

7

Biological Resources

Castro Valley has significant biological resources, primarily concentrated in creek corridors, canyons, and hillside open space areas. Many of the eastern hillside areas have been set aside as permanent open space as part of Planned Unit Developments, but other areas do not have similar protection. Castro Valley is also immediately adjacent to regional parks and County Measure D open space conservation areas. Open space areas within Castro Valley function as wildlife corridors for species to cross between larger habitat areas. This element addresses the protection of Castro Valley's biological resources, including animal species, plant species, and wildlife habitat. Its main provision is the creation of a Biological Resources Overlay Zone, which will establish special development and review requirements on properties with significant biological resources.

Alameda County is updating its Resource Conservation, Open Space, and Agriculture (ROSA) elements. The Castro Valley General Plan and the County ROSA must be consistent with one another. The updated ROSA will replace existing documents, including the 1966 Scenic Route Element, the 1973 Open Space Element, and the 1977 Specific Plan for Areas of Environmental Significance. The ROSA elements will also address plans and policies for Measure D lands.



Castro Valley has significant biological resources, primarily concentrated in creek corridors, canyons, and hillside open space areas.



Wildlife habitat exists in small pockets woven throughout residential neighborhoods, primarily along creeks.

7.1 WILDLIFE AND SENSITIVE HABITATS

Wildlife Habitat and Corridors

The western and central portions of the Castro Valley General Plan Area are largely developed. There are small pockets of areas that provide wildlife habitat woven through these areas of residential lots, primarily along creeks. The primary native wildlife habitat is oak/riparian woodland that occurs along creeks. Other undeveloped areas in western and central Castro Valley are dominated by non-native plant species. The eastern portions of the General Plan Area support primarily native habitats. Large, undeveloped portions of this area, typically on steep hillsides or in canyons, have been set aside as open space as part of planned unit developments. Ornamental landscaping with large trees, shrubs and other vegetation may provide potential nesting habitat for raptors known to nest in urbanized areas and other special-status bird species.

As shown in Figure 7-1, oak riparian woodland, coastal scrub, and grassland vegetation serve as the primary wildlife movement corridors for common and special-status wildlife species within the Castro Valley planning area. Crow Creek and San Lorenzo Creek are deeply incised creeks with well-developed riparian areas. These two creeks serve as a primary migration route through the eastern half of the planning area for both aquatic and terrestrial species.

For this element, non-native dominant habitat is defined as areas supporting ruderal vegetation (non-native plant species favoring disturbed sites), ornamental or naturalized non-native trees (such as Monterey pine and eucalyptus), and shrubs (such as cotoneaster). Non-native dominant habitats also may serve as movement corridors when continuous with habitats supporting native vegetation. Wildlife corridors allow animals to have an adequate range of habitat area to search for food, flee from predators, and find protected areas for newborns. In an urbanized area, continuous wildlife corridors, such as creeks, are particularly important.

All areas supporting native vegetation or providing suitable habitat for special-status species are considered sensitive habitat areas, including oak riparian woodland and naturalized native trees that provide potential nesting habitat for bird species. Sensitive habitat areas also include creeks and wetlands with the potential to be considered jurisdictional by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act or by the California Department of

Fish and Game under California Fish and Game Code Sections 1600-1607. In addition, Alameda County has a Tree Ordinance (Chapter 12.11 of the County General Code), which provides protection for any tree in a public right-of-way that is at least ten feet in height and has a trunk that is at least two inches in diameter.

Special Status Species

Table 7.1-1 lists the special-status species with associated vegetation type found within the Castro Valley planning area. The only special-status animal species that have been observed in the Castro Valley planning area are yellow warbler and steelhead trout. Yellow warbler (*Dendroica petechia*) is a State species of special concern. Steelhead (*Onchorhynchus mykiss*) are a federally-listed Threatened Species, and a CDFG Species of Special Concern and have been observed in San Lorenzo Creek, Castro Valley Creek, and Crow Creek in the last ten years. The planning area also includes portions of the Critical Habitat for Alameda whipsnake (USFWS, 2006).

The planning area potentially supports the following special-status animal species, based on the fact that the type of habitat that supports these species exists in Castro Valley: Steelhead, California tiger salamander, California red-legged frog, Alameda whipsnake, Western pond turtle, California horned lizard, Yellow warbler, Burrowing owl, Sharp-shinned hawk, white-tailed kite, Bats (*Myotis* spp., Pacific western big-eared bat, and greater western mastiff bat), Lum's micro-blind harvestman, great blue heron, Cooper's hawk, and red-tailed hawk. In addition, the following special-status plant species have the potential to occur in the planning area: Santa Cruz tarplant, alkali milk vetch, big-scale balsamroot, fragrant fritillary, Diablo helianthella, and Robust monardella.



This picture shows the road leading into Palomares Hills, and open space preserved as part of that 1980's residential subdivision.

Table 7.1-1: Listed Species and Associated Vegetation

Federal or State Listed Species	Associated Vegetation Types
Santa Cruz tarplant	Coastal scrub
Steelhead	Creeks
California tiger salamander	Ponds and adjacent grasslands
California red-legged frog	Creeks, ponds and adjacent grasslands
Alameda whipsnake	Coastal scrub and adjacent grasslands and woodlands
Federal or State Species of Concern	Associated Vegetation Types
Western pond turtle	Creeks and ponds
California horned lizard	Coastal scrub, grassland, riparian woodland
Yellow warbler	Oak Riparian woodland
Burrowing owl	Grassland
Sharp-shinned hawk, white-tailed kite	Oak Riparian woodland
Bats (Myotis spp., Pacific western big-eared bat, and greater western mastiff bat)	Oak Riparian woodland
Other Special-status Species	Associated Vegetation Types
Big-scale balsamroot	Grassland
Diablo helianthella	Coastal scrub, oak riparian woodland
Robust monardella	Coastal scrub, grassland
Fragrant fritillary	Coastal Scrub
Great blue heron	Oak Riparian woodland
Cooper’s hawk, red-tailed hawk and other raptors	Oak Riparian woodland, non-native dominant habitat
Lum’s micro-blind harvestman	Grassland
Alkali milk vetch	Grassland
Robust monardella	Coastal scrub, grassland

Source: ESA, 2006; Dyett & Bhatia, 2009

Biological Resources Overlay Zone

Figure 7-2, Biological Resources Overlay Zone (BROZ), illustrates the biological resource priority levels throughout Castro Valley. The purpose of the Overlay Zone is to protect areas with important biological resources, such as creeks, hillsides, and riparian areas, by requiring special review of proposed development projects. The review process would be required on all sites with high priority biological resources and on large sites (over two acres) with moderate or low priority biological resources.

Special review may involve environmental review, site plan and development review, and/or the application of County policy or ordinance requirements during review of development permit applications. The special review process will: evaluate the actual value of the habitat on the property; establish site planning parameters to preserve the most critical and/or most sensitive habitat areas; and establish conditions of approval to protect special status species during construction and occupancy. The special review requirements should be proportionate to the scale of the development project and the amount of valuable habitat on the property. On larger properties with high priority biological resources, the special review should require a biological assessment by a qualified biologist. For small home additions, application of standard conditions during building permit review would be more appropriate.

Development is allowed on parcels within the BROZ; however, the review process shall determine the level of development allowed and the design features necessary to protect biological resources. In order to ensure the protection of resources, property owners may not necessarily be entitled to the maximum amount of development allowed under the zoning on BROZ parcels.

Priority levels shown on the map are based on a habitat area's biological sensitivity and its role as habitat for threatened species. For example, oak/riparian woodland is considered the most biologically sensitive habitat, while coastal scrub and grassland are considered common plant communities. However, these communities may have higher preservation value when they provide potential habitat for threatened species or suitable habitats for supporting special-status plants. In addition, grassland habitats have the potential to contain wetland habitats and/or small drainages that are a high priority for preservation. Isolated patches of non-native dominant habitat surrounded by development are considered a low priority for preservation.



Oak riparian woodland is a high priority habitat for preservation.

Future field surveys may identify features within grassland and non-native dominant habitats that would increase the preservation value of certain areas within these habitat types (i.e. wetlands and other aquatic features). The priority scheme for habitats within Castro Valley is as follows:

High Priority

- Drainages
- Oak Riparian Woodland
- General Plan designated natural open space areas
- Coastal scrub on both sides of the Castro Valley Creek Improved Channel reach
- Coastal scrub just east of Cull Canyon Drive
- Coastal scrub between Jensen Road and Castro Valley Blvd/
Villareal Drive

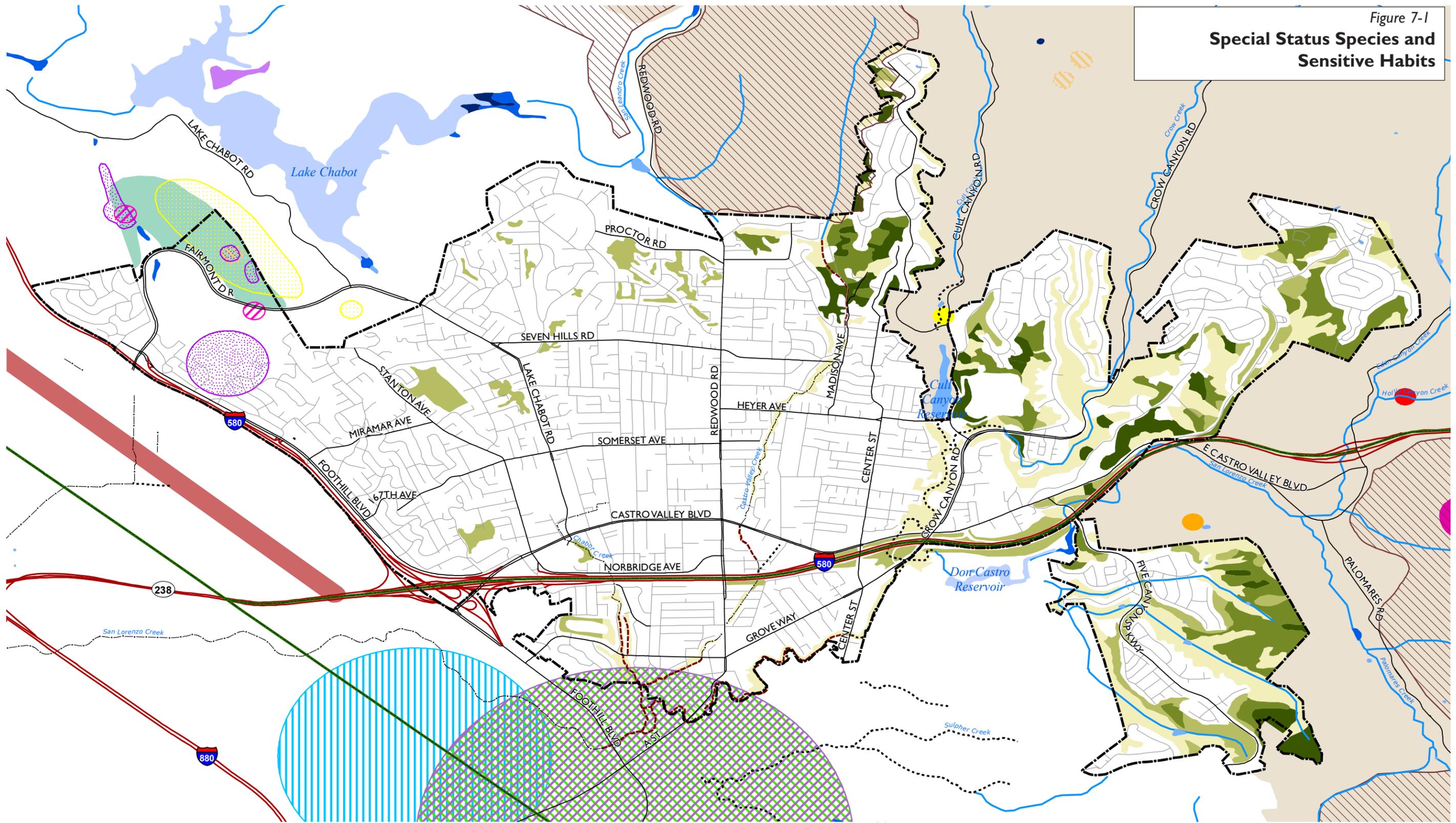
Moderate Priority

- Other Coastal Scrub areas
- Grasslands

Low Priority

- Non-native Dominant Habitat

Figure 7-1
Special Status Species and Sensitive Habits



Special Status Species

- California Red-Legged Frog
- Great Blue Heron
- Lum's Micro-Blind Harvestman
- Pallid Bat
- San Francisco Dusky-Footed Woodrat
- Western Mastiff Bat
- Yellow Warbler
- Big-Scale Balsamroot
- Congdon's Tarplant
- Diablo Helianthella
- Fragrant Fritillary
- Robust Monardella
- Santa Cruz Tarplant

Sensitive Habitats

- Coastal Scrub / Wildlife Corridor
- Grassland / Wildlife Corridor
- Non-native Dominant Habitat
- Oak Riparian Woodland/ Wildlife Corridor
- Valley Needlegrass Grassland
- Freshwater Emergent Wetland
- Freshwater Forested/ Shrub Wetland
- Freshwater Pond
- Lake

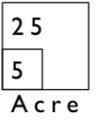
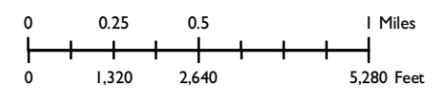
Protection Areas

- Alameda Whipsnake Critical Area
- Measure D

- Concrete Channel
- Earth Channel
- Improved Channel
- Natural Creeks
- Planning Boundary

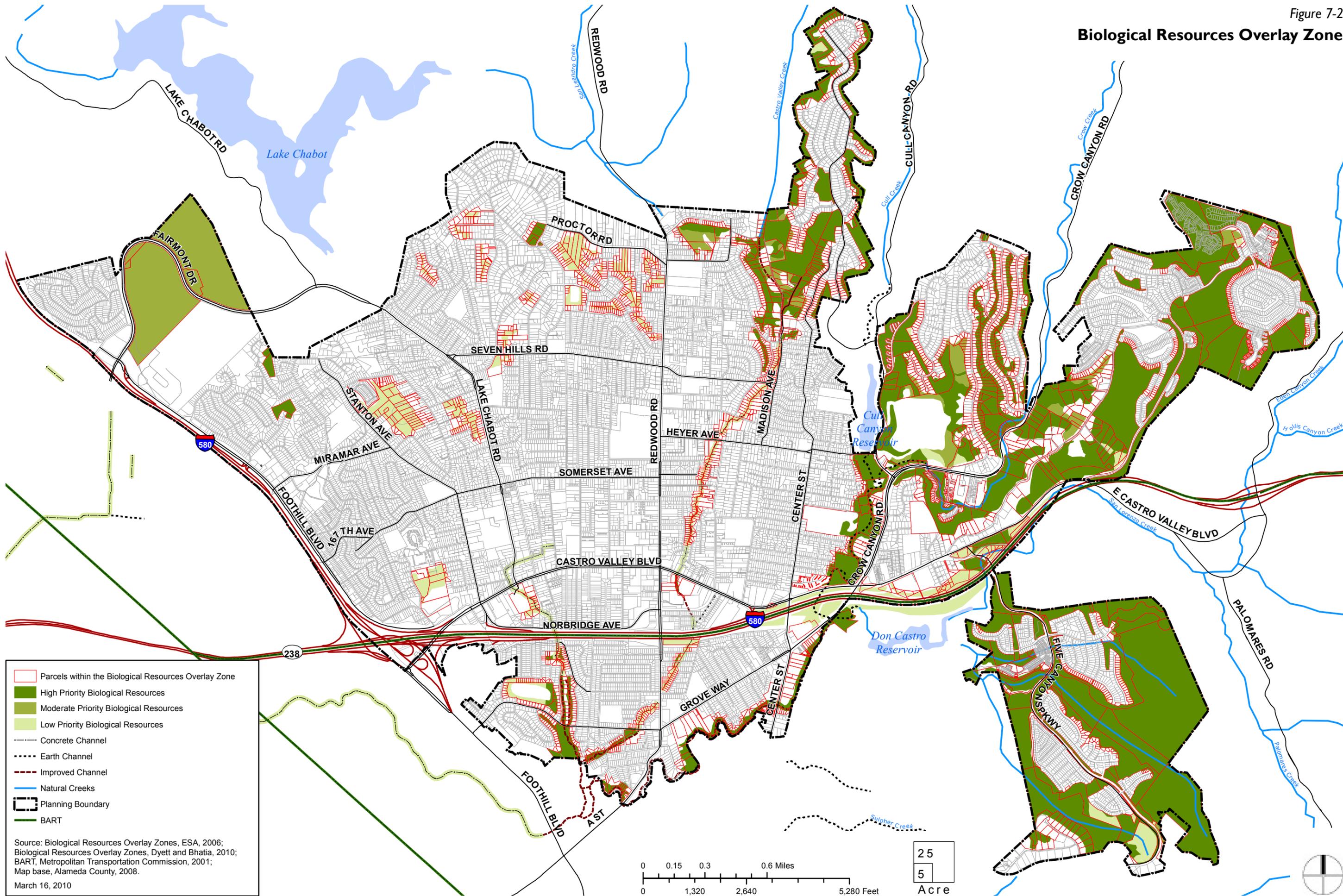
Source: Hydrology and Measure D, Alameda County, 2008; Alameda Whipsnake Critical Area, United States Fish and Wildlife, 2006; California Natural Diversity Database, California Department of Fish and Game, 2010; BART, Metropolitan Transportation Commission, 2001; Digital Elevation Model, United States Geological Survey, 1999; Map base, Alameda County, 2008.

March 16, 2010



*Alameda Whipsnake potential habitat covers the entire map area.

Biological Resources Overlay Zone



[Red Outline] Parcels within the Biological Resources Overlay Zone
 [Dark Green] High Priority Biological Resources
 [Medium Green] Moderate Priority Biological Resources
 [Light Green] Low Priority Biological Resources
 [Dashed Line] Concrete Channel
 [Dotted Line] Earth Channel
 [Dashed Red Line] Improved Channel
 [Blue Line] Natural Creeks
 [Dashed Black Line] Planning Boundary
 [Solid Green Line] BART
 Source: Biological Resources Overlay Zones, ESA, 2006;
 Biological Resources Overlay Zones, Dyett and Bhatia, 2010;
 BART, Metropolitan Transportation Commission, 2001;
 Map base, Alameda County, 2008.
 March 16, 2010

0 0.15 0.3 0.6 Miles
 0 1,320 2,640 5,280 Feet

25
 5
 Acre

WILDLIFE AND SENSITIVE HABITAT GOAL

Goal 7.1-1 **Protect Castro Valley’s native wildlife through conservation and restoration of natural habitat.**



Creeks, flood channels, and detention facilities, such as the one along Cull Creek shown here, provide critical wildlife habitat corridors as well as flood protection.

WILDLIFE AND SENSITIVE HABITAT POLICIES

Policy 7.1-1 **Major Wildlife Corridors Protection.** Protect the major wildlife corridors that run through or are adjacent to Castro Valley:

- (1) the corridor along the East Bay Hills in the forest and chaparral between major interstate highways; and
- (2) along creeks.

Policy 7.1-2 **Comprehensive Habitat Preservation.** Preserve a continuous band of open space consisting of a variety of plant communities and wildlife habitat to provide comprehensive rather than piecemeal habitat conservation.

Policy 7.1-3 **Open Space Preservation.** Preserve the undeveloped areas designated as open space within planned unit developments as permanent open space.

Policy 7.1-4 **Open Space Objectives.** Require that open space provided as part of a development project be designed to achieve multiple objectives, including but not limited to: recreation, scenic values, habitat protection, and public safety.

Policy 7.1-5 **Riparian Habitat.** New development shall not disturb any riparian habitat.

Policy 7.1-6 **Watershed Plan Coordination.** Encourage the formation of a San Lorenzo Watershed Commission charged with ensuring coordination between multiple agencies and overseeing preparation of a comprehensive watershed plan.

WILDLIFE AND SENSITIVE HABITAT ACTIONS

Biological Resources

Action 7.1-1

Biological Resources Overlay Zone. Explore the possibility of a biological resources overlay zone delineating high, moderate, and low priority areas for habitat preservation, to ensure maximum protection of biological resources.

- Require discretionary review for all development applications on properties within the high priority biological resources overlay zone, and for large sites over two acres in size with moderate or low priority biological resources. Discretionary review could include one or more of the following: environmental assessment per the California Environmental Quality Act; site plan and development review; and/or the application of Board policy or other ordinance requirements.
- Establish in the ordinance that on lands with biological resources, new development is not necessarily entitled to achieve the maximum density allowed by the underlying zoning. An environmental assessment may be required, prepared by a qualified biologist, which shall be the basis for establishing development constraints specific to the property in question. Development intensity may be required to be reduced up to 50 percent of the intensity allowed by the underlying zoning, depending on the extent and value of the biological resources on the site.
- Establish thresholds of review for different types of projects, and different types of waterways. For example, a comprehensive environmental assessment should be required for new subdivisions, whereas minor improvements such as fences or decks may be exempt from special review if they meet specific standards.

Action 7.1-2 **Biological Resources Maps and Inventories.** Maintain maps and inventories of biological resources to use when conducting site plan and development review. Update these resources regularly to include new information from site surveys that are conducted in the planning area.

Action 7.1-3 **Design Guidelines for Biological Resource Zones.** Establish guidelines to ensure that development planned on or adjacent to high and moderate priority areas designated on the Figure 7-2, Biological Resources Overlay Zone will be designed to minimize impacts on sensitive resources and habitat areas.

- Apply these guidelines through the Planning Department's project review process.
- Include information about ways in which special-status plant and wildlife populations on private properties can be protected over time.
- Specify that watercourses and areas dominated by native trees and shrubs be left undisturbed by development to the maximum extent feasible.



Development is clustered to minimize impacts on sensitive resources and habitat areas.

Sensitive Habitat

Action 7.1-4 **Open Space Preservation Mechanisms.** Evaluate mechanisms to preserve open space and wildlife habitat to determine the most feasible options, such as zoning, fee title purchase, conservation easement purchase, or conservation easement dedication through density transfer, or density bonuses.

Action 7.1-5 **Habitat Restoration Funding.** Evaluate the feasibility of property tax credits and other possible funding sources for habitat restoration on larger size private lands as an incentive to foster the implementation of habitat restoration actions by private landowners.

- Action 7.1-6** **Riparian Woodlands and Wetlands Mitigation.** Discourage loss of riparian woodlands and seasonal and perennial wetlands, including ponds, by requiring replacement mitigation at a ratio to be determined by the value of the habitat to be lost. To facilitate replacement mitigation, the County shall support the creation of wetland or other habitat mitigation banks.
- Action 7.1-7** **Preservation and Protection of Riparian Vegetation.** Consider adopting an ordinance to preserve and protect riparian vegetation, with exceptions for clearing hazards, clearing blocked channels, and other activities necessary for public safety.
- Policy 7.1-8** **Historical Woodlands and Grasslands.** Encourage the East Bay Regional Park District to restore historical woodlands and grasslands to provide natural habitat and reduce fire danger.

Wildlife Corridors

- Action 7.1-9** **Connect Open Space to Large Habitat Areas.** In the review of new subdivisions and other new development, require the preservation of adequately wide strips of undisturbed land to connect larger tracts of natural habitat or areas with biological resources.
- Action 7.1-10** **Conservation Easements.** Encourage local land trusts and other easement holders to prioritize and acquire easements that serve to protect wildlife corridors.
- Action 7.1-11** **Public Infrastructure.** Actively encourage agencies responsible for public infrastructure to site and design roadways and utilities in such a way as to minimize impacts to wildlife corridors, creeks, and regional trails. Where appropriate, grade-separated crossings and/or other features should be used to maintain the viability of the affected corridor.
- Action 7.1-12** **Wildlife Movement Corridors.** Protect the wildlife movement corridors of special status species where they cross under I-580.

7.2 CREEKS AND STREAMS

Creeks play a critical role in wildlife habitat protection, water quality protection (by filtering pollutants), surface water drainage, and flood prevention. There are several perennial and seasonal creeks within the Castro Valley planning area (see Figure 7-1). The main ones include Crow Creek, Cull Creek, San Lorenzo Creek, Castro Valley Creek, and Chabot Creek. Several unnamed tributaries convey flows to these creeks; however, this map shows only few of them. Various creek segments are natural, managed in concrete-lined or earthen channels, or contained in a closed conduit (culvert). As mentioned in Section 7.1, the well-developed riparian areas along Crow Creek and San Lorenzo Creek are important wildlife habitats and corridors.

These drainage patterns within Castro Valley are shaped by the region's topography, which consists of steeper areas located along the foothills of the Diablo Range that gradually flatten out onto an alluvial plain. Water drains from higher elevation areas in the adjacent undeveloped land outside the urbanized area, through Castro Valley, and then down through Hayward and San Lorenzo before it reaches San Francisco Bay. Sections of San Lorenzo Creek, Chabot Creek and Castro Valley Creek have been altered over the years with channels and culverts to convey higher flows.

The County has a Watercourse Protection Ordinance (Chapter 13.12 of the County General Code) that applies across the unincorporated area of Alameda County. Its purpose is to safeguard and preserve watercourses, protect lives and property, prevent damage due to flooding, protect drainage facilities, control erosion and sedimentation, and enhance the recreational and beneficial uses of watercourses. In order to better protect creeks and riparian corridors and enhance their benefits for wildlife and Castro Valley's quality of life, specific actions should include revisions to the ordinance.



Riparian vegetation along creek channels provides habitat and migration routes for wildlife, helps to control flooding, and also improves water quality by filtering pollutants.



Ensure adequate setbacks between structures and open creek channel.

CREEKS AND STREAMS GOAL

- GOAL 7.2-1** **Preserve and restore creek channels, and riparian habitat to protect and enhance wildlife and aquatic-life corridors, flood protection, and the quality of surface water and groundwater.**

CREEKS AND STREAMS POLICIES

- Policy 7.2-1** **Creek and Flood Channels.** Protect all creeks and engineered channels that traverse the urbanized area of Castro Valley.
- Policy 7.2-2** **Creek Setbacks.** Establish adequate creek setbacks to maintain and where appropriate enhance important stream functions.
- Policy 7.2-3** **Creek Uses.** Manage creeks for multiple uses including: scenic quality, recreation, water quality, soil conservation, groundwater recharge, and wildlife habitats.
- Policy 7.2-4** **Natural/Nonstructural Creek Drainage Systems.** Use and reclaim or fully restore natural or non-engineered creek drainage systems to the maximum extent feasible and look for opportunities to convert structural stormwater drainage systems to natural or semi-natural creeks.

CREEKS AND STREAMS ACTIONS

Action 7.2-1

Alameda County's Watercourse Protection Ordinance. Revise the County's Watercourse Protection Ordinance to ensure maximum protection of creeks and adjacent riparian habitat by requiring new development to provide sufficient setbacks and rights-of-way to meet the County's objectives for storm drainage, flood control, habitat protection, recreation, and other appropriate uses. Include the following provisions:

- Do not allow grading or structures within a creek bed, unless they are required to prevent flooding and erosion that pose an imminent hazard to public health and safety, or to prevent serious property damage;
- Require the preservation and/or restoration of natural drainage and habitat to the maximum extent feasible, without causing further acceleration of water flow or erosion further downstream;
- Increase the setback for habitable structures to ensure adequate distance between structures and an open creek channel.
- Require construction methods that minimize flooding and erosion;
- Consider limiting the amount of impervious surface within 100 feet of the top of the creek bed channel to limit erosion and acceleration of water flow into the creek channel;
- Establish basic standards for development in or near creekside areas, in order to clarify and expedite the permitting process;
- Require preparation of a creek protection plan for new construction or significant expansion on creekside properties. The creek protection plan shall: be prepared by qualified professionals; establish areas most suitable for construction; and identify construction procedures that will minimize impacts in creek channels and riparian vegetation.



A few larger sites exist near creeks and canyons that can be developed with new residential subdivisions, such as this site along Boundary Creek, a tributary of Cull Creek. It is critical to set back homes away from the creek channel, preserve trees and vegetation, minimize grading, and limit the amount of impervious surface.



Work with non governmental organizations on stream protection and creek restoration, such as with Chabot Creek.

Action 7.2-2 Review Procedures and Meetings. Establish review procedures and convene regular meetings to coordinate relevant departments, divisions, and public agencies to manage creek management and preservation goals.

Action 7.2-3 Comprehensive Creek Corridor Open Space Plan. Work with public agencies, nonprofit organizations, and other interested parties to develop a Comprehensive Creek Corridor Open Space Plan. The Plan shall identify: key acquisitions along creek corridors; restoration potential along creek corridors; and alternative management practices along creek corridors.

Action 7.2-4 San Lorenzo Creek Action Plan. Implement the San Lorenzo Creek Action Plan, prepared as part of the County Public Works Stormwater Quality Management Plan, as well as other restoration and trail projects in the San Lorenzo Creek watershed, to the extent that funds are available.

Action 7.2-5 Creek Protection and Restoration. Work with non-governmental organizations such as the Friends of San Lorenzo Creek, the Urban Creeks Council on creek protection and restoration efforts in order to support community involvement and resource enhancement.

7.3 VEGETATION

In addition to providing habitat and movement corridors for a variety of wildlife species, Castro Valley’s native and non-native vegetation contributes to the character of the area and provides other environmental benefits. The term “urban forest” is sometimes used to describe all of the vegetation, both public and private, in a community. In Castro Valley, the urban forest comprises vegetation in the planning area’s neighborhood, community, and regional parks; street trees; community gardens; and even ornamental landscaping and backyard vegetable gardens on private property.

This variety of vegetation helps to manage stormwater by preventing erosion and plays a crucial function in water quality protection by filtering pollutants. Trees beautify neighborhoods, increase property values, reduce noise and air pollution, and create privacy. Trees also provide shade for recreational enjoyment, buildings, and paved areas.

Site planning with trees in appropriate locations can reduce the need for air conditioning and associated energy consumption. Although most of the orchards and farms that once abounded in Castro Valley have been replaced by development, an increasing number of residents are cultivating home gardens that provide food as well as environmental benefits.

The County's Tree Ordinance protects larger trees in public right-of-ways but no similar protection exists for trees on private property. Although the Castro Valley Central Business District Specific Plan includes landscaping requirements and guidelines, there are no comparable provisions applicable to development in other parts of the planning area.

VEGETATION GOAL

- GOAL 7.3-1** **Maintain, preserve, and enhance trees and vegetation to provide environmental and aesthetic benefits.**

VEGETATION POLICIES

- Policy 7.3-1** **Alameda County Tree Ordinance.** Continue to implement and enforce the Alameda County Tree Ordinance to protect trees in the public right-of-way.
- Policy 7.3-2** **Native Environment.** Maintain and enhance the existing environment by preserving existing native trees and plants whenever feasible, replacing trees on-site, and adding trees and other vegetation in the public right-of-way.
- Policy 7.3-3** **Gardening.** Support local gardening by facilitating community gardens and creating markets for local goods.



Preserve heritage trees, similar to the ones shown here, whenever feasible.

VEGETATION ACTIONS

- Action 7.3-1** **Enforcement of Alameda County Tree Ordinance.** Ensure that there is sufficient funding to enforce the Alameda County Tree Ordinance. Require permits for planning, pruning, or removing trees in the public right-of-way.
- Action 7.3-2** **Heritage Trees.** Consider amending the Tree Ordinance to preserve and protect heritage trees including native oaks and other significant native trees on private property.
- Action 7.3-3** **Native Trees and Plants.** Adopt guidelines to promote the use of native trees and plants when landscaping on any County property. Consider adopting guidelines to mitigate the impact of private development on land with significant habitat value.
- Action 7.3-4** **Community Gardens.** Identify potential community garden sites and support the establishment of such gardens.
- Action 7.3-5** **Planter Strips.** Consider amending the County zoning ordinance to prohibit paving of planter strips.