

7

OPEN SPACE AND CONSERVATION

This element presents a discussion of open space and natural resource conservation efforts undertaken by the City of Santa Rosa. Preservation of open spaces, agricultural lands, biological resources and habitat, air quality, and energy are each discussed, and policies ensure continued conservation efforts.

7-1 VISION

In 2035, conservation of open spaces and natural resources within and near the city contribute to Santa Rosa's enviable quality of life. Santa Rosa's natural resources—including creeks, wetlands, mature trees, ridgelines, rock outcroppings, and open spaces—are conserved and incorporated into the design of new development. Multi-use trails provide access to community and regional open space areas, and views of open space areas are protected throughout the city.

The Prince Memorial Greenway is completed and Santa Rosa Creek is restored, providing a riparian corridor amenity for residents and visitors. The natural features of several other waterways are restored and enhanced, with the addition of trails and passive recreational uses.

Agricultural uses—including farms, co-ops, dairies, livestock ranches, and vineyards—surround the city's Urban Growth Boundary (UGB). Air quality is high due to the use of cleaner fuels, reduced automobile dependence, and increased transit use.

7-2 OPEN SPACE

Open space provides a variety of benefits, including visual enjoyment, natural resource conservation (e.g., plant and wildlife habitats, creek corridors, hillsides, and soils), watershed protection, recreation use, and hazard reduction. Open space areas within the UGB generally include undeveloped lands containing significant wildlife habitat or natural resources. The city's UGB encompasses 180 acres of land designated as open space. Open space lands outside the UGB include Taylor Mountain and other hillside and ridgeline areas. Figure 7-1 illustrates the open space lands designated within the Planning Area.

Community separators are greenbelt areas designated by the Sonoma County General Plan to ensure protection of open space, and prevent expansion of urban development between cities. These separators are intended to preserve the county's sense of rural character by preserving open space corridors between existing communities. The community separators are also shown on Figure 7-1.

The Sonoma County Agricultural Preservation and Open Space District (SCAPOSD) publication Connecting Communities and the Land - A Long Range Acquisition Plan (2006) addresses acquisition and preservation of open space resources in Sonoma County. Four types of open space identified near Santa Rosa include agriculture, greenbelts (community separators), natural resources, and recreation areas. Preservation of open space for each of these activities is important to the quality of life and rural character valued by local residents. General Plan policies address public access to such areas, as well as expansion of the regional open space network. A continuous network of open space land can be more beneficial for plant and habitat conservation than piecemeal open spaces.

AGRICULTURAL RESOURCES

Agricultural resources within the Santa Rosa Planning Area provide residents with a sense of rural character and access to fresh produce and agricultural goods. Agricultural resources—including crop fields and vineyards, open rangeland, barns and other farm structures—outside of the UGB but within the Planning Area include a total of 18,200 acres of farmland, according to the State Department of Conservation's Farmland Mapping and Monitoring Program.

Working with SCAPOSD to preserve lands outside of the city's UGB that contain highly productive soils for growing crops, and that are suitable for community agricultural operations—such as farmers' markets, small family farms, and co-ops—will sustain the sense of rural character within the greater Santa Rosa area. Continued operation of active farms will also contribute to the region's economic vitality.

7-3 BIOLOGICAL RESOURCES AND WATERWAYS

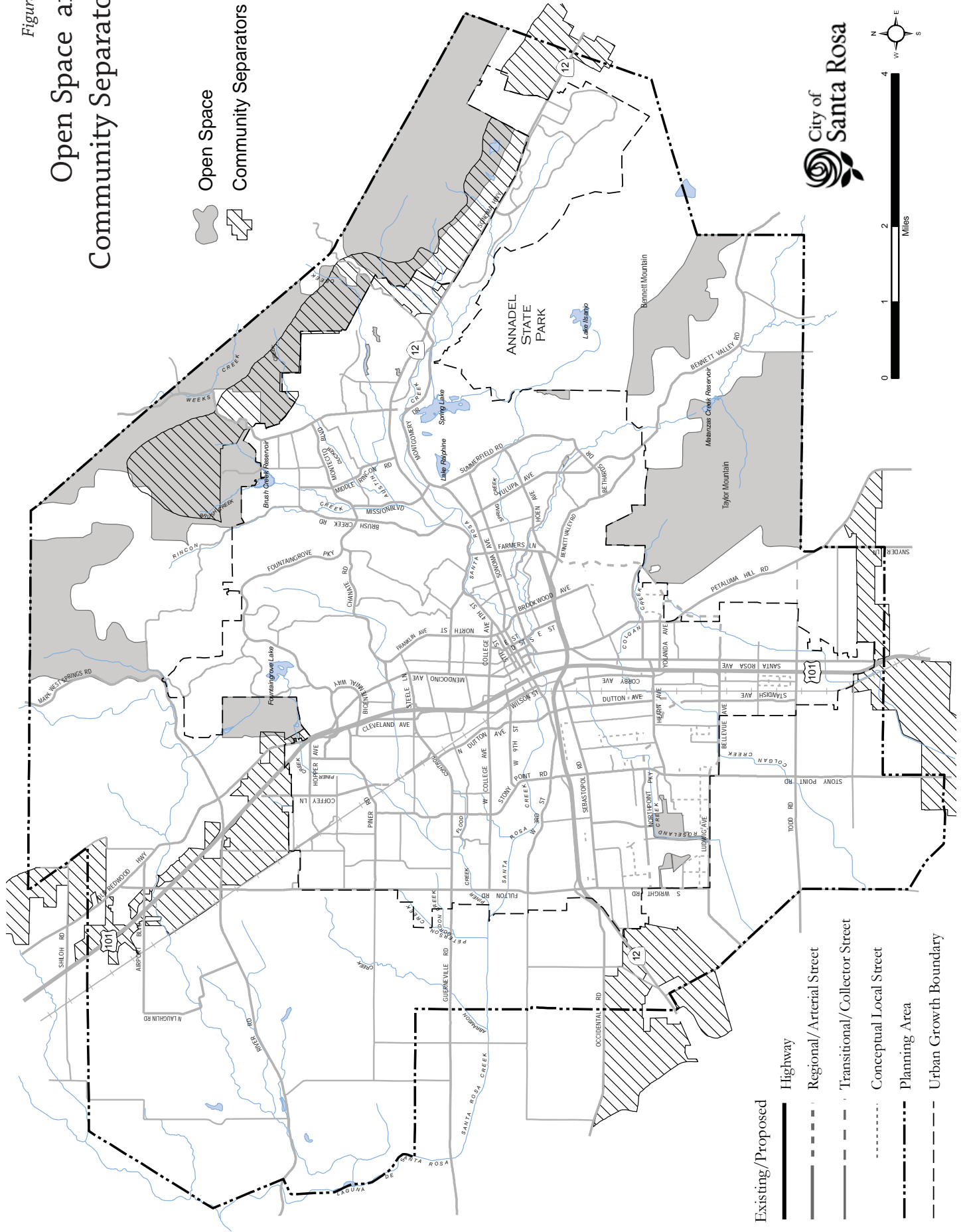
Biological resources found within Santa Rosa include sensitive plants and animals, creeks, and wetlands, including vernal pools. Figure 7-2 illustrates the areas with potential for sensitive species identified by the California Department of Fish and ~~Game~~ Wildlife (CDFG CDFW) and major creeks located within the Urban Growth Boundary.

Santa Rosa Creek, which originates in the headwaters of Mount Hood, runs from east to west through the city, and ~~on~~ into the Laguna de Santa Rosa. Other streams, including the lower reaches of Matanzas Creek, run through or near the city on their way to joining Santa

Figure 7-1

Open Space and Community Separators

- Open Space
- Community Separators



Existing/Proposed

- Highway
- Regional/Arterial Street
- Transitional/Collector Street
- Conceptual Local Street
- Planning Area
- Urban Growth Boundary

Rosa Creek. Creek related policies from several previous planning documents including the Santa Rosa Creek Master Plan (1993), and the Santa Rosa Waterways Plan (1996) ~~have been were~~ reorganized into the Santa Rosa Citywide Creek Master Plan (CCMP) in (2007). The city recognizes the importance of its waterway resources, and has established the ~~Santa Rosa Citywide Creek Master Plan (2007)~~ CCMP as the leading document that ensures creek conservation and restoration. The City recognizes that creeks and riparian corridors provide groundwater recharge areas in addition to other biological functions.

Biological resources within the Santa Rosa area can be roughly divided between those found on the ~~western~~ Santa Rosa plain and those located in the uplands to the east, with connections formed by creeks. Sensitive resources on the plain include numerous vernal pools and their associated species and surrounding grasslands, while upland resources to the east include hillside open spaces and woodlands.

CITYWIDE CREEK MASTER PLAN

The Citywide Creek Master Plan, updated in 2013, presents a range of goals and policies for specific waterways in the City of Santa Rosa. The plan details the various creek environments that exist in the city while also ~~designating a procedure for improving or maintaining their current condition areas for enhancement or preservation.~~ Implementing the recommended improvements specific to Santa Rosa's local waterways will improve wildlife habitats, increase recreational opportunities, drainage capacity, and flood control.

Key creek related goals and policies have been extracted from the Citywide Creek Master Plan. In order to review all the graphics and tables that are available in the Citywide Creek Master Plan, please refer to the full document.



Piner Creek, adjacent to Marlow Road, provides rich riparian habitat within the Urban Growth Boundary.

VEGETATION

Santa Rosa's UGB includes a variety of vegetation types, including grasslands, woodlands, riparian areas, and vernal pools. Some, like annual grasslands that now contain primarily exotic annual grasses, have been altered from their natural state. Others, including vernal pool areas, either remain in their natural state (in terms of species composition and ecological function) or have been only slightly altered.

The smaller areas of discrete habitat, such as vernal pools, support their own distinctive species associations. In these limited areas, the populations of individual species may be small and

sensitive to disturbance. In recognition of the ecological importance of vernal pools, the *Santa Rosa Plain Vernal Pool Ecosystem Preservation Plan* was developed in 1995.

WILDLIFE

Diverse vegetation types within the UGB provide for a variety of wildlife habitats, and the interspersed of different habitats is advantageous for species that use the “edges” between them. Open space areas support smaller species, including songbirds, rodents, and a variety of invertebrates. They also provide habitat for a number of sensitive species, including nesting raptors.

The streams flowing through the city provide both instream and riparian habitat. Riparian habitat supports a distinct community of plants and animals, including amphibians, and ~~may form movement~~ provides migration corridors that allow other wildlife to travel between suitable habitats that are otherwise separated by development. ~~The~~ Instream habitat is ~~also~~ important for aquatic species such as steelhead/rainbow trout which are found in Santa Rosa Creek and several of its tributaries ~~breed in its upland areas~~. Both of these habitats support a variety of animal species, from streambed invertebrates to the larger fishes and animals such as herons and egrets that feed upon them. Preservation of existing wildlife habitat and restoration of riparian corridors ensures that wildlife species are protected, as well as provides tranquil open spaces within the city’s urban landscape.

7-4 AIR QUALITY

Reduction of air pollutants contributes to quality of life for Santa Rosans by improving the health of residents and workers. The City of Santa Rosa participates with the Bay Area Air Quality Management District (BAAQMD) to address improvement of air quality. The Pacific Ocean influences the moderate climate of Sonoma County. In summer, afternoon northwesterly winds blow contaminants south toward San Francisco. In winter, periods of stagnant air can occur, especially in periods between storms.

Santa Rosa currently has one monitoring station that measures criteria pollutants, including ozone, carbon monoxide, nitrogen dioxide, lead, sulfates, and particulates 10 microns or smaller (PM10). The air quality in Santa Rosa has generally improved, as motor vehicles have become cleaner, agricultural and residential burning has been curtailed, and consumer products have been reformulated or replaced. From 2003 to 2007, Santa Rosa exceeded state standards only once, for ozone, in 2003. Carbon monoxide, a product of incomplete combustion, was formerly a problem for the city; but with improved motor vehicles and fuels, Santa Rosa air easily meets state and federal standards.

Maintaining and improving air quality will contribute to good health for all Santa Rosans.

Policies addressing land use patterns, connections between different land uses, use of energy sources, alternative transportation modes, preservation of open spaces, and construction dust abatement all contribute to the reduction of air pollutants within Santa Rosa.

7-5 ENERGY

The City of Santa Rosa depends on energy to maintain a vital economy and desirable lifestyle. It uses electricity and natural gas to light, heat, and cool structures and to power its office equipment, industrial machinery, public services, and home appliances. The city also uses petroleum products to move people and products along its transportation corridors. Energy is vital to the continued functioning of housing, employment, transportation, and public services and facilities in Santa Rosa.

Reduced energy use in housing, commercial structures, public facilities, and transportation helps maintain local economic vitality and reduces the need for new infrastructure to deliver energy to the city. Better use of materials, insulation, and increased harnessing of solar incidence in building design reduces demand on natural gas and heating products. Transportation measures that facilitate pedestrian use and bicycling reduce dependence on petroleum. Together, these steps will lead to a more reliable, sustainable, economic energy future.

7-6 CLIMATE CHANGE





In 2005, the nine cities and Sonoma County set a mutual greenhouse gas target in partnership with the Climate Protection Campaign (CPC) within its Community Climate Action Plan (CCAP). On August 2, 2005 the City Council adopted Resolution 26341 which established a municipal greenhouse gas reduction target of 20 percent from 2000 levels by 2010 and facilitates the community-wide greenhouse gas reduction target of 25 percent from 1990 levels by 2015 that was included in the CCAP.

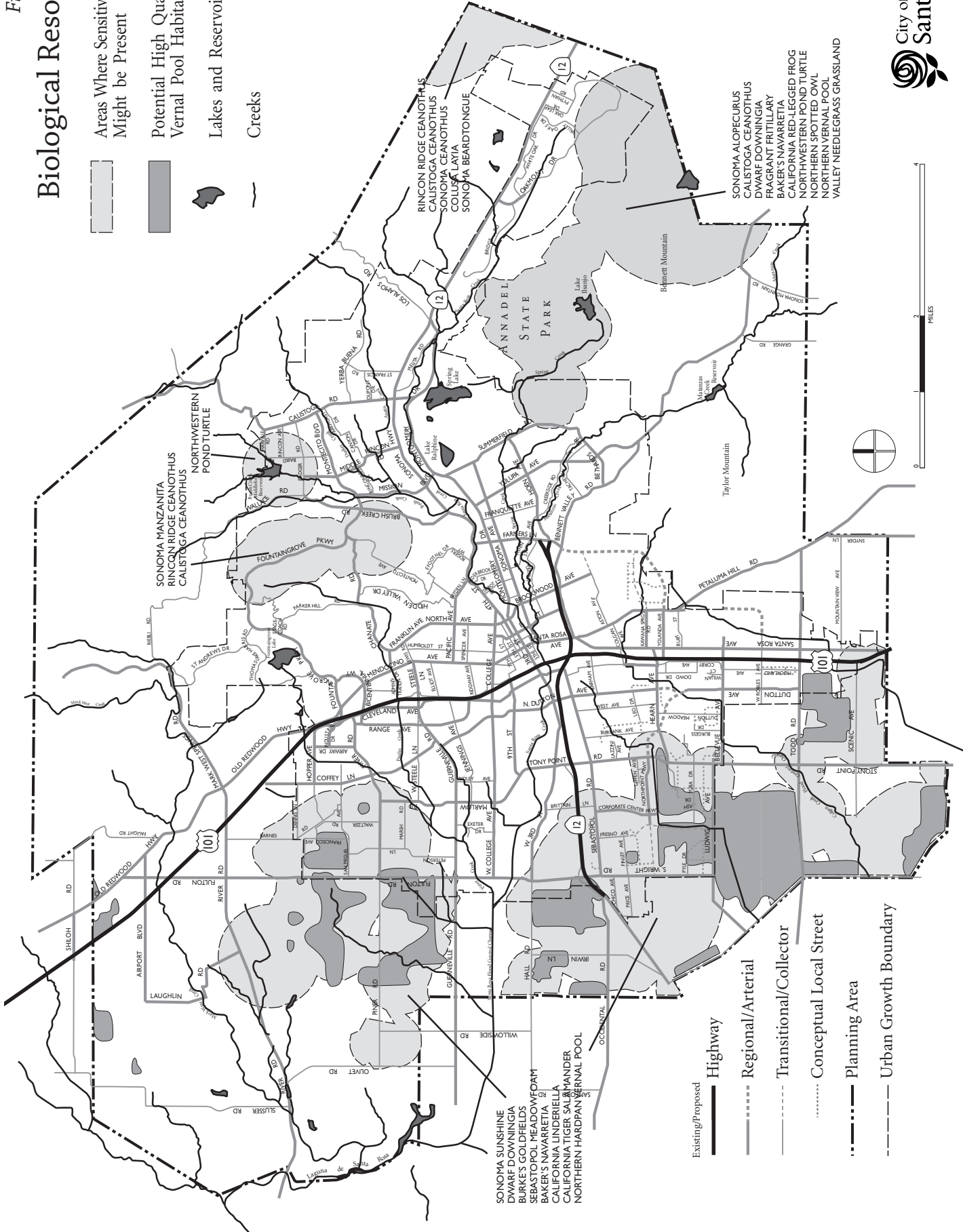
The Santa Rosa Climate Action Plan (CAP) addresses emissions specific to the City's Urban Growth Boundary. The CAP provides a roadmap to achieving GHG emissions reduction and attaining local emission reduction targets as well as those targets set at the regional and state level. The CAP recognizes the reduction targets, forecasts the amount of reductions necessary to meet those targets, identifies specific measures that will reduce emissions, outlines implementation of the measures and provides for the long term tracking of emissions.

The CAP and the General Plan work in conjunction to facilitate GHG emissions reductions. This plan acknowledges the environmental leadership Santa Rosa has achieved and supports the responsibility of continued greenhouse gas (GHG) emissions reductions. Measures, policies and projects that reduce community-wide GHGs presented in the Climate Action Plan are

Figure 7-2

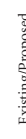





Biological Resources

-  Areas Where Sensitive Species Might be Present
-  Potential High Quality Vernal Pool Habitat
-  Lakes and Reservoirs
-  Creeks



- SONOMA ALOPECURUS
- CALISTOGA CEANOETHUS
- DWARF DOWNINGIA
- FRAGRANT FRITILLARY
- BAKER'S NAVARRETTIA
- CALIFORNIA RED-LEGGED FROG
- NORTHWESTERN POND TURTLE
- NORTHERN SPOTTED OWL
- NORTHERN VERNAL POOL
- VALLEY NEEDLEGRASS GRASSLAND

- SONOMA SUNSHINE
- DWARF DOWNINGIA
- BURKE'S GOLDFIELDS
- SEBASTOPOLE MEADOWFOAM
- BAKER'S NAVARRETTIA
- CALIFORNIA LINDERIELLA
- CALIFORNIA TIGER SALAMANDER
- NORTHERN HARDPAN VERNAL POOL

-  Existing/Proposed Highway
-  Regional/Arterial
-  Transitional/Collector
-  Conceptual Local Street
-  Planning Area
-  Urban Growth Boundary

aligned with the goals and policies in the General Plan. In addition, the General Plan provides the basis for analyzing proposed development to determine consistency with the CAP goals and measures. The measures presented in the Climate Action Plan are referenced generally throughout the General Plan.

7-7 GOALS AND POLICIES



OPEN SPACE

OSC-A ***Maximize the benefits of open space.***

OSC-A-1 Cooperate with various public and private entities to create new public access trails to parks, open spaces, and drainage ways within the city, as well as to trail systems outside the UGB. Priorities for trail access outside of the UGB should include:

- Joe Rodota Trail (from Santa Rosa to Sebastopol);
- Bay Area Ridge Trail;
- Santa Rosa Creek Trail;
- Laguna Trail;
- Roseland Creek Trail;
- Colgan Creek Trail; and
- Paulin Creek Trail.

OSC-A-2 Collaborate with other agencies and private development to link non-access open spaces, where such linking would benefit the protection of special environments and life systems such as wetlands, plant communities, and wildlife habitats and corridors.











OSC-A-3 Cooperate with the County of Sonoma in preserving and, where appropriate, acquiring open space outside the UGB, for both growth management and open space purposes.

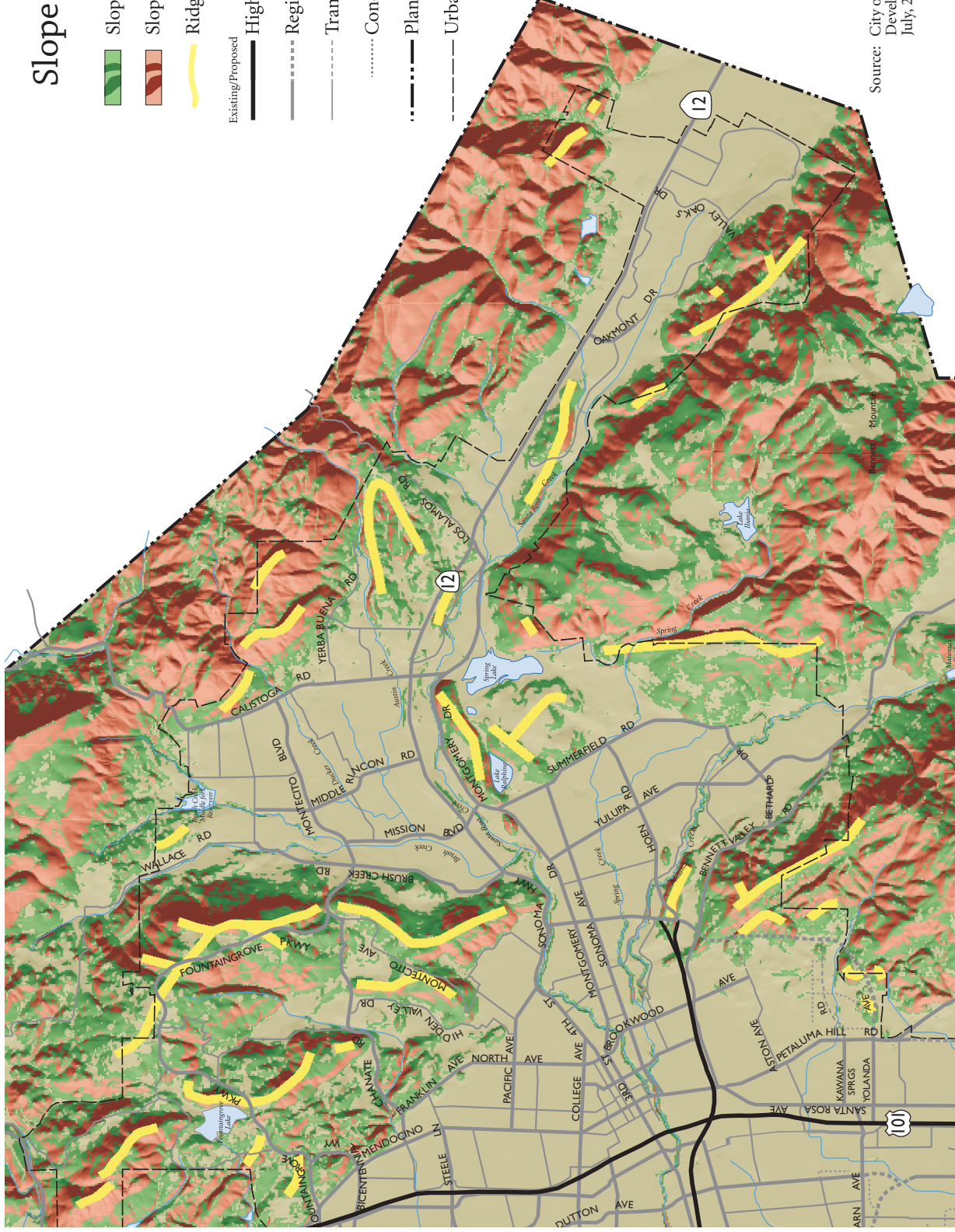
OSC-A-4 Encourage the Sonoma County Agricultural Preservation and Open Space District to appropriate funds for acquisition of open space within and surrounding Santa Rosa. Priorities for acquisition include:

- Community Separator between Santa Rosa and Rohnert Park;
- Taylor Mountain;
- Areas west and north of the Urban Growth Boundary; and
- Santa Rosa Creek corridor.


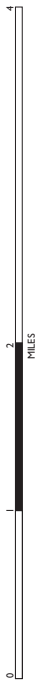
OSC-A-5 Monitor the progress of the Sonoma County Agricultural Preservation and Open

Figure 7-3
Slope and Ridgelines

-  Slope 10-25%
-  Slope greater than 25%
-  Ridgelines
-  Existing/Proposed
-  Highway
-  Regional/Arterial
-  Transitional/Collector
-  Conceptual Local Street
-  Planning Area
-  Urban Growth Boundary



Source: City of Santa Rosa, Community Development Department, July, 2002.

Space District in acquiring Santa Rosa priority properties.

- OSC-A-6 Protect the Annadel and Spring Lake regional parks from intrusion by inappropriate uses. Conserve the biotic systems in those parks.
- OSC-A-7 Encourage preservation of open space in the Community Separators (see Figure 7-1: Open Space and Community Separators) between Santa Rosa and neighboring communities. Work with regional agencies to ensure maintenance of the separators as permanent open space.
- OSC-A-8 Coordinate with public and private entities to link open spaces with a network of paths and trails, including Sonoma County Water Agency access roads and the Bay Area Ridge Trail.

OSC-B *Conserve the city's open spaces and significant natural features.*

- OSC-B-1 Prohibit development on hillsides and ridgelines where structures would interrupt the skyline.
- OSC-B-2 Minimize alteration of the topography, drainage patterns and vegetation of land with slopes of ten percent or more. Prohibit alteration of slopes greater than 25 percent.
- OSC-B-3 Require that new subdivisions, multifamily, and non-residential development abutting creek corridors are appropriately designed with respect to the creek. Development may orient toward the creek as an amenity, but adequate setbacks shall be used to ensure riparian habitat is protected.
- OSC-B-4 Require that graded areas within new developments be revegetated.
- OSC-B-5 Require a Hillside Development Permit as part of a proposed subdivision, proposed development or new land use on that portion of a site with a slope of 10 percent or greater (see Figure 7-3: Slope and Ridgelines).

AGRICULTURAL RESOURCES

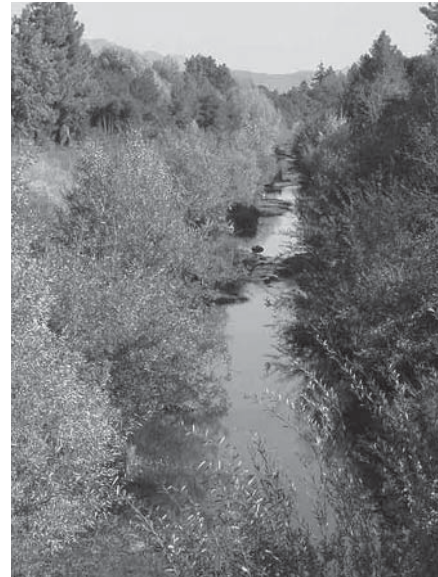
OSC-C *Conserve agricultural soils.*

- OSC-C-1 Support efforts by the Sonoma County Agricultural Preservation and Open Space District to protect and/or acquire Prime Agricultural Land outside of the Urban Growth Boundary.

OSC-C-2 During the next update of the Sonoma County General Plan, encourage preservation of unincorporated lands adjacent to and near the Santa Rosa Urban Growth Boundary as viable agricultural resources.

OSC-C-3 Preserve and enhance agriculture within the Planning Area as a component of the economy and as a part of Santa Rosa’s environmental quality.

OSC-C-4 Work with the County of Sonoma to encourage the conservation of mineral resources and the protection of access to those resources.



Santa Rosa Creek provides biological habitat, stormwater collection, and an open space amenity for local residents.

BIOLOGICAL RESOURCES AND WATERWAYS

OSC-D *Conserve wetlands, vernal pools, wildlife ecosystems, rare plant habitats, and waterways.*

OSC-D-1 Utilize existing regulations and procedures, including Subdivision Guidelines, Zoning, Design Review, and environmental law, to conserve wetlands and rare plants. Comply with the federal policy of no net loss of wetlands using mitigation measures such as:



- Avoidance of sensitive habitat;
- Clustered development;
- Transfer of development rights; and/or
- Compensatory mitigation, such as restoration or creation.

OSC-D-2 Protect high quality wetlands and vernal pools from development or other activities as determined by the Vernal Pool Ecosystem Preservation Plan.

OSC-D-3 Preserve and restore the elements of wildlife habitats and corridors throughout the Planning Area.

OSC-D-4 Continue to consult with the California Department of Fish and ~~Game~~ Wildlife to identify significant environments. Identify priorities for acquisition or maintenance of open space areas based on biological and environmental

concerns, and develop an overall strategy for the maintenance of areas that will preserve the populations of plants and animals currently found within the Urban Growth Boundary.

- OSC-D-5 Consult with North Coast Regional Water Quality Control Board staff as part of the CEQA process for proposed developments to help them identify wetland and vernal pool habitat that has candidacy for restoration/protection based on actual and potential beneficial uses, and determine appropriate locations for mitigation banking.
- OSC-D-6 Preserve waterways by informing residents of the environmental effects of dumping yard waste into creeks, or other wastes, such as motor oil, into storm drains that empty into creeks.
-  OSC-D-7 Rehabilitate existing channelized waterways, as feasible, to remove concrete linings and allow for a connection with the stream channel and the natural water table. Avoid creating additional channelized waterways, unless no other alternative is available to protect human health, safety, and welfare.
- OSC-D-8 Restore channelized waterways to a more natural condition which allows for more natural hydraulic functioning, including development of meanders, pools, riffles, and other stream features. Restoration should also allow for growth of riparian vegetation which effectively stabilizes banks, screens pollutants from runoff entering the channel, enhances fisheries, and provides other opportunities for natural habitat restoration.
- OSC-D-9 Ensure that construction adjacent to creek channels is sensitive to the natural environment. Ensure that natural topography and vegetation is preserved along the creek, and that construction activities do not disrupt or pollute the waterway.
-  OSC-D-10 Orient development and buildings toward creeks, while providing privacy, security, and an open transition between public and private open spaces.
- OSC-D-11 New development along channelized waterways should allow for an ecological buffer zone between the waterway and development. This buffer zone should also provide opportunities for multi-use trails and recreation.
- OSC-D-12 New development should maintain an adequate setback from channelized

waterways to recognize the 100-year flood elevation, and allow for stream corridor restoration. Setbacks identified in the Zoning Code should serve as minimum setbacks. Larger setbacks are encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals.



CITYWIDE CREEK MASTER PLAN

OSC-E ***Ensure local creeks and riparian corridors are preserved, enhanced, and restored as habitat for fish, birds, mammals and other wildlife.***

OSC-E-1 Maintain creek areas using practices that protect and support fish and wildlife as well as help retain hydraulic capacity.

OSC-E-2 Plan and perform stream maintenance activities that respect the balance of flood protection and environmental protection.



OSC-E-3 Continue to support efforts towards healthy, clean, and safe creeks.



OSC-F ***Construct trail corridors and other recreational opportunities along local waterways.***



OSC-F-1 Accommodate connections to regional trail systems that enhance or support the creek trail systems network.

OSC-F-2 Cooperate with various public and private entities to create new public access trails along creeks to parks and open spaces within the Urban Growth Boundary, as well as connections to regional trail systems.

OSC-G ***Provide educational opportunities along the waterways in the city.***

OSC-G-1 Continue with the distribution of the Creek Stewardship Guide that addresses, in part, erosion control techniques, vegetation management, and water quality. The guide should also explain how an individual or organization can protect and enhance the creek environment.

OSC-G-2 Support volunteer Creek Stewards who help serve to identify and report undesirable conditions and activities. Creek Stewards also perform minor maintenance and monitoring tasks and provide suggestions to enhance creek areas.




OSC-H ***Conserve significant vegetation and trees and plant new trees.***

OSC-H-1 Preserve trees and other vegetation, including wildflowers, both as individual specimens and as parts of larger plant communities.

OSC-H-2 Preserve and regenerate native oak trees.

OSC-H-3 Preserve the Highway 12 scenic route in eastern Santa Rosa, including the corridor of oak trees. Encourage CalTrans to preserve the oaks on site where possible, and to replace destroyed trees.

 OSC-H-4 Require incorporation of native plants into landscape plans for new development, where appropriate and feasible, especially in areas adjacent to open space areas or along waterways.

OSC-H-5 Plant trees on public property including park strips, open space and park areas and encourage tree planting on private property to help offset carbon emissions.


WATER CONSERVATION AND AIR QUALITY


OSC-I Conserve water and maintain water quality.


OSC-I-1 Maintain high levels of water quality for human consumption and for other life systems in the region by regularly monitoring water quality.

OSC-I-2 Require non-residential projects requesting Conditional Use Permit or Design Review approval to provide water efficient landscaping in accordance with the city's Water Efficient Landscape Policy.

OSC-I-3 Promote water conservation through public education, provision of conservation kits, and information about low-flow plumbing fixtures and leak detection.

 OSC-I-4 Consider water conservation measures in the review of new residential development projects.

 OSC-I-5 Expand the infrastructure network as possible to allow use of reclaimed water for use at residences, businesses, and city parks and facilities.

 OSC-I-6 Protect groundwater recharge areas, particularly creeks and riparian corridors. Identify and protect other potential groundwater recharge areas.

AIR QUALITY

 OSC-J **Take appropriate actions to help Santa Rosa and the larger Bay Area region achieve and maintain all ambient air quality standards.**

OSC-J-1 Review all new construction projects and require dust abatement actions as contained in the CEQA Handbook of the Bay Area Air Quality Management

District.

OSC-J-2 Budget for clean fuels and vehicles in the city’s long-range capital expenditure plans, to replace and improve the existing fleet of gasoline and diesel powered vehicles. Initiate a policy to make its fleet among the cleanest in the North Bay by:

- Purchasing electric vehicles wherever possible, and especially for stop-and-go units such as parking meter readers.
- Purchasing electric or hybrid electric fleet vehicles for general staff use, especially for building inspectors and other uses primarily within the city.
- Purchasing alternative fuel vehicles, such as natural gas, as the existing diesel-powered fleet is replaced. Alternatively, purchase diesel vehicles only if they meet or exceed emission specifications for available natural gas fuel vehicles.
- Purchasing biodiesel fuel for use by the city diesel truck fleet.
- As possible, use lo-NOx fuel additives, such as Purinox, in all diesel vehicles.



OSC-J-3 Reduce particulate matter emissions from wood burning appliances through implementation of the city’s Wood Burning Appliance code.

ENERGY



OSC-K *Reduce energy use in existing and new commercial, industrial, and public structures.*



OSC-K-1 Promote the use of site planning, solar orientation, cool roofs, and landscaping to decrease summer cooling and winter heating needs. Encourage the use of recycled content construction materials.




OSC-K-2 Identify opportunities for decreasing energy use through installation of energy efficient lighting, reduced thermostat settings, and elimination of unnecessary lighting in public facilities.




OSC-K-3 Identify and implement energy conservation measures that are appropriate for public buildings. Implement measures that are at least as effective as those in the retrofit ordinances for commercial and office buildings.





OSC-K-4 Advance the city’s environmentally sensitive preferred purchasing and green fleet conversion programs.


 OSC-K-5 Implement measures of the Climate Action Plan which increase energy efficiency, including retrofitting existing buildings and facilitating energy upgrades.

OSC-L *Encourage the development of nontraditional and distributed sources of electrical generation.*

 OSC-L-1 Reconsider any existing codes and policies that constrain or prohibit the installation of environmentally acceptable forms of distributed generation.

 *Distributed generation is small-scale sources of electrical generation, such as microturbines, fuel cells, photovoltaics, and other sources of electrical power that can be effectively located in office parks, industrial facilities, and other consumer buildings.*

 OSC-L-2 Participate in state and local efforts to develop appropriate policies and review procedures for the installation of photovoltaic solar and other environmentally acceptable forms of distributed generation.



OSC-L-3 Establish a city renewable energy program which will allow the city to generate or receive a significant portion of energy from renewable sources.

OSC-M *Reduce Greenhouse Gas Emissions*

OSC-M-1 Meet local, regional and state targets for reduction of greenhouse gas emissions through implementation of the Climate Action Plan.

Please note: Residential energy efficiency is addressed in Chapter 4: Housing Element. Energy efficiency in the transportation sector is addressed in Chapter 5: Transportation Element. Flood corridors are illustrated in Chapter 12: Noise and Safety Element.