts of indoor and outdoor air quality on health and protective strategies.

**ERC-4.3 Project Design.** The City shall promote the incorporation of new technologies, materials, and design and construction techniques in private development projects that minimize air pollution, noise, excess heat, and other forms of pollution and its impacts.

**ERC-4.4 Sensitive Uses.** The City shall consult, as appropriate, with the Sacramento Metropolitan Air Quality Management District (SMAQMD) in evaluating exposure of sensitive receptors to toxic air contaminants, and will impose conditions, as appropriate, on projects to protect public health and safety.

**ERC-4.5 Construction Emissions.** The City shall ensure that construction and grading activities minimize short-term impacts to air quality by employing appropriate measures and best practices. Refer to Basic Construction Emissions Control Practices (BMPs) recommended by the Sacramento Metropolitan Air Quality Management District (SMAQMD).

**ERC-4.6 Gas-Powered Landscaping Equipment.** The City shall encourage alternatives to gas-powered landscaping equipment that would reduce exposure to air and sound pollution caused by the use of these machines.

**ERC-4.7 Operational Emissions.** The City shall require development projects that exceed Sacramento Metropolitan Air Quality Management District (SMAQMD) reactive organic gas (ROG) and nitrogen oxide (NOX) operational thresholds to incorporate design or operational features that reduce emissions equal to 15 percent from the level that would be produced by an unmitigated project.



## WATER AND ENERGY CONSERVATION

Water is a precious resource, even in riverine Sacramento. Changing climatic conditions in the region, including rising average daily temperatures and changing precipitation patterns, are projected to increasingly strain the availability of water as the city continues to grow in coming decades. The California State legislature has mandated long-term water conservation throughout the state, and robust water conservation programs that address residential, commercial, and industrial water use will be needed to achieve targets. The City has an ongoing water conservation program and has long been committed to implementing water conservation measures for all of its customer sectors in collaboration with regional partners. Rebate offerings include both indoor and outdoor water conservation incentives for all customer types, and the City will continue to regularly conduct outreach campaigns, water efficiency trainings, and other programs related to water conservation. The City also maintains and regularly updates an Urban Water Management Plan to support long-term resource planning and water supply sustainability.





Energy, too, is indispensable to our daily lives and our energy choices impact the natural systems around us in many ways. The Sacramento Municipal Utilities District (SMUD) provides electrical service, and Pacific Gas and Electric (PG&E) provides natural gas to Sacramento residents. SMUD is actively working to expand renewable energy supply and incentivize fuel-switching from fossil fuels to cleaner electricity. SMUD runs energy efficiency programs that offer retrofits, rebates, and energy audits to residential and commercial customers. There are also many other regional and State programs to help local residents and businesses defray the costs of installing energy-efficient upgrades. The City's Climate Action and Adaptation Plan (CAAP) is also an important tool for promoting energy efficiency throughout the community, outlining bold actions the City will take to champion the responsible management of water and energy. Policies in this section seek to promote careful stewardship and reduced consumption of water and energy.

## GOAL AND POLICIES

### ERC-5

#### Careful stewardship and efficient consumption of water and energy.

- ERC-5.1 Active Water Conservation Program.** The City shall continue to implement an active water conservation program to enhance the efficient use of the resource, consistent with State law, the objectives of the Climate Action and Adaptation Plan (CAAP), and the Water Conservation Plan. To achieve State-mandated water conservation standards, the City shall monitor use, conduct studies, and research, develop, and implement incentives and programs to increase water efficiency and/or reduce water consumption. When implementing the Water Conservation Program a prioritization of program elements that enhance water affordability and promote livability in the City will be a factor.



**ERC-5.2 Reducing Storm Runoff.** The City shall encourage project designs that minimize drainage concentrations, minimize impervious coverage, utilize pervious paving materials, utilize low impact development (LID) strategies, and utilize Best Management Practices (BMPs) to reduce stormwater runoff.



**ERC-5.3 Water Efficiency Training.** The City shall support the development of partnerships and collaborations to train and educate City staff, maintenance professionals, designers, contractors, and property managers about water efficiency.

**ERC-5.4 Municipal Energy and Water Efficiency.** The City shall continue to implement energy and water conservation measures in City facilities and operations, conducting municipal energy benchmarking on City facilities in an effort to continually improve municipal energy efficiency.

**ERC-5.5 Publicize Voluntary Programs.** The City shall connect businesses and residents with voluntary programs that provide energy and water efficiency audits, retrofit installations, rebates, and financing assistance by publishing information on the City's website.

**ERC-5.6 Renewable Energy.** The City shall promote energy conservation throughout the community and encourage the use of renewable energy systems and technologies to supplement or replace traditional building energy systems with the goal of converting to carbon-free energy use by 2045. As part of this effort, the City shall publicize and promote the availability of programs such as Sacramento Municipal Utility District's (SMUD's) Community Solar, Neighborhood SolarShares, and Commercial SolarShares programs.

**ERC-5.7 Onsite Water Reuse.** The City shall explore the feasibility of requiring onsite reuse of greywater and blackwater for end uses such as toilet flushing and irrigation to offset supplies of potable water and support more resilient and sustainable water management.



# Environmental Constraints

The City of Sacramento is committed to the protection of life and property from the impacts of environmental constraints. A safe environment enhances community character, residents' quality of life, and contributes to a city's livability and economic productivity. The environmental constraints covered in this section include natural hazards (flooding, seismic and geologic), urban heat, climate change, and noise. A detailed analysis of risk factors and strategies for addressing hazards is included in the City's Local Hazard Mitigation Plan (LHMP), which is incorporated by reference into the Public Facilities and Safety Element.

## FLOODING HAZARDS

Throughout its history, Sacramento has experienced significant, sometimes devastating, flooding. In response, the Sacramento region has developed flood protection and control facilities that include a comprehensive system of dams, over 1,100 miles of levees, overflow weirs, drainage pumping plants, and flood control bypass channels. Floods in Sacramento often occur as a result of severe weather and excessive rainfall, either in the city or in areas upstream of

the city. Additionally, climate change has the potential to affect the frequency, magnitude, and duration of flood events.

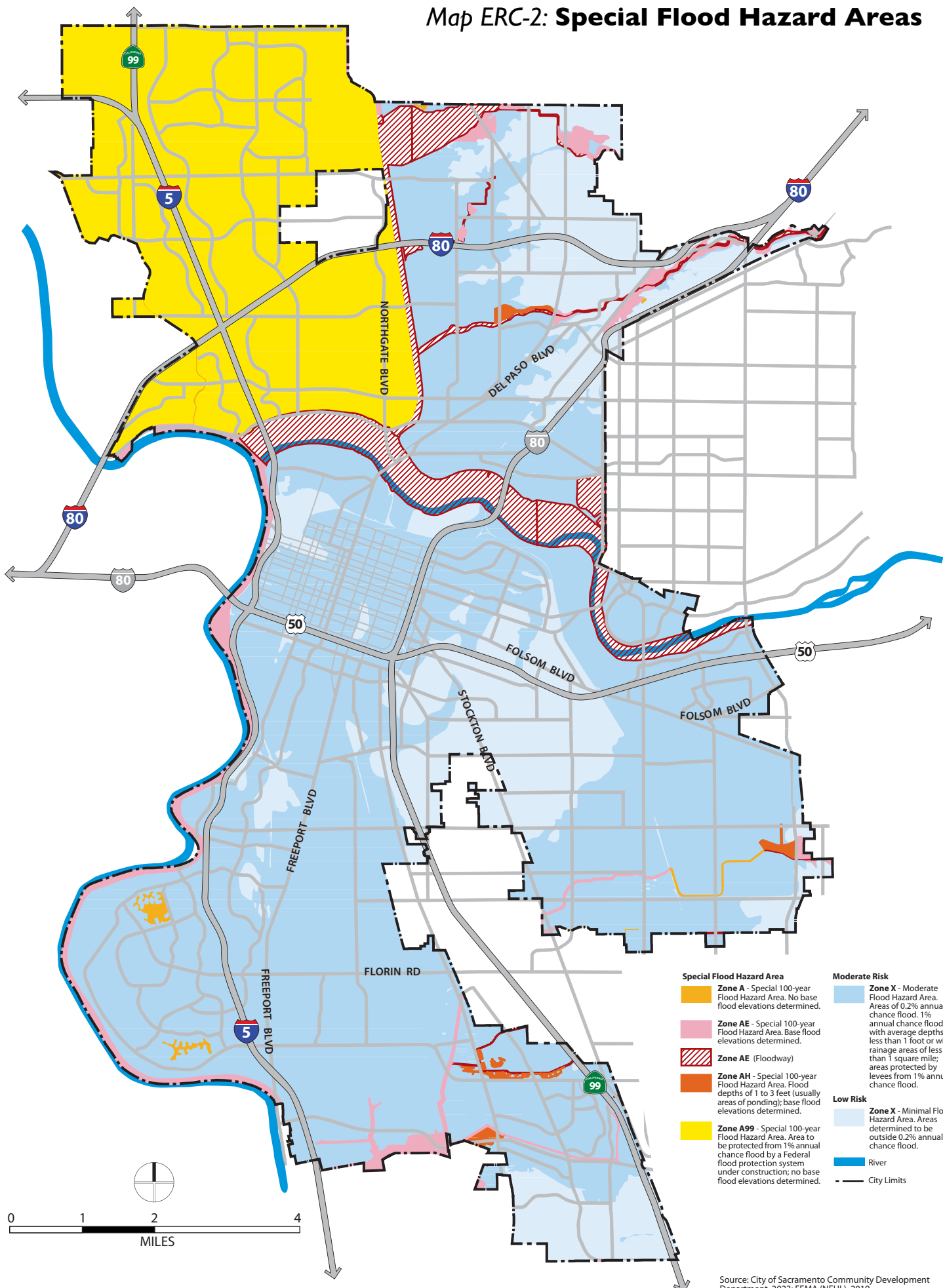
Efforts to manage flood risk include maintaining a Floodplain Management Ordinance, as well as supporting the Sacramento Area Flood Control Agency (SAFCA) in implementing projects that will ultimately provide a 200-year level of flood protection or greater. **Map ERC-2** shows the special flood hazard areas as determined by the Federal Emergency Management Agency (FEMA). The General Plan Technical Background Report also includes this map for the city of Sacramento along with the definition of each flood zone.

Policies in this section seek to protect life and property from flood hazards by requiring enforcement of safety standards, state-of-the-art site design and construction methods, and mitigation to minimize the impacts of new development. Policies also protect Sacramento residents and businesses by requiring maintenance of existing flood control infrastructure and collaboration with other public agencies in implementing projects that will ultimately provide a 200-year level of flood protection or greater.

The confluence of the Sacramento and American Rivers merges surface waters from the Sierras and from the Central Valley.



# Map ERC-2: Special Flood Hazard Areas



- |  |  |   |
|--|--|---|
| <b>Special Flood Hazard Area</b>   |  | <b>Moderate Risk</b>  |
| <span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span>  | <b>Zone A</b> - Special 100-year Flood Hazard Area. No base flood elevations determined.   | <span style="display:inline-block; width:15px; height:15px; background-color:lightblue; border:1px solid black;"></span> <b>Zone X - Moderate Flood Hazard Area.</b> Areas of 0.2% annual chance flood. 1% annual chance flood with average depths of less than 1 foot or with rainage areas of less than 1 square mile; areas protected by levees from 1% annual chance flood. |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightpink; border:1px solid black;"></span>   | <b>Zone AE</b> - Special 100-year Flood Hazard Area. Base flood elevations determined.   |   |
| <span style="display:inline-block; width:15px; height:15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, red 2px, red 4px); border:1px solid black;"></span> | <b>Zone AE (Floodway)</b>  |   |
| <span style="display:inline-block; width:15px; height:15px; background-color:orange; border:1px solid black;"></span>  | <b>Zone AH</b> - Special 100-year Flood Hazard Area. Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.   |   |
| <span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span>  | <b>Zone A99</b> - Special 100-year Flood Hazard Area. Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no base flood elevations determined. |   |
|  |  | <b>Low Risk</b>   |
|  |  | <span style="display:inline-block; width:15px; height:15px; background-color:lightblue; border:1px solid black;"></span> <b>Zone X - Minimal Flood Hazard Area.</b> Areas determined to be outside 0.2% annual chance flood.  |
|  |  | <span style="display:inline-block; width:15px; height:15px; background-color:blue; border:1px solid black;"></span> <b>River</b>  |
|  |  | <span style="display:inline-block; width:15px; border-bottom:1px dashed black;"></span> <b>City Limits</b>  |

Source: City of Sacramento Community Development Department, 2023; FEMA (NFHL), 2019



## GOAL AND POLICIES

### ERC-6

#### **Protection of life and property from flooding hazards.**

**ERC-6.1 Protection from Flood Hazards.** The City shall strive to protect life, the natural environment, and property from natural hazards due to flooding.

**ERC-6.2 Flood Management Planning Coordination.** The City shall work with local, regional, State, and federal agencies to do the following:

- Maintain an adequate information base; monitor long-term flood safety; and assess long-term flood event probabilities;
- Prepare risk assessments that account for urbanization and the effects of climate change;
- Identify strategies to mitigate flooding impacts; and
- Participate in regional planning efforts.

**ERC-6.3 Floodway Capacity.** The City shall preserve urban creeks and rivers to maintain and, where feasible, expand existing floodway capacity while enhancing environmental and habitat quality and recreational opportunities.

**ERC-6.4 Floodplain Requirements.** The City shall regulate development within floodplains in accordance with State and federal requirements and maintain the City's eligibility under the National Flood Insurance Program.

**ERC-6.5 Community Rating System.** The City shall continue its participation in the Federal Emergency Management Agency's (FEMA's) Community Rating System program, which gives property owners discounts on flood insurance.

**ERC-6.6 Flood Regulations.** The City shall continue to regulate new development in accordance with State requirements for 200-year level of flood protection and federal requirements for 100-year level of flood protection.

**ERC-6.7 Flood Hazard Risk Evaluation.** The City shall require evaluation of potential flood hazards prior to approval of development projects and shall require new development located within a Special Flood Hazard Area to be designed to meet federal and State regulations and minimize the risk of damage in the event of a flood.

**ERC-6.8 Interagency Levee Management.** The City shall coordinate with local, regional, State, and federal agencies to ensure new and existing levees are adequate in providing flood protection and coordinate to achieve local certification of levees for 200-year flood protection by 2025.

**ERC-6.9 Levee and Floodway Encroachment Permit.** The City shall require applicants to secure an encroachment permit from the Central Valley Flood Protection Board for any project that falls within the jurisdiction regulated by the Board (e.g., levees, designated floodways).



Replacing old levees is part of the flood protection plan.

**ERC-6.10 Levee Setbacks for New Development.**

The City shall require adequate setbacks from flood control levees and prohibit new development from using levees as a primary access point, consistent with local, regional, State, and federal design and management standards.

**ERC-6.11 Unobstructed Access to Levees.** The City shall provide unobstructed access, whenever feasible, on City-owned land adjacent to levees for maintenance and emergencies.

**ERC-6.12 Flood Risk Notification.** The City shall annually notify owners of residential development protected from flooding by a levee, reminding them of the risk and require all new developments protected by levees to include a notice within the deed stating that the property is protected by flooding from a levee and that the property may be subject to flooding if the levee fails or is overwhelmed.



## SEISMIC AND GEOLOGIC HAZARDS

While California is considered a seismically active region, there are no known faults within the city or the greater region. Moreover, Sacramento does not commonly experience strong ground shaking as a result of earthquakes. Isolated areas within the city, however, have soil types and other conditions which could result in structural damage induced by seismic activity. Policies in this section protect the public from seismic and geologic hazards by requiring enforcement of safety standards, state-of-the-art site design and construction methods, and mitigation to minimize the impacts of new development.

## GOAL AND POLICIES

### ERC-7 Protection of life and property from seismic hazards.

**ERC-7.1 Expansive Soils and Liquefaction.** In areas of expansive soils and high liquefaction risk, the City shall continue to require that project proponents submit geotechnical investigation reports and demonstrate that the project conforms to all recommended mitigation measures prior to City approval.

**ERC-7.2 Seismic Stability.** In accordance with the California Building Code, the City shall regulate structures intended for human occupancy to ensure they are designed and constructed to retain their structural integrity when subjected to seismic activity.



Yolo Bypass



## URBAN HEAT

On a summer day in Sacramento, the city can feel 15 to 20 degrees Fahrenheit hotter than surrounding undeveloped rural areas. This is because key elements of the urban environment, including paved streets, parking lots, and buildings absorb and amplify the heat of the sun, unlike vegetation and soil of rural areas. Even after the sun goes down, these surfaces hold heat, causing high daytime temperatures to linger into the night. Additionally, corridors of tall buildings can trap heat close to the ground where people interact, and human activities like driving cars and operating factories produce “waste heat” that can aggravate the problem. Urban heat has serious implications for human health, energy consumption, infrastructure, and the environment. Extreme heat can cause heat-related illnesses (e.g., heat stroke), exacerbate asthma and cardiac disease, and even lead to death. Young children, older adults, outdoor workers, people experiencing homelessness, and those with underlying health conditions are particularly susceptible to heat-related problems, but anyone can experience minor to severe health complications. In the United States, more people die each year from extreme heat than are killed by storms, floods, and wildfires combined.



As temperatures continue to rise with climate change, the effects of urban heat will be felt even more acutely. **Map ERC-3** shows projected average summertime temperature throughout Sacramento in 2040. While neighborhoods throughout the city will feel the effects of increased urban heat, some neighborhoods will be more impacted than others. The lowest projected temperatures are in leafy neighborhoods with mature tree canopy coverage and plentiful parks and green spaces, like Land Park, Curtis Park, and East Sacramento. By contrast, neighborhoods with fewer trees and green spaces will experience higher temperatures. Many of these neighborhoods tend to have higher concentrations of lower-income households and people of color and are located adjacent to the areas with the hottest projected temperatures - locations with large expanses of asphalt and concrete, such as Executive Airport, the former Sleep Train Arena site, the Railyards, and several active industrial areas. Proximity to these large “urban heat islands” in combination with lack of trees and green spaces leads to more intense heat, and the higher levels of pollution in these neighborhoods also compounds the health risk for residents. **Map ERC-4** overlays the highest projected temperatures with areas with low tree canopy coverage and areas with the highest cumulative environmental justice impacts, shown on the map as a “High Composite Score,” based on analysis of 68 different indicators such as pollution, demographic and health variables, housing conditions, access to healthy food and recreational facilities, neighborhood conditions, and transportation safety. Please see **Map EJ-5** in the Environmental Justice Element for a citywide map of these composite scores, showing communities most cumulatively impacted by environmental justice issues. These layers are used to create three tiers for priority intervention areas: areas with both low tree canopy and a high composite score are the most critical places to provide urban heat interventions. Areas with only high composite scores, followed by areas with low tree canopy, should be prioritized second and third, respectively.

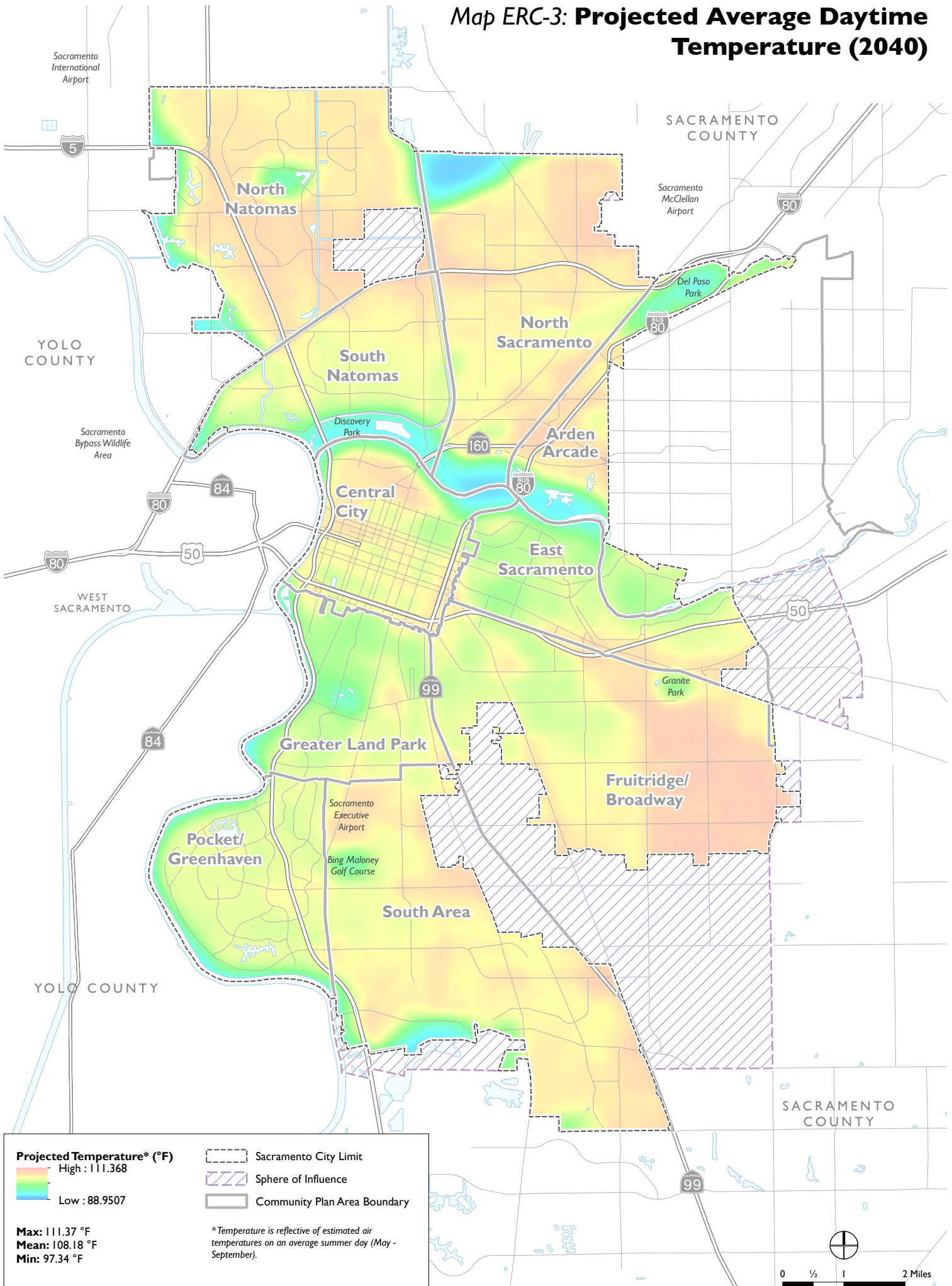
Building community resilience to the effects of climate change is a critical consideration. This includes efforts to inform and empower residents to plan for and respond effectively to environmental challenges, as well as efforts to create resiliency hubs and neighborhood resilience plans.

Studies have shown that 25 percent tree canopy coverage in urban areas can reduce temperatures by as much as 8 degrees compared with bare, unplanted areas. While it can take years for newly planted trees to grow to maturity and provide substantial canopy, there are also solutions that can have a more immediate effect, such as the use of UV-reflective treatments and coatings on roofs and building surfaces, porous pavement, misters, and evaporative cooling towers. The California Building Code requires the use of cool roofing strategies for all new development and major remodels in the Sacramento region. Code requirements can be satisfied through the use of specialized materials to reflect more of the sun's light and emit heat rather than absorb it or through the installation of attic insulation materials and other techniques for ensuring that energy performance standards are met. The Building Code also identifies voluntary measures that can be applied for energy saving and heat reduction beyond the mandatory requirements. At the ground level, reflective treatments and coatings can also be used on building materials and pavements in combination with shade trees and landscaping to reduce heat. Landscaping, building features, and site design techniques that provide passive cooling and reduce energy demand are also beneficial and can be implemented as new development occurs. Policies in this section provide support for reducing urban heat, in particular on vulnerable neighborhoods, large urban heat islands, and opportunity areas that will see significant new development.





# Map ERC-3: Projected Average Daytime Temperature (2040)

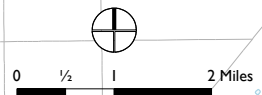


**Projected Temperature\* (°F)**  
 High : 111.368  
 Low : 88.9507

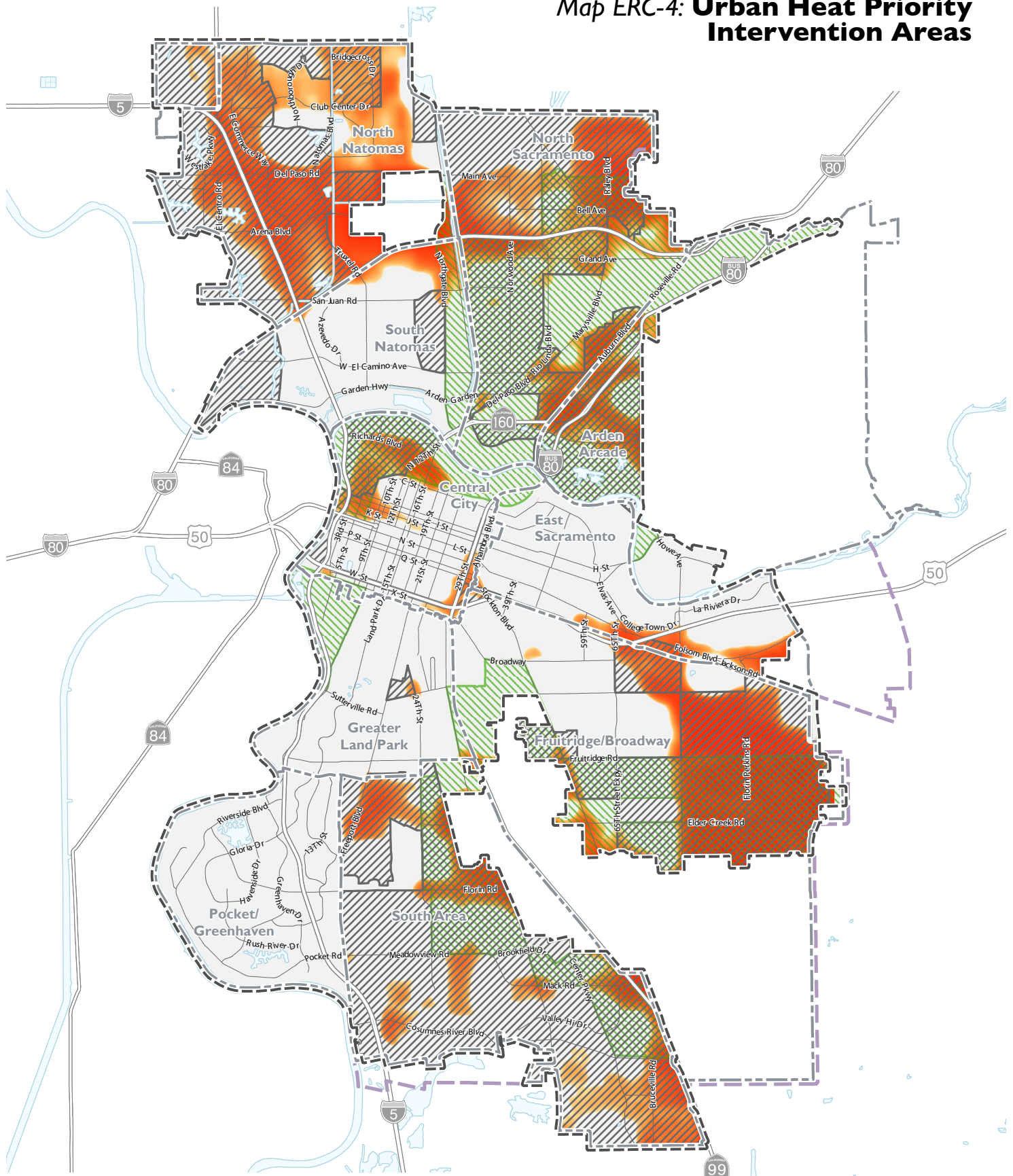
**Max:** 111.37 °F  
**Mean:** 108.18 °F  
**Min:** 97.34 °F








Sacramento City Limit  
 Sphere of Influence  
 Community Plan Area Boundary

\*Temperature is reflective of estimated air temperatures on an average summer day (May - September).



# Map ERC-4: Urban Heat Priority Intervention Areas



|  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li> Tier 1: Low Canopy and High Composite Score*</li> <li> Tier 2: High Composite Score</li> <li> Tier 3: Low Tree Canopy</li> </ul> | <p><b>Heat Islands (Top 1/3rd Hottest Areas)</b><br/>Projected Temperature (°F)</p>  <p>High: 111.368<br/>Low: 109.888</p> | <ul style="list-style-type: none"> <li> Sacramento City Limit</li> <li> Community Plan Area Boundary</li> <li> Sphere of Influence</li> </ul> |
|--|---|--|

\*Please refer to Map EJ-5 for more details on the High Composite Score.



## GOAL AND POLICIES

### ERC-8

#### Improved resilience to the effects of heat.

**ERC-8.1 Cooling Design Techniques.** Through design guidelines and other means, in all new development the City shall promote the use of tree canopy, cool pavements, landscaping, building materials, and site design techniques that provide passive cooling and reduce energy demand. In particular, the City shall promote the use of voluntary measures identified in the California Green Building Code (Title 24, Part 11 of the California Code of Regulations) to minimize heat island effects, including hardscape and roof materials with beneficial solar reflectance and thermal emittance values and measures for exterior wall shading.

**ERC-8.2 Large Heat Islands.** The City should work with property owners and businesses identified in urban heat island hot spots, informed by **Map ERC-4**, to address the urban heat island effect and reduce ambient temperatures in surrounding residential areas. City actions may include the following:

- Facilitating coordinated action among property owners; and
- Providing information and incentives for cost-effective heat reduction strategies, including front yard tree plantings and vegetation where streets lack room for street trees.

**ERC-8.3 Urban Heat Pilot Projects.** The City should continue to pursue pilot projects to test the use of new materials (e.g., landscaping, building materials, and site design techniques) in City infrastructure projects that can mitigate urban heat when implemented at scale.

**ERC-8.4 Municipal Cool Roof Retrofits.** The City should evaluate cool roofing options and plan for the retrofit of municipal facilities in coordination with energy efficiency upgrades, including administrative offices, community centers, and maintenance buildings. City buildings located in the most vulnerable areas, informed by **Map ERC-4**, should be prioritized for retrofits.

**ERC-8.5 Cool Libraries.** The City shall work with the Sacramento Public Library (SPL) to facilitate the incorporation of cooling techniques into neighborhood library facilities, including the application of cool roofing materials, cool paving treatments, landscaping, and shading amenities as funding allows.







**ERC-8.6 Heat-Reducing Public Amenities.** The City shall strive to install heat-reducing public amenities in areas most affected by urban heat, prioritizing the areas with vulnerable populations. Amenities could include the following:

- Drinking water fountains or bottle refilling facilities in public parks, at community facilities, transit centers, or other appropriate locations.
- Splash pads, sprinklers, fountains, and other water features in public parks, where appropriate.
- Shade structures and shading elements in parks and public facilities, where appropriate.
- Additional trees planted in passive landscape areas in parks and public facilities.

**ERC-8.7 Extreme Heat Education.** The City should work with community organizations and the Office of Emergency Management to provide information and services to residents to manage heat.

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**ERC-8.8 Heat Waves.** The City shall work with labor organizations, the business community, and County and State health and safety agencies to publicize programs and standards for preventing heat-related illness in employees who work outdoors and publicize precautions for preventing heat-related illness during heat waves.

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**ERC-8.9 Cooling Centers.** The City shall continue to open and operate City Cooling Centers in coordination with Office of Emergency Management during extreme heat events.

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## CLIMATE CHANGE

Climate change refers to long-term shifts in weather patterns, including temperature and precipitation. Over the course of the Earth's history, climate shifts have occurred naturally, but since the 1800s, human activities have been the main driver of climate change, primarily due to burning fossil fuels like coal, oil, and gas. Burning fossil fuels generates greenhouse gas (GHG) emissions that act like a blanket wrapped around the Earth, trapping the sun's heat and raising temperatures. As climate change progresses, it will continue to increase the frequency and severity of extreme heat events, urban heat island effect, flooding, droughts, and wildfires that will both individually and collectively have increasing impacts on vulnerable populations, critical services, and infrastructure in Sacramento. While comprehensive, coordinated actions to reduce GHG emissions can help mitigate the extent of these impacts over the long term, additional actions must be taken to address the people, places, and infrastructure most at risk and to leverage other opportunities to effectively and equitably build climate resilience in Sacramento's communities.

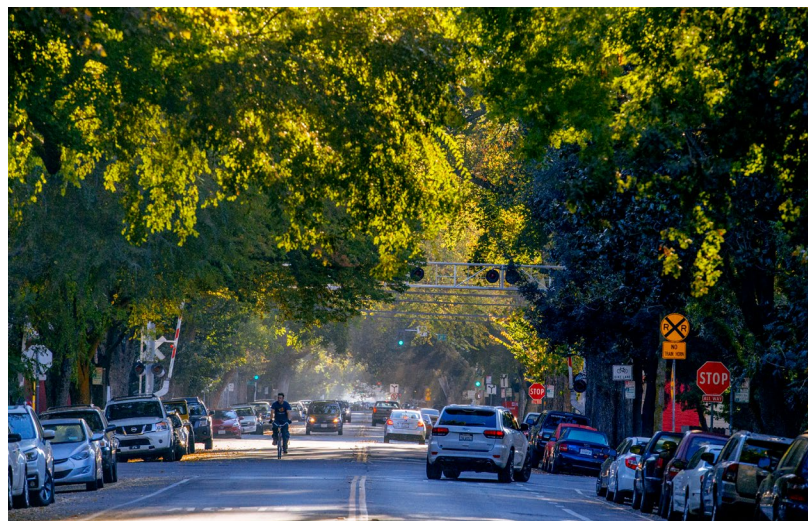
The City of Sacramento recognizes the urgent need for bold action to reduce GHG emissions. The City's Climate Action and Adaptation Plan (CAAP), prepared in parallel with this General Plan, lays out strategies and specific measures for achieving a pathway to carbon neutrality by 2045, with bold actions that will cut waste, pollution, and carbon emissions communitywide and a commitment to building resilience for all its communities, especially the most vulnerable. The policies in this section support the City's goal of achieving carbon neutrality by 2045 and strengthening resilience to the effects of climate change which are fundamental objectives that underlie policies throughout the General Plan.

## GOAL AND POLICIES

### ERC-9

**Climate leadership and bold action to achieve carbon neutrality by 2045, aggressively reduce emissions by 2030, and increase climate resilience communitywide.**

- ERC-9.1 Communitywide GHG Reduction.** The City shall implement the Climate Action and Adaptation Plan (CAAP), a qualified greenhouse gas (GHG) reduction plan that meets the requirements of the California Environmental Quality Act (CEQA) Guidelines 15183.5(b), to reduce community and municipal emissions consistent with the state's GHG reduction goals.
- ERC-9.2 Additional GHG Emission Programs.** The City shall continue to evaluate the feasibility and effectiveness of new policies, programs, and regulations that contribute to achieving the City's long-term greenhouse gas (GHG) emissions reduction goals. Efforts should build on the strategies articulated in the Climate Action and Adaptation Plan (CAAP).
- ERC-9.3 Lead By Example in Design of City Buildings.** The City shall require Net-Zero Energy or net-positive design for all newly constructed City-owned buildings to raise the profile of sustainable design in the community and encourage adoption of related strategies and technology.



**ERC-9.4 Carbon-Neutral Buildings.** The City shall work to transition fossil fuel-powered buildings to electric power communitywide, implementing a phased strategy that targets new construction starting in 2023 and progressively incorporating measures to ensure the electric powered retrofit of existing buildings by 2045.

**ERC-9.5 Climate Change Assessment and Monitoring.** The City shall continue to assess and monitor climate change impacts and adaptive capacity and strive for improvement.

**ERC-9.6 Resiliency Hubs.** The City shall continue to establish new resiliency hubs, informed by **Map ERC-4**, that provide safe breathing spaces for outdoor workers, older adults, people experiencing homelessness, and other vulnerable populations during wildfire smoke events, and cooling and warming centers for extreme weather events and power outages. When feasible, these hubs should be co-located at existing community spaces that already serve the most vulnerable communities.

**ERC-9.7 Emergency Power.** The City shall evaluate options for ensuring emergency power at critical facilities and community facilities such as resiliency hubs, including the following:

- Microgrids,
- Solar capture and storage,
- Distributed energy, and
- Back-up generators.

The City should consider the ability to reduce utility costs and carbon emissions in the assessment.

**ERC-9.8 Microgrid Energy Systems.** The City should explore the use of district-scale microgrids for energy generation and backup for infill and new development areas in coordination and partnership with the Sacramento Municipal Utility District (SMUD).

## DISTRICT ENERGY

District-scale energy systems use a centrally located facility to generate energy for multiple buildings within the area, creating a hyper-local energy district. District infrastructure refers to the infrastructure needed to support this type of energy distribution, which can rely on very low- or zero-carbon inputs to power the systems, such as solar, biofuels, or geothermal power. These systems can be applied to college or hospital campuses, airports, or office parks, and offer many advantages, including more efficient energy delivery, a reduced carbon footprint, and stability in energy pricing and cost effectiveness.



**ERC-9.9 Onsite Alternative Energy Creation.** The City shall support and encourage alternative energy creation and onsite energy production, such as thermal systems, onsite photovoltaic, wind turbines, and other emerging technologies.



**ERC-9.10 Private Ventures.** The City shall consider supporting private ventures in implementing district infrastructure systems, with the Department of Utilities and Community Development Department providing oversight.

**ERC-9.11 Neighborhood Resilience.** The City shall facilitate and coordinate with community organizations for the development of neighborhood-level resilience plans to improve initial emergency response, subsequent recovery, and ongoing self-sufficiency throughout the city. The City should provide resources, training, and information, prioritizing disadvantaged communities (DACs) and vulnerable areas of the city for creation of these plans.

**ERC-9.12 Regenerative Food System.** The City shall encourage regenerative agriculture practices in urban agriculture uses, including carbon-sequestering practices.

## NOISE

Sound shapes the way we experience the places we live, work, and play. A pleasant, healthy noise environment can reduce stress, improve health, and enhance quality of life in the community. In an urban environment, noise is a part of everyday life, but thoughtful planning and design can minimize unwanted noise. In Sacramento, the largest source of noise is generated by vehicle traffic on freeways and surface streets. This will continue to be the noise source that affects most people in the Sacramento area. Other sources of noise include non-road transportation noises, like rail and airports; stationary point-source noises from commercial or industrial operations; and places where trucks congregate, including truck stops, repair facilities, and distribution hubs.

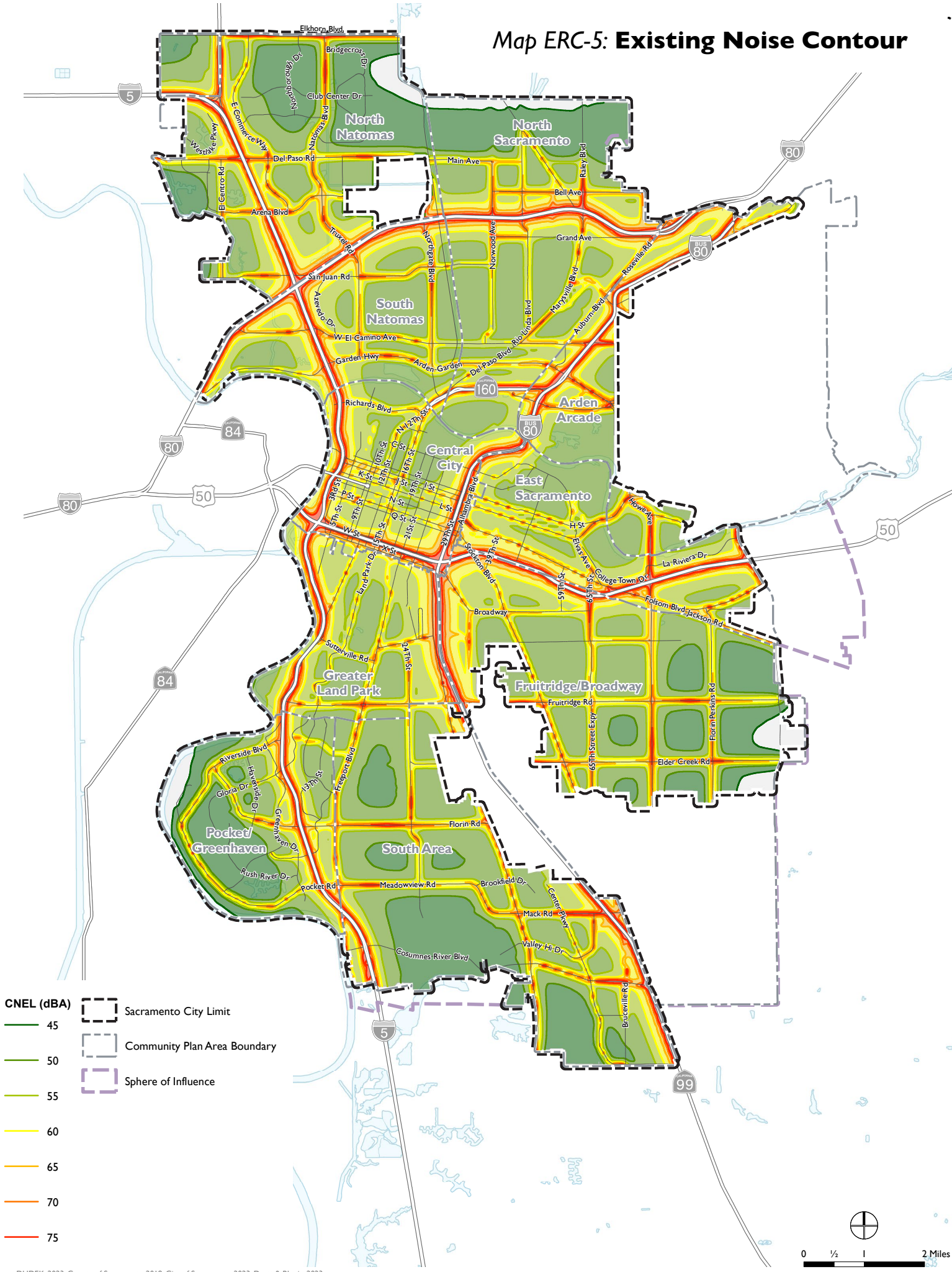
When noise levels are reported, they are typically expressed as a measurement over time to account for variations in noise exposure. Levels also account for varying degrees of sensitivity to noise during



daytime and nighttime hours. The Community Noise Equivalent Level (CNEL) and Day-Night Noise Level (Ldn) both reflect noise exposure over an average day with weighting to reflect this sensitivity. As part of the General Plan process, existing and future noise sources were evaluated. Ambient noise monitoring was conducted to assess current noise levels in Sacramento at a variety of land uses proximate to major noise sources. Short-term daytime noise measurements were taken adjacent to major noise sources in the city. These measured noise levels included major noise sources (traffic and/or train pass-bys) in addition to non-traffic noise sources. **Map ERC-5** reflects the existing noise level contours for 60, 65, 70, and 75 dBA. **Map ERC-6** shows projected noise level contours at buildout of General Plan land uses in 2040.

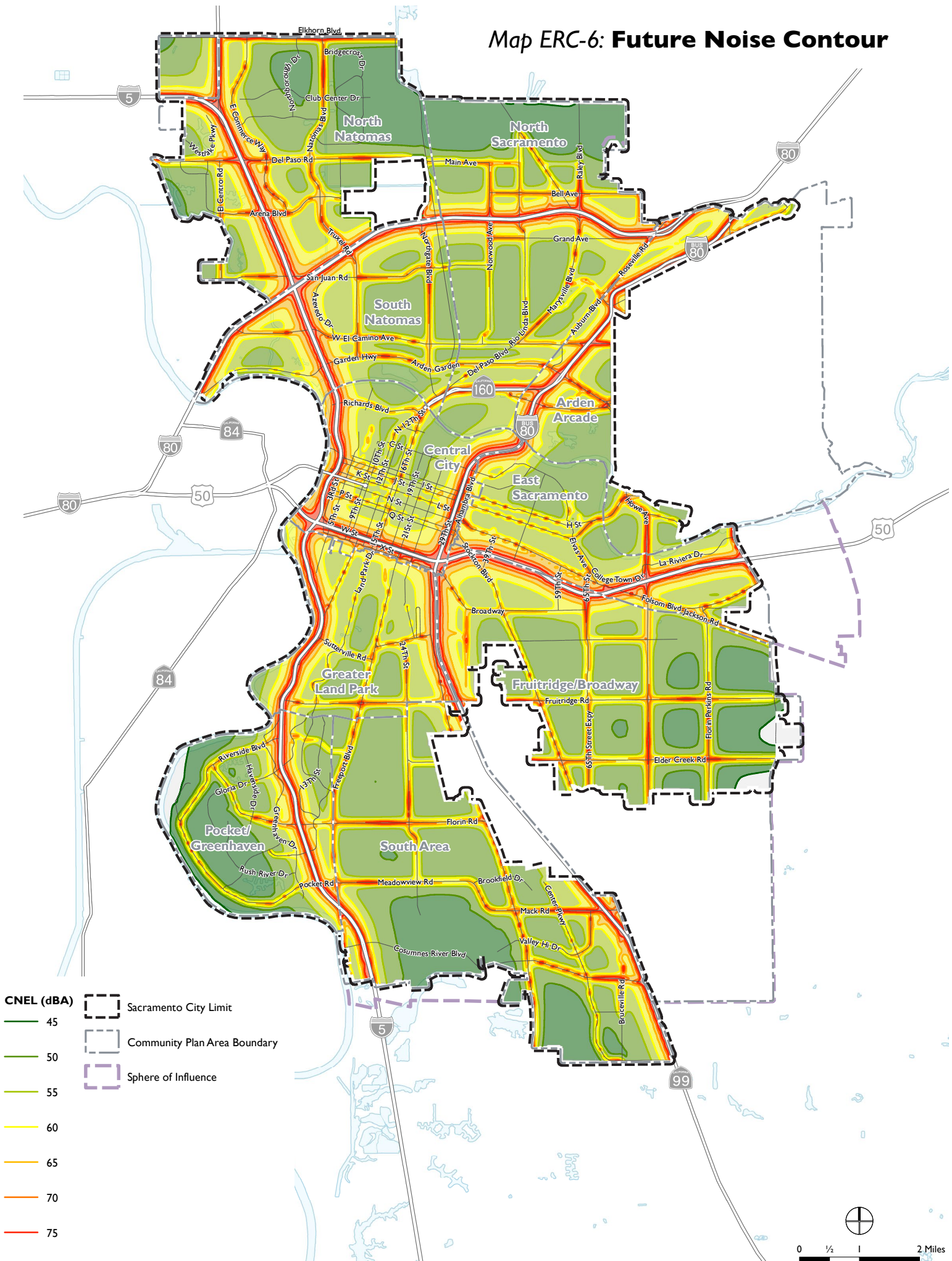
In a vibrant city, some noise is inevitable. Making sure that noise-sensitive land uses, such as schools and housing, are separated from noisy uses is important to ensuring a pleasant, healthy noise environment for all. Land uses have different levels of compatibility relative to noise, and the State of California mandates that general plans include noise level compatibility standards for the development of land as a function of a range of noise exposure values. **Table ERC-1** identifies noise level compatibility standards and interior noise standards to be used to guide land use planning decisions within a given contour. The City Code also contains regulations intended to ensure best practices in siting new development.

# Map ERC-5: Existing Noise Contour





# Map ERC-6: Future Noise Contour



**Table ERC- I: Exterior Noise Compatibility Standards for Various Land Uses**

| LAND USE TYPE   | HIGHEST LEVEL OF NOISE EXPOSURE THAT IS REGARDED AS "NORMALLY ACCEPTABLE" <sup>a</sup> (LDN <sup>b</sup> OR CNEL <sup>c</sup> ) |
|---|---|
| Residential—Low-Density Single-Family, Duplex, Mobile Homes                 | 60 dBA <sup>d,e</sup>   |
| Residential—Multi-family <sup>g</sup>                                       | 65 dBA  |
| Urban Residential Infill <sup>h</sup> and Mixed-Use Projects <sup>i,j</sup> | 70 dBA  |
| Transient Lodging—Motels, Hotels  | 65 dBA  |
| Schools, Libraries, Churches, Hospitals, Nursing Homes                      | 70 dBA  |
| Auditoriums, Concert Halls, Amphitheaters                                   | Mitigation based on site-specific study   |
| Sports Arena, Outdoor Spectator Sports                                      | Mitigation based on site-specific study   |
| Playgrounds, Neighborhood Parks   | 70 dBA  |
| Golf Courses, Riding Stables, Water Recreation, Cemeteries                  | 75 dBA  |
| Office Buildings—Business, Commercial, and Professional                     | 70 dBA  |
| Industrial, Manufacturing, Utilities, Agriculture                           | 75 dBA  |

Source: Governor's Office of Planning and Research, State of California General Plan Guidelines 2003, October 2003.

- a As defined in the California Office of Planning and Research Guidelines, "Normally Acceptable" means that the "specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements.
- b Ldn, or day-night average sound level, is an average 24-hour noise measurement that factors in day and night noise levels.
- c CNEL, or Community Noise Equivalent Level, measurements are a weighted average of sound levels gathered throughout a 24-hour period.
- d Applies to the primary open space area of a detached single-family home, duplex, or mobile home, which is typically the backyard or fenced side yard, as measured from the center of the primary open space area (not the property line). This standard does not apply to secondary open space areas, such as front yards, balconies, stoops, and porches.
- e dBA, or A-weighted decibel scale, is a measurement of noise levels.
- f The exterior noise standard for the residential area west of McClellan Airport known as McClellan Heights/Parker Homes is 65 dBA.
- g Applies to the primary open space areas of townhomes and multi-family apartments or condominiums (private year yards for townhomes; common courtyards, roof gardens, or gathering spaces for multi-family developments). These standards shall not apply to balconies or small attached patios in multistoried multi-family structures.
- h Applies to the Central City and areas with a Residential Mixed-Use designation.
- i All mixed-use projects located anywhere in the City of Sacramento.
- j See notes d and g above for definition of primary open space areas for single-family and multi-family developments.



The policies in this section seek to promote a pleasant, healthy noise environment and to protect residents, businesses, and visitors from noise hazards by establishing exterior and interior noise standards. Higher exterior noise standards are allowed for residential infill projects and mixed-use developments, as long as the interior noise standard is maintained. Mixed-use projects will be assessed for onsite noise sources to ensure compatibility of uses. The policies in this section also require mitigation of construction noise impacts and the reduction of noise from vehicles and aircrafts.

## GOAL AND POLICIES

**ERC-10** **A healthy sound environment conducive to living and working.**

**ERC-10.1 Exterior Noise Standards.** The City shall require noise mitigation for all development where the projected exterior noise levels exceed those shown in **Table ERC-1**, to the extent feasible.

**ERC-10.2 Noise Source Control.** The City should require noise impacts in new developments to be controlled at the noise source where feasible, as opposed to the receptor end, using techniques including but not limited to the following:

- Site design,
- Building orientation,
- Building design, and
- Hours of operation.

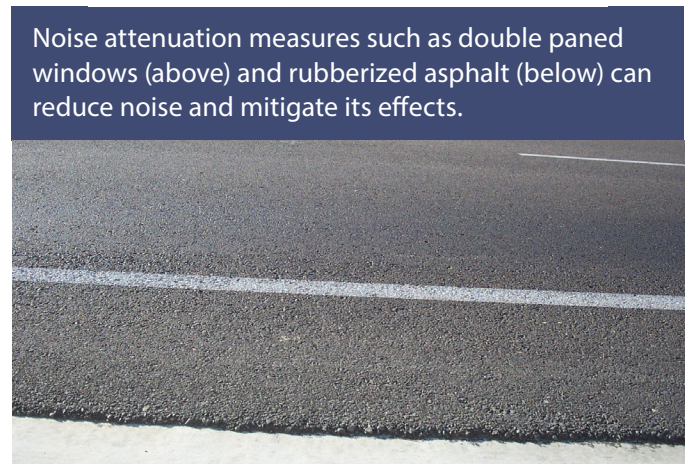
**ERC-10.3 Interior Noise Standards.** The City shall require new development to include noise attenuation to assure acceptable interior noise levels appropriate to the land use, as follows:

- 45 dBA Ldn for residential, transient lodgings, hospitals, nursing homes, and other uses where people normally sleep; and
- 45 dBA Leq (peak hour with windows closed) for office buildings and similar uses.

**ERC-10.4 Interior Noise Review for Multiple, Loud, Short-Term Events.** In cases where new development is proposed in areas subject to frequent, high-noise events (such as aircraft over-flights, or train and truck pass-bys), the City shall evaluate interior noise impacts at proposed sensitive receptors. The evaluation shall incorporate measures necessary to meet the 45 dBA Ldn standard.

**ERC-10.5 Interior Vibration Standards.** The City shall require construction projects that are anticipated to generate significant vibration levels to use appropriate methods (i.e., type of equipment, low-impact tools, modifying operations, increasing setback distance, vibration monitoring) to ensure acceptable interior vibration levels at nearby residential and commercial uses based on the current City or Federal Transit Administration (FTA) criteria.

**ERC-10.6 Effects of Vibration.** The City shall consider potential effects of vibration when reviewing new residential and commercial projects that are proposed in the vicinity of rail lines or light rail lines.



Noise attenuation measures such as double paned windows (above) and rubberized asphalt (below) can reduce noise and mitigate its effects.



Vehicles are the primary source of noise in Sacramento

**ERC-10.7 Vibration.** The City shall consider the potential for vibration-induced damage associated with construction activities, highways, and rail lines in close proximity to historic buildings and archaeological sites. Where there is potential for substantial vibration-induced damage, the City shall require preparation of a Pre-Construction Survey and Vibration Management and Monitoring Plan, prepared by a qualified historic preservation specialist or structural engineer to document existing conditions, present appropriate methods to avoid or reduce potential vibration damage, monitor for excessive vibration, and ensure any damage is documented and repaired.

**ERC-10.8 Alternative Paving Materials.** The City shall continue to explore opportunities to use alternative pavement materials such as rubberized asphalt and porous pavement on residential roadways in order to reduce noise generation, extend maintenance cycles, and improve air quality and stormwater management.

**ERC-10.9 Construction Noise Controls.** The City shall limit the potential noise impacts of construction activities on surrounding land uses through noise regulations in the City Code that address permitted days and hours of construction, types of work, construction equipment, and sound attenuation devices.

**ERC-10.10 Airport Land Use Compatibility.** The City shall restrict new residential development within the 65 dBA CNEL airport noise contour, or in accordance with plans prepared by the Airport Land Use Commission and shall only approve noise-compatible land uses.

**ERC-10.11 Hazardous Noise Protection.** The City shall discourage outdoor activities or uses in areas within the 70 dBA CNEL airport noise contour where people could be exposed to hazardous noise levels.



## IMPLEMENTING ACTIONS

### Plans and Programs

**ERC-A.1: Urban Forest Plan.** The City shall develop and implement an Urban Forest Plan as a primary planning tool for the protection, expansion, maintenance, sustainability, and enhancement of Sacramento’s urban forest.

**Responsible Entity:** Department of Public Works (lead); Community Development Department (support); Youth, Parks, and Community Enrichment (support)

**Timeframe:** Near-term (2024-2029)

**ERC-A.2: Tree Education.** The City shall develop informational materials to provide to residents and businesses to support the City’s tree canopy, including, but not limited to, the following:

- Information for new residents and businesses on tree benefits, planting guidance, tree selection and care, available programs, and water-wise irrigation;
- Guidance on tree planting to maximize building energy conservation;
- Guidance to plant and maintain healthy trees in parking lots; and
- Options and strategies to convert paved areas to tree planting areas.

**Responsible Entity:** Department of Public Works (lead); Community Development Department (support)

**Timeframe:** Near-term (2024-2029)



**ERC-A.3: CERT Training.** The City shall expand the Community Emergency Response Training (CERT) program to address community and neighborhood preparedness for climate impacts. Pilot implementation of the updated program in disadvantaged communities and areas with populations most vulnerable to climate impacts.

**Responsible Entity:** Sacramento Fire Department

**Timeframe:** Near-term (2024-2029)

### Planning Studies and Reports

**ERC-A.4: Heat Reduction in the Public Realm.** The City should explore opportunities to amend development standards and guidelines so as to promote the use of heat mitigation strategies to reduce temperatures in the public realm, particularly on active transportation networks, commercial corridors, near light rail transit (LRT) stations, and along transit corridors. Requirements may include the incorporation of the following:

- Building design strategies (varied building heights; setbacks from sidewalks; vertical and horizontal shade features);
- Cooling building and pavement materials, treatments, and coatings;
- Multiple layers of shading to maximize coverage throughout the day; and
- Street trees, and landscaping.

**Responsible Entity:** Community Development Department

**Timeframe:** Near-term (2024-2029)

**ERC-A.5: Bus Shelter Design.** The City shall encourage Sacramento Regional Transit District (SacRT) to study the feasibility of designing and installing bus shelters that are designed to offer protection and relief from heat, including the incorporation of shade trees.

**Responsible Entity:** Department of Public Works

**Timeframe:** Mid-term (2030-2035)

**ERC-A.6: Landscape Maintenance Ordinance.** The City shall study the feasibility of a landscape maintenance ordinance that would phase out the use of gas-powered landscaping equipment. This feasibility study shall include the following:

- Account for and identify potential alternatives to achieve comparable landscaping results when gas-powered landscaping equipment is no longer allowed.
- Consider potential solutions to equity impacts on the landscaping workforce as the industry shifts to accommodate the phasing out of gas-powered landscaping equipment.
- Identify a landscaping industry- and workforce-informed process and criteria for determining the extent of phasing out gas-powered landscaping equipment and how to equitably shift industry practices in response.

**Responsible Entity:** Community Development Department (lead); Office of Innovation and Economic Development (support)

**Timeframe:** Near-term (2024-2029)

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### *Regulations, Standards, and Development Review*

**ERC-A.7: Cooling Landscape Standards.** The City shall prepare a Landscape Manual or enhance landscape standards to mitigate urban heat island effects. Such standards could include the following:

- A climate appropriate planting palette and recommended plant mix,
- Targets for street tree canopy,
- Shade structure coverage, and
- Asphalt paving coverage.

**Responsible Entity:** Community Development Department (lead); Department of Youth Parks and Community Enrichment (support)

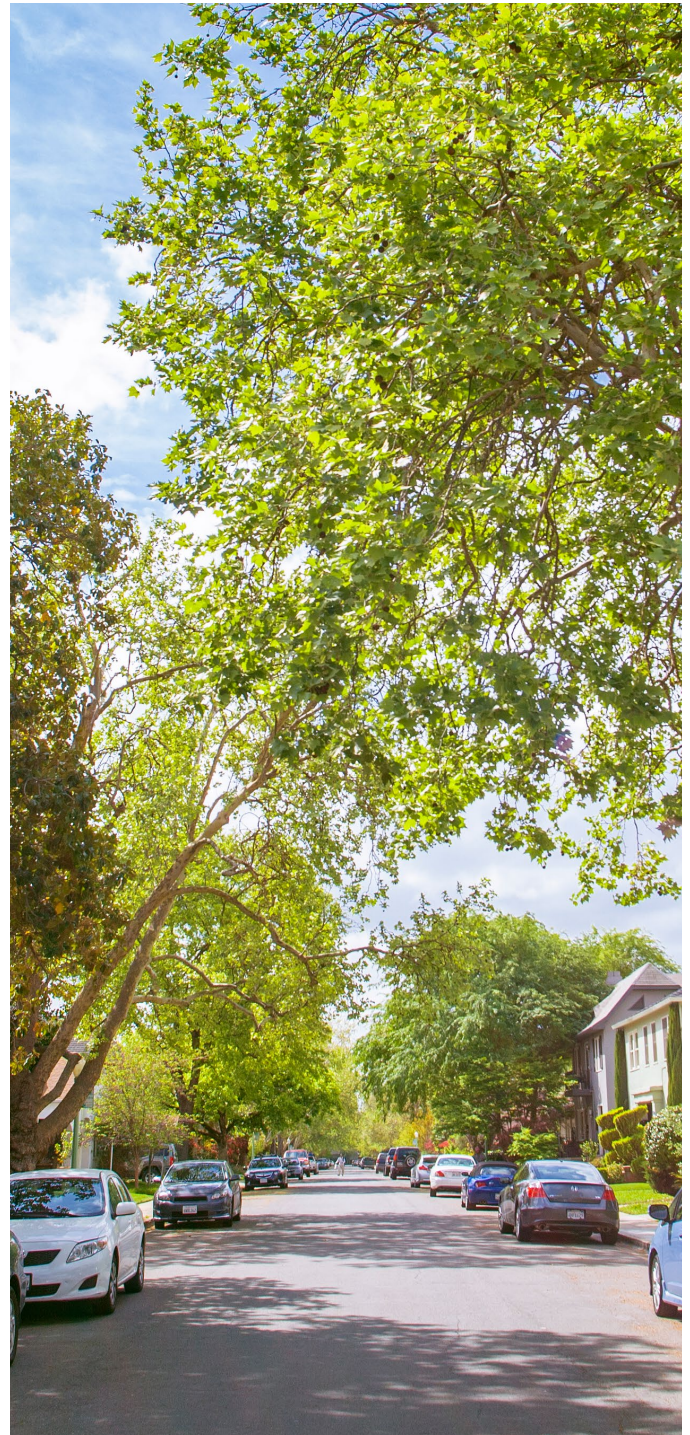
**Timeframe:** Near-term (2024-2029)

**ERC-A.8: Heat-Resilient Design Techniques.**

The City shall evaluate the feasibility of updating design guidelines, standards, and the municipal code to require building materials and site design techniques that provide passive cooling and reduce energy demand.

**Responsible Entity:** Community Development Department

**Timeframe:** Mid-term (2030-2035)





**ERC-A.9: Minimum Tree Requirements.** The City shall review and amend the planning and development code as necessary to require minimum levels of tree planting in new development and significant remodels and improve tree canopy inclusion. Review the following topics at a minimum:

- Requirements for trees in setback areas, particularly located to shade sidewalks and streets, particularly in new single-unit dwelling developments and subdivisions;
- Opportunities to provide incentives or requirements for inclusion of trees in front, back and side yards, particularly when sited to provide shade for sidewalks and streets;
- Tree plantings in site plan review to place trees to maximize energy conservation;
- Chapter 12.56 of the City Code related tree permits for ministerial development project review; and
- Solar panel installation requirements to minimize potential conflicts with tree planting.

**Responsible Entity:** Community Development Department (lead); Department of Public Works (support)

**Timeframe:** Near-term (2024-2029)

**ERC-A.10: Parking Lot Shade Ordinance.** The City shall update the Parking Lot Shade Ordinance and Guidelines to ease compliance, improve site plan review and inspection, monitoring, and to strengthen requirements for ongoing maintenance and replacement of trees in parking lots. Identify when and how shading requirements may be satisfied through alternate methods such as canopies and solar arrays.

**Responsible Entity:** Department of Public Works (lead); Community Development Department (support)

**Timeframe:** Mid-term (2030-2035)

**ERC-A.11: Street Standards for Tree Canopy.** The City shall update Street Standards with objective design standards for shade trees along roadways to optimize tree canopy and provide solutions for various street functions and conditions.

**Responsible Entity:** Department of Public Works (lead); Community Development Department (support)

**Timeframe:** Near-term (2024-2029)

