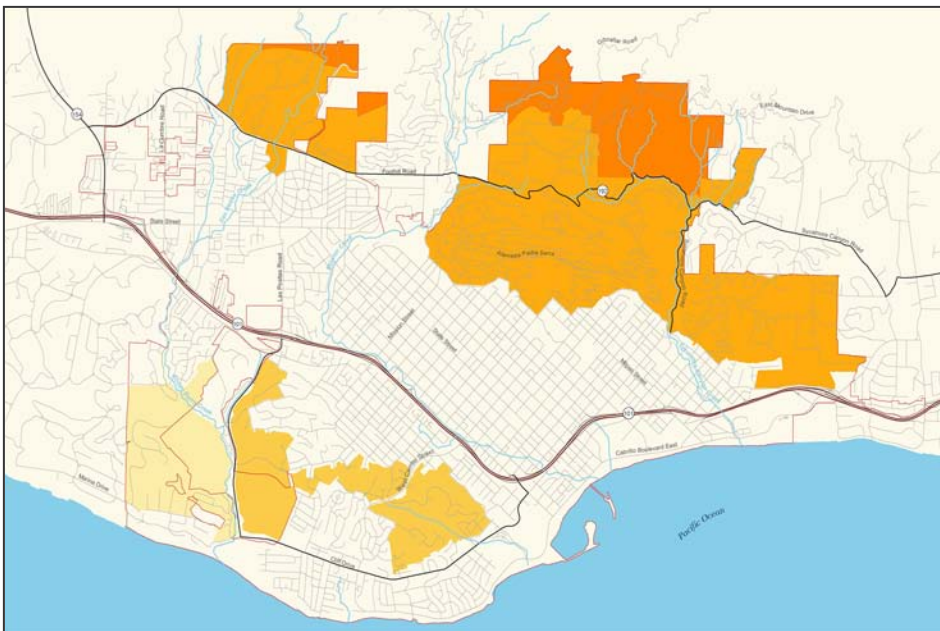


*Final*  
**PROGRAM  
ENVIRONMENTAL IMPACT REPORT  
WILDLAND FIRE PLAN**

**February 2004**



**City of Santa Barbara -  
Community Development Department  
& Fire Department**



**State Clearinghouse  
No. 2003041053**

# Final Program Environmental Impact Report

## Wildland Fire Plan

State Clearinghouse No. 2003041053

February 2004



*Prepared by:*

City of Santa Barbara

Community Development Department  
630 Garden Street  
Santa Barbara, California 93102  
Contact: Michael Berman 805-564-5470

&

Fire Department  
121 West Carrillo Street  
Santa Barbara, California 93101  
Contact: Ann Marx 805-564-5720

*Prepared with the Technical Assistance of:*

URS Corporation  
130 Robin Hill Road, Suite 100  
Santa Barbara, California 93117  
Contact: John Gray 805-964-6010

# EXECUTIVE SUMMARY

---

## I.1 BACKGROUND INFORMATION

The City of Santa Barbara Fire Department (Department) is proposing to implement a comprehensive Wildland Fire Plan (referred to as the “Plan”) to protect lives, property, and natural resources in the City of Santa Barbara (City) threatened by wildland fire. The Fire Chief has the authority to identify areas within the City’s jurisdiction that are vulnerable to wildfire and to apply appropriate codes and strategies within these areas to protect life, property, and natural resources. The proposed Plan identifies high fire hazard areas and develops policies and actions focused on reducing the impact of wildfire in the community.

The objective of the Plan is to establish and implement coordinated management actions on both City-owned and private lands (in cooperation with landowners) to reduce wildland fire hazards and the effects of wildland fires. The Plan characterizes the City's existing high fire hazard areas, presents policies and management actions to reduce wildland fire hazards and impacts, and provides a framework for seeking funds, coordinating efforts with agencies and landowners, and prioritizing work efforts. The Department will be responsible for implementing the management actions in the Plan, in cooperation with other City Departments, other fire-related agencies, individual landowners, and the general public. The management actions include a range of actions such as public education, inter-agency coordination, vegetation (fuel) management, evacuation planning, and code enforcement. Many elements of the Plan represent current fire hazard reduction practices by the Department, as well as codes and standards from the Municipal Code and California Fire Code.

In addition to current codes and standards which require defensible space around all structures in the High Fire Hazard Area, the proposed Plan contains various policies and management actions for vegetation management in different geographic areas of the City. The vegetation management areas include private property, where vegetation management would occur in cooperation with the affected landowners, and City-owned property. The Plan outlines a suite of vegetation management methods to reduce wildland fuel hazards in and near the High Fire Hazard Area. The Department will apply these methods to the selected treatment areas on a case-by-case basis. Before commencing any work, the Department will develop a work plan that identifies the specific areas to be treated and the methods to be used. The Department has prioritized the areas to be treated based on the level of hazard. However, implementation of the vegetation management work is largely dependent upon funding and, in the case of private property, landowner permission. The Department estimates that full implementation of the vegetation management element of the Plan will require 5 to 10 years.

Implementation of the proposed Plan will require formal adoption of the Plan by the City Council. Most of the work will occur outside the Coastal Zone; only a few City-owned properties in the Coastal Zone are included in the Plan. A Coastal Development Permit (CDP) may be required for the fuel reduction work on these properties, depending upon the magnitude and nature of the vegetation management action. A grading permit will not be required for the Plan because the proposed fuel reduction work would not involve grading – only vegetation management. A Burn Permit will be required from the Santa Barbara County Air Pollution Control District for prescribed

burning of vegetative debris proposed under the Plan. A limited amount of work would occur in creeks; as such, a California Department of Fish and Game (CDFG) Streambed Alteration Agreement would be required. All vegetation management work outside of the defensible space requirements will require landowner permission, and the execution of a Letter of Agreement between the Department and the affected landowner(s).

The continuation of current fire protection policies and/or actions and their incorporation into the Plan are not subject to environmental review under CEQA. The proposed Plan includes policies and actions that would not involve any physical impacts to the environment, including public education, interagency coordination, acquisition of funding, data gathering and management, acquisition of fire fighting equipment, and evacuation planning.

## **2.0 KEY ELEMENTS OF THE PROPOSED PLAN**

### **2.1 Expanded High Fire Hazard Area**

After the 1977 Sycamore Canyon Fire, the City of Santa Barbara Fire Department identified areas within City limits vulnerable to wildland fire. These areas were designated the “High Fire Hazard Area.” Municipal codes and ordinances to impose fire and safety requirements in these areas were adopted. In 1998, the Department reviewed the existing High Fire Hazard Area and determined that new hazard and risk assessment was needed to fully analyze the City's wildland fire threat. Using new topographic maps and a Geographic Information System (GIS), the Department determined that the current High Fire Hazard Area should be expanded to include new coastal areas with steep hills, dense brush or flammable vegetation, and extensive open space. The additional areas include the open space west of Arroyo Burro and Elings Park, within Las Positas Valley, and portions of the Bel Air neighborhood.

### **2.2 Proposed Fire Hazard Zones**

A primary element of the proposed Wildland Fire Plan is the designation of new “Fire Hazard Zones,” consisting of four types of zones of varying hazard levels. These zones occur in the designated High Fire Hazard Area (see above). These zones were developed through a step by step analysis of the various factors that contribute to wildland fire hazards. Based on this analysis, four Fire Hazard Zones were identified and incorporated into the Plan.

- Extreme Foothill Zone is located along the northern boundary of the City where large expanses of dense vegetative fuels in the National Forest border the City. Areas include West Mountain Drive, upper Gibraltar Road, Parma Park and areas north of the park, Coyote Road, upper San Roque Road, and upper Santa Teresita Drive.
- Foothill Zone includes the northwest and northeast portions of the City's high fire hazard area. Neighborhoods include El Cielito, Riviera, Lower Riviera, Eucalyptus Hill, Foothill, San Roque area north of Foothill Road, and the area surrounding Stevens Park.
- Coastal Zone includes the Campanil Hill and Hidden Valley area and the area northwest of Hidden Valley, which is included in the City of Santa Barbara's Sphere of Influence.

- Coastal Interior Zone includes portions of the Alta Mesa, mountain areas of the Westside, portions of the East and West Mesa, and the northern part of Elings Park. It also includes areas in the Bel Air Knolls neighborhood.

### **2.3 Modified Defensible Space Requirements**

Under Municipal Code Title 8 (Fire Protection), the Department requires that landowners maintain vegetation (native and ornamental) surrounding existing and new structures in the High Fire Hazard Area to reduce the risk of wildland fire igniting the structures. The zone where vegetation is managed for fire hazard is called “defensible space.” The Department has determined through a hazard and risk assessment that the defensible space surrounding structures needs to be modified to reflect varying levels of fire hazard. The defensible space distances would be reduced from the current 100 feet in the Coastal and Coastal Interior Zones, remain the same in the Foothill Zone, and increased in the Extreme Foothill Zone. Additional defensible space distances would apply in all zones if there are slopes greater than 30 percent near a structure.

### **2.4 Vegetation Management Units – Private Lands**

The proposed Plan identifies areas within the Fire Hazard Zones where fire hazards currently occur outside of the defensible space areas cleared around structures. These areas are identified as “Vegetation Management Units.” There are four units in the coastal Fire Hazard Zones, and 20 in the foothill Fire Hazard Zones for a total of 24 units. They range in area from 2.4 acres (Fire Station 7 unit) to 217 acres (Las Positas Road unit), encompassing a total of 700 acres.

Fire hazards in the units include the potential for increased fire hazard, and pose a challenge for fire protection because of heavy, flammable vegetation, lack of access due to topography and roads, and/or firefighter exposure. The Department has proposed certain management actions for each unit, such as public education, vegetation hazard reduction projects, and other methods to reduce fire hazard and risk.

The proposed management actions would be conducted by the Department in cooperation with private landowners. Funding for the work would be primarily from grants and from private landowners. Work at individual management units would proceed in accordance with a priority order, pending available funds and participation by affected landowners. The Department anticipates that completion of the proposed management actions at all the units would require 5 to 10 years.

The management units primarily include private property. Hence, the proposed work will require permission and cooperation from the affected landowners. The proposed vegetation management is separate from the defensible space requirements in the High Fire Hazard Area, which is required by ordinance and is the responsibility of the landowner. The Department has authority to inspect and enforce the defensible space requirements on private property. In addition, the Department can require additional fuel reduction on private property if a fire hazard has been identified.

At this time, the Department has not developed specific management actions for all the units. Because each Vegetation Management Unit is unique, specific actions will be developed in the future

for each unit based on community involvement, the type of vegetation, risk factors, and available funding. Each unit would be considered a neighborhood or community project.

The overall objective for vegetation management is to reduce the amount of flammable vegetation within targeted portions of the management units by approximately 33 to 50 percent. Vegetation management will occur outside the landowner's defensible space areas. It will be focused on the following actions:

- General thinning or removal of flammable vegetation that poses a fire hazard (i.e., areas with dense and continuous brush; dense understory of flammable vegetation)
- Thinning, pruning and limbing of vegetation to remove "fire ladders" (i.e., vertical expanses of vegetation that extend from the ground to the crowns of trees)
- Removing lower limbs of oak trees, particularly dead or weak branches ("limbing up")
- Pruning out dead material on trees

In dense eucalyptus groves, trees would be thinned to achieve a target density of 6 to 12 trees per 1,000 square feet. Eucalyptus trees that are left in place will be limbed up 8 to 10 feet from the ground. Leaf and ground litter will be retained in the area for soil protection.

Roadways within the vegetation management areas will have vegetation thinned and removed to meet Fire Department requirements for flammable vegetation removal and thinning within 10 feet from the edge of public roadways and 13 feet, 6 inches vertically.

Vegetation management would be accomplished using one or more approved methods of vegetation management, depending on slopes, direction of wind exposures, vegetation types, and access. Four vegetation management methods will be utilized: (1) hand cutting and chipping of vegetation, leaving the chippings on the ground when feasible; (2) hand cutting and multi-cutting (cutting stems into small lengths instead of chipping) of vegetation; (3) hand cutting and prescribed burning of cut material using either pile burning or broadcast burning of cut vegetation; and (4) prescribed broadcast burning of grasslands.

Hand-cutting, chipping, and multi-cutting will typically involve a 6 to 8 person trained crew. Work would typically occur on weekdays during regular work hours. All vegetation management work will occur during the period August 1st through April 1st. Prescribed burning would only occur outside the designated fire season – generally the period November through May.

The Department has identified various Best Management Practices (BMPs) to reduce environmental impacts of the vegetation management actions based on prior fuel reduction projects. The application of the BMPs would be specified in the individual work plans for the vegetation management units.

The Department and/or landowners will conduct post-treatment monitoring and maintenance. Monitoring will include visual inspections of the work areas every 1 or 2 years to determine the nature and rate of vegetation growth after the treatment. Maintenance of the vegetation management areas will involve: (1) selective hand cutting of hazardous vegetation that has re-established; and (2) selective weed removal of invasive or exotic invasive plants and grass vegetation.

To the extent feasible based on funding and landowner cooperation, the Department and/or landowners will conduct vegetation maintenance on an as-needed basis to keep the treated areas in the desired condition for five years. After five years, the Department will typically return to the vegetation management area for an inspection of the vegetation conditions. If additional vegetation management is required, the Department will re-initiate a vegetation management project at the site, entering into another Letter of Understanding between the City and property owners.

The primary maintenance activity will be selective thinning of regenerating plants which would be accomplished with the use of hand tools. The targeted vegetation would be re-sprouts of previously cut vegetation and young tree sprouts, particularly eucalyptus trees that are aggressively growing since the treatment and that can cause a future fire hazard.

In addition, the Department will use herbicides to selectively remove invasive exotic plants that have colonized the treated areas. Invasive exotic plants are defined in the Plan as non-native species that readily invade disturbed areas within native habitat areas, exhibit high rates of growth, and displace or otherwise adversely affect native vegetation due to their rapid and aggressive growth habits. The removal of such species will protect and possibly enhance native habitats in the High Fire Hazard Area. Native species are generally more adaptable to fire, and many are fire resistant. The Department will follow the herbicide selection, application, safety precautions, and record keeping in the City's Integrated Pest Management Plan (IPM) which is currently being finalized for consideration by City Council. The initial step in following the IPM is to determine if there are feasible and effective methods to remove the invasive exotic plants without the use of herbicides. Non-herbicide methods will include hand cutting, weed whacking, and mowing.

In general, the Department will conduct very little vegetation management in creeks. Under the proposed Plan, vegetation thinning and placement of chippings (as described above) will occur outside a 15-foot buffer zone measured from the top of the creek bank. However, the removal of dead brush and exotic plants (by hand only) may extend to the top of the bank.

There will be instances when the Department determines that vegetation in a creek or within the 15-foot wide exclusion zone noted above requires thinning to reduce a fire hazard. Limited vegetation management may occur in certain creeks or drainages under the following circumstances: (1) there is an abundance of dead wood in the understory that has created a fire ladder near structures or a key defensible spaces to be used for fire fighting; (2) eucalyptus trees, giant reed, and pampas grass (or similar plants) dominate the riparian corridor and have created hazardous fuel conditions due to their density or amount of dead wood and plant tissue; and (3) high fuel conditions are present in a creek adjacent to a key creek crossing (i.e., road or bridge) that would be a strategic route for emergency access or a key location for stopping a wind blown fire from traveling down through a riparian zone.

## **2.4 Community Fuels Treatment Network**

The Plan proposes to create a community fuels treatment network within the Extreme Foothill Zone to provide a break between continuous old stands of chaparral fuel outside the City boundary. This would provide a strategic last line of defense for fire protection resources to suppress a wildfire before it enters more highly populated areas of the City.

A Community Fuels Treatment Network is an area where multiple property owners expand their individual defensible space areas to treat continuous strips of hazardous vegetation across property boundaries to form a vegetation management network. Three Community Fuels Treatment Network areas have been identified in the Plan. Under the Plan, these areas would be subject to the same vegetation management actions described for the Vegetation Management Units. The Department would pursue vegetation management in these areas based on landowner interest and available funding.

Vegetation management would involve reducing the amount of flammable vegetation within the Community Fuels Treatment Network by approximately 33 to 66 percent. The objectives and method of vegetation management would be identical to that described for the Vegetation Management Units (see above), including post-treatment maintenance (e.g., selective hand cutting and weed removal). The key difference would be that the maximum extent of vegetation management would increase from 50 to 66 percent.

## **2.5 Vegetation Management on City Lands (1993 Plan)**

In 1993, the Department completed the Vegetative Fuels Management Plan (1993 Plan) that identified and recommended vegetation management projects on City owned-lands, both in and outside the City's High Fire Hazard Area. The proposed Wildland Fire Plan incorporates the 1993 Vegetative Fuels Management Plan recommendations with the following modifications: (1) application of the new High Fire Hazard Area defensible space requirements for all structures on City-owned lands; and (2) minor modifications to the treatment areas to reflect the new information about the properties, progress made on the properties since the plan was implemented in 1993, and the current risk assessment factors used by the Department.

The areas identified in the 1993 Plan would be subject to the same vegetation management actions described for the Vegetation Management Units (see above). The project would involve reducing the amount of flammable vegetation within designated areas of City-owned lands by approximately 33 to 66 percent. The objectives and method of vegetation management would be identical to that described for the Vegetation Management Units, including post-treatment maintenance (e.g., selective hand cutting and weed removal). However, the maximum amount of vegetation management (in designated areas) would be increased from 50 to 66 percent.

Two new City properties have also been added to the 1993 Vegetative Fuels Management Plan at this time – Las Positas Park Area (which includes Elings Park and 601 Las Positas) and Oak Park (a portion adjacent to houses along Tallant Road).

The vegetation management actions in the 1993 Plan are being implemented by the City departments responsible for the properties (e.g., Parks and Recreation Department or the Water Resources Division of the Public Works Department). In addition, the Fire Department provides assistance with many of the projects on City-owned lands. Over half the vegetation management projects in the 1993 Plan have been implemented over the past 10 years. For these areas, the City is currently monitoring and maintaining treated vegetation.



### 3.0 ENVIRONMENTAL IMPACTS

The City Community Development Department prepared a draft Initial Study Environmental Checklist that was issued for public review in April 2003. Based on the Initial Study, the City Community Development Department concluded that either no impact, or no significant impact, would occur related to the following environmental resources or issue areas:

- Air quality – emission related impacts associated with vegetation management (e.g., chain saws, chippers, smoke) would be minor, temporary, and less than significant.
- Agriculture – the proposed Plan would have no impact on agricultural activities in the City, which are minimal.
- Geology and Soils – the proposed Plan would not affect, or be affected by, geological hazards such as seismic ground shaking, fault rupture, landslides, or subsidence.
- Hazards and Hazardous Materials – the proposed Plan would not cause the release of hazardous substances or create public health hazards
- Hydrology and Water Quality - the proposed Plan would not affect drainage patterns, flood protection, groundwater, or surface water quality
- Land Use and Planning – the proposed Plan would not significantly affect existing land uses and communities, nor would it conflict with City General Plan policies
- Noise – noise impacts related to vegetation management (i.e., chain saws, chippers) would be temporary, localized, and less than significant
- Population and housing – implementation of the Plan would not affect population growth or available housing
- Public services – implementation of the Plan would not significantly affect the amount and availability of fire, police, school, or park services
- Utilities and service systems – the Plan would not significantly affect, or cause a significant demand for, water supply, wastewater treatment, or drainage facilities
- Recreation – the vegetation management elements of the Plan would occur in certain City parks, but the possible disruption of public uses would be minor and less than significant
- Transportation/Circulation – the impact of additional traffic associated with work crews performing vegetation management on local roadways and intersections would be minor and localized

The Initial Study concluded that the proposed Plan could potentially cause certain significant impacts in the areas of soil erosion, biological resources, visual resources, cultural resources, risk of

accidental fire, and solid waste disposal. These impacts were evaluated in the EIR. A summary of the impacts identified in the EIR is provided below.

Two **significant, unavoidable cumulative impacts (Class I)** would result over time from the implementation of the proposed Fire Plan, as follows:

- **Biological Resources.** The proposed Fire Plan would affect biological habitats by thinning native vegetation, pruning oak trees, removing understory plants, and using herbicides to control exotic plants. At any one location, these actions are not expected to cause a significant biological impact based on the proposed vegetation management methods and environmental protection measures incorporated in the Plan. However, these impacts would, over time, contribute to past, present, and future projects and actions by public and private parties that result in habitat removal and/or degradation. Most of the City has been developed, and native habitat occurs in fragments on steep slopes, in canyons, and along creek corridors. Any future action that continues to reduce or otherwise degrade native habitat would contribute to a past and ongoing significant impact to the biological resources of the City.
- **Visual Resources.** The proposed Fire Plan would result in the thinning of native and non-native vegetation on public and private properties, including removal of large eucalyptus trees, limbing of oak trees, and removal of dense understory plants in high fire hazard areas. These modifications to the landscaping at any specific location are not expected to significantly affect public views of the City's aesthetic landscape. However, the modification of vegetation and landscaping under the Plan could contribute to a past and ongoing cumulatively significant impact due to land development in the City and outside the City limits that removes native vegetation, creates barren slopes or road cuts, and establishes landscaping elements that are out of character with the native landforms and vegetation.

The proposed Fire Plan would also result in the following three **significant, but mitigable (Class II)** impacts. Mitigation measures to avoid these impacts, or to reduce them to less than significant levels, are presented in the EIR.

- Fuel reduction activity (i.e., vegetation thinning and pruning) could temporarily or permanently affect special status plant and wildlife species. A significant impact would be avoided by preparation of site-specific measures to protect these species.
- Vegetation management in a creek could reduce the quality of the riparian habitat by removing understory vegetation that provides cover for wildlife; removing dead wood that provides shelter and food for insects, invertebrates, and reptiles; and reducing canopy cover that may be important in moderating temperatures in the creek. A significant impact would be avoided by implementing various Best Management Practices during any vegetation management in creeks.
- The reduction in vegetation in the vegetation management units could cause post-treatment, localized increases in soil erosion and potential downstream sedimentation. A significant impact would be avoided by implementing various Best Management Practices during fuel reduction work on steep slopes.

Various adverse, but less than significant impacts would also occur under the proposed Plan. These impacts are summarized in Table ES-1. They include impacts to biological resources, visual resource impacts, public health and safety, and cultural resources.

The proposed Plan represents a long-term program that affects a wide geographic area in the City of Santa Barbara. Impacts would be dispersed over time and space. The impacts of the project have the potential to interact and combine with similar impacts from other land disturbing actions in and around the City, such as residential land development on individual lots, small subdivisions, road and other infrastructure improvements, flood control channel maintenance, and discretionary land development projects in Goleta and the unincorporated portions of the County surrounding the City. The proposed Plan has the potential to overlap in time, and in effect, with these other types of projects, resulting in potential cumulatively significant impacts to biological and visual resources, as described above. Cumulative impacts related to erosion, water quality, traffic, noise, and air quality are not expected to be significant.

The proposed Plan would not result in any growth inducing impacts.

#### **4.0 ALTERNATIVES**

Two alternatives were evaluated in the EIR, as summarized below:

##### **No Project Alternative**

Under the No Project Alternative, the Department would not implement any vegetation management actions in the identified Vegetation Management Units. The current vegetation management actions on City parcels, initiated in 1993, would continue. The current defensible space requirement of 100 feet in the High Fire Hazard Area would remain unchanged. Under this alternative, the impact of wildland fires would be greater than under the proposed Plan because there would be a higher potential for damage to structures and loss of life due to a wildland fire in or adjacent to the City. The increased risk of larger and more damaging wildland fires in the City would also cause environmental impacts that would be greater than from a wildland fire that occurred after implementation of the proposed Plan. The more destructive wildland fires would cause greater damage to native vegetation and cause more post-fire erosion due to the higher temperatures reached by a fire with greater fuel. These impacts would be considered significant and unavoidable under this alternative, and of a greater magnitude compared to similar impacts under the proposed Plan.

##### **Alternatives That Avoid or Reduce Significant Impacts**

The proposed Plan would result in the following types of significant impacts (Class I and II): loss or disturbance to native habitats, impact to special status plant and wildlife species, adverse effects on riparian habitats, increased erosion, and degradation of visual resources. There are no feasible alternatives to reduce wildland fire hazard and the effects of wildland fires in the City that would avoid or reduce these impacts. Reduction in fuel near structures and at strategic locations is the most effective solution in an already built urban environment such as the City of Santa Barbara. There are other methods of reducing vegetative fuel that have greater environmental impacts, such as the use

of mechanical equipment to clear brush or the use of large scale prescribed burning to remove live stands of vegetation. However, in both instances, the environmental impacts of these alternative methods would be substantially greater than for the proposed Plan.

**TABLE ES-1  
SUMMARY OF IMPACTS AND MITIGATION - WILDLAND FIRE PLAN**

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<b>CLASS I IMPACTS: SIGNIFICANT AND UNAVOIDABLE</b>		
<i>Biological Resources [Cumulative Impact]</i>		
<p>The proposed Fire Plan would affect biological habitats by thinning native vegetation, pruning oak trees, removing understory plants, and using herbicides to control exotic plants. At any one location, these actions are not expected to cause a significant biological impact based on the proposed vegetation management methods and environmental protection measures incorporated in the Plan. However, these impacts would, over time, contribute to past, present, and future projects and actions by public and private parties that result in habitat removal and/or degradation. Most of the City has been developed, and native habitat occurs in fragments on steep slopes, in canyons, and along creek corridors. Any future action that continues to reduce or otherwise degrade native habitat would contribute to a past and ongoing significant impact to the biological resources of the City.</p>	<p>No feasible mitigation is available.</p>	<p>Significant</p>
<i>Visual Resources [Cumulative Impact]</i>		
<p>The proposed Fire Plan would result in the thinning of native and non-native vegetation on public and private properties, including removal of large eucalyptus trees, limbing of oak trees, and removal of dense understory plants in high fire hazard areas. These modifications to the landscaping at any specific location are not expected to significantly affect public views of the City's aesthetic landscape. However, the modification of vegetation and landscaping under the Plan could contribute to a past and ongoing cumulatively significant impact due to land development in the City and outside the City limits which removes native vegetation, creates barren slopes or road cuts, and establishes landscaping elements that are out of character with the native landforms and vegetation.</p>	<p>No feasible mitigation is available. However, the Fire Department will continue it's ongoing efforts to educate property owners about fuel reduction guidelines and fire resistant landscaping that is visually pleasing</p>	<p>Significant</p>

**TABLE ES-1**

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<b>CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE</b>		
<p><i>Biological Resources</i></p> <p>Various special status plant and wildlife species may occur in the vegetation management units (private lands), Community Fuels Treatment Network areas, and 1993 fuels management units (City owned land). Fuel reduction activity (i.e., vegetation thinning and pruning) could temporarily or permanently displace certain wildlife species, and possibly damage or destroy sensitive plant species. The number and likelihood of special status species in the proposed treatment areas are expected to be low.</p>	<p><b>BIO-1.</b> To avoid direct impacts to the special status species that could occur in the Fire Plan vegetation management units (see Table 3-13), the Department shall consult with a qualified biologist during the preparation of work plans for each unit that could support a special status species. Based on this consultation, the Department shall develop site-specific measures to avoid or reduce impacts to special status species known or likely to occur at the unit. A reconnaissance survey shall be conducted of the proposed work areas to identify biological sensitivities such as: (1) locations of oak trees and oak woodlands, where the Department would implement BMPs to reduce impacts to oaks; (2) top of creek bank, in the event that work will occur near the creek; (3) potential habitat for special status plants or wildlife species; and (4) raptor nests. Based on this information, the Department shall modify the proposed vegetation management actions to reduce impacts to special status species.</p> <p>The Department shall consider the following modifications: (1) delay the work until the late fall (e.g., September or later) if it appears that nesting by riparian birds is still ongoing in August; (2) avoid disturbance to any trees with occupied or unoccupied raptor nests; (3) avoid or reduce the amount of vegetation management in areas that could support special status species; (4) consolidate foot paths and work corridors in areas with well developed native scrub and oak woodland in order to reduce the amount of ground disturbance; (5) include a biological monitor if there is a potential for direct impacts; (6) implement post-treatment restoration efforts to facilitate the use of the affected areas, and the nearby areas, by the special status species; and (7) further restrict or prohibit the use of herbicides for post treatment weed control.</p>	<p>Less than significant</p>

**TABLE ES-1**

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<b>CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE (Continued)</b>		
<p>Vegetation management in a creek could reduce the quality of the riparian habitat by removing understory vegetation that provides cover for wildlife; removing dead wood that provides shelter and food for insects, invertebrates, and reptiles; and reducing canopy cover that may be important in moderating temperatures in the creek.</p>	<p><b>BIO-3.</b> Prior to conducting work in a creek, or within 15 feet of the top of bank, the Department shall consult with a qualified biologist during the preparation of the work plan to identify methods to achieve the vegetation management without significant impacts to riparian resources. Based on this consultation, the Department shall develop site-specific measures to avoid or reduce impacts to riparian resources. These measures shall include (among others) the following:</p> <ul style="list-style-type: none"> <li>a) To the extent feasible, all work near a creek shall be conducted when surface water is absent.</li> <li>b) Vegetation shall not be thinned, removed, or pruned, nor shall dead wood be removed, within 15 feet of a creek channel when flowing water is present</li> <li>c) The only plants that can be removed from a creek bed (that is, below the line of the ordinary high water mark) are live or dead eucalyptus trees and dead native shrubs/trees that are deemed to be a fire hazard, and invasive exotics (including but not limited to giant reed).</li> <li>d) Cut stems, tree trunks or other vegetative debris shall not be dragged across a creek bed that contains riparian vegetation, wetlands, or surface water</li> <li>e) No trees shall be felled across a creek while there is flowing water</li> <li>f) No eucalyptus chipping or cut stems shall be left on the creek banks or upper stream terrace, when present</li> <li>g) Chipped native vegetation shall not be placed on creek banks, unless a qualified biologist determines that placement of the chipping would provide needed erosion protection without an adverse impact on aquatic habitats and water quality in the creek. Native plant chippings can be spread outside the top of bank.</li> <li>h) To the extent feasible, the Department shall incorporate low-cost riparian restoration measures into vegetation management work in creeks when the work reduces the canopy coverage, such as when large eucalyptus trees are thinned from a creek. These measures would include installing inexpensive and easy-to-establish riparian plants such as willow and mulefat stems, blackberry plants, or mugwort plants. This restoration would be a one-time, opportunistic event at the work site.</li> </ul>	<p>Less than significant</p>

**TABLE ES-1**

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<b>CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE (Continued)</b>		
<i>Erosion and Sedimentation</i>		
<p>The reduction in vegetation in the vegetation management units (private lands), Community Fuels Treatment Network areas, and 1993 fuels management units (City owned land) could cause post-treatment, localized increases in soil erosion and potential downstream sedimentation. This impact would occur if the vegetation reduction resulted in significant soil exposure in steep areas that are vulnerable to water erosion from winter rains.</p>	<p><b>ER-1</b> The Department shall implement the following additional Best Management Practices when conducting vegetation management on slopes greater than 10 percent, within 25 feet of the top of a creek, or within a creek:</p> <ul style="list-style-type: none"> <li>▪ To the extent feasible, field crews shall not create foot paths to and from the work areas that remove leaf litter and expose mineral soils to potential future erosion. If crews must use a single path that becomes worn and vulnerable, the path shall be rehabilitated after vegetation management to reduce erosion potential. Rehabilitation would include replacement of leaf litter and chippings on the path, and piling dirt and organic matter at periodic intervals along the path to act as water bars and prevent concentration of flows.</li> <li>▪ Crews shall avoid stripping the leaf litter from slopes or creek banks when dragging vegetation from the cutting location to the chipper. If the removal of vegetation and leaf litter is unavoidable, the Department shall restore the affected areas by spreading leaf litter and chippings back over the stripped areas.</li> <li>▪ For any vegetation management work in a creek, or within 25 feet of the top of bank, the Department shall prepare an erosion control plan that evaluates the potential for causing erosion from vegetation management actions, and identifies BMPs to avoid significant erosion impacts through modifying vegetation removal methods, utilizing alternative access methods, and/or rehabilitating affected areas after the work.</li> </ul> <p>If the Department field supervisor determines that an erosion potential has been created due to vegetation reduction work, and that the spreading of leaf litter and chippings is insufficient protection from future winter rains, the Department shall consider temporary biodegradable erosion control blankets and barriers, such as coconut fiber blankets and logs. These materials shall be placed strategically to reduce the amount and velocity of flow over the affected areas, to prevent gullyng and soil loss by water erosion, and to facilitate natural regeneration and colonization by native plants.</p>	<p>Less than significant</p>



**TABLE ES-1**

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<b>CLASS II IMPACTS: SIGNIFICANT, BUT MITIGABLE (Continued)</b>		
There is a potential to increase erosion in a creek due to the vegetation management in creeks because the treated areas could be exposed to flowing water in the subsequent winter.	See ER-1 above	Less than significant

**CLASS III IMPACTS: LESS THAN SIGNIFICANT**

<b>Biological Resources</b>		
The habitat values of oak woodlands may be degraded by the removal of understory vegetation and lower branches, which reduces food and cover for wildlife. This impact applies to fuel reduction in the Vegetation Management Units (private lands), Community Fuels Treatment Network, and 1993 fuel management units (City owned land).	None required. The magnitude of this impact is lessened by the Department’s environmental Best Management Practice “G,” which encourages retention of certain native understory shrubs, and specifies a limitation on the total amount of understory clearing in oak woodlands.	Less than significant
The removal of oak tree branches and understory will cause trampling and damage to understory vegetation, which could adversely affect oak seedlings and saplings. This impact applies to fuel reduction in the Vegetation Management Units (private lands), Community Fuels Treatment Network, and 1993 fuel management units (City owned land).	None required. This impact would be reduced to less than significant levels because of the Department’s environmental Best Management Practice “G,” which prohibits oak tree removal, protects oak saplings, and limits the depth of chips spread in oak woodlands.	Less than significant
Field crews conducting vegetation management under the proposed Plan would cause noise and direct physical disturbance to natural areas occupied by wildlife. Noise would emanate from chainsaws, chipping machines, and trucks. This disturbance, while short-term and localized, would potentially cause wildlife to temporarily leave areas where they burrow, nest, take refuge, forage, roost or perch.	No feasible mitigation	Less than significant
Fuel reduction activities in the vegetation management units (private lands), Community Fuels Treatment Network areas, and 1993 fuels management units (City owned land) may interfere with breeding and nesting of both sensitive and more common birds, including raptors. Activity during the breeding season could disturb mating pairs and cause them to abandon the area.	Direct disturbance of nesting birds would be avoided by the use of the Fire Department’s environmental Best Management Practice (BMP) “E,” which states that “ <i>Vegetation management work shall be completed outside of the defined nesting season for birds (i.e. before April 1 and after July 30). If vegetation management work must occur within the project areas during the breeding season (April 1 to July 30), a site survey shall be conducted by a qualified wildlife biologist to determine any presence of nesting birds. Vegetation management activities shall not occur within 200 feet of active nests located during this survey.</i> ”	Less than significant

**TABLE ES-1**

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<b>CLASS III IMPACTS: LESS THAN SIGNIFICANT (Continued)</b>		
<p>The physical disturbances to native vegetation due to fuel reduction in the vegetation management units (private lands), Community Fuels Treatment Network areas, and 1993 fuels management units (City owned land) could facilitate colonization by weedy non-native plants. The expansion of invasive exotic species at the expense of native perennial vegetation could degrade habitat values for wildlife.</p>	<p>Recommended Mitigation Measure:</p> <p><b>BIO-2.</b> During the preparation of work plans for all vegetation management units under this Plan, the Department shall identify the extent of non-native weeds in the fuel reduction areas, and develop a plan to reduce or eradicate these plants from the work areas during the initial treatment, and/or during post-treatment maintenance. The plan shall include post-treatment inspections and weed treatment at suitable intervals until the next fuel reduction project at that unit, as funding allows.</p> <p>The extent of non-native plant colonization of the work area will also be reduced by the Fire Department’s post-treatment management program, and by environmental Best Management Practice (BMP) “A,” which states that <i>“To the extent feasible, the vegetation management will preferentially remove exotic plants that pose a fire hazard, and generally remove exotic plants in the work area as the opportunity arises.”</i> This measure would offset any increase in non-native species due to fuel reduction actions.</p>	<p>Less than significant</p>
<p>Vegetation management activities in eucalyptus groves in the management units could disturb monarch butterflies which may utilize some of these groves during migration, and possibly during their overwintering period on the South Coast. At this time, none of the eucalyptus groves in the various management units under the Plan represent monarch butterfly aggregation sites.</p>	<p>No mitigation required</p>	<p>Less than significant</p>
<p>The use of herbicides to control emerging exotic invasive plants in or near a creek could adversely affect water quality and aquatic organisms if there was substantial overspray, excessive application, or accidental spills. This impact applies to fuel reduction in the Vegetation Management Units (private lands), Community Fuels Treatment Network, and 1993 fuel management units (City owned land).</p>	<p><b>BIO-4.</b> No herbicide use shall occur within the 15-foot wide exclusion zone at the top of the creek bank, on the creek bank, or in the creek bed unless the herbicide use is to remove invasive exotics during a post-treatment maintenance project that is authorized in a creek under the Fire Plan. Herbicide use in the creek channel shall be conducted in accordance with a site specific plan prepared by the Department in consultation with a qualified biologist, consistent with the City’s Integrated Pest Management Plan (IPM), and consistent with all other mitigation measures and environmental BMPs under the Fire Plan.</p>	<p>Less than significant</p>

**TABLE ES-1**

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<b>CLASS III IMPACTS: LESS THAN SIGNIFICANT (Continued)</b>		
<i>Air Quality</i>		
<p>Temporary emissions of reactive organic compounds (ROC), particulate matter, and NO<sub>x</sub> associated with chainsaws and chippers used in fuel reduction activities. Temporary emissions of fugitive dust (particulate matter) from chipping activities. Emissions of carbon monoxide and particulate matter associated with prescribed burns.</p>	<p>Recommended Mitigation Measures:</p> <p><b>AQ-1</b> Trucks transporting cut vegetation material shall be covered from the point of origin.</p> <p><b>AQ-2</b> The haul route(s) for all construction-related trucks, three tons or more, entering or exiting the sites, shall be approved by the Transportation Engineer.</p> <p><b>AQ-3</b> After clearing, grading, earth moving or excavation is completed, the entire area of disturbed soil shall be treated to prevent wind pickup of soil. This may be accomplished by: Seeding and watering until vegetative cover is grown; spreading soil binders; sufficiently wetting the area down to form a crust on the surface with repeated soakings as necessary to maintain the crust and prevent dust pickup by the wind; other methods approved in advance by the Air Pollution Control District.</p> <p><b>AQ-4</b> All prescribed burns shall be conducted in compliance with applicable SBAPCD rules and regulations and appropriate permits required shall be obtained from the SBAPCD.</p>	<p>Less than significant</p>
<i>Erosion and Sedimentation</i>		
<p>The modified defensible space requirements are not expected to cause a significant cumulative increase in erosion potential because there will be an overall net decrease in the area of vegetation management which could increase erosion potential. There may be localized increases in erosion potential in the Extreme Foothill Zone.</p>	<p>No mitigation required</p>	<p>Less than significant</p>

**TABLE ES-I**

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<b>CLASS III IMPACTS: LESS THAN SIGNIFICANT (Continued)</b>		
<i>Visual Resources</i>		
<p>The proposed modified defensible space requirements will increase the defensible space requirements in the foothill High Fire Hazard Zone, which will result in the reduction in the density and biomass of native or ornamental vegetation near structures on foothill properties. The types of native vegetation that would be affected include oak woodlands, coastal sage scrub, and chaparral. Fuel reduction would alter the visual appearance of the affected areas. The magnitude of the visual change and its effect on the larger visual setting will range greatly based on the proximity and quality of views from public viewpoints (i.e., parks, public roads) and the extent of vegetation reduction on individual private parcels. Expanded defensible spaces on hillsides that are highly visible from public roads would have the potential for the greatest change in the visual setting.</p>	<p>No feasible mitigation is available to avoid this impact as the work would be conducted by landowners on private property, and could not be regulated by the Fire Department. The Fire Department will continue its ongoing efforts to educate property owners about fuel reduction guidelines and fire-resistant landscaping that are visually pleasing, while meeting fuel reduction requirements.</p>	<p>Less than significant</p>
<p>Under the proposed Plan, the amount of flammable vegetation within targeted portions of the various management units under the Fire Plan would be reduced by approximately 33 to 66 percent by a general thinning or removal of flammable vegetation, removing lower limbs of oak trees, pruning out of dead material on trees, and reducing the density of eucalyptus trees. In addition, the defensible space requirements in the Extreme Foothill Fire Hazard Zone will increase, requiring additional vegetation management by landowners. These actions may alter the visual appearance of densely vegetated portions of the management units and private lots in the foothills. The modification to vegetation could potentially affect views of the landscape from public view points (e.g., parks, public road, scenic highways). This impact is not considered significant because most public views are obscured, the vegetation modifications may not be noticeable or objectionable, and the change in the landscape may be minor relative to the extensive native vegetation and ornamental landscaping throughout the City that would be unaffected. Visual impacts due to prescribing burning of cut vegetation would be minor and localized.</p>	<p>Recommended Mitigation Measures:</p> <p><b>VIS-1.</b> The following measures shall be considered when conducting vegetation management on private and public parcels:</p> <ul style="list-style-type: none"> <li>▪ Straight line boundaries and other strong linear configurations that tend to detract from the natural appearance of the landscape shall be avoided as much as practicable.</li> <li>▪ Vegetation removal or thinning shall follow natural or existing landscape features such as streamcourses, vegetation type lines, ridgetops, and existing roads.</li> <li>▪ Fireline edges on the outside-of-the-burn side shall be feathered into the natural landscape, with brush cuttings used to disguise the lines.</li> </ul>	<p>Less than significant</p>

**TABLE ES-I**

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<b>CLASS III IMPACTS: LESS THAN SIGNIFICANT (Continued)</b>		
<i>Cultural Resources</i>		
<p>Fuel reduction activities in the Vegetation Management Units and 1993 fuel management units are not expected to cause a disturbance to archeological deposits because the work will not involve grading. There is a remote possibility that fuel reduction work could disturb shallow or surface located artifacts, although the magnitude of the impact would be very low.</p>	<p><b>CR-1.</b> Prior to the initiation of fuel reduction work, Department personnel shall instruct the field crew of the potential to uncover unanticipated archeological deposits and features. If any suspected archeological artifacts, shell, or bone are discovered, the Department shall temporarily halt work in the area of the discovery, and a City-approved archeologist shall evaluate the find, and provide a recommendation on how to proceed with the fuel reduction work without significantly affecting archeological resources.</p>	<p>Less than significant</p>
<i>Public Health and Safety</i>		
<p>Although the fire department would follow the above procedures to minimize the risks of a prescribed burn igniting a wildfire, there is a very remote potential for accidental fire to occur during a prescribed burns due to sudden, unexpected changes in weather conditions that cause high temperatures and high winds, coupled with inadequate perimeter control or inspections.</p>	<p>No mitigation is required. The Department is aware of the risk factors associated with prescribed burns and the conditions that have led to previous accidental fires. The Department has the knowledge, experience, and resources to reduce the risk of an accidental fire during a prescribed burn to an acceptable level.</p>	<p>Less than significant</p>
<p>Use of equipment for vegetation management (e.g. chain saws, chippers, vehicles) could cause injury to workers in the event of an accident or improper use of equipment. Use of such equipment in the workplace is subject to State and Federal workplace laws that would minimize the risk.</p>	<p>No mitigation required</p>	<p>Less than significant</p>
<i>Solid Waste</i>		
<p>In areas where it is not physically feasible to put chip or multi-cut material back on the ground, the Department will remove the vegetative debris from the work site for off-site beneficial use. The Department has determined that there is sufficient capacity in Santa Barbara County's green waste management program for the new green waste.</p>	<p>No mitigation required</p>	<p>Less than significant</p>

**TABLE ES-1**

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<b>CLASS III IMPACTS: LESS THAN SIGNIFICANT (Continued)</b>		
<i>Noise</i>		
<p>Temporary increases in noise in different areas of the City as crews remove or thin vegetation using equipment such as chippers and chainsaws. Noise events would be temporary in any one location and would only occur on weekdays (except where private landowners are doing their own vegetation removal, usually on weekends).</p>	<p><b>NS-1.</b> Noise generating public vegetation management activity shall be prohibited Saturdays, Sundays, and holidays and between the hours of 5 p.m. to 8 a.m. Holidays are defined as those days which are observed by the City of Santa Barbara as official holidays by City employees.</p> <p><b>NS-2.</b> All construction equipment, including trucks, shall be professionally maintained and fitted with standard manufacturers' muffler and silencing devices.</p>	<p>Less than significant</p>
<p>Workers in the vicinity of operating equipment, such as chainsaws and wood chippers, would be subject to noise from this equipment, and due to their close proximity to the equipment, they would be exposed to this relatively high level of noise. Compliance with existing workplace noise protection requirements, including use of ear mufflers or plugs, would ensure that this impact would be less than significant.</p>	<p><b>NS-3.</b> All workers using or within close proximity to operating chain saws, chippers and other noisy equipment shall utilize noise protection (ear plugs) consistent with Cal OSHA Federal OSHA requirements and other legal workplace requirements.</p>	<p>Less than significant</p>
<i>Traffic</i>		
<p>There will be vehicle trips associated with crews conducting fuel reduction throughout the High Fire Hazard Area over time. This volume of traffic will be negligible, and the traffic will be sporadic and dispersed throughout the project area. No effect is anticipated on the circulation or level of service in the City's existing street network.</p>	<p>No mitigation required.</p>	<p>Less than significant</p>
<i>Recreation</i>		
<p>The project proposes vegetation management in public areas including parks. This vegetation removal activity could temporarily disturb recreation activities in the areas where vegetation removal is being conducted. The impact would be temporary, lasting only as long as the vegetation removal and disposal is being conducted.</p>	<p><b>REC-1.</b> The Fire Department shall consult with Parks and Recreation staff to ensure that recreational opportunities are not precluded simultaneously in several parks in the same portion of the City.</p>	<p>Less than significant</p>

**TABLE ES-1**

DESCRIPTION OF IMPACT BY ISSUE AREA	MITIGATION MEASURES	RESIDUAL IMPACT LEVEL
<b>CLASS III IMPACTS: LESS THAN SIGNIFICANT (Continued)</b>		
<i>Hydrology and Flooding</i>		
The proposed project could remove vegetation and conduct controlled burns in areas where steep slopes occur and this could result in minor increases in flows from these areas because vegetation in these areas would no longer absorb a portion of the runoff in the area. Due to the limited nature of the project proposal to conduct small area prescribed burns (one acre maximum), and the limited number of these prescribed burns, the increase in runoff would be small and would be less than significant.	No mitigation required	Less than significant
<b>CLASS IV IMPACTS: BENEFICIAL IMPACTS</b>		
<i>Public Services</i>		
Indirect impacts on schools and water supply facilities would likely be beneficial because the reduced risk of wildland fires would allow for continued operation of the schools which could have been subject to wildland fire risk and less water would be required to address any reduced risk of wildland fires.	No mitigation required	Not applicable
<i>Erosion and Sedimentation</i>		
To the extent that the proposed modified defensible space requirements and vegetation management actions reduce the severity of wildland fires on the South Coast, the proposed Plan could reduce severe post-fire erosion.	No mitigation required	Not applicable
<i>Biological Resources</i>		
The removal of exotic invasive plant species during the initial vegetation management actions, and during post-treatment maintenance would result in a beneficial impact to the overall condition of native habitats in the High Fire Hazard Area because it would reduce the seed source and hinder further expansion of these species which displace native habitats.	No mitigation required	Not applicable

# I.0 INTRODUCTION

---

## I.1 BACKGROUND INFORMATION

The City of Santa Barbara Fire Department (“Department”) is proposing to implement a comprehensive Wildland Fire Plan (referred to as the “Plan”) to protect lives, property, and natural resources in the City of Santa Barbara (City) threatened by wildland fire. The Fire Chief is mandated and has the authority to identify areas within the City jurisdiction that are vulnerable to wildfire and to apply appropriate codes and strategies within these areas to protect life, property, and natural resources. The proposed Plan identifies a High Fire Hazard Area and develops policies and actions focused on reducing the impact of wildfire in the community.

Wildfire has always been a part of the Santa Barbara community due to the proximity or presence of steep, densely vegetated mountains where chaparral vegetation is adapted to, and reliant upon, periodic wildfires. Current and past fire suppression policies have resulted in large accumulations of vegetation on hillsides both within and above the City. When wildland fires occur, the severity of the fire is greater than under natural conditions with more frequent, smaller, and less intense fires. As wildland vegetation continues to accumulate and land development expands into the urban-wildlife interface, there is an increased potential for loss of life, structures and natural resources. Fire history on the South Coast indicates that a major wildland fire occurs, on average, every ten years. The significant wildfires that affected the City in the last 50 years include the 1964 Coyote Fire (67,000 acres, 106 homes destroyed, one death); the 1971 Romero Canyon Fire (14,500 acres, four homes destroyed, four deaths); the 1977 Sycamore Canyon Fire (805 acres, 195 homes destroyed) and the 1990 Painted Cave Fire (4,900 acres, 479 homes destroyed, one death)

Since the Department’s inception, it has been actively working to reduce the impact of wildland fires. The most familiar wildland fire measure by the Department is the requirement for homeowners in the High Fire Hazard Area of the City to reduce flammable vegetation surrounding structures. The Department has the authority to enforce this requirement for “defensible space,” and can remove unabated fire hazards on private property.

In recent years, the Department’s focus on wildland fires has shifted from suppression and prevention of wildfires, to include reducing the hazards that contribute to wildland fires, increasing public education, and improving evacuation plans. Since the 1977 Sycamore Canyon Fire, the City has implemented many wildland fire prevention and mitigation measures. Despite these efforts, the community is still vulnerable to catastrophic loss that results from wildland fire. The recent wildfires throughout southern California in October 2003 dramatically illustrated the dangers faced by the community from wildfires.

## I.2 SCOPE AND OBJECTIVES OF THE PLAN

Because of the potential for significant loss to life, property, and natural resources from wildland fire, the City has placed a high priority on developing a comprehensive wildland fire program. The City’s Fire Master Plan originated in the Seismic Safety-Safety Element of the City’s General Plan,



adopted in 1979. The City Master Fire Plan was updated in 1986. After the 1990 Painted Cave Fire, the Department recognized the 1986 Fire Master Plan did not fully develop recommendations to adequately address the City's vulnerability to wildland fires. In 1993, the Department completed a Vegetation Fuels Management Plan (1993 Plan) on City-owned lands. The 1993 Plan identified vegetation management projects on 1,600 acres of undeveloped City park and open space lands. The 1993 Plan was adopted by the City Council and is currently being implemented by the Parks and Water Resource Departments, in coordination with the Department. Much of the vegetation management in the 1993 Plan has been implemented; the program is currently being implemented and prior work is being maintained as funding allows.

In 1997, a Wildland Interface Specialist was hired by the City to update the Fire Master Plan and provide expertise and direction in developing a comprehensive wildland fire program. In 2000/2001, a wildland fire hazard and risk assessment was completed for the City and the surrounding area. The results of the assessment were used to develop the policies and management actions that form the proposed Wildland Fire Plan.

*The objective of the Plan is to establish and implement coordinated management actions on both City-owned and private lands (in cooperation with landowners) to reduce wildland fire hazards and the effects of wildland fires.* The Plan delineates a High Fire hazard Area; presents policies and management actions to reduce wildland fire hazards and impacts; and provides a framework for seeking funds, coordinating efforts with agencies and landowners, and prioritizing work efforts. The Department will be responsible for implementing the management actions in the Plan, in cooperation with other City Departments, other fire-related agencies, individual landowners, and the general public. The Plan includes a range of actions, including public education, inter-agency coordination, vegetation (=fuel) management, evacuation planning, and code enforcement. Many elements of the Plan represent current fire hazard reduction practices by the Department, as well as codes and standards from the Municipal Code and the California Fire Code (as adopted by City Council).

The Department recognizes that implementation of the proposed Plan will not be possible without the support of the people, businesses, and organizations that live and work in high fire hazard areas of the community, as well as state, federal, and local agencies that have jurisdiction in these areas. All members of the community that would be affected by the plan (i.e., stakeholders) must share in the responsibility for protecting themselves and their community. The role of the Department is to identify wildland fire hazards and risks, develop recommended procedures and programs for City and private lands to minimize the threat of wildfire, educate the public on how to prepare and protect themselves from wildfire, enforce existing and new wildland fire codes to protect the public, and develop partnerships and cooperation from the City, homeowner groups, and individual property owners to effectively manage and respond to wildfire threat. The role of stakeholders is to be aware of the hazards and risks that threaten their property and safety, comply with wildland fire codes, formulate wildland fire evacuation plans, support neighborhood preparedness and community groups focused on wildland fire safety, and become part of the solution in mitigating the wildland fire threat.

### **I.3 ENVIRONMENTAL REVIEW AND PUBLIC PARTICIPATION**

The proposed Plan represents a discretionary action subject to the environmental review requirements of the California Environmental Quality Act (CEQA). As such, the Department submitted the Plan to the City's Community Development Department for environmental analysis. The Community Development Department completed a CEQA Environmental Checklist and determined that there was a potential for certain management actions in the Plan to cause significant environmental impacts, and therefore, an Environmental Impact Report (EIR) would be required to evaluate the impacts of the Plan.

The draft Plan was completed in February 2003. A Notice of Preparation (NOP) was issued in April 2003, and public comments on the scope of the EIR were provided at the May 8, 2003 Planning Commission scoping hearing. The City received written comments on the NOP from the following parties: California Department of Fish and Game, Riviera Association of Santa Barbara, and Santa Barbara Urban Creeks Council.

The City Community Development Department prepared this Draft EIR, which will be circulated for public review and comment. The Planning Commission will conduct an environmental hearing on the Draft EIR to receive comments on the document. After the close of the public comment period, the City will complete a Final EIR, taking the public comments into consideration. A Final EIR will be issued and presented to the Planning Commission as part of a public hearing to consider certification of the Final EIR, and a decision on whether to approve the Plan.

### **I.4 SCOPE OF THE ENVIRONMENTAL REVIEW**

The proposed Plan contains various policies and management actions for different geographic areas in the High Fire Hazard Area of the City. These areas include both private property (where vegetation management would occur in cooperation with the affected landowners) and City-owned property. These areas were identified in the Plan because they contain wildland fire hazards that can be effectively reduced. The Department has developed a suite of vegetation management methods that are described in the Plan, to reduce fuel in wildland areas. The Department will apply these methods to selected treatment areas on a case-by-case basis, as appropriate. Before commencing any work, the Department will develop a work plan that identifies the specific areas to be treated and the methods to be used. The Department has prioritized the areas to be treated based on the level of hazard. However, implementation of the vegetation management work is largely dependent upon funding, and in the case of private property, landowner permission. The Department estimates that full implementation of the vegetation management element of the Plan will require 5 to 10 years.

Based on the above information, the "project," or discretionary action, addressed in this EIR is a long-term program that will be implemented in an incremental manner over time, limited to specific properties and utilizing a defined suite of vegetation management tools. Detailed vegetation management work plans for specific areas have not been defined at this time. Specific plans will be developed over time for individual areas as the program is implemented.

Under the CEQA Guidelines, the appropriate environmental document for this type of “project” is a Program EIR. In this type of document, the environmental impacts of a plan or program are evaluated at a more general or programmatic level in order to identify potentially significant impacts or impact types, evaluate broad alternatives, and develop programmatic mitigation measures to can be applied to a wide range of situations. This document represents a Program EIR, as defined in CEQA Guidelines Section 15168. The EIR identifies the different types of environmental impacts that are likely to occur due to the implementation of the Plan in the various treatment areas. In some instances, the environmental impacts of the Plan can be described in detail, particularly for environmental resources that occur at specific geographic locations. However, in most instances, a generic impact is identified in the EIR, and then its magnitude and significance is evaluated over the range of geographic settings in the City’s High Fire Hazard Area.

A primary focus of the EIR is the development or programmatic mitigation measures that can be applied to future site-specific work under the Plan. These measures have been designed to provide a range of actions or procedures that the Department can draw upon when needed to reduce environmental impacts due to the presence of a sensitive environmental resource or due to the nature of the vegetation management action.

As noted above, it is not possible to fully evaluate certain impacts because the nature and extent of the proposed vegetation management actions at a specific work site are not sufficiently defined, and/or information about site-specific resources is lacking. For these situations, the EIR identifies the appropriate subsequent environmental analysis and/or documentation that may be required to ensure consistency with the EIR findings. There are two options for achieving this consistency, as follows:

- **Application of Programmatic Mitigation Measures.** The Department can implement programmatic mitigation measures identified in the EIR by tailoring them to the specific conditions at the work site or associated with the specific management actions to ensure that the measures achieved the desired result in a specific application. This approach requires that the Department staff identifies the need for a mitigation measure, and then modifies the procedures and scope of the programmatic measure to address the specific situation. This process would be accomplished in accordance with the reporting framework of the adopted Mitigation Monitoring and Reporting Plan for the project.
- **Subsequent CEQA Document.** In certain instances, the proposed vegetation management work may occur in sensitive environmental areas where additional investigations are required to define the work and to develop the appropriate site-specific mitigation measures. In this situation, the Department would likely prepare an EIR Addendum that documents the environmental resources and impacts associated with a specific work effort, and presents detailed, site specific mitigation measures. The EIR Addendum would be “tiered” from the Program EIR, utilizing the general background and impact conclusions from this document. In other situations, the vegetation management may vary slightly from what is described in the Wildland Fire Plan relative to the limits of work or methodology. If the differences are minor, then an EIR Addendum would be required to evaluate the impacts and to

demonstrate that the proposed actions are in substantial compliance with the proposed project as described in the EIR.

## **I.5 PERMITS AND APPROVALS**

Implementation of the proposed Plan will require formal adoption of the Plan by the City Council. No land use permit is required.

Most of the work will occur outside the Coastal Zone; only a few City-owned properties in the Coastal Zone are included in the Plan. A Coastal Development Permit (CDP) may be required for the fuel reduction work on these properties, depending upon the magnitude and nature of the vegetation management action.

A grading permit will not be required for the Plan because the proposed fuel reduction work would not involve grading – only vegetation management.

A Burn Permit will be required from the Santa Barbara County Air Pollution Control District for prescribed burning of vegetative debris proposed under the Plan.

Most of the proposed vegetation management would occur outside natural drainages and creeks; as such, no state or federal approval or permits for work in watercourses are required, such as the California Department of Fish and Game (CDFG) Streambed Alteration Agreement and Corps of Engineers 404 permit. However, there are situations when the Department would thin vegetation on creek banks or in the creek bed to abate certain fire hazards, as described in the Plan. The removal or pruning of vegetation in a creek would require a Streambed Alteration Agreement from CDFG pursuant to Fish and Game Code Section 1601.

All work on private property will require landowner permission, and the execution of a Letter of Agreement between the Department and the affected landowner(s).

## 2.0 PROPOSED WILDLAND FIRE PLAN

---

The proposed Wildland Fire Plan (Plan) includes various goals, policies, and actions, which are presented in Chapter 4 of the Plan, and in Appendix C of this Environmental Impact Report (EIR). The goals, policies, and actions represent a compilation of existing and newly proposed policies and actions related to Codes and Standards, Funding, Fire Rehabilitation, Evacuation, Fire Protection, Vegetation Management, and Public Education.

The EIR only addresses new proposed policies and/or actions that could result in impacts to the environment, which include the following categories:

- Modified High Fire Hazard Area and new Fire Hazard Zones (Section 2.1 below)
- Modified defensible space requirements (Section 2.2 below)
- Vegetation management on private lands (Section 2.3 below)
- Community Fuel Treatment Network on private lands (Section 2.4 below)
- Vegetation management on City lands (Section 2.5 below)

The continuation of current fire protection policies and/or actions and their incorporation into the Plan are not subject to environmental review under CEQA.

The proposed Plan also includes several other policies and actions that would not involve any physical impacts to the environment, including public education, interagency coordination, acquisition of funding, data gathering and management, acquisition of fire fighting equipment, and evacuation planning.

### 2.1 PROPOSED MODIFICATIONS TO THE HIGH FIRE HAZARD AREA

#### 2.1.1 Current and Proposed High Fire Hazard Area

After the 1977 Sycamore Canyon Fire, the City of Santa Barbara Fire Department identified areas within City limits vulnerable to wildland fire. These areas were identified based on slope and vegetation and were designated as high fire hazard areas. Municipal codes and ordinances to impose fire and safety requirements in these areas were adopted. The boundaries of the “High Fire Hazard Area” were confirmed in 1992, after the Oakland Hills Fire, in response to Assembly Bill No. 337 (Bates bill) which required local fire agencies to identify areas vulnerable to wildfire. Since 1992, research, technology and an understanding of wildland fire severity and its impact on communities has changed significantly. In 1998, the Department reviewed the existing High Fire Hazard Area and determined that new hazard and risk assessment was needed to fully analyze the City's wildland fire threat.

Primary elements of the proposed Wildland Fire Plan are the expansion of the current High Fire Hazard Area, and the designation of Fire Hazard Zones, as described below.

The High Fire Hazard Area is defined based on three variables: high fuel load (or dense or old vegetation), steep slopes, and adverse weather conditions (e.g., presence of “sundowner winds”). Using new topographic maps and a Geographic Information System (GIS), the Department determined that the current High Fire Hazard Area should be expanded to include new coastal areas with steep hills, dense brush or flammable vegetation, and extensive open space. The additional areas include the open space west of Arroyo Burro and Elings Park, within Las Positas Valley, and portions of the Bel Air neighborhood. The proposed High Fire Hazard Area with the proposed additional areas is shown on Figures 1 and 2.

### **2.1.2 Proposed Fire Hazard Zones**

The Department has also identified Fire Hazard Zones within the larger High Fire Hazard Area which indicate varying levels of wildland fire hazard. Fire Hazard Zones for the Plan were identified by overlaying the following factors with fuel load, slope steepness, and weather conditions using GIS programs: roof type, density of structures, road system, water supply, fire response time, and historic fire starts. Based on this analysis, four Fire Hazard Zones were identified and incorporated into the Plan, as described below and shown on Figure 1.

**Extreme Foothill Zone.** The Extreme Foothill Zone is found along the northern boundary of the City where large expanses of heavy decadent fuels on National Forest lands border the City. Areas include West Mountain Drive, upper Gibraltar Road, Parma Park and area north of the park, Coyote Road, upper San Roque Road, and upper Santa Teresita Drive. It is defined by areas that have a combination of heavy, decadent chaparral and oak forests, steep slopes greater than 30 percent, many slopes with south and southwest aspects; and drainages that are directly aligned to frequent severe, hot dry wind conditions. These combined hazards make this zone vulnerable to extreme fire behavior.

**Foothill Zone.** The Foothill Zone includes the northwest and northeast portions of the City's High Fire Hazard Area. Neighborhoods include El Cielito, Riviera, Lower Riviera, Eucalyptus Hill, Foothill, San Roque area north of Foothill Road, and the area surrounding Stevens Park. The potential fire behavior in this zone is considered high to extreme depending on weather and fuel conditions. This zone is defined as areas within the City where a combination of flammable chaparral, oak forest, riparian vegetation, eucalyptus groves, and landscaped fuels intermix with residential areas to pose a significant fire threat. The eucalyptus groves within this area are extensive, dense, and have significant accumulations of dead fuel that threaten the areas surrounding them. Slopes range from between 20 to 40 percent, and many slopes have southeast, south, and southwest aspects. Canyons within this zone are directly aligned to severe, hot dry wind conditions.

**Coastal Zone.** The Coastal Zone includes the Campanil Hill and Hidden Valley areas, and the area north of Hidden Valley, which is included in the City of Santa Barbara's Sphere of Influence. The potential fire behavior in this zone is considered moderate to high depending on weather conditions. The majority of fuels are moderate and intermixed with residential areas; slopes range from 10 to 35 percent, and aspects in this zone vary. The ocean influence dominates this area for much of the year; however, there are a number of canyons directly aligned to periodic hot dry wind conditions that occur during late summer and fall months. This zone has many pockets of moderate fuel made up

of chaparral, and landscape vegetation. Isolated areas of heavy fuel consisting of eucalyptus and oak vegetation increase the hazard in specific areas within this zone.

**Coastal Interior Zone.** This zone includes portions of the Alta Mesa, mountain areas of the Westside, portions of the East and West Mesa, and the northern part of Elings Park. It also includes areas in the Bel Air Knolls neighborhood. The potential fire behavior in this zone is considered moderate to low. It is defined as areas within the City where the majority of fuel is made up of diverse pockets of vegetation consisting of heavy chaparral, oak forests, coastal sage shrub, landscaped vegetation, agricultural lands, and eucalyptus groves. Slopes in this zone range from 10 to 35 percent and aspects vary considerably. The canyons in this area are dissected. They are not in direct alignment to receive hot dry winds, although these winds are funneled through many of these areas. For the majority of the year this area is greatly affected by the ocean influence; however, when late summer and fall winds arise, the risk in this area is significantly increased.

### **2.1.3 Overview of Fire Protection Strategies in Each Zone**

The Fire Department provides a complete range of fire protection, prevention, and educational services to the City and its residents. The Department is mostly staffed and equipped for structural fire protection. However, in recent years, the Department has put greater emphasis on equipment, training, and staffing in wildland fire protection and prevention because such fires are inevitable and can cause significant damage. In addition, the Department has recognized the need to develop a long-range plan to reduce the catastrophic results of wildland fire.

The first priority of the Department is to protect public lives and maintain the safety of its firefighters. The second priority is to protect structures. The third priority for the Department is to protect natural resources such as soils, water, vegetation, and wildlife. The latter priority presents many challenges, because fire suppression and prevention can conflict with protection of natural resources. The chaparral environment in the City's foothills is adapted to periodic fires as part of the natural ecosystem. However, past fire suppression policies have resulted in large accumulations of flammable vegetation on hillsides. When these areas burn under wildfire conditions, they result in intense fire behavior and increase the potential for resource damage. The Department believes the most efficient way to protect the City residents from wildland fire while also protecting natural resources is to implement a fire plan to reduce accumulations of vegetation, in the most environmentally sensitive manner that will reduce the risk of wildfire.

The Department has developed fire protection strategies for each Fire Hazard Zone based on an assessment of the fire hazard, risk assessment, predicted fire behavior, and firefighting resources used by the Fire Department for wildland fire suppression. A summary of these strategies is presented below:

### Extreme Foothill Zone

The Extreme Foothill Zone has a combination of heavy vegetation, slopes greater than 30 percent with south and southwest aspects, and drainages that are directly aligned to frequent severe, hot dry wind conditions. Because the majority of this zone is outside the Department's 4-minute response time, the potential of an ignition becoming a large scale fire increases during periods of high fire danger. The Department has 7 fire stations, with several 3-person engine companies available to respond to wildland fires 24 hours a day. During the designated Fire Season an initial dispatch to a wildland fire would be 3 fire engines and a Battalion Chief. Additional engines and mutual aid would be available for second and third alarms. Aerial fire suppression resources may be available to the Department depending on state and national wildland fire activity.

Fire behavior in this zone, under high fire danger weather or Sundowner/Santa Ana winds would be extreme. The 1990 Painted cave Fire, the 1977 Sycamore Canyon Fire, and the 1964 Coyote Fire burned under Sundowner wind conditions and produced extreme fire behavior conditions. Because of the potential for extreme fire behavior in this zone, structures must be able to stand alone in a wildfire event. Fuels management, defensible space, non-combustible building construction, water supply, and emergency access for fires become particularly important in this zone. From a fire protection standpoint, this zone is strategically important to the Department because it provides the last line of defense for fire suppression of a fire burning from the National Forest into more highly populated areas of the City.

### Foothill Zone

This zone has a mixture of heavy brush, heavy canopy fuels from oak and eucalyptus trees, decadent riparian fuels, and landscape vegetation. Slopes range from 20 to 40 percent, with many southeast, south, and southwest aspects and canyons directly aligned to severe, hot dry wind conditions. The majority of this zone is within the Fire Department's 4-minute response time. Like the Extreme Foothill Zone, the department has the same number of engines available to respond and would rely heavily on the cooperating fire agencies and aerial fire suppression resources for fire protection support through Mutual Aid Agreements.

Fire behavior in this zone, under high fire danger weather or sundowner/Santa Ana winds, would be high to extreme. The 1977 Sycamore Canyon Fire and the 1964 Coyote Fire burned into this zone under sundowner wind conditions and produced extreme fire behavior conditions, with heavy "spotting" (i.e., spot fires created by flying embers) up to one mile ahead of the main fire front. The heavy canopy cover in this area, especially from eucalyptus trees, increases the amount and size of burning embers that can be carried in down canyon wind conditions, threatening areas well ahead of the fire. In heavy brush fuels within this zone, fire behavior predictions would be the same as the Extreme Foothill Zone predictions.

### Coastal Zone

The Coastal Zone has many diverse pockets of chaparral, oak forests, coastal sage shrub, landscape vegetation, agricultural lands, and eucalyptus groves. Slopes in this zone range from 10 to 35 percent



with varying aspects and many dissecting canyons. These canyons are not in direct alignment to receive hot dry winds, although these winds are funneled through many of these areas. The ocean influence dominates the weather pattern in this zone for most of the year. Still, under down canyon wind conditions, the potential for a catastrophic fire exists. The majority of this zone is within the department's 4-minute response time. Like the other three zones, the department has the same number of engines available to respond and would rely heavily on the cooperating fire agencies and aerial fire suppression resources for fire protection support.

Fire behavior in this zone would be moderate for the majority of the year, due mainly to the ocean influence. Fires in this zone would be mainly slope and fuel driven fires within the pockets of open space that exist in this area. Fires would typically have short burning periods no longer than 1 day. During hot dry wind conditions, winds are funneled through the canyons in this zone, but not with the same intensity as canyons in the foothill high fire hazard zones. Under high fire danger weather or a down canyon wind condition, fire behavior in this zone would be moderate. No history of large fire occurrence has been found in this zone.

### Coastal Interior Zone

The Coastal Interior Zone has a mix of moderate brush, pockets of heavy canopy fuels, and landscape vegetation. Slopes range from 10 to 35 percent with a range of aspects. The ocean influence dominates the weather pattern in this zone for most of the year. Still, under down canyon wind conditions, the potential for a catastrophic fire exists. The majority of this area is within the Department's 4-minute response time. Like the other zones, the department has the same number of engines available to respond and would rely heavily on the cooperating fire agencies and aerial fire suppression resources for fire protection support.

Fire behavior in this zone would be moderate for the majority of the year, due mainly to the ocean influence. Fires in this zone would be mainly slope and fuel driven fires and would typically have short burning periods no longer than 1 day. Under high fire danger weather or a down canyon wind condition, fire behavior in this zone would be high. The 1990 Paint Fire burned within one mile of this zone and stopped only because the down canyon wind pattern changed to an onshore flow.

## **2.2 MODIFIED DEFENSIBLE SPACE REQUIREMENTS**

### **2.2.1 Current and Proposed Defensible Space Requirements**

Under Municipal Code Title 8 (Fire Protection), the Department requires that landowners maintain vegetation (native and ornamental) surrounding existing and new structures in the High Fire Hazard Area to reduce the risk of wildland fire igniting the structures. The zone where vegetation is managed for fire hazard is called “defensible space.” The current defensible space requirements, as presented in the “*High Fire Hazard Area Requirements, Minimum Brush Clearance Standards*,” are as follows:

- Cut and remove hazardous brush, shrubs, and flammable vegetation such as dry grass and weeds within 100 feet of any structure and within 2 inches of the ground.

- Clear brush from streets and driveways both horizontally and vertically along the property.
- Flammable vegetation must be cleared on each side of a street or driveway for a distance of 10 feet and a vertical distance of 13 feet, 6 inches. Vegetation must be cut to within 2 inches of the ground. This applies to public or private driveways and any public or private streets that border the property.
- Remove dead wood, trim the lower branches, and limb all live trees to 6 feet above the ground (or as much as possible with younger, smaller trees), especially trees adjacent to buildings.
- Trim tree limbs back a minimum distance of 10 feet from any chimney opening.
- Remove all dead trees from the property.
- Maintain the roof of all structures free of leaves, needles or other vegetative debris.
- Legally dispose of all cut vegetation, including any debris left from previous tree trimming and brush removal. Cut vegetation may be chipped and spread throughout the property as a ground cover, up to 12 inches in depth, and at least 30 feet from any structure.

Shrubs, hedges, and bushes may be retained throughout the 100 foot defensible space, provided: (1) they are spaced at least 18 feet from other shrubs, bushes or structures; (2) they are maintained free of dead wood and litter and trimmed at least 2 feet up from the ground, or 1/3 of their height, whichever is less; and (3) they do not form a means of rapidly transmitting fire to a structure.

The Department has determined through a hazard and risk assessment that the defensible space surrounding structures needs to be modified to reflect varying levels of fire hazard. Under the proposed Plan, the requirement for reducing vegetation near structures would be revised by modifying the Municipal Ordinance to include the defensible space distances listed in Table 2-1. The new distances would be reduced from the current 100 feet in the Coastal and Coastal Interior Fire Hazard Zones. They would remain the same in the Foothill Zone, but increased in the Extreme Foothill Zone. Additional defensible space distances would apply in all zones if there are slopes greater than 30 percent near a structure.

**TABLE 2-1  
PROPOSED DEFENSIBLE SPACE REQUIREMENTS FOR THE HIGH FIRE  
HAZARD AREA**

High Fire Hazard Zone	Defensible Space Requirement
Coastal Interior Zone	30 to 50 feet *
Coastal Zone	50 to 70 feet *
Foothill Zone	100 feet *
Extreme Foothill Zone	150 feet defensible space*
Note: Within any high fire hazard zone, additional defensible space may be required on slopes greater than 30%. Slopes ranging between 30 to 40% may require 200 feet defensible space. Slopes ranging from 41 to 60% may require 250 to 300 foot defensible space.	

### **2.2.2 Fire Resistant or Fire Safe Landscaping**

The Uniform Fire Code currently requires the use of fire-resistance or fire-safe landscaping for all new development in the High Fire Hazard Area, and encourages homeowners to use this landscaping for defensible space at existing developed lots. The Department recommends certain types of landscaping in the defensible space which is presented in the Department’s “*High Fire Hazard Area Landscaping Design Guidelines*.” Key guidelines for fire-safe landscaping in the defensible space are summarized below.

1. The nature and density of landscaping in the defensible space should be designed for four zones surrounding the structure: Zone 1 - (0-30 feet from structure), Zone 2 - (30 to 50 feet from structure), Zone 3 - (50 to 70 feet from the structure), and Zone 4 - (70 to 100 feet or greater from the structure).
2. All landscape plant species should be fire resistant – that is, native or non-native plants that exhibit several of the following characteristics:
  - Ability to store water in leaves or stems
  - Produces limited dead and fine material
  - Extensive root systems for controlling erosion
  - Plant has high levels of salt or other non-resinous compounds within its tissues that can contribute to fire resistance
  - Ability to withstand drought
  - Plants that are low growing in form
  - Ability to withstand severe pruning
  - Low levels of volatile oils or resins
  - Ability to re-sprout after a fire

3. Undesirable plants should be avoided in the defensible space due to their high flammability and other adverse characteristics. These characteristics can be either physical or chemical. Physical properties would include large amounts of dead material retained within the plant, rough or peeling bark, and the production of profuse amounts of litter. Chemical properties include the presence of volatile substances such as oils, resins, wax, and pitch. Certain native (and non-native) plants are notorious as species containing these volatile substances. Examples of undesirable, fire-prone plants are listed below:

- Chamise - *Adenostoma fasciculatum*
- *Acacia* species
- Red Shank - *Adenostoma sparsifolium*
- Beefwood - *Casuarina* species
- California sagebrush - *Artemisia californica*
- Pampas grass - *Cortadera* species
- Cypress - *Cupressus* species
- Common buckwheat - *Eriogonum fasciculatum*
- Eucalyptus - *Eucalyptus* species
- Ironwood - *Olneya tesota*
- Juniper - *Juniperous* species (except species which grow less than one foot high)
- *Melaleuca* species
- Fountain grass - *Pennisetum* species
- Pine trees - *Pinus* species
- Brazilian and Peruvian pepper trees (within 50 feet of structure)
- Palm trees

4. The following guidelines should be used in establishing plant density and height in the defensible space:

- **ZONE 1. 0 – 30 feet.** This area is closest to a structure. It provides the best protection against the high radiant heat that result during a wildfire. Plants should be low growing, irrigated plants. Focus should be on ground covers not more than 12 inches in height or succulents. Use non-flammable materials for paths, patios, and mulch. If trees are planted in this zone, their crowns at maturity should be 15 feet from structures.
- **ZONE 2. 30 – 50 feet.** Maintain a reasonably open character in this area. Plant low growing ground covers and succulents resistant to fire. Shrubs up to 3 feet can be planted but should have at least 18 feet spacing between other shrubs or other trees. Shrubs can be planted in clusters not more than 10 feet in diameter, but should have at least 18 feet between clusters. Do not plant shrubs underneath canopy of trees. Trees should be spaced at least 30 feet apart to prevent crowns from touching once fully grown. Do not plant shrubs beneath the canopy of trees if the shrubs will form a vertical fuel ladder into the canopy.
- **ZONE 3. 50 – 70 feet.** This area should have native and Mediterranean plantings that require irrigation and should not be higher than 4 to 6 feet. Highly flammable natives

should be avoided. Shrubs should be spaced at least 18 feet away from each other. Shrubs can be planted in clusters not more than 10 feet in diameter, but should have at least 18 feet between clusters. Trees should be spaced at least 30 feet apart to prevent crowns from touching once fully grown.

- **ZONE 4. 70 – 100 feet or greater.** This zone is furthest from the structure. Plantings once established need no irrigation. There is no limit to height. Shrubs planted in this area should have 18 feet spacing or be planted in clusters with at least 18 feet spacing. Trees can be planted in groups or with individual spacing at least 30 feet from other trees.

The Department will not modify the above guidelines for fire-safe landscaping. However, as part of the proposed Wildland Fire Plan, the Department will revise the “*High Fire Hazard Area Landscaping Design Guidelines*” to include new tree planting guidelines under power lines, recently developed by Southern California Edison (SCE). The new requirements apply to all private and public lands where SCE has a power line easement, and include the following: (1) the height of trees within 50 feet of the edge of the outermost conductor must be 40 feet or less; and (2) the height of trees under the power line must be 25 feet or less.

## **2.3 VEGETATION MANAGEMENT UNITS – PRIVATE LANDS**

### **2.3.1 Vegetation Management Units**

The proposed Plan identifies areas within the High Fire Hazard Area where fire hazards currently occur outside of the defensible spaces created around structures. These areas are identified as “Vegetation Management Units.” Hazards include the potential for increased fire behavior, and pose a challenge for fire protection because of heavy, flammable vegetation, lack of access due to topography and roads, and/or firefighter exposure. The Department has proposed certain management actions for each unit, such as public education, fuel hazard reduction projects, and other methods to reduce fire hazard and risk.

The proposed management actions would be conducted by the Department in cooperation with private landowners. Funding for the work would be primarily from grants and from private landowners. Work at individual management units would proceed in accordance with a priority order, pending available funds and participation by affected landowners. The Department anticipates that completion of the proposed management actions at all the units would require 5 to 10 years.

The management units primarily include private property. Hence, the proposed work will require permission and cooperation from the affected landowners. The proposed vegetation management is separate from the defensible space requirements in the High Fire Hazard Area, which is required by ordinance and is the responsibility of the landowner. The Department has authority to inspect and enforce the defensible space requirements on private property. In addition, the Department can require additional fuel reduction on private property if a fire hazard has been identified.

At this time, the Department has not developed specific management actions for all the units. Because each Vegetation Management Unit is unique, specific actions will be developed in the future for each unit based on community involvement, the type of vegetation, risk factors, and available funding. Each unit would be considered a neighborhood or community project.

The Department has recently completed a fuel hazard reduction project in the foothills near Westmont College called the “Circle Drive/Las Barrancas” unit in cooperation with private landowners. This unit is included in the proposed Plan. The project was conducted after the Department completed a public environmental review process, which included preparation of a Negative Declaration. The project represents an example of the types of vegetation management approach and methods that would be used at other vegetation management units identified in the Plan.

The proposed Vegetation Management Units are listed below in Table 2-2 and shown on Figure 3. The locations of the units relative to parcels boundaries are shown on Figures 4a-d. There are four units in the coastal Fire Hazard Zones, and 20 in the foothill Fire Hazard Zones for a total of 24 units. They range in area from 2.4 acre (Fire Station 7 unit) to 217 acres (Las Positas Road unit), encompassing about 700 acres. The priority order for implementation is also shown in Table 2-2. The first units to be addressed, pending funding, are in the foothills: Las Canoas, Upper Coyote Road, and Circle Drive/Las Barrancas. As noted above, work in the latter unit was completed in 2001-2002.

Two vegetation management units, Stevens Park and Honda Valley, were previously identified in the 1993 Vegetative Fuels Management Plan, which only addressed vegetation management on City property. The units have been included in the Plan and modified to include private property adjacent to City property to reduce the fire hazard.

### **2.3.2 Vegetation Management Actions**

#### **Overview**

The Department will prepare specific work plans for each unit prior to conducting any vegetation management actions. The work will proceed with the landowner’s permission specified in a Letter of Understanding between the Department and property owner. In some instances, the landowner may conduct portions of the work themselves or by retaining commercial services. The Department will only conduct work on private property when the landowner has demonstrated compliance with the Department’s defensible space requirements.

**TABLE 2-2  
SUMMARY OF VEGETATION MANAGEMENT UNITS (PRIVATE LANDS)\***

	Name	Acreage	Priority**
<b><i>Coastal Units</i></b>			
1	Flora Vista	40.2	23
2	Honda Valley	82.7	21
3	Las Positas Road	217.1	22
4	Loma Alta	42.0	24
<i>Subtotal=</i>		382.0	
<b><i>Foothill Units</i></b>			
1	Alston Place	39.1	11
2	Alturas Del Sol	18.2	19
3	Camino Viejo	23.8	17
4	Circle Drive/Las Barrancas	47.4	3
5	Cima Linda Lane	15.7	18
6	Cleveland School Area	7.9	13
7	Conejo Road	86.1	6
8	Coyote Circle	10.5	5
9	Coyote Road	12.0	4
10	Eucalyptus Hill Drive	63.1	10
11	Fire Station 7	2.4	7
12	Garcia/Ferrelo Canyon	5.5	20
13	Hillcrest Road	66.9	9
14	Jimeno/Garcia Canyon	63.7	14
15	Las Canoas Road	52.8	1
16	Mountain/Las Tunas	43.4	16
17	Owens Road	25.2	12
18	San Roque Creek	82.4	8
19	Stevens Park Area	15.4	15
20	Upper Coyote Road	20.9	2
<i>Subtotal=</i>		702.4	
<b>Total=</b>		<b>1,084.4</b>	

\* Locations are shown on Figures 3, 4a-d, and 7a-c.\*\* The priority order may change over time as new information is gathered about fire hazards, or due to factors related to community involvement and funding.

The overall objective for vegetation management is to reduce the amount of flammable vegetation within targeted portions of the management units by approximately 33 to 50 percent. Vegetation management will occur outside the landowner's defensible space areas. It will be focused on the following actions:

- General thinning or removal of flammable vegetation that poses a fire hazard (i.e., areas with dense and continuous brush; dense understory of flammable vegetation)

- Thinning, pruning and limbing of vegetation to remove “fire ladders” (i.e., vertical expanses of vegetation that extend from the ground to the crowns of trees)
- Removing lower limbs of oak trees, particularly dead or weak branches (“limbing up”)
- Pruning out dead material on trees

In dense eucalyptus groves, trees would be thinned to achieve a target density of 6 to 12 trees per 1,000 square feet (=261 to 522 trees per acre). Eucalyptus trees that are left in place will be limbed up 8 to 10 feet from the ground. Leaf and ground litter will be retained in the area for soil protection.

Roadways within the vegetation management areas will have vegetation thinned and removed to meet Fire Department requirements for flammable vegetation removal and thinning within 10 feet from the edge of public roadways and 13 feet, 6 inches vertically.

### **Fuel Reduction Methods**

Vegetation management would be accomplished using one or more approved methods of vegetation management, depending on slopes, direction of wind exposures, vegetation types, and access. Four vegetation management methods will be utilized: (1) hand cutting and chipping of vegetation, (2) hand cutting and multi-cutting of vegetation, (3) hand cutting and prescribed burning using either pile burning or broadcast burning of vegetation, and (4) prescribed broadcast burning of grasslands. Table 2-3 outlines specific vegetation management methods that will be used in each vegetation management unit. A description of each method is provided below.

- **Hand Cutting and Chipping.** This method involves cutting vegetation using hand tools (McLeod’s, Pulaski’s, or shovels), chainsaws, weed whips, and mowers. Cut vegetation will then be chipped on site and chips will be spread back on the work area (where physically feasible) and will be spread no greater than 12 inches in depth. No chipped material will be placed into any creek banks or beds. The chipper will be moved around as work occurs. Actual placement of the chipper will depend on the ability to minimize the distance vegetation must be hauled to the chipper. Refueling of the chipper will occur outside of riparian areas or any sensitive habitat. The chipper will not be stored or maintained within 50 feet of a stream or riparian area. Using this vegetation management method would result in minimal ground disturbance since the root structure of vegetation will be left in place and chips generated from vegetation reduction will be placed back on site where physically feasible.
- **Hand Cutting and “Multi-Cutting.”** This method involves cutting vegetation (using hand tools, chainsaws, weed whips, and mowers) as described above. However, instead of using a chipper, the cut vegetation is reduced in size by cutting stems into lengths no longer than 6 inches long. The multi-cut vegetation is then left on the ground within the work area with a maximum depth of 4 inches. Minimal ground disturbance would occur using this method since the root structure of vegetation will be left in place and biomass generated from vegetation reduction will be placed back on site.



- **Hand Cutting and Prescribed Burning of Vegetative Debris.** Under this method, vegetation will be hand cut (as described above) and then the cut vegetation is reduced by prescribed burning. There are two methods of burning. In the first technique, pile burning, cut vegetation will be stacked into piles at the work site. The vegetation in the piles is allowed to dry and then piles are burned. Piles will range in size from 10 x 10 x 10 feet to 12 x 12 x 12 feet. The second prescribed burn technique is called broadcast burning. It involves cut vegetation being broadcast on the ground, allowed to dry and then the area is ignited in small patches, but no more than one acre in size. Prescribed burning would be conducted under safe burning conditions outside the Department's designated fire season. The fire season varies from year to year based on weather and fuel conditions. It is declared by the Forest Service and County of Santa Barbara Fire Department, and is typically June through October. Prescribed burning can only occur on a California Air Resources Board designated burn day when weather conditions are suitable. In addition, a "pile burn plan" must be prepared by the Department staff that must be approved by the Fire Chief and the Santa Barbara County Air Pollution Control District. A pile burn plan will outline weather, topography and fuel within the work area, the prescribed burn objectives, the required fire organization and resources needed to control the fire, and the weather parameters under which the burn can be conducted safely and with minimal smoke disturbance. Prescribed burning of cut vegetation would result in minimal ground disturbance. Hand tools would be used to clear a shallow trench or line no more than 2 inches in depth around each pile, group of piles, or broadcast burn area to confine the fire and catch any burned materials that may roll downhill during burning.
- **Prescribed Burning of Grasslands.** This method is broadcast burning areas where dry grass is left standing and then ignited over a small area not more than one acre in size. The precautions for prescribed burning noted above would apply to this method too.

Hand-cutting, chipping, and multi-cutting will typically involve a 6 to 8 person trained crew, typically from the California Conservation Corps or a commercial company retained by the Department. Work would occur during weekdays during regular work hours (8 AM to 5 PM), unless otherwise determined in consultation with the affected landowners. A Department representative would supervise the field crews. The crew would typically travel to the site in vans or trucks, and park on public roads or in owner-approved spaces on private property. For most work, the crew would bring a chipper which would operate on an intermittent basis during the work period. The crew may use loud equipment, such as chain saws, mowers, and weed whips. Conducting a prescribed burn would involve a larger crew, including Department fire fighting staff and equipment.

All vegetation management work will occur during the period August 1st through April 1st. Prescribed burning would only occur outside the designated fire season, which varies from year to year, but is typically June through October. Hence, prescribed burns would typically occur in the period November through May.

**TABLE 2-3  
SUMMARY OF VEGETATION MANAGEMENT METHODS**

Vegetation Management Unit (in priority order) [See Figures 3, 4a-d, and 7a-c]	Proposed Vegetation Management Method			
	Hand Cutting & Chipping	Hand Cutting & Multi-cutting	Hand Cutting & Prescribed Burning	Prescribed Burning
1. Las Canoas Road	x	x	x	x
2. Upper Coyote Road	x	x	x	x
3. Circle Drive/Las Barrancas	x	x	x	
4. Coyote Road	x	x	x	
5. Coyote Circle	x	x	x	
6. Conejo Road	x	x	x	
7. Fire Station 7	x	x	x	x
8. San Roque Creek	x	x	x	
9. Hillcrest Road	x	x		
10. Eucalyptus Hills Road	x	x		
11. Alston Place	x	x		
12. Owens Road	x			
13. Cleveland School area	x			
14. Jimeno/Garcia Road	x	x		
15. Stevens Park area	x	x	x	x
16. Mountain/Las Tunas	x			
17. Camino Viejo	x	x		
18. Cima Linda	x	x		
19. Alturas Del Sol	x	x		
20. Garcia/Ferrello Canyon	x	x		
21. Honda Valley	x			
22. Las Positas Road	x			
23. Flora Vista	x			
24. Loma Alta	x			

At this time, the Department has not prepared specific plans for the vegetation management units other than for Circle Drive/Las Barrancas (which was completed in 2001). However, the estimated acreage of each unit to be considered for vegetation management is shown in Table 2-4, as well as the predominant vegetation types to be treated. In general, the management efforts will occur in open space land (especially steep slopes) that occurs amongst developed residential areas. These areas generally have steep slopes and contain chaparral, coastal sage scrub, oak woodland, and eucalyptus woodlands. About 277 acres of the total 1,084 acres in the management units could be included in the vegetation management efforts over time. This estimate is considered conservative – that is, the actual amount to be treated would likely be less once a detailed site inspection by the Department’s Wildland Fire Specialist has been completed.

**TABLE 2-4  
POTENTIAL TREATMENT ACREAGE IN THE VEGETATION MANAGEMENT UNITS**

Units (Figures 3, 4a-d, 7a-d)	Name	Total Acreage	Percent of Total Unit Area to be Treated	Acres of Potential Treatment	Predominant Habitats in Areas to be Treated*
Coastal Units					
1	Flora Vista	40.2	10	4.0	OW
2	Honda Valley	82.7	35	28.9	OW/CSS/EG
3	Las Positas Road	217.1	5	10.9	CSS/OW
4	Loma Alta	42	15	6.3	OW
<i>Subtotal=</i>		382		50.1	
Foothill Units					
1	Alston Place	39.1	80	31.3	OW/CSS
2	Alturas Del Sol	18.2	65	11.8	CSS/OW
3	Camino Viejo	23.8	35	8.3	EG
4	Circle Drive/Las Barrancas	47.4	10	4.7	CH/OW
5	Cima Linda Lane	15.7	10	1.6	OR/OW
6	Cleveland School Area	7.9	15	1.2	EG
7	Conejo Road	86.1	10	8.6	OW/OR
8	Coyote Circle	10.5	10	1.1	CH/OW
9	Coyote Road	12	25	3.0	OW/OR
10	Eucalyptus Hill Drive	63.1	40	25.2	EG/OW
11	Fire Station 7	2.4	50	1.2	OW
12	Garcia/Ferrelo Canyon	5.5	40	2.2	OW/OR
13	Hillcrest Road	66.9	15	10.0	OW/OR
14	Jimeno/Garcia Canyon	63.7	45	28.7	CSS/OW
15	Las Canoas Road	52.8	35	18.5	OW/CSS
16	Mountain/Las Tunas	43.4	20	8.7	OF
17	Owens Road	25.2	15	3.8	OR/CSS/OW
18	San Roque Creek	82.4	60	49.4	OW/CSS
19	Stevens Park Area	15.4	30	4.6	OR/OW
20	Upper Coyote Road	20.9	15	3.1	CH/OW
<i>Subtotal=</i>		702.4		227.1	
Total=		1,084.40		277.2	

\*EG = eucalyptus grove; CH = chaparral; CSS = coastal sage scrub; OF = oak forest; OW = oak woodland; OR = ornamentals

## **Post-Treatment Monitoring**

Each work plan will include a post-treatment monitoring plan. The Department and/or landowners will conduct the monitoring for a period specified in the work plan, which would typically be about 5 years. Monitoring will include visual inspections of the work areas every 1 or 2 years to determine the nature and rate of vegetation growth after the treatment. Observations will be recorded and photographs will be taken. For most units, the Department expects that vegetation thinning and reduction will be needed about 5 years after the initial treatment.

## **Post-Treatment Maintenance**

The responsibility for maintaining the vegetation in the original work area in a non-hazardous condition, or for conducting future vegetation management may reside with the Department or the landowner, depending upon the terms of the Letter of Understanding between the Department and the landowner. Future vegetation management by the Department will depend on available funding. Individual Letters of Agreement will specify if there are any penalties to either party for failure to conduct the agreed-upon post-treatment vegetation management. Maintenance of the vegetation management areas will involve: (1) selective hand cutting of hazardous vegetation that has re-established; and (2) selective weed removal of invasive or exotic invasive plants and grass vegetation. To the extent feasible based on funding and landowner cooperation, the Department and/or landowners will conduct vegetation maintenance on an as-needed basis to keep the treated areas in the desired condition for five years. After five years, the Department will typically return to the vegetation management area for an inspection of the vegetation conditions. If additional vegetation management is required, the Department will re-initiate a vegetation management project at the site, entering into another Letter of Understanding between the City and property owners

The primary maintenance activity will be selective thinning of regenerating plants which would be accomplished with the use of hand tools. The targeted vegetation would be re-sprouts of previously cut vegetation and young tree sprouts, particularly eucalyptus trees that are aggressively growing since the treatment and that can cause a future fire hazard. Many of these plants can be removed readily in the spring when the soils are moist and pliable. The amount of vegetation to be hand removed is expected to be minor and would not require chipping.

In addition, the Department will utilize herbicides to selectively remove invasive exotic plants that have colonized the treated areas. Invasive exotic plants are defined in the Plan as non-native species that readily invade disturbed areas within native habitat areas, exhibit high rates of growth, and displace or otherwise adversely affect native vegetation due to their rapid and aggressive growth habits. A preliminary list of such species is presented below in Table 2-5. This list will be periodically updated over time by the Department as more information is collected during the implementation of the Plan. The removal of such species will protect and possibly enhance native habitats in the High Fire Hazard Area. Native species are generally more adaptable to fire, and many are fire resistant.

**TABLE 2-5  
INVASIVE EXOTIC PLANTS TO BE REMOVED UNDER THE PROPOSED PLAN**

Common Name	Scientific Name	Annual or Perennial
Giant reed	<i>Arundo donax</i>	P
Wild oats	<i>Avena sp.</i>	A
Beggar ticks	<i>Bidens pilosa</i>	P
Black mustard	<i>Brassica nigra</i>	A
Ripgut brome	<i>Bromus diandrus</i>	A
Soft chess	<i>Bromus mollis</i>	A
Red brome	<i>Bromus rubens</i>	A
Ice plant	<i>Carpobrotus edulis</i>	P
Pineapple weed	<i>Chamomilla suaveolens</i>	A
Poison hemlock	<i>Conium maculaatum</i>	P
Horseweed	<i>Conyza sp.</i>	A
Pampas grass	<i>Cortaderia ssp.</i>	P
Eucalyptus*	<i>Eucalyptus globules</i> and others	P
Fennel	<i>Foeniculum vulgare</i>	P
English ivy	<i>Hedera helix</i>	P
Mustard	<i>Hirschfeldia incana</i>	A
Smilo grass	<i>Piptatherum miliaceum</i>	P
Periwinkle	<i>Vinca major</i>	P
Ironweed	<i>Ageratina adenophora</i>	P
Prickly lettuce	<i>Lactuca serriola</i>	A
Myoporum	<i>Myoporum laetum</i>	P
Tree tobacco	<i>Nicotiana glauca</i>	P
Oxalis	<i>Oxalis pes-caprae</i>	A
Radish	<i>Raphanus ssp.</i>	A
Castor bean	<i>Ricinus communis</i>	P
German ivy	<i>Senecio mikanioides</i>	P
Milk thistle	<i>Silybum marianum</i>	A
Periwinkle	<i>Vinca major</i>	P

\*In most cases, eucalyptus will be thinned, not entirely removed. Eradication would only occur where new groves are developing that represent potential future fire hazard.

The Department will follow the herbicide selection, application, safety precautions, and record keeping in the City’s Integrated Pest Management Plan (IPM) which was adopted by the City Council on January 27, 2004. The initial step in following the IPM is to determine if there are feasible and effective methods to remove the invasive exotic plants without the use of herbicides. For example, manual weed removal is often very effective when the weed infestation is light, or when annual plants can be removed prior to seed maturation. In contrast, herbicide treatment is most effective when there are widespread infestations with a high density of plants, or when it is not feasible to remove roots of woody plants or perennials.

In a typical situation, a trained Department representative would use Roundup™ with a surfactant to eradicate individual target plants or clumps of plants. The application method will vary with invasive exotic plant species and stage of plant growth. Foliar spray will be used for young, actively growing

herbs and woody plants that are 5 feet or less in height. A narrow spray will be applied to leaves using a backpack spraying unit. Care will be taken to avoid overspraying or spraying non-targeted plants. The Department representative will carefully mark plants prior to spraying to avoid accidentally spraying non-targeted plants during the procedure. For larger plants, particularly giant reed, pampas grass, castor bean, the stems will be cut at 6 inches from the ground surface, and then herbicide will be applied to the cut stem within 5 minutes using a spray bottle. The herbicide will be taken into the root system and kill the plant, avoiding the broadcast spraying of herbicides. The timing of the herbicide application will vary based on site specific needs at each vegetation management unit, but would generally occur in the midst of the growing season – April through July. Herbicides will only be applied to target plants in a controlled and selective manner.

The Department will utilize the following standard precautions and environmental protection measures during herbicide applications:

- Only trained personnel shall participate, and only in accordance with the City's IPM
- Targeted plants shall be marked prior to spraying
- No broadcast spraying shall occur when there are winds of 5 mph or greater
- No herbicides shall be applied if there is dew on the leaves, or there is a forecast for heavy fog or rain in 48 hours

Prior to hand cutting and herbicide treatment, the District will remove mature seed heads from invasive exotics, to the extent feasible, to prevent the spread of viable seeds from a treated plant. The seed heads will be placed in plastic bags and removed off site.

Specific weed removal methods, including both manual methods and herbicide treatment, for individual weed species are listed below. Many of these methods have been used by the Department on prior weed removal efforts.

#### **Mustard and Radish (*Brassica* sp. and *Raphanus* sp) and Other Annual Weeds**

- Species Characteristics: Common weed in all areas. Annual, erect plants with abundant seed production.
- Eradication Methods and Schedule: Timed mowing (weed whipping) just before seed matures in summer or fall.

#### **Pampas Grass (*Cortaderia* sp.)**

- Species Characteristics: Large perennial bunchgrass imported from South America. Abundant seed producer and aggressive invader of disturbed ground. Seed persists at least six years.
- Eradication Methods and Schedule: Mature plants - cut and bag seed heads before seed matures (usually in August) and remove from site. Manually remove plant and all roots (root system is shallow). Seedlings - hand pull within one year before plants produce seed.

#### **Tree Tobacco (*Nicotiana glauca*)**

- Species Characteristics: Perennial erect shrub to 15 feet tall, abundant seed producer.
- Eradication Methods and Schedule: Mature plants - bag seed heads for removal. Cut stems within one foot of ground and hand spray wound immediately with 100% Roundup™ and brightly

colored dye. For best results, cut and apply the Roundup™ from mid-July to fall when plant is translocating nutrients to roots. Seedlings - hand pull as soon as recognizable.

### **Castor Bean (*Ricinus communis*)**

- Species Characteristics: Perennial, erect shrub to 15 feet tall. Heavy seed producer - seed persists for at least two years.
- Eradication Methods and Schedule: Dig up by hand. In large areas, apply herbicide before seed is viable between mid July and September. Spray foliage with 2% Roundup™ (good coverage will increase effectiveness) or cut stems for removal off site and immediately treat stumps with 15% Roundup™. Check area next spring for seedlings. Seedlings - hand pull as soon as recognizable.

### **Eucalyptus**

- Species characteristics: Aggressive sprouter.. Abundant seed producer - seed persists at least two years.
- Eradication Methods and Schedule: Seedlings - hand pull if small. If larger than one-half inch in diameter, cut at base and treat stump immediately with 100% Roundup™. Leave no green branches on cut stumps.

### **Fennel (*Foeniculum vulgare*)**

- Species Characteristics: Perennial, erect herb with large below ground structure. Dies back to ground annually. Abundant seed producer - seed persists at least two years.
- Eradication Methods and Schedule: Mature plants - If seed is not ripe, cut stem near base and immediately spray stumps with 15 percent Roundup™. If seed is mature, cut stems, bag seed and remove from site. Treat stump with Roundup™ as described above. Wait 6 weeks for re growth and spray with three percent Roundup™. May require multiple treatments. Seedlings - hand pull as soon as recognizable.

### **German Ivy (*Senecio mikanioides*)**

- Species Characteristics: Perennial, prostrate or climbing vine. Ivy-shaped leaf with yellow daisy-like flower. Aggressive grower - can smother trees. Abundant seed producer - seed persists at least two years.
- Eradication Methods and Schedule: Treat when plants are flowering, typically from February into spring. Hand pull German ivy vines from native trees or completely 'cut vines growing up native trees from rooted portions. Spray leaves with a 2% solution of Roundup Pro™ (or 1.5% solution of Rodeo™), 0.5% surfactant by volume. Spot spray any ivy entangled with blackberry. Seedlings - hand pull as soon as recognizable.

### **Giant Reed (*Arundo donax*)**

- Species Characteristics: Perennial giant grass forming clumps to 20 feet in height. Very limited seed production. Primary means of spread is by uprooted rhizomes taking root in new locations.
- Eradication Methods and Schedule: During spring and early summer cut steins to 6 inches in height, immediately treat stumps with 30% Roundup™ (Rodeo™ near creek) and remove stems from site. Best results with early spring cutting/spraying. Check for re-growth from rhizomes in 8 -12 weeks. Cut re-growth when two feet tall or taller and immediately treat stumps with 30%. If re-growth occurs again, then wait until following spring to cut and treat.

Eradication Restrictions: First cutting must occur after April 1st and second cutting must occur before August 1st.

### **Ice Plant (*Carpobrotus edulis*)**

- Species Description: Perennial prostrate succulent growing in dense mats. Aggressive invader which excludes all other species. Abundant seeder - seed persists at least two years.
- Eradication Methods and Schedule: Clumps - spot spray with 3% solution Roundup™ in spring and summer (to early fall) months. Wait four weeks and spray any portions of clump still alive. Wait four weeks and remove dead thatch and top two inches to seed-laden soil, or leave thatch in place. Seedlings - hand pull as soon as recognizable.

### **Environmental Best Management Practices**

The Department has identified various Best Management Practices (BMPs) to reduce environmental impacts of the vegetation management actions, which are listed below. The application of the BMPs would be specified in the individual work plans for the vegetation management units. Additional environmental protection measures have been developed as a result of the environment impact analyses, and are presented as mitigation measures in Section 3.

- A. To the extent feasible, the vegetation management will preferentially remove exotic plants that pose a fire hazard, and generally remove exotic plants in the work area as the opportunity arises.
- B. When thinning stands of flammable brush, a mosaic pattern of thinning will be established to maintain cover and connections for wildlife, and to reduce post-thinning erosion.
- C. No eucalyptus chips or debris will be placed within oak forests, coastal sage scrub, riparian corridors or banks of riparian corridors, or other areas dominated by native plants.
- D. Large eucalyptus branches greater than 8 inches in diameter may be left on site provided they are placed outside the drip line of trees left on site, do not result in a heavy accumulation of logs on site, will not roll down slopes into drainages, and they do not pose a safety or fire hazard.
- E. Vegetation management work shall be completed outside of the defined nesting season for birds (i.e. before April 1 and after July 30). If vegetation management work must occur within the project areas during the breeding season (April 1 to July 30), a site survey shall be conducted by a qualified wildlife biologist to determine any presence of nesting birds. Vegetation management activities shall not occur within 200 feet of active nests located during this survey.
- F. Within the vegetation management areas, no entry shall be allowed into streambeds. Brush removal shall be limited to the removal of dead brush that is easily accessible and the removal of exotic pest plants within a 15-foot buffer along the top of banks, as long as the work does not cause damage to the bank structure. No placement of cut vegetation shall occur within a 15-foot buffer along the top of banks. The top of bank shall be defined by the first bank out from the present, active stream channel (denoted by an incised bank and cobble bed). The 15-foot buffer shall be measured out from the top of bank, marked in the field by an approved biologist and



the Department project manager prior to any work occurring in drainage areas. [This measure does not apply to vegetation management specifically designed to reduce fire hazards in creeks].

- G. To maintain adequate regeneration rates of oak trees within vegetation management areas the following procedures will be followed in oak woodlands: (1) no live oak trees shall be removed; (2) oak saplings shall be protected from damage or cutting during the work; (3) as much as possible, other healthy native understory components such as toyon, lemonade berry and currant shall be retained within oak forests, as long as they do not create fire ladders; (4) lower oak branches (to six feet) of oaks shall be thinned of branches to reduce the total plant volume; (5) dried grasses, dead branches and resinous woody species shall be removed in oak tree understory; (6) young coast live oak saplings and seedlings shall not be removed during brush modification in grasslands and scrublands; (7) chips shall not be spread more than 6-8 inches in depth, and all chip piles shall be kept at least 5 feet from the dripline of oak trees; and (8) all removed oak limbs shall be clean-cut, using the best industry standard practices.
- H. Where slopes exceed 30% and the surface vegetation is reduced to approximately 50% or greater of cover (compared to bare ground), the Department project manager shall consult with the Building and Safety Division and/or a qualified consultant as necessary to determine if additional soil erosion retention measures are necessary to prevent erosion.

### **Vegetation Management in Creeks**

In general, the Department will conduct very little vegetation management in creeks. Under the proposed Plan, vegetation thinning and placement of chippings (as described above) will occur outside a 15-foot buffer zone measured from the top of the creek bank. However, the removal of dead brush and exotic plants (by hand only) may extend to the top of the bank.

There will be instances when the Department determines that vegetation in a creek or within the 15-foot wide exclusion zone noted above requires thinning to reduce a fire hazard. Creeks are located in the bottom of canyons, where high downslope winds occur during wildland fires. The vegetation on the canyon slopes, creek banks, and even on the creek bottoms, can carry a fire from remote foothill areas to highly developed areas in the City. Despite the high moisture conditions in a creek or canyon bottom, hazardous fuel conditions can develop over time or in a very dry season. For example, a dense understory can develop in a riparian area with abundant dead wood created by shaded trees, shrubs, and vines. Willow trees in drier creeks can develop a relative high amount of dead wood on the trees. Finally, many riparian corridors in the foothills contain eucalyptus trees along the perimeter of the creeks.

In general, the Department will not conduct vegetation management inside the above prescribed 15-foot wide zone along the top of the creek bank. However, limited vegetation management may occur in certain creeks or drainages, as follows:

1. There is an abundance of dead wood in the understory that has created a fire ladder near structures or key defensible spaces to be used for fire fighting

2. Eucalyptus trees, giant reed, and pampas grass (or similar plants) dominate the riparian corridor and have created hazardous fuel conditions due to their density or amount of dead wood and plant tissue
3. High fuel conditions are present in a creek adjacent to a key creek crossing (i.e., road or bridge) that would be a strategic route for emergency access or a key location for stopping a wind blown fire from traveling down through a riparian zone.

The Department will prepare a specific vegetation management plan each time it proposes to conduct work in a creek. Mitigation measures to protect aquatic and riparian resources during this work are presented in Section 3 of the EIR based on the environmental impact analyses. At this time, the Department does not have any immediate plans for vegetation removal in a creek within the Vegetation Management Units.

The Department would acquire a California Department of Fish and Game (CDFG) Streambed Alteration Agreement (Fish and Game Code 1601) for any vegetation management project in a creek. The Agreement will include conditions developed by CDFG that are considered necessary to protect fish and wildlife resources in the creek.

## **2.4 COMMUNITY FUELS TREATMENT NETWORK**

The Plan proposes to create a Community Fuels Treatment Network within the Extreme Foothill Zone to provide a break between continuous decadent stands of chaparral fuel outside the City boundary. This would provide a strategic last line of defense for fire protection resources to suppress a wildfire before it enters more highly populated areas of the City.

A Community Fuels Treatment Network is an area where multiple property owners expand their individual defensible space areas to treat continuous strips of hazardous vegetation across property boundaries to form a vegetation management network. Three Community Fuels Treatment Network areas have been identified in the Plan: Upper Ontare/Santa Terisita Area, Rattlesnake Canyon Area, and West Mountain Drive Area. Their locations are shown on Figures 1 and 8a and b.

Under the Plan, these areas would be subject to the same vegetation management actions described for the Vegetation Management Units (see Section 2.3), which are listed below:

- **Hand Cutting and Chipping.** This method involves cutting vegetation using hand tools (McLeod's, Pulaski's, or shovels), chainsaws, weed whips, and mowers. Cut vegetation will then be chipped on site and chips will be spread back on the work area (where physically feasible) and will be spread no greater than 12 inches in depth.
- **Hand Cutting and "Multi-Cutting."** This method involves cutting vegetation (using hand tools, chainsaws, weed whips, and mowers) as described above. However, instead of using a chipper, the cut vegetation is reduced in size by cutting stems into lengths no longer than 6 inches. The multi-cut vegetation is then left on the ground within the work area with a maximum depth of 4 inches.

- **Hand Cutting and Prescribed Burning of Vegetative Debris.** Under this method, vegetation will be hand cut (as described above) and then the cut vegetation is reduced by prescribed burning. There are two methods of burning. In the first technique, pile burning, cut vegetation will be stacked into piles at the work site. The vegetation in the piles is allowed to dry and then piles are burned. The second prescribed burn technique is called broadcast burning. It involves cut vegetation being broadcast on the ground, allowed to dry and then the area is ignited in small patches, but no more than one acre in size.
- **Prescribed Burning of Grasslands.** This method is broadcast burning areas where dry grass is left standing and then ignited over a small area not more than one acre in size. The precautions for prescribed burning noted above would apply to this method too.

Vegetation management would involve reducing the amount of flammable vegetation within the Community Fuels Treatment Network (but outside the property owners defensible space requirements) by approximately 33 to 66 percent. The objectives and method of vegetation management would be identical to that described for the Vegetation Management Units (see Section 2.3 above), including post-treatment maintenance (e.g., selective hand cutting and weed removal). The key difference would be that the maximum extent of vegetation management would increase from 50 to 66 percent.

In general, the Department will conduct very little or no vegetation management in creeks in the Community Fuels Treatment Network. Vegetation thinning and placement of chippings will typically occur outside a 15-foot buffer zone measured from the top of any adjacent creek bank. However, the removal of dead brush and exotic plants (by hand only) may extend to the top of the bank.

Limited vegetation management may occur in certain creeks or drainages under the following circumstances: (1) there is an abundance of dead wood in the understory that has created a fire ladder near structures or key defensible spaces to be used for fire fighting; (2) eucalyptus trees, giant reed, and pampas grass (or similar plants) dominate the riparian corridor and have created hazardous fuel conditions due to their density or amount of dead wood and plant tissue; and (3) high fuel conditions are present in a creek adjacent to a key creek crossing (i.e., road or bridge) that would be a strategic route for emergency access or a key location for stopping a wind blown fire from traveling down through a riparian zone. There are only two creeks that traverse the Community Fuels Treatment Network: upper San Roque Creek and upper Rattlesnake Creek (Figures 8a and b).

The Department will prepare a specific vegetation management plan each time it proposes to conduct work in a creek. Mitigation measures to protect aquatic and riparian resources during this work are presented in Section 3 of the EIR based on the environmental impact analyses. The Department would acquire a CDFG Streambed Alteration Agreement for any vegetation management project in a creek. At this time, the Department does not have any immediate plans for vegetation removal in a creek within the Community Fuels Treatment Network.

The Department will pursue vegetation management in the Community Fuels Treatment Network based on landowner interest and available funding. At this time, the Department does not have any specific proposals for the three Community Fuels Treatment Network areas.

The Department will utilize the same Best Management Practices (BMPs) to reduce environmental impacts as in the Vegetation Management Units (see Section 2.3). These BMPs are repeated below.

- A. To the extent feasible, the vegetation management will preferentially remove exotic plants that pose a fire hazard, and generally remove exotic plants in the work area as the opportunity arises.
- B. When thinning stands of flammable brush, a mosaic pattern of thinning will be established to maintain cover and connections for wildlife, and to reduce post-thinning erosion.
- C. No eucalyptus chips or debris will be placed within oak forests, coastal sage scrub, riparian corridors or banks of riparian corridors, or other areas dominated by native plants.
- D. Large eucalyptus branches greater than 8 inches in diameter may be left on site provided they are placed outside the drip line of trees left on site, do not result in a heavy accumulation of logs on site, will not roll down slopes into drainages, and they do not pose a safety or fire hazard.
- E. Vegetation management work shall be completed outside of the defined nesting season for birds (i.e. before April 1 and after July 30). If vegetation management work must occur within the project areas during the breeding season (April 1 to July 30), a site survey shall be conducted by a qualified wildlife biologist to determine any presence of nesting birds. Vegetation management activities shall not occur within 200 feet of active nests located during this survey.
- F. Within the vegetation management areas, no entry shall be allowed into streambeds. Brush removal shall be limited to the removal of dead brush that is easily accessible and the removal of exotic pest plants within a 15-foot buffer along the top of banks, as long as the work does not cause damage to the bank structure. No placement of cut vegetation shall occur within a 15-foot buffer along the top of banks. The top of bank shall be defined by the first bank out from the present, active stream channel (denoted by an incised bank and cobble bed). The 15-foot buffer shall be measured out from the top of bank, marked in the field by an approved biologist and the Department project manager prior to any work occurring in drainage areas. [This measure does not apply to vegetation management specifically designed to reduce fire hazards in creeks].
- G. To maintain adequate regeneration rates of oak trees within vegetation management areas the following procedures will be followed in oak woodlands: (1) no live oak trees shall be removed; (2) oak saplings shall be protected from damage or cutting during the work; (3) as much as possible, other healthy native understory components such as toyon, lemonade berry and currant shall be retained within oak forests, as long as they do not create fire

ladders; (4) lower oak branches (to six feet) of oaks shall be thinned of branches to reduce the total plant volume; (5) dried grasses, dead branches and resinous woody species shall be removed in oak tree understory; (6) young coast live oak saplings and seedlings shall not be removed during brush modification in grasslands and scrublands; (7) chips shall not be spread more than 6-8 inches in depth, and all chip piles shall be kept at least 5 feet from the dripline of oak trees; and (8) all removed oak limbs shall be clean-cut, using the best industry standard practices.

- H. Where slopes exceed 30% and the surface vegetation is reduced to approximately 50% or greater of cover (compared to bare ground), the Department project manager shall consult with the Building and Safety Division and/or a qualified consultant as necessary to determine if additional soil erosion retention measures are necessary to prevent erosion.

## **2.5 VEGETATION MANAGEMENT ON CITY LANDS (1993 PLAN)**

In 1993, the Department completed the Vegetative Fuels Management Plan (1993 Plan) that identified and recommended vegetation management projects on City owned-lands, both in and outside the City's High Fire Hazard Area. The objective of the 1993 Plan was to reduce fire hazard on these properties due to extensive vegetation in public parks and open space, and due to new City structures being located on these lands and need to maintain defensible space requirements.

The proposed Wildland Fire Plan will incorporate the 1993 Plan recommendations with the following modifications: (1) application of the new High Fire Hazard Area defensible space requirements for all structures on City-owned lands; and (2) minor modifications to the treatment areas to reflect the new information about the properties, progress made on the properties since the Plan was implemented in 1993, and the current risk assessment factors used by the Department.

The areas identified in the 1993 Plan would be subject to the same vegetation management actions described for the Vegetation Management Units (Section 2.3). The project would involve reducing the amount of flammable vegetation within designated areas of City-owned lands by approximately 33 to 66 percent. The objectives and method of vegetation management would be identical to that described for the Vegetation Management Units, including post-treatment maintenance (e.g., selective hand cutting and weed removal). However, the maximum amount of vegetation management (in designated areas) would be increased from 50 to 66 percent.

A list of the City-properties included in 1993 Plan and now included in the Wildland Fire Plan is presented in Table 2-6. The locations of the City-owned properties included in the 1993 Plan are shown on Figures 4a-b, 5, and 7a-c. Two new City properties have also been added to the 1993 Vegetative Fuels Management Plan at this time – Las Positas Park Area (which includes Elings Park and 601 Las Positas) and Oak Park (a portion adjacent to houses along Tallant Road).

The vegetation management actions in the 1993 Plan are being implemented by the City departments responsible for the properties (e.g., Parks and Recreation Department or the Water Resources Division of the Public Works Department). In addition, the Fire Department provides assistance with many of the projects on City-owned lands.

**TABLE 2-6  
1993 FUEL MANAGEMENT UNITS (CITY OWNED PROPERTIES)**

No.	Properties (see Figures 4a-d, 5, and 9a-d)	Subareas
1	Equestrian Circle/Mission Park	Equestrian Circle Mission Park Reservoir #3 Rocky Nook Pump Station Sheffield Pump Station
2	Parma Park	Parma Park Fire Station No. 7 Sheffield Reservoir (to be converted to open space)
3	Honda Valley Area	Honda Valley Open Space Thornberry Park Vic Trace Reservoir
4	Gould Park	East Mountain Drive at park entrance Cold Springs Trail (1,000 feet)
5	Tunnel Reservoir Area	Trails and roads in the Tunnel Reservoir property Rattlesnake Ck parcels 48 and 49
6	Rattlesnake Canyon Area (Park)	Skofield Reservoir Rattlesnake Canyon
7	Stevens Park Area	Stevens Park Cater Treatment Plant Laurel Canyon Area La Vista Reservoir
8	Hale Park Area	Hale Park Reservoir 1
9	Hidden Valley	Hidden Valley Park
10	Skofield Park	Skofield Park El Cielito Reservoir
11	Sylvan Park/Loma Media Park	Sylvan Park Loma Media Park
12	Franceschi Park	Upper Franceschi Park Lower Franceschi Park
13	Coastal City Facilities	Escondido Reservoir Cliff Drive Lift Station Hope Reservoir Booster Station La Mesa Park
14	Las Positas Area [new; not included in 1993 Plan]	Elings Park 601 Las Positas Campanil Booster Station
15	Oak Park [new; not included in 1993 Plan]	Portion of Oak Park along Tallant Road

The updated 1993 Plan is presented in Appendix D. Over half the vegetation management projects in the 1993 Plan have been implemented over the past 10 years. For these areas, the City is currently monitoring and maintaining treated vegetation. This ongoing action is part of the project being addressed in the EIR.

However, many of the fuel reduction projects have yet to be completed, pending funding. A summary of the fuel reduction work to be completed is provided in Table 2-7. Examples of future key vegetation management projects on City-owned lands are listed below:

- Implement vegetation management on the east and north perimeters of Mission Park
- In Parma Park, create fuel break by thinning chaparral on eastern ridge of the park; thin and remove understory vegetation in eucalyptus grove along upper Parma Road; thin vegetation for 50 feet on each side of the access road on the east side of the open space; establish vegetation management buffer in southeast corner of the park; and restore the lower portion of the fire access road on the east side of the open space.
- Reduce non-native vegetation and prune eucalyptus in riparian area of Honda Valley Open Space.
- At Gould Park, reduce fuel along sides of Mountain Drive and Cold Springs Trail.
- Reduce fuel along sides of Gibraltar Road near Rattlesnake Canyon Park, and along trail in Rattlesnake Canyon.
- Establish “fire-safe” landscaping behind Cater Water Treatment Plant and along west and south perimeters of Laurel Canyon Park.
- Reduce fuels around the following water facilities: Reservoir #1, Reservoir #3, Rocky Nook Pump Station, Sheffield Pump Station, Escondido Reservoir, Campanil Booster Station, and Cliff Drive Lift Station.
- Implement vegetation management at the western end of Upper Franceschi Park.
- Implement vegetation management along southern perimeter of Lower Franceschi Park near Mission Ridge Road.
- Create vegetation management buffer along southern perimeter of Skofield Park.
- Implement vegetation management on the ridge east of Stevens Park between Cater Treatment Plant and Foothill Road.
- Implement a vegetation management buffer around most of the perimeter of Hale Park.

- Remove dead palm fronds, limb up palms, and implement vegetation management along west and south portions of City-owned property along Las Positas Road
- Reduce fuels and establish vegetation management buffer along Elings Park boundaries next to certain residential parcels

In general, the Department will conduct very little or no vegetation management in creeks on the City owned properties. Vegetation thinning and placement of chippings will typically occur outside a 15-foot buffer zone measured from the top of any adjacent creek bank. However, the removal of dead brush and exotic plants (by hand only) may extend to the top of the bank.

Limited vegetation management may occur in certain creeks or drainages under the following circumstances: (1) there is an abundance of dead wood in the understory that has created a fire ladder near structures or key defensible spaces to be used for fire fighting; (2) eucalyptus trees, giant reed, and pampas grass (or similar plants) dominate the riparian corridor and have created hazardous fuel conditions due to their density or amount of dead wood and plant tissue; and (3) high fuel conditions are present in a creek adjacent to a key creek crossing (i.e., road or bridge) that would be a strategic route for emergency access or a key location for stopping a wind blown fire from traveling down through a riparian zone.

The Department will prepare a specific vegetation management plan each time it proposes to conduct work in a creek. Mitigation measures to protect aquatic and riparian resources during this work are presented in Section 3 of the EIR based on the environmental impact analyses. The Department would acquire a CDFG Streambed Alteration Agreement for any vegetation management project in a creek.

At this time, the Department has only one project in a creek under consideration – thinning eucalyptus trees in Arroyo Honda within Honda Valley Open Space. This project would involve thinning very large eucalyptus trees that are rooted on the bank and adjacent to the bed of this ephemeral drainage. The trees have created a fire hazard due to their high density, abundant dead wood, and proximity to residential areas. Eucalyptus trees would be selectively removed; native adjacent trees and shrubs would be retained.

The Department will utilize the same Best Management Practices (BMPs) to reduce environmental impacts for vegetation management on City-owned properties, as in the Vegetation Management Units (see Section 2.3). These BMPs are repeated below.

- I. To the extent feasible, the vegetation management will preferentially remove exotic plants that pose a fire hazard, and generally remove exotic plants in the work area as the opportunity arises.
- J. When thinning stands of flammable brush, a mosaic pattern of thinning will be established to maintain cover and connections for wildlife, and to reduce post-thinning erosion.



- K. No eucalyptus chips or debris will be placed within oak forests, coastal sage scrub, riparian corridors or banks of riparian corridors, or other areas dominated by native plants.
- L. Large eucalyptus branches greater than 8 inches in diameter may be left on site provided they are placed outside the drip line of trees left on site, do not result in a heavy accumulation of logs on site, will not roll down slopes into drainages, and they do not pose a safety or fire hazard.
- M. Vegetation management work shall be completed outside of the defined nesting season for birds (i.e. before April 1 and after July 30). If vegetation management work must occur within the project areas during the breeding season (April 1 to July 30), a site survey shall be conducted by a qualified wildlife biologist to determine any presence of nesting birds. Vegetation management activities shall not occur within 200 feet of active nests located during this survey.
- N. Within the vegetation management areas, no entry shall be allowed into streambeds. Brush removal shall be limited to the removal of dead brush that is easily accessible and the removal of exotic pest plants within a 15-foot buffer along the top of banks, as long as the work does not cause damage to the bank structure. No placement of cut vegetation shall occur within a 15-foot buffer along the top of banks. The top of bank shall be defined by the first bank out from the present, active stream channel (denoted by an incised bank and cobble bed). The 15-foot buffer shall be measured out from the top of bank, marked in the field by an approved biologist and the Department project manager prior to any work occurring in drainage areas. [This measure does not apply to vegetation management specifically designed to reduce fire hazards in creeks].
- O. To maintain adequate regeneration rates of oak trees within vegetation management areas the following procedures will be followed in oak woodlands: (1) no live oak trees shall be removed; (2) oak saplings shall be protected from damage or cutting during the work; (3) as much as possible, other healthy native understory components such as toyon, lemonade berry and currant shall be retained within oak forests, as long as they do not create fire ladders; (4) lower oak branches (to six feet) of oaks shall be thinned of branches to reduce the total plant volume; (5) dried grasses, dead branches and resinous woody species shall be removed in oak tree understory; (6) young coast live oak saplings and seedlings shall not be removed during brush modification in grasslands and scrublands; (7) chips shall not be spread more than 6-8 inches in depth, and all chip piles shall be kept at least 5 feet from the dripline of oak trees; and (8) all removed oak limbs shall be clean-cut, using the best industry standard practices.
- P. Where slopes exceed 30% and the surface vegetation is reduced to approximately 50% or greater of cover (compared to bare ground), the Department project manager shall consult with the Building and Safety Division and/or a qualified consultant as necessary to determine if additional soil erosion retention measures are necessary to prevent erosion.

**TABLE 2-7**  
**STATUS OF VEGETATION MANAGEMENT ON CITY OWNED PROPERTIES\***

No.	Property and Subareas (see Figures 4a-d, and 5)	Vegetation Management Projects to be Completed**
1	<p><b>Equestrian Circle/Mission Park</b></p> <p><i>Subareas:</i></p> <p>Equestrian Circle  Mission Park  Reservoir #3  Rocky Nook Pump Station  Sheffield Pump Station</p>	<p><u>Mission Park:</u> (1) Implement 100 foot vegetation management buffer throughout northeast and east portion of parcel 025-273-02 (undeveloped park area only) to allow for increased fire safety to fire personnel and residence. (2) Implement 50 foot vegetation management buffer along east portion of parcel 025-272-001 (undeveloped park area only) to allow for increased fire safety to fire personnel and residence.</p> <p><u>Reservoir #3:</u> (1) Insure that vegetation road clearance meets Fire Department’s High Fire Hazard Area Defensible Space Requirements. (2) Remove dead vegetation throughout parcel.</p> <p><u>Rocky Nook Pump Station:</u> Implement vegetation management throughout the Rocky Nook Pump Station.</p> <p><u>Sheffield Pump Station:</u> Implement vegetation management throughout the Sheffield Pump Station.</p>
2	<p><b>Parma Park</b></p> <p><i>Subareas:</i></p> <p>Parma Park  Fire Station No. 7  Sheffield Reservoir (to be converted to open space)</p>	<p><u>Parma Park:</u></p> <p><i>Area C</i> - Thin and remove 1/2 of the chaparral to create a vegetation management buffer along the eastern boundary of the Open Space. Chaparral will be removed in a mosaic pattern clusters and feathered to protect visual quality of the area.</p> <p><i>Area D</i> - Thin and remove 1/2 of the chaparral along the open space boundary.</p> <p><i>Area G</i> - Thin and remove understory vegetation in eucalyptus grove along upper Parma Road. Limb eucalyptus trees 12 feet from the ground. Remove some mature eucalyptus trees to obtain a ratio of 12 to 18 trees per 1,000 square feet of area.</p> <p><i>Area H</i> – Implement vegetation management 100 feet on each side of the access road through the middle of the open space. The focus of work will be removal of chaparral in a mosaic pattern and feathered to protect visual quality of the area. Mow grasses within 50 feet of the road annually.</p> <p><i>Area I</i> – Implement vegetation management 50 feet on each side of the access road on the east side of the open space. The focus of work will be in a mosaic pattern and feathered to protect visual quality of the area. Mow grasses within 20 feet on each side of the road annually</p> <p><i>Access Road</i> - A fire access road that starts at the main entrance off of Stanwood Dr. and runs in a northeast direction to the top of the ridge and then goes downhill in a southeasterly direction will be maintained. The effectiveness of the fuelbreak in the Open Space is dependant on the ability of fire personnel being able to access the fuelbreak area. The lower portion of the fire access road along the east end of the open space was washed out during the winter of 1999. This portion of the road allowed fire resources to safely exit the park to Stanwood Dr.. The lower portion of the road will be restored and maintained to connect with the SCE road that exits onto Stanwood Dr.</p>

No.	Property and Subareas (see Figures 4a-d, and 5)	Vegetation Management Projects to be Completed**
		<p><i>Other</i> - Implement thinning, limbing, and pruning along parcel 019-031-002. Implement 150 foot vegetation management buffer along southeast corner of parcel 021-130-002. Allow property owners to complete Fire Department Defensible Space Requirements on Parma Park property within parcel 021-130-002.</p> <p><u>Fire Station 7:</u> Restore parcel 021-120-012 to native oak woodland by eradicating scotch broom and other non-native plants and reseed with native perennial grasses.</p>
3	<p><b>Honda Valley Area</b></p> <p><u>Subareas:</u></p> <p>Honda Valley Open Space Thornberry Park Vic Trace Reservoir</p>	<p><u>Honda Valley Park :</u> Reduce the amount of non-native vegetation within the riparian zone (Area B). Trim up eucalyptus, prune out dead material, chip and scatter chips on site. Keep chipped material out of the water course.</p> <p>City Parks and Recreation and Fire Department staff should work with private landowners to encourage their participation in defensible space landscaping on their private property along the park boundaries (Area F).</p> <p><u>Vic Trace Reservoir:</u> [partially completed] Implement vegetation management treatment 30 feet around the entire perimeter (Area A) of reservoir as needed. This involves pruning out all dead material, partially thinning clusters of brush, limbing up (6 feet from the ground) large bushes and trees. Vegetation should be chipped and scattered on-site.</p>
4	<p><b>Gould Park</b></p> <p><u>Subareas:</u></p> <p>East Mountain Drive at park entrance Cold Springs Trail (1,000 feet)</p>	<p>Implement vegetation management treatment to provide defensible space for firefighting apparatus and personnel in addition to reducing the risk from ignitions along Mountain Drive. Vegetation management treatment will extend 100 feet to each side of Mountain Drive when allowed by park boundary. Treatment will use cutting and chipping or cutting and multi-cutting methods.</p> <p>Implement vegetation management treatment 50 feet on each side of Cold Spring Creek trail for 1,000 feet. Treatment will use cutting and multi-cutting methods.</p>
5	<p><b>Tunnel Reservoir Area</b></p> <p><u>Subareas:</u></p> <p>Trails and roads in the Tunnel Reservoir property Rattlesnake Ck parcels 48 and 49</p>	<p><u>[Partially completed for 10 feet on each side of Tunnel Road]</u> - Implement vegetation management treatment to provide defensible space for firefighting apparatus and personnel in addition to reducing the risk from ignitions throughout Tunnel Reservoir and along upper Mission Canyon Road for a distance 50 feet on each side of the road. Complete vegetation management within entire portions of parcels 23-060-48 and 23-060-49 (Las Canoas and Mission Canyon Road Water Resource areas) to reduce fuel loading.</p>

No.	Property and Subareas (see Figures 4a-d, and 5)	Vegetation Management Projects to be Completed**
6	<b>Rattlesnake Canyon Area (Park)</b>  <u>Subareas:</u>  Skofield Reservoir Rattlesnake Canyon	<u>Rattlesnake Park:</u> Implement vegetation management treatment to provide defensible space for firefighting apparatus and personnel in addition to reducing the risk from ignitions along Gibraltar Road. Treatment should extend 100 feet on each side of Gibraltar Road or to park boundary. Implement vegetation management treatment 50 feet on each side of Rattlesnake Canyon trail in parcels 21-010-25, 21-020-01, and 153-280-01.
6	<b>Stevens Park Area</b>  <u>Subareas:</u>  Stevens Park Cater Treatment Plant Laurel Canyon Area La Vista Reservoir	<u>Stevens Park:</u> Implement vegetation management treatment 100 feet along the western perimeter of parcel 55-160-48. <u>Cater Water Treatment Facility:</u> Implement vegetation management treatment behind Cater water treatment facility within 100 ft along site perimeter. <u>Laurel Canyon Park:</u> Implement vegetation management perimeter treatment around west and south perimeter of Laurel Canyon Park for a distance of 100 feet.
7	<b>Hale Park Area</b>  <u>Subareas:</u>  Hale Park Reservoir 1	<u>Hale Park:</u> [Partially completed] Implement vegetation management treatment along southwestern perimeter for a distance of 100 feet from the park boundary. Additional clearance due to steepness of slope should be the responsibility of private landowners. Opportunity exists for coordinated effort between private property owners and City. Implement 50 foot vegetation management buffer around perimeter of park, with exception of 100 feet along southwest perimeter. [Partially completed ]Thin, limb and prune eucalyptus areas throughout the park to 10 to 16 trees per 1,000 feet.  <u>Reservoir 1:</u> Implement vegetation management treatment along perimeter of reservoir for a distance of 50 to 100 feet around perimeter.
8	<b>Hidden Valley</b>	Implement vegetation management treatment throughout parcel 049-030-035 and 049-330-013.
9	<b>Skofield Park</b>  <u>Subareas:</u>  Skofield Park El Cielito Reservoir	<u>Skofield Park:</u> Implement 100 foot vegetation management buffer along the south portions of parcels 021-071-001, 021-040-024, and 021-030-007. Implement vegetation management treatment 50 feet on each side of primary trails through parcel 021-040-024.

No.	Property and Subareas (see Figures 4a-d, and 5)	Vegetation Management Projects to be Completed**
10	<b>Sylvan Park/Loma Media Park</b>  <u>Subareas:</u>  Sylvan Park Loma Media Park	<u>Loma Media Park</u> Implement 50 foot vegetation management buffer along southern perimeter of Loma Media Park.  <u>Sylvan Park</u> Implement 70 foot vegetation management buffer on the western perimeter of parcel 019-201-005.
11	<b>Francheschi Park</b>  <u>Subareas:</u>  Upper Francheschi Park Lower Francheschi Park	<u>Upper Francheschi Park:</u> Parcels 019-090-006, 019-090-007, 019-090-008, and 019-090-009 together form the western area of Upper Francheschi. Implement Fire Department Defensible Space requirements around the perimeter of the western area made up of the 4 parcels.  <u>Lower Francheschi Park:</u> Implement vegetation management treatment a minimum of 75 to 100 feet on the south and east perimeter of parcel 019-103-001 and 100 feet on the south and west perimeter of parcel 019-191-006 and areas along Mission Ridge Road.
12	<b>Coastal City Facilities</b>  <u>Subareas:</u>  Escondido Reservoir Cliff Drive Lift Station Hope Reservoir Booster Station La Mesa Park	<u>Escondido Reservoir:</u> Implement vegetation management treatment throughout reservoir area.  <u>Cliff Drive Lift Station:</u> Implement vegetation management treatment throughout parcel.
13	<b>Las Positas Area [new; not included in 1993 Plan]</b>  <u>Subareas:</u> Elings Park 601 Las Positas Campanil Booster Station	<u>Elings Park:</u> [City owned however managed by Elings Park Foundation] Implement 50 foot vegetation management buffer on the northern portion of parcel 047-010-034 (to protect homes at the end of Live Oak Lane). Implement 50 foot vegetation management buffer on the west, north, and east portions of parcel 049-150-050. Implement 50 foot vegetation management buffer on the east portion of 047-010-049 (to protect homes at the end of Valerio, Calle Linares, Calle Galicia, and Calle Almonte).  <u>601 Las Positas Road:</u> Within parcel 047-010-009 limb up all dead palm fronds to 20 feet.

No.	Property and Subareas (see Figures 4a-d, and 5)	Vegetation Management Projects to be Completed**
		Implement 50 foot vegetation management buffer on the west and south portions of parcel 047-010-009.  <u>Campanil Hills Booster Station</u> Thin, prune, and trim hedges throughout parcel as needed.
14	<b>Oak Park [new; not included in 1993 Plan]</b>	[Partially Completed ] Implement 50 foot buffer along the western portion of Oak Park adjacent to homes along Tallant Road and the Samarkand area. Within the 50 foot buffer thin out any dead fuel, limb up trees 6 feet, and prune out ladder fuels.

\* A complete listing of all vegetation management actions in the 1993 Plan for each City owned property is shown in Appendix D. \*\* Note: the application of the appropriate defensible space requirements applies to structures on all City property. Many vegetation management projects have already been completed and are not listed above. For those projects, the City is continuing maintenance of the treated areas.

### 3.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

---

As noted in Section 1.4, this document represents a Program EIR in which the environmental impacts of the proposed Plan are evaluated at a programmatic level. A program level document is appropriate because the Plan consists of a long-term program that is applied to various properties throughout the City over the next 5 to 10 years. The Plan will be implemented following site specific work plans to be developed in the future for each individual project. Hence, the objectives of this EIR are to evaluate impacts at a programmatic level, and develop broad mitigation measures that can be applied in a site-specific manner to future individual projects as they are defined. In some instances, additional environmental analysis may be required to more fully evaluate the impacts of a future individual project, or to refine the programmatic mitigation measures identified in the EIR. Future environmental analysis would be completed through the use of an EIR Addendum, Supplemental EIR, or Mitigated Negative Declaration, depending upon the nature and extent of the required analyses.

The City Community Development Department prepared a draft Initial Study Environmental Checklist that was issued for public review in April 2003. Based on the Initial Study, the City Community Development Department concluded that either no impact, or no significant impact, would occur to the environmental resources or issue areas listed below:

- Air quality – emission related impacts associated with vegetation management (e.g., chain saws, chippers) would be minor, temporary, and less than significant
- Agriculture – the proposed Plan would have no impact on agricultural activities in the City, which are minimal
- Geologic Hazards – the proposed Plan would not affect, or be affected by, geological hazards such as seismic ground shaking, fault rupture, landslides, or subsidence.
- Hazards and Hazardous Materials – the proposed Plans would not cause the release of hazardous substances or create public health hazards
- Hydrology and Water Quality - the proposed Plan would not affect drainage patterns, flood protection, groundwater, or surface water quality
- Land Use and Planning – the proposed Plan would not significantly affect existing land uses and communities, nor would it conflict with City General Plan policies
- Noise – noise impacts related to vegetation management (i.e., chain saws, chippers) would be temporary, localized, and less than significant

- Population and housing – implementation of the Plan would not affect population growth or available housing
- Public services – implementation of the Plan would not significantly affect the amount and availability of fire, police, school, or park services
- Utilities and service systems – the Plan would not significant affect, or cause a significant demand for, water supply, wastewater treatment, or drainage facilities
- Recreation – the vegetation management elements of the Plan would occur in certain City parks, but the possible disruption of public uses would be minor and less than significant
- Transportation/Circulation – the impact of additional traffic associated with work crews performing vegetation management on local roadways and intersections would be minor and localized

The environmental analyses for the above issue areas from the Initial Study are presented in Section 3.7 of this EIR in order to provide a complete record of the environmental analyses of the proposed Plan in one document.

The April 2003 Initial Study concluded that the proposed Plan could potentially cause certain significant impacts, and therefore, an EIR was required to fully address these impacts. The issue areas where a significant impact could occur are listed below.

- Geology and Soils: Soil Erosion
- Biological Resources
- Visual Resources or Aesthetics
- Cultural Resources
- Hazards and Hazardous Materials: Risk of Accidental Fires
- Public Services: Solid Waste Disposal

Impact analyses for the above issues and resource categories are presented in Sections 3.1 through 3.6 of the EIR.

Environmental impacts of the proposed Plan are classified in the categories shown below.

**Class I - Unavoidably Significant Impact.** An impact that cannot be reduced below the level of significance given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved.

**Class II – Potentially Significant but Mitigable Impact.** An impact that is potentially significant, but that can be reduced to below the significance level given reasonably available and feasible mitigation measures. Such an impact requires CEQA Findings to be made if the project is approved.



**Class III – Less than Significant Impact.** An impact that may be adverse, but does not exceed the significance level and does not require mitigation measures under CEQA. However, mitigation measures that could further lessen the minor adverse impacts may be recommended, if available and feasible.

**Class IV – Beneficial Impact.** An effect that would reduce an existing environmental problem or hazard.

An impact was determined to be significant in the EIR using guidance from the following sources: (1) the definitions of "significance" in the *CEQA Guidelines* (Sections 15064, 15065) and *CEQA Statute* (Public Resource Code 21088); and (2) the thresholds used in the *CEQA Guidelines Environmental Checklist* (Appendix G). The latter are presented in the following environmental analyses.

For each issue area, the impact assessment was organized into two subsections as follows:

1. Impacts of the proposed modified defensible space requirements – i.e., impacts of increased or decreased defensible space distances
2. Impacts of the proposed vegetation management on private property (i.e., Vegetation Management Units), on City-owned properties identified in the 1993 Plan, and in the three proposed Community Fuels Treatment Network areas (private property). The impacts associated with these actions are due to vegetation removal, thinning, and pruning, as well as prescribed burning and exotic species removal.

The following impact assessments take into account the environmental best management practices (BMPs) described in Section 2.3, which the Department implements with all current fuel management efforts in order to reduce incidental environmental impacts.

## 3.1 EROSION AND SEDIMENTATION

### 3.1.1 Existing Conditions

The City of Santa Barbara occurs on the coastal plain and lower foothills of the Santa Ynez Mountains. Most of the urbanized area is located on the coastal plain that abuts against the steep foothills which appear to represent an ancient wave-cut shoreline. These foothills lie at the base of the very steep south flank of the Santa Ynez Mountains which have a ridgeline of about 3,500 foot elevation. Scattered rural residences on large lots occur in these foothills.

The Santa Ynez Mountains, foothills, and alluvial plains are composed of sedimentary rocks that range in age from Late Jurassic (in the oldest formation, the Franciscan) to Recent (composed of alluvium). The dominant rock types in the High Fire Hazard Area are listed below. A brief description of their characteristics related to erosion hazards is also presented below. All of the formations are characterized by moderate to high erosion and weathering rates.

Formation	Extreme Foothill Zone	Foothill Zone	Coastal and Coastal Interior Zones
Sespe	X		
Rincon Shale		X	X
Fanglomerate		X	
Monterey Shale		X	X
Santa Barbara			X

The Sespe Formation occurs in the steep foothills of the City. It is highly erodible and weathers to a productive soil. It is composed of silty shales and fine to coarse grained sandstones. The shales are soft and disintegrate into small fragments. The red color of this rock type is imparted by red oxides that impregnate the shales. The Rincon Shale crops out along the foothills of the City of Santa Barbara. It weathers to a dark loamy soil and forms low, rounded grass covered hills that contrast sharply with other formations. The bedrock is blue-gray and moderately hard. However, it is highly erodible.

The Fanglomerate Formation occurs as alluvial fans in the foothills of Santa Barbara. This formation blends with more recent alluvial deposits on the coastal plain. The formation typically is composed of poorly-sorted cobble gravels and coarse sands. The Fanglomerate was deposited during severe rain and flood events during the Pleistocene ice ages. This formation is highly erodible. Monterey Shale is moderately resistant to weathering and erosion, and is often characterized by steep slopes. It weathers to a dark adobe soil that supports brush and grasses. Santa Barbara Formation is restricted to the coastal areas of the City of Santa Barbara. It is composed of soft sands and silts that weather to low rounded hills.

The soils in the High Fire Hazard Area range from clay loams to sandy loams with a highly variable depth based on the slope. All soils are derived from sedimentary rocks, and as such, typically have a high erosion potential on steep slopes. A summary of the slope conditions, soil type, and soil

erosion potential for the vegetation management units is presented in Table 3-1. These data indicate that most of the units have areas with moderate to steep slopes, and that the soil erosion potential is inherently high to very high due to the nature of the soils and their locations on steep slopes.

The High Fire Hazard Area generally includes moderate to complex topography, including steep slopes, incised canyons, hillsides, and ridgetops (Figure 2). These areas exhibit high wildland fire hazards due in large part to this complex topography. The steep slopes, combined with the highly erodible bedrock formations and soils, contribute to a moderate to high erosion potential in the High Fire Hazard Area. The magnitude of the erosion potential hazard associated with specific vegetation management units under the proposed Plan, or surrounding residences in the High Fire Hazard Area, will be determined by several factors, including slope steepness, bedrock and soil type, soils depth, nature and extent of vegetation, runoff conditions, and human disturbances.

Erosion is a natural geologic process on the South Coast, and is responsible for the formation of the coastal plain where the city is now located, and the beaches along the shoreline. However, erosion rates are often increased due to land management practices, including fire suppression. Under pre-development conditions, fires occurred at a higher frequency and with a lower intensity. Post-fire erosion rates under this type of fire regime were lower than under current conditions. Under current conditions, the severe fires that follow prolonged periods of fire suppression cause greater erosion because the hotter fires inhibit post-fire regeneration by native plants, and create poor post-fire soil conditions that increase runoff and decrease percolation due to the formation of a hydrophobic layer on the soils. It appears that current overall erosion and sedimentation rates in the developed portions of the South Coast are higher than under pre-development conditions due to the combined effects of land development that exposes soils and slopes, development of orchards on very steep slopes, and effects of fire suppression followed by catastrophic fires.

### **3.1.2 Thresholds of Significance**

Applicable erosion and sedimentation impact thresholds from the *CEQA Guidelines* Appendix G, (Geology and Soils, and Hydrology and Water Quality sections) are listed below: Will the project:

- Result in substantial soil erosion or the loss of topsoil?
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
- Violate any water quality standards or waste discharge requirements?
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
- Otherwise substantially degrade water quality?

**TABLE 3-1  
TERRAIN AND SOIL CONDITIONS IN THE VEGETATION MANAGEMENT UNITS**

Management Unit	Slope Conditions	Main Soil Type(s)	Texture	Slope	Depth	Erosion Hazards
<b><i>Vegetation Management Units (Private Lands)</i></b>						
Alston Place	Moderately to very steep hillsides along a deep canyon	LdG, ScE2	Lopez-Rock outcrop complex and Santa Lucia shaly clay loam	15-75%	6-36'	High to Very High
Alturas del Sol	Moderate slopes	LdG, OAG	Lopez-Rock outcrop complex and Orthents	50-75%	6-18'	Very High
Camino Viejo	Gentle slopes on hillside	MdE	Milpitas stony fine sandy loam	15-30%	16-26'	Very High
Cleveland School	Gentle slopes on hillside	OAG, MdD	Orthents and Milpitas stony fine sandy loam	9-75%	6-28'	High to Very High
Clima Linda	Gentle slopes to flat terrain	ScE2	Santa Lucia shaly clay loam	15-30%	24-36'	High
Conejo Road	Very steep slopes	ZaF2, ZaE2, MdF	Zaca clay and Milpitas stony fine sandy loam and Orthents	15-50%	12-55"	High to Very High
Coyote Circle	Moderately to very steep hillsides along a deep canyon	MdD	Milpitas stony fine sandy loam	9-15%	18-28'	High
Coyote Road	Moderately to very steep hillsides along a deep canyon	OAG, MdD	Orthents and Milpitas stony fine sandy loam	9-75%	6-28'	High to Very High
Eucalyptus Hill Drive	Moderately to very steep hillsides	ScF2	Santa Lucia shaly clay loam	30-50%	22-30'	High
Fire Station 7	Gentle slopes	ZaF2, ZaE2, MdF	Zaca clay and Milpitas stony fine sandy loam and Orthents	15-50%	12-55"	High to Very High
Flora Vista	Moderately to very steep hillsides	AhG, AgG	Ayar Clay and Arnold loamy sand	50-75%	20-60'	High to Very High
Garcia/Ferrelo Canyon	Gentle to moderate slopes	MdF, MdE	Milpitas stony fine sandy loam	15-50%	16-68'	Very High
Hillcrest Road	Moderately to very steep hillsides	MdE	Milpitas stony fine sandy loam	15-30%	16-26'	Very High
Honda Valley	Moderately to steep hillsides along a deep canyon	AgF2	Arnold loamy sand	30-50%	20-60'	High
Jimeno/Garcia Canyon	Gentle to moderate slopes with minor active erosion	MdF, OAG, MdE	Milpitas stony fine sandy loam and Orthents	15-75%	6-26'	Very High
Las Canoas Road	Moderately to very steep hillsides along a deep	TdF2, TbE2, OAG	Todos-Lodo complex, Todos clay loam and Orthents	15-75%	6-60'	Moderate to Very High

Management Unit	Slope Conditions	Main Soil Type(s)	Texture	Slope	Depth	Erosion Hazards
	canyon					
Las Positas Road	Moderately steep hillsides with active erosions and landslides	AhG, SaD2, DaF2, DaD	Ayar clay, San Andreas-Tierra complex, and Diablo clay	9-75%	12-60'	Moderate to Severe
Loma Alta	Very steep slopes	AgG	Arnold loamy sand	50-75%	20-60'	Very High
Mountain/Las Tunas	Very steep slopes along drainage	BbC, OAG, MdE	Baywood loamy sand, Orthents and Milpitas stony fine sandy loam	2-75%	6'-several ft	Moderate to Very High
Owens Road	Gentle slopes along a shallow canyon	LdG, ScE2	Lopez-Rock outcrop complex and Santa Lucia shaly clay loam	15-75%	6-36'	High to Very High
San Roque Creek	Moderately steep hillsides along a deep canyon	AhF2, OAG, MdE, EaB	Ayar clay, Orthents, Milpitas stony fine sandy loam and Elder sandy loam	2-75%	6'-several ft	Moderate to Very High
Stevens Park Area	Moderately steep hillsides along a deep canyon	EaB, OAG, MdE	Elder sandy loam, Orthents and Milpitas stony fine sandy loam	2-75%	6'-several ft	Moderate to Very High
Upper Coyote	Gentle slopes along a shallow canyon	LcG, Tbe2	Lodo-Sespe complex and Todos clay loam	15-75%	6-60'	High to Very High
Circle Dr/Las Barrancas	Moderately to very steep hillsides along a deep canyon	OAG, MdD	Orthents and Milpitas stony fine sandy loam	9-75%	6-28'	High to Very High
<b><i>Community Fuels Treatment Network</i></b>						
Upper Ontare – Santa Terisita Area	Moderately to very steep hillsides along deep canyons	TdF2, Tbe2, OAG	Todos-Lodo complex, Todos clay loam and Orthents	15-75%	6-60'	Moderate to Very High
Rattlesnake Canyon Area	Moderately to very steep hillsides along deep canyons	TdF2, Tbe2, OAG	Todos-Lodo complex, Todos clay loam and Orthents	15-75%	6-60'	Moderate to Very High
West Mountain Drive Area	Gentle slopes along a shallow canyon	LcG, Tbe2	Lodo-Sespe complex and Todos clay loam	15-75%	6-60'	High to Very High
<b><i>1993 Fuels Management Units (City Owned Land)</i></b>						
Equestrian Circle/Mission Park	Flat stream terrace	BbC, OAG, MdE	Baywood loamy sand, Orthents and Milpitas stony fine sandy loam	2-15%	6'-several ft	Moderate
Parma Park	Moderately to very steep hillsides along deep canyons	ZaF2, ZaE2, MdF	Zaca clay and Milpitas stony fine sandy loam and Orthents	15-50%	12-55"	High to Very High
Honda Valley Area	Moderately steep hillsides	AgF2	Arnold loamy sand	30-50%	20-60'	High
Gould Park	Moderately to very steep hillsides along a deep	LcG, Tbe2	Lodo-Sespe complex and Todos clay loam	15-75%	6-60'	High to Very High

Management Unit	Slope Conditions	Main Soil Type(s)	Texture	Slope	Depth	Erosion Hazards
	canyon					
Tunnel Reservoir Area	Moderately to very steep hillsides along a deep canyon	TdF2, TbE2, OAG	Todos-Lodo complex, Todos clay loam and Orthents	15-75%	6-60'	Moderate to Very High
Rattlesnake Canyon Area (Park)	Moderately to very steep hillsides along a deep canyon	TdF2, TbE2, OAG	Todos-Lodo complex, Todos clay loam and Orthents	15-75%	6-60'	Moderate to Very High
Stevens Park Area	Moderately steep hillsides along a deep canyon	EaB, OAG, MdE	Elder sandy loam, Orthents and Milpitas stony fine sandy loam	2-75%	6'-several ft	Moderate to Very High
Hale Park Area	Gentle slopes	ScF2	Santa Lucia shaly clay loam	30-50%	22-30'	High
Hidden Valley	Gentle slopes	AhG, SaD2, DaF2, DaD	Ayar clay, San Andreas-Tierra complex, and Diablo clay	9-15%	12-60'	Moderate
Skofield Park	Gentle slopes along a shallow canyon	TdF2, TbE2, OAG	Todos-Lodo complex, Todos clay loam and Orthents	15-35%	6-60'	Moderate to High
Sylvan Park/Loma Media Park	Gentle slopes along a shallow canyon	MdF, OAG, MdE	Milpitas stony fine sandy loam and Orthents	15-15%	6-26'	Moderate
Franceschi Park	Moderately to very steep hillsides	MdF, OAG, MdE	Milpitas stony fine sandy loam and Orthents	15-55%	6-26'	Very High
Coastal City Facilities	Gentle to moderate slopes	AhG, AgG	Ayar Clay and Arnold loamy sand	50-55%	20-60'	Moderate
Las Positas Area	Moderately steep hillsides with active erosions and landslides	AhG, SaD2, DaF2, DaD	Ayar clay, San Andreas-Tierra complex, and Diablo clay	9-75%	12-60'	Moderate to Severe
Oak Park	Gentle slopes	AhF2, OAG, MdE, EaB	Ayar clay, Milpitas stony fine sandy loam and Elder sandy loam	2-35%	6'-several ft	Moderate

### 3.1.3 Impacts

#### **Modified Defensible Space Requirements**

Landowners in the High Fire Hazard Area must meet current defensible space requirements which involve managing native and ornamental vegetation within 100 feet of a structure to reduce flammable vegetation and inhibit the spread of a wildfire to the structure. Vegetation is allowed in the defensible space, but must be modified as follows:

- Flammable vegetation such as dry grass and weeds must be removed or cut to within 2 inches of the ground
- Dead wood and live branches on trees must be removed within 6 feet of the ground
- Dead trees must be removed

Native or ornamental shrubs can be cultivated in the defensible space provided they are spaced at least 18 feet from other shrubs, bushes or structures; maintained free of dead wood and litter and trimmed at least 2 feet up from the ground, or 1/3 of their height, whichever is less; and they do not form a means of rapidly transmitting fire to a structure. The Department encourages the use of fire resistant native plants in the defensible space.

The proposed modified defensible space requirements will reduce the buffer to less than 100 feet in the Coastal and Coastal Interior Fire Hazard Zones (Figure 1) in recognition of the lower fire hazard and risk in this portion of the City (see Table 2-1). As such, landowners will have an opportunity to increase the density and extent of native or ornamental vegetation on their property.

In contrast, the proposed modified defensible space requirements in the Extreme Foothill Fire Hazard Zones (Figure 1) will increase to 150 feet, and in areas with steep slopes, to as much as 300 feet (see Table 2-1). Increasing the width of the defensible space would reduce the density and vegetative biomass of native or ornamental vegetation near structures on foothill properties.

Wind and water soil erosion in the foothills of the Santa Ynez Mountains is a natural process. The natural rate of erosion is moderated by native vegetation due to several characteristics. For example, canopy cover by trees and shrubs intercepts rainfall, reducing the volume and velocity of rainfall reaching the ground surface. Plant roots are also effective in reducing water erosion because roots secure the soil with millions of fine roots, and also create favorable conditions for percolation of low rainfall events. Plant litter and grass or herb cover also reduces erosion by intercepting rainfall. Plant cover and litter also inhibit the formation of gullies that can form during heavy rainfall events, causing localized erosion.

Increasing the defensible space could potentially increase the potential for erosion from rainfall and overland flow because there would be a net decrease in the canopy coverage, plant density, dead wood and heavy plant litter, and overall plant biomass. Expansion of the defensible space at any one parcel is not likely to create a significant increase in erosion because of the following considerations: (1) woody vegetation is allowed in the defensible space, albeit at a reduced density; (2) grass and

herb cover is allowed in the defensible space; and (3) root systems of woody plants will remain intact in the defensible space.

However, there is a potential for the minor increase in erosion from individually expanded defensible spaces to be cumulatively significant. The potential for a significant increase in erosion potential due to the cumulative effect of modifying the defensible space requirements for all parcels in the High Fire Hazard Area was estimated in the following manner. The number of parcels in the High Fire Hazard Area was determined using a GIS analysis. The results are presented in Table 3-2. A total of 4,647 parcels occur in the High Fire Hazard Area, most of which occur in the Foothill Hazard Zone. Most of the parcels are developed; about 400 parcels are undeveloped. To be conservative in this analysis, it was assumed that all parcels are developed and would be subject to the proposed changes in the defensible space requirements.

**TABLE 3-2  
NUMBER OF PARCELS IN THE FIRE HAZARD ZONES, PER WATERSHED**

Watershed	Fire Hazard Zones (Figure 1)				Total
	Extreme Foothill	Foothill	Coastal Interior	Coastal	
Arroyo Burro	10	253	244	285	792
Lighthouse			33		33
Arroyo Honda			200		200
Mission	47	466	211		724
Laguna		1,483			1,483
Sycamore	80	838			918
Montecito		497			497
Total=	137	3,537	688	285	4,647

The mean size of parcels in the different Fire Hazard Zones was then estimated, as shown in Table 3-3. Parcels in the Extreme Foothill Zone are very large (3 or more acres) compared to the other zones that are more urbanized.



**TABLE 3-3  
MEAN PARCEL SIZE IN THE FIRE HAZARD ZONES**

Watershed	Fire Hazard Zone			
	Extreme Foothill	Foothill	Coastal Interior	Coastal
Arroyo Burro	2.35	1.12	0.37	1.02
Lighthouse			0.44	
Arroyo Honda			0.58	
Mission	2.66	1.03	0.81	
Laguna		0.41		
Sycamore	3.23	0.69		
Montecito		0.77		
Mean Acreage =	3.60	0.68	0.59	1.02

The amount of vegetation that would be modified to create a defensible space was then estimated for a typical parcel in each of the Fire Hazard Zones. The assumptions used to develop this estimate are as follows:

1. Parcels and the residence on each parcel were assumed to be rectangular
2. The parcels require vegetation management to create a defensible space on two of the four sides of the residence, assuming that the other two sides contain turf, paved areas, or ornamental vegetation
3. The square footages of structures in the different Fire Hazard Zones were assumed to be as follows: Extreme Foothill (3,600 sq ft), Foothill (2,025sq ft), Coastal Interior (1,225 sq ft), and Coastal (2,500sq ft).
4. The widths of the defensible space to be created in the different Fire Hazard Zones were assumed to be as follows for the analysis: Extreme Foothill (120 feet), Foothill (90 feet), Coastal Interior (70 feet), and Coastal (100 feet).

The proposed modification of the defensible space requirements include an increase in the Extreme Foothill Zone and a decrease in the Coastal and Coastal Interior zones, as shown in Table 3-4. By applying the net change in distance for the defensible space in each zone, the change in defensible space square footage can be calculated for a typical parcel. The results of this calculation are shown in Table 3-4. They indicate that there would be a net increase in defensible space on a typical parcel in the Extreme Foothill Zone, no change in the Foothill Zone, and decreases in the Coastal and Coastal Interior Zones (Table 3-4).

By multiplying the net change in defensible space on a typical parcel times the number of parcels in each Fire Hazard Zone, an estimate can be made of the cumulative effect of the modified defensible space requirements throughout the City. The results of these calculations are summarized in Table 3.5. The results indicate that, overall, the modified defensible space requirements will reduce the acreage of defensible space in the city. The increase in defensible space in the Extreme Foothill Zone (18.9 acres) will more than offset in the reduction in the Coastal and Coastal Interior zones.

**TABLE 3-4  
NET CHANGE IN DEFENSIBLE SPACE ACREAGE BY FIRE HAZARD ZONE**

	Fire Hazard Zones				Net change
	Extreme Foothill	Foothill	Coastal Interior	Coastal	
Existing defensible space requirements (feet)	100	100	100	100	
New defensible space requirements (feet)	150	100	50	70	
Change in distance (feet)	50	0	-50	-30	
Typical width of area to be managed on a parcel (feet)	120	90	70	100	
Change in width of area to be managed on a parcel (feet)	6,000	0	-3,500	-3,000	
Total number of parcels	137	3,537	688	285	
Total change in defensible space area (acres)	18.9	0.0	-55.3	-19.6	-56

Based on the above considerations, the modified defensible space requirements are not expected to cause a significant cumulative increase in erosion potential because there will be an overall net decrease in the area of vegetation management which could increase erosion potential. There may be localized increases in erosion potential in the Extreme Foothill Zone. To the extent that increased erosion occurs in these areas, it would primarily affect the Sycamore Creek watershed (as shown in Table 3-5).

**TABLE 3-5  
NET CHANGE IN DEFENSIBLE SPACE ACREAGE BY WATERSHED**

Watershed	Acreage
Arroyo Burro	-37.9
Lighthouse	-2.7
Arroyo Honda	-16.1
Mission	-10.5
Laguna	0.0
Sycamore	11.0
Montecito	0.0
Net Total =	-56.2

In summary, the potential to increase erosion potential due to modified defensible space requirements is considered a **less than significant (Class III)** impact. None of the impact thresholds related to erosion, sedimentation, or water listed in Section 3.1.2 would be exceeded.

The above analysis does not take into account landowners that may establish their defensible space poorly or incorrectly. The Department has observed some landowners clear more vegetation than is necessary to meet the requirements. Excessive clearing could cause increased erosion on individual parcels. Based on observations over the years, the Department expects that excessive clearing would occur infrequently. It has been the Department's experience that failure to establish an adequate defensible space is a more common occurrence than excessive clearing.

Through ongoing public education efforts, the Department will continue to educate landowners about the type of vegetation allowed in the defensible space, and explain how proper planting and maintenance of this vegetation will prevent excessive soil erosion. In addition, the Department will inform landowners that excessive clearing could result in soil erosion, and may be illegal.

As noted earlier, post-fire erosion is typically higher under recent historic fire management practices which were characterized by extended periods of fire suppression followed by catastrophic wildfires. These wildfires tend to burn hotter which can inhibit post-fire regeneration by native plants, and create poor post-fire soil conditions that increase runoff and decrease percolation due to the formation of a hydrophobic layer on the soils. Hence, to the extent that the proposed modified defensible space requirements and vegetation management actions (see below) reduce the severity of wildland fires on the South Coast, the proposed Plan could reduce severe post-fire erosion. This is considered a **potentially beneficial impact (Class IV)**.

### **Vegetation Management Units (Private Property)**

The overall objective for vegetation management is to reduce the amount of flammable vegetation within targeted portions of the management units by approximately 33 to 50 percent. Vegetation management will occur outside the landowner's defensible space areas. It will be focused on the following actions:

- General thinning or removal of flammable vegetation that pose a fire hazard (i.e., areas with dense and continuous brush; dense understory of flammable vegetation)
- Thinning, pruning and limbing of vegetation to remove "fire ladders"
- Removing lower limbs of oak trees, particularly dead or weak branches
- Pruning out dead material in trees

The proposed vegetation management actions will involve the following physical activities in the management units: (1) hand cutting and chipping of vegetation, (2) hand cutting and multi-cutting of vegetation, (3) hand cutting and prescribed burning using either pile burning or broadcast burning of vegetation, and (4) prescribed broadcast burning of grasslands. The potential to increase soil erosion and off-site sedimentation due these fuel reduction methods are assessed below.

- Hand Cutting, Chipping, and/or Multi-Cutting. Under these methods, hand tools will be used to thin vegetation. Cut vegetation will either be chipped on site and spread over the work area, or cut into small pieces and spread over the work area. These methods would result in little to no ground disturbance because the roots the vegetation will be left in place. Under this method, chips generated from vegetation reduction will be placed back on site, providing additional protection from soil erosion due to a thicker layer of plant litter.
- Hand Cutting and Prescribed Burning of Vegetative Debris. Under this method, vegetation will be hand cut and then the cut vegetation will be reduced by prescribed burning. There are two methods of burning: (1) pile burning, and (2) broadcast burning. Prescribed burning of cut vegetation would result in minimal ground disturbance. Hand tools would be used to clear a shallow trench or line no more than 2 inches in depth around each pile, group of piles, or broadcast burn area to confine the fire and catch any burned materials that may roll downhill during burning.
- Prescribed Burning of Grasslands. This method is broadcast burning areas where dry grass is left standing and then ignited over a small area not more than one acre in size.

The proposed fuel reduction in the Vegetation Management Units (Figure 3) could cause a potential increase in soil erosion from the treated areas because of the reduction in vegetation canopy and plant density. Many of the units occur in steep terrain where the inherent erosion potential is high (see Figures 6a-d and 7a-d). However, significant erosion is not expected to occur at any individual unit for the following reasons:

1. Most of the vegetation in the treated areas will remain intact, and thereby providing continued erosion protection due to vegetative cover, plant litter, and root systems.
2. The vegetation management methods would cause little to no soil disturbance, as described above. Hence, the organic material on the soil will remain intact and protect against erosion, and roots will remain intact in the soil, also providing protection from erosion.
3. The only ground disturbance associated with the proposed fuel reduction actions would be trampling effects on ground vegetation and disturbance to leave litter due to crews working in the brush.
4. The establishment of a shallow, 2-inch trench downslope of a burn pile or broadcast burn area would not represent a substantial ground disturbance that could result in significant soil erosion.
5. Prescribed burning of cut vegetation would not cause adverse effects on soil properties and runoff conditions that are commonly observed after a wildfire because the extent of the prescribed burning, and the temperatures would be substantially less than for a wildfire.

Although individual vegetation management actions on individual units may not cause a significant erosion problem, there is a potential for the cumulative effects of vegetation management on all units to increase the overall erosion rates of these treated areas. The estimated area to be treated amongst the 24 Vegetation Management Units is presented in Table 3-6. There is a substantial range in the acreage of vegetation management planned in each unit. Over time, up to 277 acres could be treated under the program.

**TABLE 3-6  
SUMMARY OF ACREAGE TO BE TREATED IN THE VEGETATION  
MANAGEMENT UNITS (PRIVATE LANDS)**

Unit (Figure 3)	Name	Acreage	Percent of Total Unit Area to be Treated (%)	Acres of Treatment
<b>Coastal Units</b>				
1	Flora Vista	40.2	10	4.0
2	Honda Valley	82.7	35	28.9
3	Las Positas Road	217.1	5	10.9
4	Loma Alta	42	15	6.3
<i>Subtotal=</i>		382		50.1
<b>Foothill Units</b>				
1	Alston Place	39.1	80	31.3
2	Alturas Del Sol	18.2	65	11.8
3	Camino Viejo	23.8	35	8.3
4	Circle Drive/Las Barrancas	47.4	10	4.7
5	Cima Linda Lane	15.7	10	1.6
6	Cleveland School Area	7.9	15	1.2
7	Conejo Road	86.1	10	8.6
8	Coyote Circle	10.5	10	1.1
9	Coyote Road	12	25	3.0
10	Eucalyptus Hill Drive	63.1	40	25.2
11	Fire Station 7	2.4	50	1.2
12	Garcia/Ferrelo Canyon	5.5	40	2.2
13	Hillcrest Road	66.9	15	10.0
14	Jimeno/Garcia Canyon	63.7	45	28.7
15	Las Canoas Road	52.8	35	18.5
16	Mountain/Las Tunas	43.4	20	8.7
17	Owen Road	25.2	15	3.8
18	San Roque Creek	82.4	60	49.4
19	Stevens Park Area	15.4	30	4.6
20	Upper Coyote Road	20.9	15	3.1
<i>Subtotal=</i>		702.4		227.1
<b>Total=</b>		1,084.40		277.2

Many Vegetation Management Units contain creeks where off site eroded materials could cause sedimentation of creeks. Units with creeks are listed in Table 3-7.

**TABLE 3-7  
VEGETATION MANAGEMENT UNITS (PRIVATE LANDS) WITH CREEKS**

Management Unit (Figures 6a-d)	Creek	Location in Unit
Honda Valley	Arroyo Honda (ephemeral); drains directly to ocean	Middle of the unit; primary drainage
Las Positas Road (Ellings Park)	Unnamed tributaries to Arroyo Burro (ephemeral)	Center of Elings Park; west side of south parcel; both drain under Las Positas Road to Arroyo Burro
Circle Drive/Las Barrancas	Coyote Creek and Westmont Creek (ephemeral); both drain to Sycamore Creek	On east and west boundaries of the unit
Conejo Road	Sycamore Creek (semi-perennial)	Parallel to Mountain Drive
Coyote Circle	Coyote Creek (ephemeral); tributary to Sycamore Creek	On east boundary of the unit
Coyote Road	Sycamore Creek (semi-perennial)	Parallel to Sycamore Canyon Road
Las Canoas Road	Rattlesnake Creek (perennial)	Center of unit (Skofield Park)
Mountain/Las Tunas	Unnamed tributary to Mission Creek (semi-perennial)	Along Foothill Road and south of tennis club
San Roque Creek	San Roque Creek (semi-perennial)	Center of unit
Stevens Park	San Roque Creek (semi-perennial)	Center of unit

Although no significant erosion impact are expected to occur at any one Vegetation Management Unit, there is a potential for a cumulatively significant impact to occur considering all units if the reduction in vegetation causes greater soil exposure. Based on the above considerations, the cumulative reduction in vegetation in the Vegetation Management Units could cause an overall increase in soil erosion and potential downstream sedimentation. The increased off site erosion and downstream sedimentation could cause adverse biological impacts (see Section 3.2) and contribute to a reduction in channel capacity in downstream areas. This impact is considered **significant, but mitigable (Class II)** because the erosion potential can be substantially reduced by BMPs employed during vegetation management (see Mitigation Measure ER-1 below).

In general, the Department will conduct very little vegetation management in creeks. Under the proposed Plan, vegetation thinning and placement of chippings will occur outside a 15-foot buffer zone measured from the top of the creek bank. However, the removal of dead brush and exotic plants (by hand only) may extend to the top of the bank. This type of work near the top of creek banks is not expected to cause any erosion.

As described in Section 2.3.2, the Department may conduct limited vegetation thinning in a creek or along the 15-foot wide exclusion zone to reduce a specific fire hazard. Limited vegetation management would include removal of dead wood in the understory that has created a fire ladder near structures or that occurs in a key defensible space to be used for fire fighting. Vegetation management in a creek may also occur to thin eucalyptus trees that form a hazardous condition, or to create a defensible space at a creek crossing.

There is a potential to increase erosion in a creek due to the above vegetation management because the treated areas could be exposed to flowing water in the subsequent winter. This impact is considered **significant, but mitigable (Class II)** because the erosion potential can be substantially reduced by BMPs employed during vegetation management in creeks (see Mitigation Measure ER-1 below).

### **Community Fuels Treatment Network**

Under the Plan, a Community Fuels Treatment Network would be established in the Extreme Foothill Zone (Figures 1 and 8a-b) to provide a break between continuous decadent stands of chaparral fuel outside the City. The network will be an area where multiple property owners expand their individual defensible space areas to treat continuous strips of hazardous vegetation across property boundaries to form a larger vegetation management network. Three Community Fuels Treatment Network areas have been identified in the Plan as shown on Figure 1.

Under the Plan, these areas would be subject to the same vegetation management actions described for the Vegetation Management Units. Vegetation management would involve reducing the amount of flammable vegetation within the Community Fuels Treatment Network (but outside the property owners defensible space requirements) by approximately 33 to 66 percent. The objectives and method of vegetation management would be identical to that described for the Vegetation Management Units. The key differences would be that the maximum extent of vegetation management would increase from 50 to 66 percent.

The proposed fuel reduction in the Community Fuels Treatment Network may cause a minor, localized increase in soil erosion from the treated areas because of the reduction in vegetation canopy and plant density. However, significant erosion is not expected to occur at any individual unit for the reasons described above for the Vegetation Management Units. A significant cumulative soil erosion impact is also not expected to occur because there are only three small network areas to be treated. Similarly, no significant sedimentation is expected to occur to creeks that traverse the Community Fuels Treatment Network because: (1) only two creeks that traverse the Community Fuels Treatment Network: upper San Roque Creek and upper Rattlesnake Creek; and (2) the potential for off-site erosion from vegetation management is considered low.

### **Vegetation Management on City Lands (1993 Plan)**

As described in Section 2.5, the Department has been conducting vegetation management on City owned-lands, both in and outside the City's High Fire Hazard Area, based on a 1993 Plan. These lands consist of parks, open space, and water-related facilities (Figures 9a-c). They are subject to the same vegetation management actions described for the Vegetation Management Units (Section 2.3). The work involves reducing the amount of flammable vegetation within designated areas of City-owned lands by approximately 33 to 66 percent. The objectives and method of vegetation management would be identical to that described for the Vegetation Management Units, except that the maximum amount of vegetation management (in designated areas) would be increased from 50 to 66 percent.

Significant erosion is not expected to occur at any individual City owned property due to fuel reduction work for the reasons described above for the Vegetation Management Units. Although no significant erosion impacts are expected to occur at any one City owned parcel, there is a potential for a cumulatively significant impact to occur if the reduction in vegetation on all parcels causes greater soil exposure. As such, the cumulative reduction in vegetation on City owned lands could cause an overall increase in soil erosion and potential downstream sedimentation. This impact is considered **significant, but mitigable (Class II)** because the erosion potential can be substantially reduced by BMPs employed during vegetation management (see Mitigation Measure ER-1 below).

The area of vegetation management on each City owned property is difficult to estimate. In general, the work is less intensive than the proposed fuel reduction on private property, and focused on establishing a defensible space around City structures, and creating vegetation management buffers along the perimeter of City owned land to protect adjacent residences. An estimate of the acreage of potential fuel reduction that has occurred on these lands, and that has yet to be completed, cannot be developed at this time. However, the amount of land affected by the vegetation management would be less than the 277 acres to be treated in the Vegetation Management Units on private property. City owned parcels that include a creek where sedimentation could occur if the fuel reduction work caused substantial off-site erosion are listed in Table 3-8.

**TABLE 3-8  
CITY OWNED PROPERTIES WITH CREEKS OR NEAR TO CREEKS**

City Parcel (Figure 5)	Creek	Location in Unit
Equestrian Circle	Mission Creek	Middle of the unit; primary drainage
Rocky Nook Pump Station	Mission Creek	Adjacent to the creek
Parma Park	Tributary to Sycamore Creek	Middle of the unit, and along eastern boundary
Honda Valley	Arroyo Honda	Middle of the unit
Gould Park	Tributary to Montecito Creek	Middle of the unit
Tunnel Reservoir Area	Mission Creek	Middle of the unit
Rattlesnake Canyon Park	Rattlesnake Creek	Middle of the unit
Stevens Park	San Roque Creek	Middle of the unit
Cater Treatment Plant	San Roque Creek	West side of unit
Hidden Valley	Arroyo Burro	Adjacent to unit
Skofield Park	Rattlesnake Creek	Middle of unit
La Mesa Park	Lighthouse Creek	West side of unit
Elings Park	Unnamed tributary to Arroyo Burro	Middle of unit
601 Las Positas	Arroyo Burro	West side of unit
Oak Park	Mission Creek	Middle of unit



## **Summary of Impacts**

A summary of the erosion and sedimentation impacts due to the proposed Wildland Fire Plan is presented below:

- The reduction in vegetation in the vegetation management units (private lands), Community Fuels Treatment Network areas, and 1993 fuels management units (City owned land) could cause post-treatment, localized increases in soil erosion and potential downstream sedimentation. This impact would occur if the vegetation reduction resulted in significant soil exposure in steep areas that are vulnerable to water erosion from winter rains. Significant, but mitigable (Class II)
- There is a potential to increase erosion in a creek due to the vegetation management in creeks because the treated areas could be exposed to flowing water in the subsequent winter. Significant, but mitigable (Class II)
- The modified defensible space requirements are not expected to cause a significant cumulative increase in erosion potential because there will be an overall net decrease in the area of vegetation management which could increase erosion potential. There may be localized increases in erosion potential in the Extreme Foothill Zone. Less than significant (Class III)

### **3.1.4 Consistency with Applicable Local Plans and Policies**

The Seismic Safety-Safety Element and Conservation Element of the City's General Plan do not have any applicable goals, policies, or recommendations that address soil erosion as it relates to fuel management.

Only a very small portion of the High Fire Hazard Area occurs in the Coastal Zone – the southern half of the Coastal Fire Hazard Zone (Figure 3). None of the vegetation management units on private land occur in the Coastal Zone. Only three fuel management units on City-owned lands occur in the Coastal Zone: (1) Hope Reservoir Booster Station; (2) Cliff Drive Lift Station; and (3) La Mesa Park. La Mesa Park is located adjacent to Lighthouse Creek; the other sites are located on flat terrain in developed neighborhoods. There are no Local Coastal Plan (LCP) policies on erosion and sedimentation that relate directly to the proposed Wildland Fire Plan. The only policy that relates indirectly, is as follows:

- *Policy 6.8. The riparian resources, biological productivity, and water quality of the City's coastal zone creeks shall be maintained, preserved, enhanced, and, where feasible, restored.*

The proposed Wildland Fire Plan would not result in a significant unavoidable impact related to erosion of treated areas and sedimentation of nearby creeks. All feasible best management practices and mitigation measures to reduce these impacts will be applied to the project. As such, the proposed Plan in the Coastal Zone (as well as outside the Coastal Zone) is expected to protect water quality in the Coastal Zone, and is therefore, consistent with this policy.

### **3.1.5 Mitigation Measures**

ER-1 The Department shall implement the following additional Best Management Practices when conducting vegetation management on slopes greater than 10 percent, within 25 feet of the top of a creek, or within a creek:

- To the extent feasible, field crews shall not create foot paths to and from the work areas that remove leaf litter and expose mineral soils to potential future erosion. If crews must use a single path that becomes worn and vulnerable, the path shall be rehabilitated after vegetation management to reduce erosion potential. Rehabilitation would include replacement of leaf litter and chippings on the path, and piling dirt and organic matter at periodic intervals along the path to act as water bars and prevent concentration of flows.
- Crews shall avoid stripping the leaf litter from slopes or creek banks when dragging vegetation from the cutting location to the chipper. If the removal of vegetation and leaf litter is unavoidable, the Department shall restore the affected areas by spreading leaf litter and chippings back over the stripped areas.
- For any vegetation management work in a creek, or within 25 feet of the top of bank, the Department shall prepare an erosion control plan that evaluates the potential for causing erosion from vegetation management actions, and identifies BMPs to avoid significant erosion impacts through modifying vegetation removal methods, utilizing alternative access methods, and/or rehabilitating affected areas after the work.
- If the Department field supervisor determines that an erosion potential has been created due to vegetation reduction work, and that the spreading of leaf litter and chippings is insufficient protection from future winter rains, the Department shall consider temporary biodegradable erosion control blankets and barriers, such as coconut fiber blankets and logs. These materials shall be placed strategically to reduce the amount and velocity of flow over the affected areas, to prevent gullying and soil loss by water erosion, and to facilitate the natural regeneration and colonization by native plants.

### **3.1.6 Residual Impacts**

No significant, unavoidable impacts would occur related to erosion and sedimentation.

## 3.2 BIOLOGICAL RESOURCES

### 3.2.1 Existing Conditions

#### Vegetation Types on Private Parcels

Native vegetation on private parcels subject to the defensible space requirements varies considerably. In general, there is little native vegetation in small lots (less than 0.5 acres). Larger lots support a variety of native vegetation, typically restricted to hillsides and undeveloped terrain around the perimeter of a lot. Native vegetation that occurs on lots in the High Fire Hazard Area includes chaparral, coastal sage scrub, coyote brush scrub, coast live oak woodland/forest, riparian woodland/forest, and remnant patches of coastal perennial grassland. Non-native vegetation is most common on private developed lots, consisting of ornamental trees, shrubs, and herbs that are part of the landscaping. In addition, developed lots may contain weedy or ruderal vegetation, eucalyptus groves, and orchards.

The upper foothills of Santa Barbara consist mostly of rural residential areas (low density) and a few single homes. The vegetation on these lots typically includes orchards mixed with ornamental trees, ruderal vegetation, and native habitats. Chaparral is the dominant vegetation type in the upper foothills, followed by coastal sage scrub and coast live oak woodland. Several riparian woodland corridors occur along the bottom of canyons in the foothills, and as they traverse developed areas they become mixed with more ornamental trees and non-native vegetation. The lower foothills consist mostly of rural residential and medium density areas, which are dominated by ornamental trees and landscaping.

The coastal areas are dominated by coastal sage scrub with scattered patches of grassland, oak woodland and ruderal vegetation. Large patches of oak woodland intersect residential areas usually on north-facing slopes, and are often mixed with chaparral. A large riparian woodland corridor (Arroyo Burro) mixed with several ornamental trees bisects the coastal mesa and extends to the ocean. Developed areas consist mostly of residential rural medium density areas. These areas contain ornamental trees/landscape and are often mixed with a nearby native habitat, ruderal vegetation, or orchard.

#### Vegetation Types in the Vegetation Management Units (Private Lands)

URS conducted field surveys and examined aerial photographs to identify and map vegetation types and land uses in the Vegetation Management Units. Vegetation types are shown on Figures 10a-d. Descriptions of the individual vegetation types are provided below.

- Grassland. Annual grasses and weedy herbs dominate the grasslands that were formerly occupied by native perennial grasses (*Nassella pulchra*). Grasslands are found on gentle hillsides and areas disturbed by people. This community occurs separately and as the understory of other habitats. The dominant grass species include ripgut brome (*Bromus diandrus*), wild barley (*Hordeum sp.*), and wild oats (*Avena sp.*). Native broadleaf species include tarweed (*Hemizonia ramosissima*), doveweed (*Eremocarpus setigerus*), jimson weed (*Datura meteloides*), and coast

goldenbush (*Isocoma menziesii* ssp. *vernonioides*). Non-native weeds include mustards, wild radish, sweet fennel, and prickly wild lettuce.

- Coyote Brush Scrub. Coyote brush scrub is often mixed with other coastal sage scrub species. Coyote brush scrub is found in disturbed areas where *Baccharis pilularis* is the dominant species mixed with non-native grasses and weeds including sweet fennel (*Foeniculum vulgare*), black mustard (*Brassica nigra*), and wild radish (*Raphanus sativus*).
- Chaparral. Chaparral occurs on hot, dry slopes, ridges, and mesas. Some of the dominant species of this habitat include big pod ceanothus (*Ceanothus megacarpus*), green bark ceanothus (*Ceanothus spinosus*), chamise (*Adenostoma fasciculatum*), black sage (*Salvia mellifera*), and white sage (*Salvia apiana*). Common scrub oak (*Quercus berberidifolia*) is found in patches and scattered throughout chaparral. Nuttall's scrub oak (*Quercus dumosa*), which is a sensitive species may also be present and hybridizes with the common scrub oak (*Quercus berberidifolia*).
- Eucalyptus Grove. A variety of eucalyptus trees are found throughout the area individually and in groves. The most common eucalyptus tree is the blue gum (*Eucalyptus globulus*). Groves are found mostly in residential areas, but also in a few riparian and oak woodland areas. The understory of eucalyptus groves is generally absent due to the chemical properties of the leaf litter which inhibit plant growth in the understory.
- Ornamental trees/Landscaping. Santa Barbara has a wide diversity of ornamental trees and plants. Ornamental trees/landscape is the dominant feature of most developed areas, becoming less dominant with decreasing density of housing. On the edges of development, some ornamentals have expanded into natural habitats, such as along Mountain Drive.
- Ruderal. Ruderal vegetation consists of disturbed habitat dominated by a variety of non-native weeds and annual grasses. Dominant weeds include black mustard, wild radish, sweet fennel, milk thistle, and prickly lettuce.

Certain vegetation or habitat types in the project area that are considered sensitive due to their low abundance and/or unique biological features are listed below:

- Coastal Perennial Grassland. Coastal perennial grasslands are dominated by purple needle grass (*Nassella pulchra*) and mixed with a variety of forbs. This habitat occurs in small remnant patches within grasslands dominated by annual species. Non-native annual grasslands have replaced native grasslands in the last 400 years, primarily due to heavy grazing by cattle. Also, many native grasslands have been developed over due to the ease of developing coastal plains. A few locations where *Nassella pulchra* has been observed include a hillside in Parma Park, northeast end of Anapamu Street, and the northern slope of Honda Valley. None of these patches of native bunchgrass exist in a pristine condition.
- Coastal Sage Scrub. Coastal sage scrub is found in a few isolated pockets throughout the City on the lower, dry slopes of undeveloped areas. Much of this habitat has been lost within the City due to development. Dominant species include California sagebrush (*Artemisia californica*),

purple sage (*Salvia leucophylla*) coyote brush (*Baccharis pilularis*), and buckwheat (*Eriogonum fasciculatum*). Native morning glory (*Calystegia macrostegia* ssp. *cyclostegia*), Douglas nightshade (*Solanum douglasii*), and lemonade berry are scattered throughout the habitat. This habitat is valuable to wildlife because it provides dense vegetation cover and food.

- Oak Woodland/Forest. Coast live oak dominates southern oak woodland/forest/savannah habitat, and is often mixed with scattered blue elderberry (*Sambucus mexicana*). Oak forests are the most densely vegetated with a closed canopy. Oak woodland is less dense and usually mixed with more understory species. Oak savannahs consist of scattered oak trees among grassland or ruderal habitat. Oak woodland and forest understory species include hummingbird sage (*Salvia spathacea*), giant rye (*Leymus condensatus*), California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), mugwort (*Artemisia douglasiana*), toyon (*Heteromeles arbutifolia*), lemonadeberry (*Rbus integrifolia*), and Santa Barbara honeysuckle (*Lonicera subspicata* spp. *subspicata*). Invasive weeds include tree tobacco, sweet fennel, and German ivy. This habitat provides cover, nesting/den sites, food, and shade for a wide diversity of resident and migratory birds, and mammals.
- Riparian Woodland/Forest. Extensive riparian woodlands/forests are limited to the upper portions of San Roque, Mission, Rattlesnake, and Sycamore creeks and along most of Arroyo Burro. Species include coast live oak (*Quercus agrifolia*), western sycamore (*Platanus racemosa*), and arroyo willow (*Salix lasiolepis*). Eucalyptus trees are common and a variety of other ornamental trees are scattered throughout the riparian areas. Some wetland species occur along the edges of the creeks, such as bulrush (*Scirpus maritimus*), and scouring rush (*Equisetum hyemale*), which occur along the lower portion of Arroyo Burro. Common riparian woodland/forest understory species are similar to the oak woodland understory and also include snowberry (*Symphoricarpos mollis*) and creek clematis (*Clematis ligusticifolia*). Riparian woodland/forest provides nesting, foraging, and roosting habitat for a diversity of resident and migratory birds. Streams along this habitat provide drinking and bathing opportunities for wildlife, and support a variety of amphibians and reptiles associated with this habitat. Larger mammals use riparian corridors to travel through the city from natural areas in the upper foothills.

A summary of the vegetation types in the Vegetation Management Units is provided in Table 3-9. These data indicate that the most abundant native vegetation is coastal sage scrub, oak woodland, and riparian forest/woodland. Residential development and landscaping account for about 40 percent of the total acreage.

**TABLE 3-9  
SUMMARY OF VEGETATION AND LAND USES IN THE VEGETATION  
MANAGEMENT UNITS (PRIVATE LANDS)**

Vegetation Type	Acreage
Coastal Sage Scrub	225.1
Ornamental/Landscaping	204.9
Oak Woodland	196.6
Residential Rural Medium Density	161.9
Riparian Woodland	75.7
Residential Suburban	56.5
Orchard	47.9
Grassland	45.2
Ruderal	27.8
Eucalyptus Grove	16.4
Riparian Forest	14.7
Facility (Ruderal/Ornamental)	10.2
Residential Rural - Single Home	1.7
Total=	1,084.5

A summary of the habitats in each Vegetation Management Unit is presented in Table 3-10. Aerial photographs of the units showing land use and vegetation conditions are shown on Figures 7a-d, and in Appendix E. The dominant land use at the units is residential, which typically includes extensive landscaping. Some units are completely developed with residences and landscaping, such as Camino Viejo, Cima Linda Lane, Cleveland School, Coyote Road, and Owens Road units. Several units have extensive native habitats in the undeveloped open spaces on large lots such as Alturas del Sol, Las Canoas Road, Loma Alta, and Mountain/Las Tunas units.

**TABLE 3-10  
HABITAT TYPES IN THE VEGETATION MANAGEMENT UNITS (PRIVATE LANDS), ACRES**

Vegetation Types	Alston	Alturas del Sol	Camino Viejo	Gima Linda Lane	Circle Dr-Las Barrancas	Cleveland School	Conejo Road	Coyote Circle	Coyote Road	Eucalyptus Hill	Fire Station 7	Flora Vista	Garcia /Ferrelo Cyn
Chaparral/Oak Woodland					13.9		1.5	2.7	2.3				
Coastal Sage Scrub	1.7						13.6						
Coastal Sage Scrub/Oak Woodland		14.2											
Grassland												0.5	
Oak Savannah													
Oak Woodland												5.2	
Oak Woodland/Chaparral												11.9	
Oak Woodland/Coastal Sage Scrub	24.6									6.5			
Oak Woodland/Eucalyptus													
Oak Woodland/Ornamental							2.2			3.8	1.4		2.4
Riparian Forest													
Riparian Woodland							3.5						
Riparian Woodland/Chaparral									0.1				
Riparian Woodland/Coastal Sage Scrub													
Riparian Woodland/Ornamental							16.6						
Ruderal										7.7			
Ornamental	2.2		14.3		1.0	0.1	53.2	7.8	9.6	27.3	1.0		
Eucalyptus Grove										10.0			
Orchard												16.4	
Rural Residential - Medium	10.6	4.0	9.4	15.7	18.6	7.9	15.5			7.9		3.6	
Rural Residential - Single Homes												1.7	1.8
Rural Suburban						13.9						0.9	1.3
TOTAL=	39.0	18.2	23.7	15.7	47.4	8.0	86.1	10.5	12.0	63.2	2.4	40.2	5.5
Percent Residential & Ornamental	33	22	100	100	71	100	57	74	80	56	41	15	56
Percent Oak Habitats	63	0	0	0	0	0	3	0	0	16	59	43	44
Percent Riparian Habitats	0	0	0	0	0	0	23	0	0	0	0	0	0
Vegetation Types	Garcia /Ferrelo Cyn	Hillcrest Road	Honda Valley	Jimeno/ Garcia Cyn	Las Canoas Road	Las Positas	Loma Alta	Mountain/Las Tunas	Owen Road	San Roque Creek	Stevens Park	Upper Coyote Road	Total
Chaparral/Oak Woodland			11.8		1.0							9.4	42.7
Coastal Sage Scrub			18.6			95.3	2.9			3.6			135.7
Coastal Sage Scrub/Oak Woodland				26.9		5.6							46.7
Grassland						54.7							55.2
Oak Savannah								0.1					0.1
Oak Woodland			12.0	7.7	6.1	7.3							38.3
Oak Woodland/Chaparral							26.4						38.3
Oak Woodland/Coastal Sage Scrub						18.9							50.0
Oak Woodland/Eucalyptus			5.4										5.4
Oak Woodland/Ornamental	2.4	20.6				11.2		33.7					75.8
Riparian Forest						14.7							14.7
Riparian Woodland								1.3			6.8		11.6
Riparian Woodland/Chaparral													0.1
Riparian Woodland/Coastal Sage Scrub										41.1			41.1
Riparian Woodland/Ornamental								6.3					22.9
Ruderal						19.0				11.3			38.0
Ornamental		37.5	3.4		0.9	34.3		2.0	7.5			11.5	193.5
Eucalyptus Grove			5.6				0.5		0.3				16.4
Orchard										21.4			37.8
Rural Residential - Medium		8.8	2.7							5.0	5.2		114.8
Rural Residential - Single Homes	1.8			19.8			8.1		17.4				48.8
Rural Suburban	1.3		23.2	9.3		1.0	3.6				3.4		56.5
TOTAL=	5.5	66.9	82.6	63.7	52.7	217.2	42.0	43.4	25.2	82.4	15.4	20.9	1,084.3
Percent Residential & Ornamental	56	69	35	46	2	16	28	5	99	6	56	55	38
Percent Oak Habitats	44	31	21	12	69	3	64	78	0	0	0	0	19
Percent Riparian Habitats	0	0	0	0	28	0	0	18	0	50	44	0	8

### **Vegetation Types in the 1993 Fuel Management Units (City Lands)**

URS also conducted field surveys and examined aerial photographs to identify and map vegetation types and land uses in the 1993 fuel management units that occur on City owned parcels. Vegetation types are shown on Figures 11a-d.

A summary of the vegetation types in the 1993 management units on City property is provided in Table 3-11. These data indicate that the most abundant native vegetation is chaparral, coastal sage scrub, oak woodland, and riparian woodland.

**TABLE 3-11  
SUMMARY OF VEGETATION AND LAND USES IN THE 1993 FUEL  
MANAGEMENT UNITS (CITY LANDS)**

Vegetation Type	Acreage
Chaparral/coastal sage scrub	923.2
Riparian woodland	162.7
Coastal sage scrub	150.4
Chaparral/oak woodland	143.2
Riparian forest	83.2
Oak woodland	76.8
Grassland	64.8
Ornamental	63.2
Developed Facility	36.5
Ruderal	31.2
Riparian scrub	25.6
Eucalyptus	18.5
Rural residential – medium density	10.5
Coyote brush scrub	4.6
Total=	1,794.5

Acreage of individual habitats in each management unit is presented in Table 3-12. Aerial photographs of the units showing land use and vegetation conditions are shown on Figures 9a-d, Figures 11-a-c, and in Appendix F.



**TABLE 3-12  
HABITAT TYPES IN THE 1993 MANAGEMENT UNITS (CITY LANDS), ACRES**

	Las Pintas	Campanil	Cater	Chf Dr Lft	East Res	El Centro Res.	Elings	Epsteinian Creek	Escamella Res	Francisco Park	Gould Park	Hak Park	Hidden Valley	Honda Valley	Hope Booster	La Mesa Park	La Mesa Res	Laurel Cyn	La Vina Res	Loma Meda Park	Oak Park	Puma Park	Rankenale Park	Res 1	Res 2	Res 3	Rocky Nook	Sheffield Pump	Sheffield Res	Sheffield Park	Storfield Res	Stevens Park	Sylvan Park	Tunnel Res Area	Vic Trace Res	Total			
CBS/OR	4.6																																			4.6			
CH/CSS											328.9												1.8	346.4													328.9	923.2	
CH/OW														8.6									119.0	14.7													143.2	4.1	
CSS							3.7																					0.2										0.2	12.0
CSS/G														12.0																								12.0	
CSS/OS																							12.0															12.0	
CSS/OW							5.6																4.8															18.7	
CSS/R	0.0						93.0												7.0		0.7		0.0								8.3						103.5		
EG																																					5.6		
EG/OR											0.8																											0.8	
EG/OW											6.6																											6.6	
EG/R					0.5							5.0																										5.5	
F (CSS/R)																0.5																			0.1		0.1	3.0	
F (OR)																																						6.5	
F (OR/OW)																																						13.6	13.6
F (OR/R)																																						1.7	
F (OS/R)							1.7																															1.7	
F (R/OR)				10.1		0.8																																10.8	
F (RW/OR)																											0.8											0.8	
G/CSS																							5.3															6.8	
G/R							1.6																4.8															58.0	
OR/CSS							53.2																															2.6	
OR/EG																																						1.8	
OR/R																																						1.0	
RC (OR)							2.7																															2.7	
RC (OR/R)							29.8																															29.8	
RRL (OR/CSS)																																						4.0	
RRL (OR/O)																																						7.0	
RRL (OR/OS)							0.2																															0.8	
RRL (OR/OW)												0.8																										0.1	
RRL (OR/R)																																						0.0	
OF/CH																																						0.2	
OS/OR																																						0.5	
OW							1.0																															9.9	
OW/CH																																						3.9	
OW/CSS			0.0									5.1																										2.5	
OW/EG																																						4.2	
OW/OR				0.3							3.4																											0.3	
OW/R																																						0.7	
RC (OW)																																						3.4	
RC (OW/R)																																						8.4	
RC (RW/OR)																																							
RRL (OF/OR)																																						0.2	
RRL (OW/OR)																																						0.2	
R/CSS							19.0																															0.1	
R/OR																																						3.0	
R/OS																																						4.5	
R/OW																																						1.9	
RRL (R/OR)																																						4.5	
RF																																						1.0	
RRM (OR)																																						1.0	
RRM (OR/O)																																						2.9	
RRM (OR/OW)																																						0.4	
RRM (OR/R)			0.5	0.1							5.1																											0.4	
RS (OR)																																						2.9	
RS (OR/R)																																						0.1	
RS (OR/OW)																																						1.1	
RRL (RW/OR)																																						0.1	
RW																																						1.1	
RW/CH																																						0.6	
RW/EG			0.4																																			15.0	
RW/OR																																						7.1	
Total=	5.1	0.5	12.7	0.3	1.2	1.8	210.8	5.4	7.3	16.1	367.0	12.8	16.7	48.9	1.5	1.8	0.0	14.0	0.0	1.3	35.4	187.0	436.0	7.6	0.8	0.9	0.6	0.4	21.9	35.1	0.1	24.8	0.8	303.3	14.8	1,794.5			

CH = chaparral, CSS = coastal sage scrub, CBS = covote brush scrub, EG = eucalyptus grove, F = industrial facility, G = grassland, RC = recreation [park], RRL = rural residential low density, OF = oak forest, OW = oak woodland, OS = oak savannah  
R = ruderal, RRM = rural residential moderate density, RS = rural suburban, RW = riparian woodland, riparian forest

## **Special Status Species in the Project Area**

Special Status Species include the following categories of species that are considered rare, endangered, or with limited distribution: (1) species officially designated as rare, threatened, endangered by the California Fish and Game Department (CDFG) or US Fish and Wildlife (USFWS); (2) Species of Special Concern designated by CDFG; and (3) plant species included in the California Native Plant Society Inventory of Rare and Endangered Species of California. A list of special status aquatic species, terrestrial wildlife, and plant species that are either known to occur in the project area, or may potentially occur in the High Fire Hazard Area is presented in Table 3-13. This information is based on a search of the most recent records of such species in the California Natural Diversity Data Base (CNDDDB), information in the City's Master Environmental Assessment, results of prior biological studies, and reconnaissance surveys of the various management units.

Formal biological surveys have not been conducted on most of the private and City owned management units, and in the Community Fuels Treatment Network. Hence, the information on potential occurrence in Table 3-13 represents a conservative assessment based solely on the presence of suitable habitat features.

## **Potential Occurrences of Special Status Species in Vegetation Management Units (Private Lands)**

The potential occurrence of special status species on each management unit is summarized below, including any unique habitat features at the site.

*Alston Place.* The majority of this unit is a canyon consisting of oak woodland and coastal Sage scrub, and is completely surrounded by residential development. Due to the lack of connectivity to other natural habitats, this area is likely to be highly disturbed and have low species diversity. Coastal western whiptail and silvery legless lizard are special status species that could potentially occur at the site, since they occur nearby at Parma Park. White-tailed kite, Cooper's hawk, and sharp-shinned hawk are special status species that are likely to visit the area. Special status plants that could potentially occur at the site include Nuttall's scrub oak, late-flowered mariposa lily, and Catalina mariposa lily.

*Alturas Del Sol.* The majority of this unit is a canyon dominated by coastal sage scrub with scattered oak woodland and completely surrounded by residential development. Due to the lack of connectivity to other natural habitats, this area is likely to be highly disturbed and have low species diversity. Special status wildlife that could potentially occupy the site include: California horned lizard, coastal western whiptail, San Diego desert woodrat, silvery legless lizard, and southern California rufous-crowned sparrow. Special status plants that could potentially occur at the site include Plummer's baccharis, southern honeysuckle, and white-flowered sticky phacelia.

**TABLE 3-13**

**SPECIAL STATUS SPECIES IN OR NEAR THE VEGETATION MANAGEMENT UNITS (PRIVATE LANDS) AND CITY OWNED PROPERTIES**

Common Name	Scientific Name	Legal Status	Habitat	Life History	Suitable Habitat occurs in Management Unit	Observed in Management Units?	Source
<b>Listed Species</b>							
California red-legged frog	<i>Rana aurora draytonii</i>	FT, CSC	aquatic habitat with low or no flow	resident	<u>Vegetation Mgmt Units:</u> Conejo Road, Las Canoas Road, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Gould Park, Hidden Valley, 601 Las Positas, Oak Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Rattlesnake Creek Sites, Equestrian Circle, Rocky Nook Station, Stevens Park, Skofield Park	No confirmed modern records in City creeks	b, c, f
Southern Steelhead	<i>Oncorhynchus mykiss</i>	FE, CSC	spawn in clear, cool, well oxygenated water, usually greater than 0.8 ft deep, with gravel	Resident and spring-summer visitor	<u>Vegetation Mgmt Units:</u> Las Canoas Road, Mountain/Las Tunas. <u>City Parcels:</u> Gould Park, Hidden Valley, 601 Las Positas, Oak Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Rattlesnake Creek Sites, Equestrian Circle, Rocky Nook Station	Only known to occur in Mission Creek	b, c, f
Tidewater goby	<i>Encyclobius newberryi</i>	FE, CSC	shallow lagoons, estuaries, and lower reaches of coastal streams	resident	<u>Vegetation Mgmt Units:</u> Arroyo Burro estuary, downstream of Las Positas Road. <u>City Parcels:</u> Arroyo Burro estuary, downstream of 601 Las Positas, and Cliff Drive Lift Station	No, nearest CNDDDB record is Arroyo Burro estuary.	c
<b>Species of Special Concern, or of Local Interest</b>							
<b>Aquatic Species</b>							
Arroyo chub	<i>Gilia orcutti</i>	CSC	Coastal streams	resident	<u>Vegetation Mgmt Units:</u> Conejo Road, Las Canoas Road, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Gould Park, Hidden Valley, 601 Las Positas, Oak Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Rattlesnake Creek Sites, Equestrian Circle, Rocky Nook Station, Stevens Park	No confirmed modern records in City creeks	b
Southwestern pond turtle	<i>Clemmys marmorata pallida</i>	FSC, CSC	Permanent or nearly permanent bodies of water	resident	<u>Vegetation Mgmt Units:</u> Conejo Road, Las Canoas Road, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Gould Park, Hidden Valley, 601 Las Positas, Oak Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Rattlesnake Creek Sites, Equestrian Circle, Rocky Nook Station, Stevens Park, Skofield Park	Known to occur in Sycamore, Mission, and Arroyo Burro watersheds	a, b, c, f
<b>Wildlife Species</b>							
California Tree frog or Chorus frog	<i>Pseudacris cadaverina</i>	CSC	Riparian woodland canyon streams and washes with quiet pools, rocks, and shade	resident	<u>Vegetation Mgmt Units:</u> Conejo Road, Las Canoas Road, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Gould Park, Hidden Valley, 601 Las Positas, Oak Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Rattlesnake Creek Sites, Equestrian Circle, Rocky Nook Station, Stevens Park, Skofield Park	No	a, f

**TABLE 3-13**

**SPECIAL STATUS SPECIES IN OR NEAR THE VEGETATION MANAGEMENT UNITS (PRIVATE LANDS) AND CITY OWNED PROPERTIES**

Common Name	Scientific Name	Legal Status	Habitat	Life History	Suitable Habitat occurs in Management Unit	Observed in Management Units?	Source
Coast Range newt	<i>Taricha torosa torosa</i>	CSC	Riparian woodland, dry season restricted to pools, during wet season forage in Chaparral/Oak woodland within 0.5 miles of breeding sites	resident	<u>Vegetation Mgmt Units:</u> Conejo Road, Las Canoas Road, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Gould Park, Hidden Valley, 601 Las Positas, Oak Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Rattlesnake Creek Sites, Equestrian Circle, Rocky Nook Station, Stevens Park, Skofield Park	No, but expected to occur in Sycamore, Mission, and Arroyo Burro watersheds	a,b, d, f
California horned lizard	<i>Phrynosoma coronatum frontale</i>	CSC	Grassland, Chaparral, Coastal Sage scrub, and sandy soils	resident	<u>Vegetation Mgmt Units:</u> Honda Valley, Alturas Del Sol, Circle Drive/Las Barrancas, Conejo Road, Coyote Circle, Coyote Drive, Upper Coyote Road, Las Canoas Road, Las Positas Road, Loma Alta, San Roque Creek. <u>City Parcels:</u> Elings Park, Laurel Canyon Park, Gould Park, Skofield Park, 601 Las Positas, Parma Park, Rattlesnake Canyon Area, Reservoir #1, Vic Trace Reservoir, Honda Valley, Hidden Valley, Stevens Park	No, recent records at Mountain Drive north of Parma Park and upper reaches of Mission Canyon. Historic records on the Mesa and Hope Ranch.	a, d, f
Coastal western whiptail	<i>Cnemidophorus tigris multiscutatus</i>	FSC, CSC	Dense vegetation in a variety of habitats including Oak/Riparian woodland, Coastal Sage scrub, and Annual Grassland	resident	<u>Vegetation Mgmt Units:</u> Honda Valley, Eucalyptus Hill Drive, Alston Place, Alturas Del Sol, Circle Drive/Las Barrancas, Conejo Road, Coyote Drive, Upper Coyote Road, Flora Vista, Las Canoas Road, Las Positas Road, Loma Alta, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Elings Park, Laurel Canyon Park, Gould Park, Skofield Park, 601 Las Positas, Parma Park, Rattlesnake Canyon Area, Reservoir #1, Vic Trace Reservoir, Honda Valley, Hidden Valley, Stevens Park. <u>Community Fuels Treatment Network areas</u>	No, expected to occur at Parma Park and in suitable habitats throughout Santa Barbara County.	c, d, e, f
Coast Mountain kingsnake	<i>Lampropeltis zonata</i>	SLC	Riparian woodland	resident	<u>Vegetation Mgmt Units:</u> Conejo Road, Las Canoas Road, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Elings Park, Laurel Canyon Park, Gould Park, Skofield Park, Parma Park, Rattlesnake Canyon Area, Honda Valley, Stevens Park, Skofield Park	No	a, b, d, f
Two-striped garter snake	<i>Thamnophis hammondi</i>	CSC	found in or near permanent fresh water along stream banks	resident	<u>Vegetation Mgmt Units:</u> Conejo Road, Las Canoas Road, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Gould Park, Hidden Valley, 601 Las Positas, Oak Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Rattlesnake Creek Sites, Equestrian Circle, Rocky Nook Station, Stevens Park, Skofield Park	No, nearest CNDDDB record is 1 mile north from the east end of Las Canoas Road.	a, b, c, d, f

**TABLE 3-13**

**SPECIAL STATUS SPECIES IN OR NEAR THE VEGETATION MANAGEMENT UNITS (PRIVATE LANDS) AND CITY OWNED PROPERTIES**

Common Name	Scientific Name	Legal Status	Habitat	Life History	Suitable Habitat occurs in Management Unit	Observed in Management Units?	Source
Silvery Legless lizard	<i>Anniella pulchra pulchra</i>	FSC, CSC	Sandy soils under litter of Oak, Chaparral, Coastal Sage scrub	resident	<u>Vegetation Mgmt Units:</u> Honda Valley, Alston Place, Alturas Del Sol, Circle Drive/Las Barrancas, Conejo Road, Coyote Circle, Coyote Drive, Upper Coyote Road, Las Canoas Road, Las Positas Road, Loma Alta, San Roque Creek. <u>City Parcels:</u> Elings Park, Laurel Canyon Area, El Cielito Reservoir, Gould Park, 601 Las Positas, Mission Park, Oak Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Skofield Park, Honda Valley. <u>Community Fuels Treatment Network areas</u>	No, but found very close to Las Positas Road unit near Los Pasitas Park, Hope Ranch, and the Mesa.	a, c, d, f
Bank Swallow	<i>Riparia riparia</i>	ST	Colonial nester in Riparian lowlands. Requires vertical bank cliffs with fine textured sandy soils near streams, rivers, lakes, or ocean to dig nesting hole.	migrant	<u>Vegetation Mgmt Units:</u> Las Positas Road. <u>City Parcels:</u> Elings Park, Gould Park, 601 Las Positas, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Skofield Park, Honda Valley	No, nearest CNDDDB record is at Arroyo Burro Beach.	c
California Spotted owl	<i>Strix occidentalis occidentalis</i>	FSC, CSC	woodlands, nests from 1,000 to 7,700 feet elevation	migrant	<u>Vegetation Mgmt Units:</u> Conejo Road, Coyote Drive, Hillcrest Road, Upper Coyote Road, Las Canoas Road, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> El Cielito Reservoir, Equestrian Circle, Franceschi Park, Gould Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Rattlesnake Creek Sites, Rocky Nook Station, Skofield Park, Honda Valley	No	a, d
Cooper's hawk	<i>Accipiter cooperii</i>	CSC (nesting)	Dense stands of Riparian / Oak woodlands	resident	<u>Vegetation Mgmt Units:</u> Honda Valley, Eucalyptus Hill Drive, Alston Place, Camino Viejo, Cima Linda, Circle Drive/Las Barrancas, Conejo Road, Coyote Circle, Coyote Drive, Garcia/Ferrello Canyon, Hillcrest Road, Upper Coyote Road, Flora Vista, Jimeno/Garcia Road, Las Canoas Road, Las Positas Road, Loma Alta, San Roque Creek, Stevens Park, Mountain/Las Tunas, <u>City Parcels:</u> Ellings Park, El Cielito Reservoir, Equestrian Circle, Escondido Reservoir, Franceschi, Mission Ridge, Gould Park, Hidden Valley, La Mesa Park, 601 Las Positas, Mission Park, Oak Park, Parma Park, Rattlesnake Canyon Area, Rattlesnake Creek Sites, Reservoir #2, Rocky Nook Station, Reservoir #1, Vic Trace Reservoir, Sheffield Reservoir, Skofield Park, Honda Valley. <u>Community Fuels Treatment Network areas</u>	Yes, records of nesting in upper Mission creek and Rocky Nook Park, near Mountain/Las Tunas.	a, b, c, d, e, f

**TABLE 3-13**

**SPECIAL STATUS SPECIES IN OR NEAR THE VEGETATION MANAGEMENT UNITS (PRIVATE LANDS) AND CITY OWNED PROPERTIES**

Common Name	Scientific Name	Legal Status	Habitat	Life History	Suitable Habitat occurs in Management Unit	Observed in Management Units?	Source
Monarch butterfly	<i>Danaus Plexippus</i>	*	Windrows including Eucalyptus groves	migrant	<u>Vegetation Mgmt Units:</u> Owens Road, Camino Viejo/Cleveland School, Honda Valley. <u>City Parcels:</u> Honda Valley, East Reservoir, Franceschi, Mission Ridge, Hidden Valley, La Mesa Park	Yes, small numbers observed at Eucalyptus Hill Drive, and nearest CNDDDB record is 0.77 miles southwest of Honda Valley.	c, e
Pallid Bat	<i>Antrozous pallidus</i>	CSC	rocks, crevices, caves, mines, tunnels, tree holes, and buildings. Most common in Grasslands, Oak savannah, and open scrub	resident	<u>Vegetation Mgmt Units:</u> San Roque Creek, Stevens Park, Circle Drive/Las Barrancas, Mountain/Las Tunas. <u>City Parcels:</u> Gould Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Skofield Park	No	f
San Diego Desert woodrat	<i>Neotoma lepida intermedia</i>	FSC, CSC	Coastal Sage scrub, Chaparral, rock outcrops	resident	<u>Vegetation Mgmt Units:</u> Honda Valley, Alturas Del Sol, Circle Drive/Las Barrancas, Conejo Road, Coyote Circle, Coyote Drive, Upper Coyote Road, Las Positas Road, Loma Alta. <u>City Parcels:</u> Elings Park, Laurel Canyon Park, Gould Park, 601 Las Positas, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Reservoir #1, Vic Trace Reservoir, Skofield Park, Honda Valley	No	a, c, d, f
Sharp-shinned hawk	<i>Accipiter striatus</i>	CSC (nesting)	Dense stands of Riparian / Oak woodlands	migrant	<u>Vegetation Mgmt Units:</u> Honda Valley, Eucalyptus Hill Drive, Alston Place, Camino Viejo, Cima Linda, Circle Drive/Las Barrancas, Conejo Road, Coyote Circle, Coyote Drive, Garcia/Ferrello Canyon, Hillcrest Road, Upper Coyote Road, Flora Vista, Jimeno/Garcia Road, Las Canoas Road, Las Positas Road, Loma Alta, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Elings Park, El Cielito, Escondido Reservoir Reservoir, Equestrian Circle, Franceschi, Mission Ridge, Gould Park, Hidden Valley, La Mesa Park, 601 Las Positas, Mission Park, Oak Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Rattlesnake Creek Sites, Reservoir #2, Rocky Nook Station, Reservoir #1, Vic Trace Reservoir, Sheffield Reservoir, Skofield Park.	Yes, observed foraging at Honda Valley during the September 1993 field survey.	a, c, d, f

**TABLE 3-13**

**SPECIAL STATUS SPECIES IN OR NEAR THE VEGETATION MANAGEMENT UNITS (PRIVATE LANDS) AND CITY OWNED PROPERTIES**

Common Name	Scientific Name	Legal Status	Habitat	Life History	Suitable Habitat occurs in Management Unit	Observed in Management Units?	Source
White-tailed kite	<i>Elanus leucurus</i>	FSC (nesting), SLC	Coastal and valley lowlands, nests in tree tops with dense foliage including orchards	resident	<u>Vegetation Mgmt Units:</u> Alston Place, Camino Viejo, Cima Linda, Circle Drive/Las Barrancas, Eucalyptus Hill Drive, Conejo Road, Coyote Circle, Coyote Drive, Garcia/Ferrello Canyon, Upper Coyote Road, Hillcrest Road, Honda Valley, Flora Vista, Jimeno/Garcia Road, Las Positas Road, Loma Alta, San Roque Creek, Stevens Park, Las Canoas Road, Mountain/Las Tunas. <u>City Parcels:</u> Ellings Park, El Gielito Reservoir, Escondido Reservoir, 601 Las Positas, Parma Park, Sheffield Reservoir	No	b, c, e
Southern California Rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	CSC	steep, rocky exposed slopes with open Coastal Sage scrub and Chaparral with grassy areas	resident	<u>Vegetation Mgmt Units:</u> Alturas Del Sol, Conejo Road, Coyote Drive, Upper Coyote Road, Honda Valley. <u>City Parcels:</u> Honda Valley, Gould Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Reservoir #1	No, but found north and south of Parma Park and Conejo Road is directly below Parma Park.	f
Warbling vireo	<i>Vireo gilvus</i>	SLC	Riparian forests including Oak woodlands along streams	Migrant and spring breeder	<u>Vegetation Mgmt Units:</u> Honda Valley, Eucalyptus Hill Drive (Hale Park), Circle Drive/Las Barrancas, Conejo Road, Coyote Circle, Coyote Drive, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Equestrian Circle, Gould Park, Hidden Valley, 601 Las Positas, Oak Park, Parma Park, Reservoir #2, Rocky Nook Station	Yes, found at upper Mission and Rattlesnake creeks, which is within Las Canoas Road.	a, b, c, d, e, f
Wilson's warbler	<i>Wilsonia pusilla</i>	SLC	Riparian forests including Oak woodlands along streams	Migrant and spring breeder	<u>Vegetation Mgmt Units:</u> Honda Valley, Eucalyptus Hill Drive (Hale Park), Circle Drive/Las Barrancas, Conejo Road, Coyote Circle, Coyote Drive, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Equestrian Circle, Gould Park, Hidden Valley, 601 Las Positas, Oak Park, Parma Park, Reservoir #2, Rocky Nook Station	No, nesting has not been reported recently in the vicinity; expected to frequent brushy and wooded habitats.	c, d, e, f
Yellow warbler	<i>Dendroica petechia</i>	CSC (nesting)	Riparian woodland including willows, cottonwoods, and other small trees	Migrant and spring breeder	<u>Vegetation Mgmt Units:</u> Eucalyptus Hill Drive (Hale Park), Conejo Road, Mountain/Las Tunas, San Roque Creek, Stevens Park, Circle Drive/Las Barrancas. <u>City Parcels:</u> Gould Park, Hidden Valley, 601 Las Positas, Oak Park, Parma Park, Reservoir #2	Yes, nests along Mission, Rattlesnake (Las Canoas Road), Montecito, Oak, Romero, and San Ysidro Creeks	a, b, c, d, e, f

**TABLE 3-13**

**SPECIAL STATUS SPECIES IN OR NEAR THE VEGETATION MANAGEMENT UNITS (PRIVATE LANDS) AND CITY OWNED PROPERTIES**

Common Name	Scientific Name	Legal Status	Habitat	Life History	Suitable Habitat occurs in Management Unit	Observed in Management Units?	Source
Yellow-breasted chat	<i>Ictera virens</i>	CSC (nesting)	Breeding habitat in dense Riparian woodland	Migrant and spring breeder	<u>Vegetation Mgmt Units:</u> Eucalyptus Hills Road, Conejo Road, Las Canoas Road, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Equestrian Circle, Gould Park, Hidden Valley, 601 Las Positas, Oak Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Rattlesnake Creek Sites, Reservoir #2, Equestrian Circle, Rocky Nook Station	No, nesting status in the area is unknown.	b, c
<b>Plant Species</b>							
Bitter gooseberry	<i>Ribes amarum</i>	CNPS (3)	cool shaded canyons/creek banks	perennial	<u>Vegetation Mgmt Units:</u> Conejo Road, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Gould Park, Hidden Valley, Parma Park	Yes, found along Rattlesnake (Las Canoas Road) and Mission Creek.	a, b, f
Catalina mariposa lily	<i>Calochortus catalinae</i>	CNPS (4)	Grasslands and openings in Oak woodland / Chaparral	annual forb	<u>Vegetation Mgmt Units:</u> Upper Coyote Rd., Los Canoas Rd., Circle Drive/Las Barrancas, Honda Valley, Alston Place, Conejo Road, Coyote Circle, Coyote Drive, Garcia/Ferrello Canyon, Hillcrest Road, Eucalyptus Hill Drive, Flora Vista, Jimeno/Garcia Road, Las Canoas Road, Loma Alta, Mountain/Las Tunas, San Roque Creek. <u>City Parcels:</u> El Cielito Reservoir, Franceschi, Mission Ridge, Gould Park, Mission Park, Oak Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Reservoir #1. <u>Community Fuels Treatment Network areas</u>	No, found in suitable habitat in Santa Barbara County.	a, b, d, f
Downy wood fern	<i>Thelypteris puberula</i>	SLC	creek banks in shaded canyons	perennial	<u>Vegetation Mgmt Units:</u> Extreme Foothill Zone, Conejo Road, Las Canoas Road, San Roque Creek. <u>City Parcels:</u> Equestrian Circle, Stevens Park, Gould Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Rattlesnake Creek Sites, Rocky Nook Station	No, endemic to the area.	a, f
Hoffman's sanicle	<i>Sanicula hoffmannii</i>	CNPS (4)	shaded woodlands near stream banks	taprooted	<u>Vegetation Mgmt Units:</u> Extreme Foothill Zone, Conejo Road, San Roque Creek, Stevens Park. <u>City Parcels:</u> Gould Park, Parma Park, Stevens Park	Yes, found along Rattlesnake (Las Canoas Road) and Mission Creek.	a, f
Late-flowered mariposa lily	<i>Calochortus weedii</i> var. <i>vestus</i>	CNPS (1B)	Oak woodland / Chaparral	annual forb	<u>Vegetation Mgmt Units:</u> Upper Coyote Rd., Los Canoas Rd., Circle Drive/Las Barrancas, Alston Place, Conejo Road, Coyote Circle, Coyote Drive, Garcia/Ferrello Canyon, Hillcrest Road, Honda Valley, Flora Vista, Jimeno/Garcia Road, Las Canoas Road, Loma Alta, Mountain/Las Tunas, San Roque Creek. <u>City Parcels:</u> Franceschi Park, Gould Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Reservoir #1	Yes, observed in the field at Las Barrancas (July 2003), and found mostly north of Mountain Drive.	b



**TABLE 3-13**

**SPECIAL STATUS SPECIES IN OR NEAR THE VEGETATION MANAGEMENT UNITS (PRIVATE LANDS) AND CITY OWNED PROPERTIES**

Common Name	Scientific Name	Legal Status	Habitat	Life History	Suitable Habitat occurs in Management Unit	Observed in Management Units?	Source
Nuttall's scrub oak	<i>Quercus dumosa</i>	CNPS (1B), SLC	Oak woodland / Chaparral	perennial	<u>Vegetation Mgmt Units:</u> Alston Place, Circle Drive/Las Barrancas, Conejo Road, Coyote Circle, Coyote Drive, Garcia/Ferrello Canyon, Hillcrest Road, Upper Coyote Road, Las Canoas Road, Mountain/Las Tunas, San Roque Creek, City Parcels: Franceschi Park, Gould Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Reservoir #1. <u>Community Fuels Treatment Network areas.</u>	No, expected to occur in the canyons and foothills of Santa Barbara County from Carpinteria to Gaviota.	b, f
Parish's checkerbloom	<i>Sidalcea hickmanii</i> ssp. <i>Parishii</i>	CNPS (1B), SR, FC	Chaparral, open Conifer forest, sometimes on serpentine	perennial	<u>Vegetation Mgmt Units:</u> Circle Drive/Las Barrancas, Coyote Circle, Coyote Drive, Upper Coyote Road. <u>City Parcels:</u> Gould Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area	No, expected to occur in the canyons and foothills of Santa Barbara.	b
Plummer's baccharis	<i>Baccharis plummerae</i>	CNPS (4)	Coastal Sage scrub, Oak/Riparian woodlands, Chaparral	perennial shrub	<u>Vegetation Mgmt Units:</u> Alturas Del Sol, Circle Drive/Las Barrancas, Conejo Road, Coyote Circle, Coyote Drive, Garcia/Ferrello Canyon, Upper Coyote Road, Eucalyptus Hill Drive (Hale Park), Flora Vista, Jimeno/Garcia Road, Las Canoas Road, Las Positas Road, Loma Alta, Mountain/Las Tunas, Owens Road, San Roque Creek, Stevens Park, Hillcrest Road. <u>City Parcels:</u> Elings Park, Laurel Canyon Park, Equestrian Circle, Franceschi Park, Gould Park, Hidden Valley, 601 Las Positas, Loma Media Park, Oak Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Rattlesnake Creek Sites, Rocky Nook Station, Reservoir #1, Vic Trace Reservoir, Skofield Park, Stevens Park. <u>Community Fuels Treatment Network areas.</u>	Yes, found at Honda Valley (1993) and Parma Park.	a, b, c, d, f
Santa Barbara bedstraw	<i>Galium clifftonsmithii</i>	CNPS (4)	Chaparral, woodlands	perennial	<u>Vegetation Mgmt Units:</u> Circle Drive/Las Barrancas, Conejo Road, Coyote Circle, Coyote Drive, Garcia/Ferrello Canyon, Hillcrest Road, Upper Coyote Road, Las Canoas Road, Loma Alta, Mountain/Las Tunas, San Roque Creek, Stevens Park. <u>City Parcels:</u> Equestrian Circle, Franceschi, Mission Ridge, Gould Park, Oak Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Skofield Park, Stevens Park	No, found in Chaparral and woodlands of Santa Barbara foothills.	a, f
Smith's yerba santa	<i>Eriodictyon traskiae</i> ssp. <i>Smithii</i>	SLC	Chaparral	perennial	<u>Vegetation Mgmt Units:</u> Circle Drive/Las Barrancas, Coyote Circle, Coyote Drive, Upper Coyote Road. <u>City Parcels:</u> Gould Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Skofield Park	No, found on Chaparral slopes in Santa Ynez Mountains.	a, f
Sonoran maiden fern	<i>Thelypteris puberula</i> var. <i>sonorensis</i>	CNPS (2)	Meadows and seeps along streams	perennial	<u>Vegetation Mgmt Units:</u> Eucalyptus Hill Drive, Extreme Foothill Zone, Las Canoas Road, San Roque Creek. <u>City Parcels:</u> Gould Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Skofield Park	No, nearest CNDDDB record is just north of Tunnel Reservoir.	c, e

**TABLE 3-13**

**SPECIAL STATUS SPECIES IN OR NEAR THE VEGETATION MANAGEMENT UNITS (PRIVATE LANDS) AND CITY OWNED PROPERTIES**

Common Name	Scientific Name	Legal Status	Habitat	Life History	Suitable Habitat occurs in Management Unit	Observed in Management Units?	Source
Southern honeysuckle or Santa Barbara honeysuckle	<i>Lonicera subspicata</i> ssp. <i>subspicata</i>	CNPS (1B), SLC	Chaparral / Coastal Sage scrub	perennial	<u>Vegetation Mgmt Units:</u> Honda Valley, Alturas Del Sol, Circle Drive/Las Barrancas, Conejo Road, Coyote Circle, Coyote Drive, Upper Coyote Road, Flora Vista, Jimeno/Garcia Road, Las Canoas Road, Las Positas Road, Loma Alta, Owens Road, San Roque Creek. <u>City Parcels:</u> Elings Park, Laurel Canyon Area, Gould Park, Hidden Valley, 601 Las Positas, Loma Media Park, Rattlesnake Canyon Area, Reservoir #1, Vic Trace Reservoir	No, found in many plant communities on the south side of Santa Ynez mountains along Cold Springs, Parma, and Tunnel Trail in several locations.	a, b, d, f
White-flowered sticky phacelia	<i>Phacelia viscida</i> var. <i>albiflora</i>	SLC	found in disturbed places, open sandy burns, Coastal Sage scrub, Chaparral	annual	<u>Vegetation Mgmt Units:</u> Alturas Del Sol, Circle Drive/Las Barrancas, Conejo Road, Coyote Circle, Coyote Drive, Upper Coyote Road, Honda Valley, Flora Vista, Jimeno/Garcia Road, Las Positas Road, Loma Alta, Owens Road, San Roque Creek, Las Canoas Road. <u>City Parcels:</u> Elings Park, Laurel Canyon Area, Gould Park, 601 Las Positas, Loma Media Park, Parma Park, Rattlesnake Canyon Area, Tunnel Reservoir Area, Reservoir #1, Vic Trace Reservoir.	No, but seen within the city in disturbed locations.	a, f

**Legal Status definitions:**

FE= Federally listed as endangered

FT= Federally listed as threatened

FSC= Federal species of concern

SE= State endangered

ST= State threatened

SR = State rare

CSC= California state species of special concern

SLC =species of local concern

\* = Species that are biologically rare, restricted in distribution, and declining throughout their range or closely related with a habitat that is declining in California.

California Native Plant Society List:

1B = plants that are rare, threatened, or endangered in California and elsewhere.

2 = plants that are rare, threatened, or endangered in California but are more common elsewhere.

3 = plants about which we need more information - a review list

4 = a watch list of plants of limited distribution

**Sources:**

<sup>a</sup> Wildland fire management plan Initial study

<sup>b</sup> Montecito Community Fire Protection Plan Draft EIR, September 2001

<sup>c</sup> Biological Assessment for the Douglas Family Preserve

<sup>d</sup> Honda Valley Biological Assessment and Management Plan

<sup>e</sup> Biological Assessment for Hale Park, August 2002

<sup>f</sup> Parma Open Space Resource Management Guide

Camino Viejo. This unit is dominated by residential development. The area consists mostly of ornamental trees/landscape, but some oak trees are scattered throughout. White-tailed kite, Cooper's hawk, and sharp-shinned hawk are special status species that could potentially visit the area due to the presence of oak trees.

Cima Linda. This area consists of residential development with mostly ornamental trees/landscape and scattered oak trees. Oak woodland habitat is adjacent to the west border, so it is possible that white-tailed kite, Cooper's hawk, and sharp-shinned hawk could come from the west side to use the oak trees present within this unit.

Circle Drive/Las Barrancas. The area is mostly residential surrounded by a thin buffer of chaparral and oak woodland habitats. A small eastern tributary of Sycamore Canyon creek runs along the western edge of the unit. The late-flowered mariposa lily (a special status species) was observed in July 2003 near the recent fuel reduction project located within this unit. Other special status plants that could potentially occur in this area include Catalina mariposa lily, Nuttall's scrub oak, Parish's checkerbloom, Plummer's baccharis, Santa Barbara bedstraw, Smith's yerba santa, southern honeysuckle, and white-flowered sticky phacelia, warbling vireo, Wilson's warbler, yellow warbler, white-tailed kite, Cooper's hawk, sharp-shinned hawk, and southern steelhead trout are special status species that could potentially visit the area due to the presence of a stream and oak woodland. Suitable habitat is also present for California horned lizard, coastal western whiptail, San Diego desert woodrat, and silvery legless lizard.

Cleveland School Area. This unit is mostly residential with a small eucalyptus grove south of Cleveland School. The only special status species that may occur here is the Monarch butterfly, which may visit the eucalyptus grove, but it is not considered a roosting site.

Conejo Road. The majority of this area is residential with patches of riparian woodland, oak woodland and scattered oak trees. A small portion of coastal sage scrub habitat along the east facing slope that runs along the west side of Sycamore Creek is included in the south end of the unit. Parma Park is located north of the unit forming a large contiguous Chaparral and oak woodland habitat, and a small portion of this is included in the unit. Several special status plants and wildlife species that occur north and south of the unit are likely to travel through the unit and occupy areas where suitable habitat is present. Special status species likely to occur in the unit due to their close proximity to the site and presence of suitable habitat include coastal western whiptail, southern California rufous-crowned sparrow, Plummer's baccharis, late-flowered mariposa lily, and southern honeysuckle. Other species that could potentially occupy or travel through the unit include California red-legged frog, arroyo chub, coast range newt, southwestern pond turtle, California horned lizard, coast mountain kingsnake, San Diego desert woodrat, Cooper's hawk, sharp-shinned hawk, silvery legless lizard, two-striped garter snake, warbling vireo, white-tailed kite, Wilson's warbler, yellow warbler, yellow-breasted chat, California spotted owl as a visitor only, bitter gooseberry, Catalina mariposa lily, Downy wood fern, Hoffman's sanicle, Nuttall's scrub oak, Santa Barbara bedstraw, and white-flowered sticky phacelia.

Coyote Circle. The majority of this area is residential with some scattered oak trees. The eastern edge includes a small tributary of Sycamore Creek which supports chaparral and oak woodland. The late-

flowered mariposa lily may occur at this site, as well as Nuttall's scrub oak, Parish's checkerbloom, Plummer's baccharis, Santa Barbara bedstraw, Smith's yerba santa, southern honeysuckle, and white-flowered sticky phacelia, warbling vireo, Wilson's warbler, yellow warbler, white-tailed kite, Cooper's hawk, sharp-shinned hawk, and southern steelhead trout.

Coyote Drive. This unit is mostly residential with scattered oak trees, chaparral, and oak woodland on the west side. The unit is surrounded by development except to the west where it connects to a riparian corridor and Parma Park, which increases the possibility for special status species to utilize the unit. Special status species that occur in the natural areas adjacent to the unit and are likely to occur in the unit include California horned lizard, coastal western whiptail, late-flowered mariposa lily, Plummer's baccharis, southern honeysuckle, and southern California rufous-crowned sparrow. Other special status species that could potentially occupy the unit include California spotted owl as a visitor only, Cooper's hawk, San Diego desert woodrat, sharp-shinned hawk, silvery legless lizard, warbling vireo, white-tailed kite, Wilson's warbler, Catalina mariposa lily, Nuttall's scrub oak, Parish's checkerbloom, Santa Barbara bedstraw, Smith's yerba santa, and white-flowered sticky phacelia.

Eucalyptus Hill Road. Hale Park is located on the northern side of the unit. Hale Park is predominantly non-native grassland mixed with ornamental trees and other exotic species. There are a few seeps on the southeastern portion of the park that support wetland vegetation. A small stream flowing from northeast to southwest with riparian vegetation bisects the park. The eastern side of the park consists of eucalyptus and oak trees. The southern side of the park is oak woodland mixed with ornamental trees. A small amount of coastal sage scrub occurs on the northwest side of the park. The center and outer edges of the unit are residential with patches of oak woodland and scattered oak trees. A large eucalyptus grove on the southern end of the unit serves only as a minor autumnal site for the monarch butterfly. Suitable habitat is present at Hale Park for the following special status species: coastal western whiptail, warbling vireo, Wilson's warbler, yellow warbler, yellow-breasted chat, Sonoran maiden fern, Plummer's baccharis, and Catalina mariposa lily, Cooper's hawk, sharp-shinned hawk, and white-tailed kite may occur throughout the unit in wooded areas.

Flora Vista. A north-facing slope with oak woodland and chaparral dominates the eastern half of this unit. The western half is predominantly an orchard mixed with oak and ornamental trees. The unit is connected to Las Positas and Elings Park at the west end, which is primarily coastal sage scrub. Residential areas surround the rest of the unit. Special status species that could potentially occur at the site include coastal western whiptail, Cooper's hawk, sharp-shinned hawk, white-tailed kite, Catalina mariposa lily, late-flowered mariposa lily, Plummer's baccharis, southern honeysuckle, and white-flowered sticky phacelia.

Garcia/Ferrello Canyon. About half of this unit consists of a small oak woodland canyon. The canyon is surrounded by residential development with a few scattered oak trees. Since the oak woodland canyon is very small and disconnected it does not likely support many special status species. Special status species that could potentially occur at this site include Cooper's hawk, sharp-shinned hawk, white-tailed kite, Catalina mariposa lily, late-flowered mariposa lily, Nuttall's scrub oak, Plummer's baccharis, and Santa Barbara bedstraw.

Hillcrest Road. This unit is mostly residential, but large patches of oak forest, woodland, and savannah are present. It is completely surrounded by development; however, to the east patches of oak woodland provide some connectivity to the open space along Sycamore Canyon. Special status species that could potentially occur at this site include Cooper's hawk, sharp-shinned hawk, California spotted owl as a visitor only, white-tailed kite, Catalina mariposa lily, late-flowered mariposa lily, Nuttall's scrub oak, Plummer's baccharis, and Santa Barbara bedstraw.

Honda Valley. A small drainage flowing from west to east bisects the unit. The south side of the drainage consists of chaparral and oak woodland on a north-facing slope with patches of eucalyptus trees throughout. The north side is a south-facing slope consisting of coastal sage scrub mixed with ruderal vegetation and patches of eucalyptus trees. Residential areas surround the entire unit. Sharp-shinned hawk was observed foraging, and Plummer's baccharis was found along an eroded path at the south-central portion of Honda Valley during a September 1993 field survey. Other special status species that could potentially occur at the site include California horned lizard, coastal western whiptail, Cooper's hawk, Monarch butterfly, San Diego desert woodrat, silvery legless lizard, southern California rufous-crowned sparrow, warbling vireo, white-tailed kite, Wilson's warbler, Catalina mariposa lily, late-flowered mariposa lily, southern honeysuckle, and white-flowered sticky phacelia.

Jimeno/Garcia Canyon. About half of the unit is the County Bowl with patches of coastal sage scrub and oak woodland. Two narrow oak woodland canyons are on the west side of the unit. The outer edge of the unit is completely surrounded by residential areas. Due to a high amount of noise disturbance and isolation from other habitats, this site is not likely to support special status wildlife. However, Cooper's hawk, white-tailed kite, and sharp-shinned hawk may occasionally visit the site. Special status plants that may occupy the site include Catalina mariposa lily, late-flowered mariposa lily, Plummer's baccharis, southern honeysuckle, and white-flowered sticky phacelia.

Las Canoas Road. Oak woodland mixed with coastal sage scrub is the dominant vegetation in this unit among low-density housing. Riparian forest along Rattlesnake Creek bisects the site. The upper end of Rattlesnake Creek connects to the Los Padres National Forest providing habitat connectivity for wildlife dispersal. Special status species known to occur along Rattlesnake Creek include Hoffman's sanicle, bitter gooseberry, yellow warbler, and warbling vireo. Other special status species that could occur along the creek include California red-legged frog, southern California steelhead trout, California spotted owl as a visitor only, coast mountain kingsnake, two-striped garter snake, Wilson's warbler, yellow-breasted chat, arroyo chub, California tree frog, Coast Range newt, southwestern pond turtle, downy wood fern, Sonoran maiden fern, coastal western whiptail, Cooper's hawk, sharp-shinned hawk, white-tailed kite, Plummer's baccharis, and Santa Barbara bedstraw. California horned lizard, silvery legless lizard, Catalina mariposa lily, late-flowered mariposa lily, Nuttall's scrub oak, southern honeysuckle, and white-flowered sticky phacelia may be found in the oak woodland and coastal sage scrub areas.

Las Positas Road. This coastal mesa is dominated by coastal sage scrub along the slopes and grassland mixed with ruderal vegetation at the top of the mesa. A large area of coastal sage scrub continues on the west side of Las Positas Road. Oak woodland on the south side of Cliff Drive provides some habitat connectivity. The east side is mostly residential with a small corridor connecting to an

orchard and oak woodland habitat. The special status species that could potentially occur at the site are California horned lizard, coastal western whiptail, San Diego desert woodrat, silvery legless lizard, Plummer's baccharis, southern honeysuckle, and white-flowered sticky phacelia. Oak woodland to the south provides nesting habitat and the grassland provides foraging habitat for the white-tailed kite, sharp-shinned hawk, and Cooper's hawk.

Loma Alta. The dominant feature of this unit is a north-facing slope consisting of oak woodland and chaparral. A small patch of coastal sage scrub is on the west end of the unit. The site is completely surrounded by residential areas. Special status species that could potentially occur at the site include California horned lizard, coastal western whiptail, Cooper's hawk, San Diego desert woodrat, sharp-shinned hawk, silvery legless lizard, white-tailed kite, Catalina mariposa lily, late-flowered mariposa lily, Plummer's baccharis, Santa Barbara bedstraw, southern honeysuckle, and white-flowered sticky phacelia.

Mountain/Las Tunas. A small drainage flowing east to west that joins Mission Creek at Rocky Nook Park runs along the northern edge of the unit. Oak forest is the dominant vegetation mixed with low-density housing. Residential areas surround the unit except a small piece of the western end where Mission Creek crosses the unit. Cooper's hawks were found nesting at the upper end of Rocky Nook Park, which is within or very close to this west end of the unit. The same special status species that could potentially occupy Hillcrest Road may occupy this unit. In addition, some riparian and oak woodland sensitive species that may occupy the drainages include warbling vireo, two-striped garter snake, coast mountain kingsnake, coastal western whiptail, Wilson's warbler, yellow warbler, yellow-breasted chat, Coast Range newt, Santa Barbara bedstraw, Plummer's baccharis, Nuttall's scrub oak, late-flowered mariposa lily, Catalina mariposa lily, and bitter gooseberry.

Owens Road. The dominant feature of this unit is a small south facing canyon and drainage consisting of ornamental trees/landscape and coastal sage scrub. Residential areas and a golf course to the south surround the canyon. It is unlikely that special status species occupy the site, since it is small and highly disturbed by introduced species.

San Roque Creek. San Roque Creek runs through the central half of the unit and is dominated by riparian woodland mixed with coastal sage scrub. Low-density housing and orchards surround the northern end, and the southern end is higher density residential with some smaller orchards scattered among ornamental trees. The upper end of San Roque Creek connects to the Los Padres National Forest providing habitat connectivity for wildlife dispersal. Special status plants likely to occur along the creek include Hoffman's sanicle, bitter gooseberry, downy wood fern, Sonoran maiden fern, Plummer's baccharis, and Santa Barbara bedstraw. Special status wildlife likely to occur along the riparian corridor include yellow warbler, warbling vireo, Wilson's warbler, yellow-breasted chat, Cooper's hawk, sharp-shinned hawk, white-tailed kite, coast mountain kingsnake, two-striped garter snake, coastal western whiptail, Coast Range newt, and southwestern pond turtle. Special status species that could occur along the creek, but are less likely include California red-legged frog, California spotted owl as a visitor only, arroyo chub, and California tree frog. California horned lizard, silvery legless lizard, Catalina mariposa lily, late-flowered mariposa lily, white-flowered sticky phacelia, Nuttall's scrub oak, and southern honeysuckle may be found in the oak woodland and coastal sage scrub areas adjacent to the creek.

Stevens Park Area. San Roque Creek on the south side of Foothill Drive runs through the center of the unit and is dominated by riparian woodland. Residential areas mixed with riparian woodland surround the unit. This unit may support some of the same special status species that may occupy riparian woodland along San Roque Creek north of Foothill Drive. Special status plants likely to occur here include Hoffman's sanicle, bitter gooseberry, Plummer's baccharis, and Santa Barbara bedstraw. Special status wildlife likely to occur along the riparian corridor include yellow warbler, warbling vireo, Wilson's warbler, yellow-breasted chat, Cooper's hawk, sharp-shinned hawk, white-tailed kite, coast mountain kingsnake, two-striped garter snake, coastal western whiptail, Coast Range newt, and southwestern pond turtle. Special status species that could occur along the creek, but are less likely include California red-legged frog, California spotted owl as a visitor only, and arroyo chub.

Upper Coyote Road. The western half of the unit is a small canyon consisting of chaparral and oak woodland and is connected with Parma Park and Sycamore Canyon to the west. The eastern half of the unit is residential with some scattered oak trees. Species that occur in the natural areas adjacent to the unit and are likely to occur in the unit include California horned lizard, coastal western whiptail, late-flowered mariposa lily, Plummer's baccharis, southern honeysuckle, and southern California rufous-crowned sparrow. Other species that could potentially occupy the unit include California spotted owl as a visitor only, Cooper's hawk, San Diego desert woodrat, sharp-shinned hawk, silvery legless lizard, white-tailed kite, Catalina mariposa lily, Nuttall's scrub oak, Parish's checkerbloom, Santa Barbara bedstraw, Smith's yerba santa, and white-flowered sticky phacelia.

### **Potential Occurrences of Special Status Species in 1993 Fuel Management Units (City Lands)**

The potential occurrence of special status species on each management unit is summarized below, including any unique habitat features at the site.

Cliff Drive Lift Station. This unit is located on the east end of the north-facing slope dominated by oak woodland. Tidewater goby occurs within Arroyo Burro estuary downstream of the site. Special status species that could potentially occupy this unit include white-tailed kite, sharp-shinned hawk, and Cooper's hawk, Catalina mariposa lily, late-flowered mariposa lily, Nuttall's scrub oak, Plummer's baccharis, Santa Barbara bedstraw, Hoffman's sanicle, downy wood fern, bitter gooseberry, Sonoran maiden fern, silvery legless lizard, and coastal western whiptail.

East Reservoir. This unit is within a patch of land consisting of eucalyptus groves and ruderal vegetation. A habitat corridor of chaparral and coastal sage scrub connects to the west end of the eucalyptus grove and extends to Sycamore Canyon Road, which is adjacent to the east of Sycamore Canyon Creek. The remaining area surrounding the eucalyptus grove is residential. Since native habitat is not present in this unit, the only potential special status species to occupy the unit is the Monarch butterfly.

El Cielito Reservoir. This unit is surrounded by residential areas but is close to large areas of oak woodland and chaparral. The unit is mostly oak savanna with some ornamentals and ruderal

vegetation. Special status species that may occupy the unit include Cooper's hawk, sharp-shinned hawk, white-tailed kite, California spotted owl as a visitor only, silvery legless lizard, and Catalina mariposa lily.

*Equestrian Circle.* Mission Creek and an eastern tributary of Mission Creek bisect the unit, resulting in dominance of riparian woodland. Residential areas with dense oak woodlands border the remaining boundaries of the unit. This unit is just downstream from Rattlesnake Creek sites, and therefore has similar potential special status species. Species observed within the unit include yellow warbler, bitter gooseberry, and Hoffman's sanicle. Special status species that could potentially occur in the unit include California red-legged frog, southern California steelhead trout, arroyo chub, California tree frog, Coast Range newt, southwestern pond turtle, coastal western whiptail, coast mountain kingsnake, two-striped garter snake, Wilson's warbler, yellow-breasted chat, warbling vireo, California spotted owl as a visitor only, Cooper's hawk, sharp-shinned hawk, white-tailed kite, downy wood fern, Sonoran maiden fern, Plummer's baccharis, and Santa Barbara bedstraw.

*Escondido Reservoir.* The area surrounding the reservoir is dominated by ornamental vegetation with some scattered oak trees. The south boundary is bordered by dense housing and the north boundary is bordered by light density housing with orchards and scattered oak woodland. Special status species that could potentially occupy this site include Cooper's hawk, sharp-shinned hawk, and white-tailed kite.

*Franceschi Park.* This unit is dominated by eucalyptus grove and oak woodland mixed with some ornamentals (especially on the south end). There is habitat connectivity at the north end of the unit with a patch of oak forest within the Mountain/Las Tunas unit. Hillcrest Road unit borders the northeast side of the unit, and the remaining borders are surrounded by residential development. Special status species that could potentially occupy the unit include the same species as at Hillcrest Road, as well as the Monarch butterfly.

*Gould Park.* Riparian woodland meanders vertically through the unit, which is dominated by a mixture of chaparral and coastal sage scrub. The area surrounding the unit consists of the same vegetation and is within the Los Padres National Forest. Species that may occur along the riparian corridor include Hoffman's sanicle, bitter gooseberry, yellow warbler, Warbling vireo, California Red-legged frog, Southern California steelhead trout, California spotted owl as a visitor only, coast mountain kingsnake, two-striped garter snake, Wilson's warbler, yellow-breasted chat, arroyo chub, California tree frog, Coast Range newt, southwestern pond turtle, downy wood fern, Sonoran maiden fern, coastal western whiptail, Cooper's hawk, sharp-shinned hawk, white-tailed kite, Plummer's baccharis, and Santa Barbara bedstraw. Pallid bat, southern California rufous-crowned sparrow, San Diego desert woodrat, California horned lizard, silvery legless lizard, Catalina mariposa lily, late-flowered mariposa lily, Nuttall's scrub oak, Parish's checkerbloom, Smith's yerba santa, southern honeysuckle, and white-flowered sticky phacelia may be found in the chaparral and coastal sage scrub areas.

*Hidden Valley.* A section of Arroyo Burro Creek, just south of Modoc Road and slightly past Torino Drive, dominates this unit. Riparian woodland and eucalyptus groves occur on the banks of the creek. The surrounding areas are mostly residential with a golf course on the northwest side of the



unit. Special status species that could potentially occupy the area include California red-legged frog, southern steelhead trout, coast mountain kingsnake, coastal western whiptail, Cooper's hawk, Monarch butterfly, sharp-shinned hawk, two-striped garter snake, warbling vireo, white-tailed kite, Wilson's warbler, yellow-breasted chat, arroyo chub, yellow warbler, southwestern pond turtle, bitter gooseberry, Plummer's baccharis, and southern honeysuckle.

Honda Valley. A small drainage flowing from west to east bisects the unit. The south side of the drainage consists of chaparral and oak woodland on a north-facing slope with patches of eucalyptus trees throughout. The north side is a south-facing slope consisting of coastal sage scrub mixed with ruderal vegetation and patches of eucalyptus trees. Residential areas surround the entire unit. Sharp-shinned hawk was observed foraging, and Plummer's baccharis was found along an eroded path at the south-central portion of Honda Valley during a September 1993 field survey. Other special status species that could potentially occur at the site include California horned lizard, coastal western whiptail, Cooper's hawk, Monarch butterfly, San Diego desert woodrat, silvery legless lizard, southern California rufous-crowned sparrow, warbling vireo, white-tailed kite, Wilson's warbler, Catalina mariposa lily, late-flowered mariposa lily, southern honeysuckle, and white-flowered sticky phacelia.

Hope Reservoir Booster Station. This small unit consists of ornamental trees and ruderal vegetation. The surrounding landscape is low-density housing with patches of ruderal vegetation and coastal bluff scrub. It is unlikely that special status species could occupy this unit, however, white-tailed kite could occasionally visit the area.

La Mesa Park. This small unit consists of ornamental trees/landscape and a eucalyptus grove. It is adjacent to a creek that runs along the west side of the unit. The remaining areas surrounding the unit are residential. Special status species that could potentially occupy the trees in this unit include Cooper's hawk, sharp-shinned hawk, and white-tailed kite due to the close proximity to the creek. Also, the Monarch butterfly may occupy the eucalyptus grove.

La Mesa Reservoir. This unit consists of ornamental trees and vegetation with some oak trees. The surrounding area is residential with scattered oak woodland. It is unlikely that special status species could occupy this unit, however, white-tailed kite, could occasionally visit the area.

La Vista Reservoir. This unit is a reservoir with scattered ornamental trees and ruderal vegetation. Arroyo Burrow Creek and orchards are adjacent to the east end of this unit. Residential areas surround the remainder of the unit. It is unlikely that any special status species occur in this unit.

601 Las Positas. Coyote brush scrub and palm trees are the dominant vegetation of this unit. Arroyo Burro Creek borders the western edge of the unit and Las Positas Road borders the eastern edge. Just beyond the creek and road, there are extensive coastal sage scrub habitats. California red-legged frog, southern steelhead trout, arroyo chub, southwestern pond turtle, two-striped garter snake, warbling vireo, Wilson's warbler, yellow-breasted chat, yellow warbler, white-tailed kite, sharp-shinned hawk, and Cooper's hawk are special status riparian species that may occasionally occur in the unit due to the close proximity of the creek. Other special status species that may occur in coyote brush scrub areas include the California horned lizard, coastal western whiptail, San Diego

desert woodrat, silvery legless lizard, Plummer's baccharis, white-flowered sticky phacelia, and southern honeysuckle.

Elings Park. Recreational areas dominate slightly less than half of Elings Park. The remaining park area is composed of disturbed coastal sage scrub mixed with ruderal vegetation and a north-facing slope with oak woodland. The road that is used for the recreation areas borders the park to the south and provides somewhat of a barrier for wildlife dispersal between the park and the southern half of the unit. California horned lizard, coastal western whiptail, San Diego desert woodrat, silvery legless lizard, Plummer's baccharis, southern honeysuckle, and white-flowered sticky phacelia are some of the special status species that could potentially occur in the coastal sage scrub areas. White-tailed kite, sharp-shinned hawk, and Cooper's hawk may use the oak woodland habitat.

Laurel Canyon Park. This unit is dominated by coastal sage scrub with some ruderal vegetation. Residential areas border the unit to the south and west. The northeastern border is connected to the coastal sage scrub open space surrounding the Lauro Reservoir. California horned lizard, coastal western whiptail, San Diego desert woodrat, silvery legless lizard, Plummer's baccharis, southern honeysuckle, and white-flowered sticky phacelia are some of the special status species that could potentially occur in the unit.

Loma Media Park. This small park consists of coastal sage scrub habitat with some ruderal vegetation. There is a narrow corridor that leads to a large canyon dominated by coastal sage scrub to the north of Loma Media Road that provides a limited connection to the park. The remaining areas surrounding the park are residential. It is unlikely that any special status wildlife occur in this unit due to the small size, and roads and housing surrounding it. Potential special status plants that could occur at the park include Plummer's baccharis, southern honeysuckle, and white-flowered sticky phacelia.

Mission Park (lower and upper). Oak savanna and ornamental trees dominate Upper Mission Park. It connects with Mission Creek to the north, Alameda Padre Serra to the south, and the remaining surrounding areas are residential. Reservoir #3 is within the northwestern corner of the upper park. Lower Mission Park, which is on the south side of upper Mission Park south of Alameda Padre Serra is dominated by oak savanna and ornamental trees including a few eucalyptus on the northern half. The southern half of Lower Mission Park is turf and ornamental landscape. Special status species that could potentially occur at the park include Cooper's hawk, sharp-shinned hawk, California spotted owl as a visitor only, white-tailed kite, Catalina mariposa lily, and silvery legless lizard.

Oak Park. The western half of this unit is residential, while the eastern half is recreational dominated by riparian and oak woodland. Mission Creek runs within the eastern side of the unit. The surrounding areas are residential. The majority of this unit is within the area designated by CNDDDB as containing *Atriplex coulteri*. Other special status species that could occur along the creek include California red-legged frog, southern steelhead trout, arroyo chub, southwestern pond turtle, warbling vireo, Wilson's warbler, yellow warbler, yellow-breasted chat, Cooper's hawk, sharp-shinned hawk, white-tailed kite, two-striped garter snake, coastal western whiptail, silvery legless lizard, Santa Barbara bedstraw, Plummer's baccharis, Nuttall's scrub oak, and Catalina mariposa lily.

Parma Park. The upper portion of Sycamore Canyon Creek and two of its tributaries run vertically through the park. The dominant vegetation types are chaparral, oak woodland, and riparian woodland, with patches of grassland and coastal sage scrub. It connects with the Los Padres National Forest on the north end and the remaining surrounding areas are residential. Plummer's baccharis and southern honeysuckle were observed in Parma Park and the coastal western whiptail and coast mountain kingsnake are expected to occur there. Southern California rufous-crowned sparrow was observed just outside of the park on the north and south sides, so it is likely that it inhabits the park. Species that may occur along the riparian corridor include Hoffman's sanicle, bitter gooseberry, yellow warbler, warbling vireo, California red-legged frog, Southern California steelhead trout, California spotted owl as a visitor only, two-striped garter snake, Wilson's warbler, yellow-breasted chat, arroyo chub, California tree frog, Coast Range newt, southwestern pond turtle, downy wood fern, Sonoran maiden fern, Cooper's hawk, sharp-shinned hawk, white-tailed kite, and Santa Barbara bedstraw. San Diego desert woodrat, California horned lizard, silvery legless lizard, Catalina mariposa lily, late-flowered mariposa lily, Nuttall's scrub oak, Parish's checkerbloom, Smith's yerba santa, and white-flowered sticky phacelia may be found in the chaparral and coastal sage scrub areas.

Rattlesnake Canyon Area. Riparian Forest along Rattlesnake Creek runs vertically through the center of the unit. The dominant vegetation is chaparral and coastal Sage scrub. The unit is entirely within the Los Padres National Forest. CNDDDB records for the Sonoran maiden fern and two-striped garter snake are within this unit. Other species observed within the unit include warbling vireo, yellow warbler, bitter gooseberry, and Hoffman's sanicle. Species that may occur along the riparian corridor include California red-legged frog, southern California steelhead trout, California spotted owl as a visitor only, coast mountain kingsnake, Wilson's warbler, yellow-breasted chat, arroyo chub, California tree frog, Coast Range newt, southwestern pond turtle, downy wood fern, coastal western whiptail, Cooper's hawk, sharp-shinned hawk, white-tailed kite, Plummer's baccharis, and Santa Barbara bedstraw. Pallid bat, southern California rufous-crowned sparrow, San Diego desert woodrat, California horned lizard, silvery legless lizard, Catalina mariposa lily, late-flowered mariposa lily, Nuttall's scrub oak, Parish's checkerbloom, Smith's yerba santa, southern honeysuckle, and white-flowered sticky phacelia may be found in the chaparral and coastal sage scrub areas.

Rattlesnake Creek Sites. These two small units are within riparian woodland along Rattlesnake Creek. The surrounding areas are riparian woodland, coastal Sage scrub and low-density housing. Species observed within the unit include warbling vireo, yellow warbler, bitter gooseberry, and Hoffman's sanicle. Special status species that could potentially occur in the unit include California red-legged frog, southern California steelhead trout, arroyo chub, California tree frog, Coast Range newt, southwestern pond turtle, coastal western whiptail, coast mountain kingsnake, two-striped garter snake, Wilson's warbler, yellow-breasted chat, warbling vireo, California spotted owl as a visitor only, Cooper's hawk, sharp-shinned hawk, white-tailed kite, downy wood fern, Sonoran maiden fern, Plummer's baccharis, and Santa Barbara bedstraw.

Reservoir #1. The western half of this unit is part of a large oak woodland and coastal sage scrub area on the east side of Sycamore Canyon Road. The east side of the unit is a reservoir with ornamental vegetation, and is surrounded by residential development. Southern California rufous-crowned

sparrow, coastal western whiptail and silvery legless lizard are special status species that are likely to occur at the site, since they occur nearby or at Parma Park. San Diego desert woodrat, California horned lizard, white-tailed kite, Cooper's hawk, and sharp-shinned hawk are special status species that could potentially visit the area. Special status plants that may occur at the site include Plummer's baccharis, southern honeysuckle, Nuttall's scrub oak, white-flowered sticky phacelia, late-flowered mariposa lily, and Catalina mariposa lily.

Reservoir #2. Residential areas surround this unit, except on the north end where it connects with Mission Creek. Riparian species that may occur at the north end of this unit include Wilson's warbler, yellow-breasted chat, Cooper's hawk, sharp-shinned hawk, white-tailed kite, warbling vireo, and yellow warbler.

Rocky Nook Pump Station. This small unit is composed of riparian woodland along Mission Creek. Riparian woodland and residential areas with dense oak woodlands border the unit. This unit is just downstream from Equestrian Circle, and therefore has the same potential special status species.

Sheffield Reservoir. This unit is previously contained an open concrete reservoir. The site is being modified to include a buried water tank, with an open space park throughout the parcel. The park will contain various native plants, including oak trees. The perimeter of the existing parcel contains well developed oak woodland and annual grassland, which remain intact.

Stevens Park. San Roque Creek on the south side of Foothill Drive runs through the center of the unit and is dominated by riparian woodland with oak woodland on the edges of the creek. Stevens Park is located along the creek and extends into San Roque Creek unit. Residential areas mixed with oak woodland surround the unit. This unit may support some of the same special status species that may occupy riparian woodland along San Roque Creek north of Foothill Drive. Special status plants likely to occur here include Hoffman's sanicle, bitter gooseberry, Plummer's baccharis, and Santa Barbara bedstraw. Special status wildlife likely to occur along the riparian corridor include yellow warbler, warbling vireo, Wilson's warbler, yellow-breasted chat, Cooper's hawk, sharp-shinned hawk, white-tailed kite, coast mountain kingsnake, two-striped garter snake, coastal western whiptail, Coast Range newt, and southwestern pond turtle. Special status species that could occur along the creek, but are less likely include California red-legged frog, Southern California steelhead trout, California spotted owl as a visitor only, and arroyo chub.

Sylvan Park. This small park consists of ornamental trees/landscape and is completely surrounded by residential development. Therefore, it is unlikely that any special status species would occupy this unit.

Tunnel Reservoir Area. Riparian forest along Mission Creek runs vertically through the center of the unit. The dominant vegetation is chaparral and coastal sage scrub. The unit is entirely within the Los Padres National Forest, except the southern border, which is residential. This unit falls within the area designated by CNDDDB for the Sonoran maiden fern. Other species observed within the unit include Cooper's hawk, California horned lizard, warbling vireo, yellow warbler, bitter gooseberry, Hoffman's sanicle, and southern honeysuckle. Species that may occur along the riparian corridor include California red-legged frog, Southern California steelhead trout, California spotted

owl as a visitor only, coast mountain kingsnake, two-striped garter snake, Wilson's warbler, yellow-breasted chat, arroyo chub, California tree frog, Coast Range newt, southwestern pond turtle, downy wood fern, Sonoran maiden fern, coastal western whiptail, sharp-shinned hawk, white-tailed kite, Plummer's baccharis, and Santa Barbara bedstraw. Pallid bat, southern California rufous-crowned sparrow, San Diego desert woodrat, California horned lizard, silvery legless lizard, Catalina mariposa lily, late-flowered mariposa lily, Nuttall's scrub oak, Parish's checkerbloom, Smith's yerba santa, and white-flowered sticky phacelia may be found in the chaparral and coastal sage scrub areas.

Vic Trace Reservoir. This small unit is within the western half of a moderately sized open space surrounded by residential development. Vegetation is dominated by ruderal vegetation with scattered ornamental trees and small patches of coastal sage scrub. California horned lizard, coastal western whiptail, San Diego desert woodrat, silvery legless lizard, Plummer's baccharis, southern honeysuckle, and white-flowered sticky phacelia are some of the special status species that could potentially occur in the coastal sage scrub areas. White-tailed kite, sharp-shinned hawk, and Cooper's hawk may use area for foraging.

### **3.2.2 Thresholds of Significance**

Applicable biological impact thresholds from the *CEQA Guidelines* Appendix G, (Biological Resources section) are listed below: Will the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, special status, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian habitat or other special status natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Mandatory Finding of Significance:

- a) Does the project have the potential to ... substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to

eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant ...?

### 3.2.3 Impacts

#### **Modified Defensible Space Requirements**

Under the proposed Plan, defensible space requirements will be reduced from the current 100 feet, to 30-50 feet in the Coastal Interior Fire Hazard Zone, and from the current 100 feet to 50-70 feet in the Coastal Fire Hazard Zone. As such, landowners would have an opportunity to increase the density and extent of native or ornamental vegetation on their property.

There will be no change in the requirements in the Foothill Fire Hazard Zone, where the current defensible space requirement is 100 feet. However, the requirements will increase to 150 feet in the Extreme Foothill Fire Hazard Zone, and up to 300 feet in all zones in situations where slopes exceed 30 percent (see Table 2-1). Increasing the width of the defensible space would reduce the density and vegetative biomass of native or ornamental vegetation near structures on foothill properties.

The types of native vegetation that would be typically affected include oak woodlands, coastal sage scrub, and chaparral. Expansion of the defensible space at any one parcel is not likely to create a significant loss of native habitat because native shrubs, herbs, grasses, and trees are allowed in the defensible space, albeit at a reduced density. Establishment of a defensible space does not require removal of native plants, only the reduction in plant biomass that contributes to a fire hazard. For example, native vegetation in the defensible space can remain, but must be modified as follows: (1) dry grass and weeds must be removed or cut to within 2 inches of the ground; (2) dead wood and live branches on trees must be removed within 6 feet of the ground; and (3) dead trees must be removed. Native shrubs can remain in the defensible space provided they are spaced at least 18 feet from other shrubs; maintained free of dead wood and litter and trimmed at least 2 feet up from the ground, or 1/3 of their height, whichever is less; and they do not form a means of rapidly transmitting fire to a structure.

Modification of native vegetation in the defensible space would reduce its value for wildlife due primarily to the reduction in cover and biomass. However, this reduction in habitat value is not expected to significantly affect wildlife in the High Fire Hazard Area. Most native habitats that occur on residential lots represent small remnants of a larger natural ecosystem. They are often fragmented by driveways, fences, gardens, and paths. Domestic animals and pets occur in the undeveloped portions of lots. In addition, many native habitat areas on residential lots also contain non-native exotic species. Furthermore, the potential for the occurrence of special status species is very low due to the small size of habitat areas on residential lots, and the proximity of human disturbances.

In light of these considerations, the modification of native vegetation associated with increasing the defensible space in the Extreme Foothill Fire Hazard Zone would have a **less than significant (Class III)** impact on native vegetation, and plant and wildlife species using these habitats including special status species.

The proposed modification of the defensible space requirements would result in an increase in the defensible space acreage in the Extreme Foothill Zone and a decrease in the existing acreage of defensible space in the Coastal and Coastal Interior zones, as described in Section 3.1.3. The results of the analyses from Section 3.1.3 indicate that, overall, the modified defensible space requirements would reduce the acreage of defensible space in the City. The reduction in defensible space in the Coastal and Coastal Interior zones (about 75 acres) would more than offset the increase in defensible space in the Extreme Foothill Zone (18.9 acres). The reduction in defensible space in the Coastal and Coastal Interior zones (about 75 acres) would more than offset the increase in defensible space in the Extreme Foothill Zone (18.9 acres). As such, the modified defensible space requirements under the proposed Plan could result in a net increase in native habitat in the City if landowners allowed native habitats to re-establish in the smaller defensible space. At a minimum, it appears that the modified defensible space requirements would not cause a significant cumulative impact on native habitat in the City, and that any impact would be considered **less than significant (Class III)**. None of the impact thresholds listed in Section 3.2.2 would be exceeded.

### **Vegetation Management Units (Private Property)**

The overall objective for the Vegetation Management Units is to reduce the amount of flammable vegetation within targeted portions of the management units by approximately 33 to 50 percent. Vegetation management would occur outside the landowner's defensible space area. It would be focused on the following actions:

- General thinning or removal of flammable vegetation that pose a fire hazard (i.e., areas with dense and continuous brush; dense understory of flammable vegetation)
- Thinning, pruning and limbing up of vegetation to remove "fire ladders"
- Removing lower limbs of oak trees, particularly dead or weak branches
- Pruning out of dead material on trees

The proposed vegetation management actions would involve the following physical activities in the management units: (1) hand cutting and chipping of vegetation, (2) hand cutting and multi-cutting of vegetation, (3) hand cutting and prescribed burning using either pile burning or broadcast burning of vegetation, and (4) prescribed broadcast burning of grasslands. The biological impacts of the vegetation management actions are described below.

#### Degradation of Wildlife Habitat Due to Oak Tree Limbing and Removal of Understory Vegetation

The habitat values of oak woodlands may be degraded by the removal of understory vegetation and lower branches, which reduces food and cover for wildlife. The magnitude of this impact is lessened by the Department's environmental Best Management Practice (BMP) "G" (Section 2.3.2) which states that "... (3) *As much as possible, other healthy native understory components such as toyon, lemonade berry and currant will be retained within oak forests, as long as they do not create fire ladders...*" Under the proposed vegetation management objectives in the Plan, no more than 33 to 50 percent of an understory

would be removed within a management unit. Based on these measures and restrictions, the impact on oak woodland habitat is considered **less than significant (Class III)**.

#### Adverse Effect on Oak Tree Regeneration

The removal of oak tree branches and understory would cause trampling and damage to understory vegetation in and near oak woodlands, which could adversely affect oak seedlings and saplings. This impact would be reduced to less than significant levels because of the Department's Environmental Best Management Practice (BMP) "G" (see Section 2.3.2) which states that "(1) No live oak trees will be removed; (2) Oak saplings will be protected from damage or cutting during the work; .... (6) Young coast live oak saplings and seedlings shall not be removed during brush modification in grasslands and scrublands; (7) Chips will not be spread more than 6 to 8 inches in depth. All chip piles should be kept at least 5 feet from the dripline of oak trees." The impact of the vegetation management actions would be considered **less than significant (Class III)**.

#### General Disturbance to Wildlife during Work

Crews working in natural areas would potentially introduce noise and direct physical disturbance during vegetation management operations. Noise would emanate from chainsaw, chipping machine, and truck use. Noise disturbance and physical disturbance, such as trampling, would potentially cause wildlife to temporarily leave areas in which they would otherwise burrow, nest, take refuge, forage, roost or perch. The impacts of noise and human activity would be short-term and **less than significant (Class III)**.

#### Disturbance to Nesting Birds

Fuel reduction may interfere with breeding and nesting of both sensitive and more common birds, including raptors. Activity during the breeding season could disturb mating pairs and cause them to abandon the area. Vegetation management activity near breeding and nesting birds during the breeding season could result in a potentially significant, impact. However, a significant impact would be avoided by the use of the Department's Environmental BMP "E" (Section 2.3.2) which states that "*Vegetation management work shall be completed outside of the defined nesting season for birds (i.e. before April 1 and after July 30). If vegetation management work must occur within the project areas during the breeding season (April 1 to July 30), a site survey shall be conducted by a qualified wildlife biologist to determine any presence of nesting birds. Vegetation management activities shall not occur within 200 feet of active nests located during this survey.*" With the implementation of the above BMP, the impacts to breeding birds would be **less than significant (Class III)**.

#### Impacts to Special Status Plant and Wildlife Species

Various special status plant and wildlife species occur, or could occur, in the Vegetation Management Units, as described in Section 3.2.1. Vegetation modification activities could temporarily or permanently displace certain wildlife species and damage or destroy sensitive plant species. To avoid potentially significant direct impacts to the special status species that could use the management units (see Table 3-13), the Department would consult with a qualified biologist during



the preparation of work plans for each unit, and develop site-specific measures to avoid or reduce impacts to these species, as necessary (see Mitigation Measure BIO-1 below). Hence, the impact on special status species is considered **potentially significant, but mitigable (Class II)**.

#### Increase in Non-Native Plants

The proposed vegetation management actions would reduce the extent of native plant cover within the treated areas. Removal of woody native vegetation would potentially create conditions favorable for invasion and establishment of weedy plant species. The weedy plant species are opportunistic and are known to establish on denuded soil more quickly than native species in the short-term. Once established, many of the invasive exotic species have the potential to persist in the habitat, excluding native vegetation. The combination of bare soil and increased light from thinning or removal of the canopy vegetation, coupled with disturbance to the soil surface associated with crews performing the vegetation modification, lead to favorable conditions for exotic species establishment.

This expansion of invasive exotic species at the expense of native perennial vegetation could lead to a substantial long-term loss of this vegetation and degradation of the habitat for native wildlife. Without mitigation, this would be a significant impact on biological resources. However, the extent of non-native plant colonization of the work area would be reduced by the Department's Environmental BMP "A" (see Section 2.3.2) which states that *"To the extent feasible, the vegetation management will preferentially remove exotic plants that pose a fire hazard, and generally remove exotic plants in the work area as the opportunity arises."* Application of Mitigation Measure BIO-2 would also reduce the magnitude of the impact. Hence, the potential increase in non-native plants due to vegetation management under the Plan is considered a **less than significant (Class III) impact**.

#### Disturbance to Eucalyptus Tree Groves Used by Foraging Monarch Butterflies

Monarch butterflies may utilize some of the eucalyptus groves in the Vegetation Management Units. None of the eucalyptus groves in these units are known to support butterfly aggregations. However, monarch butterflies may utilize some of these groves during migration, and possibly during their overwintering period on the South Coast. The eucalyptus tree groves in the management units do not function as monarch butterfly aggregate sites. Hence, the impact of the proposed fuel reduction work would be **less than significant (Class III)**.

#### Adverse Effects on Riparian and Aquatic Habitats

The Department will conduct very little vegetation management in creeks. Under the proposed Plan, vegetation thinning and placement of chippings will occur outside a 15-foot buffer zone measured from the top of the creek bank. However, the removal of dead brush and exotic plants (by hand only) may extend to the top of the bank.

As described in Section 2.3.1, the Department may conduct limited vegetation thinning in a creek or along the 15-foot wide exclusion zone to reduce a specific fire hazard. Limited vegetation management would include removal of dead wood in the understory that has created a fire ladder

near structures or that occurs in a key defensible space to be used for fire fighting. Vegetation management in a creek may also occur to thin eucalyptus trees that form a hazardous condition, or to create a defensible space at a creek crossing.

Vegetation management in a creek could reduce the quality of the riparian habitat by removing understory vegetation that provides cover for wildlife; removing dead wood that provides shelter and food for insects, invertebrates, and reptiles; and reduction in canopy cover that may be important in moderating temperatures in the creek. The extent of work in a creek at any single location is not expected to be substantial – that is, such work would likely affect less than 100 feet of a creek reach. In addition, the number of locations where creek work would occur is expected to be very low (less than 1 or 2 per year). The disturbance of riparian and aquatic habitats is considered a **significant, but mitigable (Class II)** impact. Significant habitat degradation would be avoided by preparing and implementing an erosion control plan for the creek work (see Mitigation Measure ER-1 in Section 3.1.5), and minimizing habitat disturbance as described in Mitigation Measure BIO-3 (see below).

#### Impact of Herbicide Use [for removal of exotic invasive plants only]

For many Vegetation Management Units, the Department will assume responsibility for maintaining the vegetation for up to 5 years. Maintenance of the vegetation management areas will involve: (1) selective hand cutting of hazardous vegetation that has re-established; and (2) selective weed removal of invasive or exotic invasive plants and grass vegetation.

The Department will utilize herbicides to selectively remove invasive exotic plants that have colonized the treated areas during the maintenance period. The Department will follow the herbicide selection, application, safety precautions, and record keeping in the City's Integrated Pest Management Plan (IPM). In a typical situation, a trained Department representative would use Roundup™ with a surfactant to eradicate individual target plants or clumps of plants. The application method will vary with invasive exotic plant species and stage of plant growth. Foliar spray will be used for young, actively growing herbs and woody plants that are 5 feet or less in height. A narrow spray will be applied to leaves using a backpack spraying unit. Care will be taken to avoid overspraying or spraying non-targeted plants. The Department representative will carefully mark plants prior to spraying to avoid accidentally spraying non-targeted plants during the procedure. For larger plants, particularly giant reed, pampas grass, castor bean, the stems will be cut at 6 inches from the ground surface, and then herbicide will be applied to the cut stem within 5 minutes using a spray bottle. The timing of the herbicide application will vary based on site specific needs at each vegetation management unit, but would generally occur in the midst of the growing season – April through July. The Department will utilize the following standard precautions and environmental protection measures during herbicide applications:

- Only trained personnel shall participate, and only in accordance with the City's IPM
- Targeted plants shall be marked prior to spraying
- No broadcast spraying shall occur when there are winds of 5 mph or greater
- No herbicides shall be applied if there is dew on the leaves, or there is a forecast for heavy fog or rain in 48 hours

The application of herbicides to remove exotic invasive plants in the treated areas, including creeks, could result in adverse impacts to fish and wildlife. For example, if herbicides were discharged or otherwise transported to surface waters in creeks, elevated concentrations could affect water quality and aquatic organisms. The potential impact on fish and wildlife is addressed below.

Herbicide applications would be very patchy. That is, only clumps of plants would be sprayed. Only vegetative material would be sprayed; no herbicide would be applied to open water. In fact, most of the application would occur outside of creeks, in upland areas. Once the herbicide is applied to plant foliage, it is readily taken up and metabolized, and as such, does not have the potential to be transported to soils or water. Herbicides can only be introduced to water in creeks by several mechanisms: (1) overspray that deposits herbicide directly into open water; and (2) overspray that deposits herbicide on dry substrates where it may be dissolved by flowing water at a later time.

The potential for overspray onto open water is considered very low because most of the herbicide application would occur in upland areas, away from open water.

Round-up™ is a non-restricted herbicide and does not require a certified applicator. The active ingredient in Round-up™ is glyphosate. Glyphosate on surface soils is subject to heat degradation over time. Some glyphosate will penetrate the soil where it is strongly absorbed. Glyphosate is stable in the soil for varying lengths of time, depending upon soil texture and organic matter content. The average half-life of glyphosate in the soil is about 47 days, but can range from 3 to 130 days. Soil microorganisms break down glyphosate to aminomethylphosphonic acid, which is further broken down by soil microorganisms to carbon dioxide and nitrogen compounds.

If glyphosate is introduced to subsoils, it is unlikely to be leached. The EPA label for Roundup™ states: “When this product comes in contact with soils (on the soil surface or as suspended soil or sediment in water), it is bound to soil particles. Under recommended use conditions, once this product is bound to soil particles, it is not available for plant uptake and will not harm off-site vegetation where roots grow into the treatment area. Under the recommended use conditions, the strong affinity of this product to soil particles prevents this product from leaching out of the soil profile and entering the groundwater. The affinity between this product and soil particles remains until this product is degraded, which is primarily a biological degradation process carried out under both aerobic and anaerobic conditions by soil microflora.”

In light of the above information, the application of herbicides to control emerging exotic invasive species is not expected to introduce herbicide to groundwater or surface water in creeks where fish, aquatic organisms, and humans could be exposed, because of the following reasons: (1) no herbicide is directly applied to open water; (2) overspray is minimized by precise spraying by trained field crews; (3) glyphosate is strongly absorbed by soil particles and not easily mobilized once it has contact with soils or wet sediments; and (4) residual herbicide in soils or sediments are subject to microbial degradation.

Glyphosate is rated by the EPA as “practically non-toxic” (i.e., requires concentrations in water over 100 mg/l for prolonged periods of time) for the following aquatic invertebrates and fish: *Daphnia*

*magna*, mysid shrimp, grass shrimp, fiddler crab, sea urchin, carp, bluegill sunfish, minnow. It is only slightly toxic (i.e., requires concentrations between 10 and 100 mg/l for prolonged periods of time) for rainbow trout and oyster larvae. There is a very low potential for the compound to build up in the tissues of aquatic invertebrates or other aquatic organisms. Acute toxicity in trout and bluegill were observed with 96-hour dosages of over 1,000 mg/l.

Glyphosate is nontoxic to honeybees. Its oral and dermal LD<sub>50</sub> is greater than 0.1 mg/bee. Glyphosate has no known effect on soil microorganisms. The reported contact LC<sub>50</sub> values for earthworms in soil are greater than 5,000 ppm for glyphosate. Glyphosate is non-toxic to birds, mammals, and bees. Acute oral toxicity (LD<sub>50</sub>) in mammals is over 4,000 mg/kg, while acute dermal toxicity (LD<sub>50</sub>) in mammals is over 800 mg/kg. Glyphosate is slightly toxic to wild birds. The dietary LC<sub>50</sub> in both mallards and bobwhite quail is greater than 4,500 mg/l.

The above concentrations and prolonged exposures from laboratory tests are not expected to occur in the field because the Department would be using substantially lower concentrations, and would apply herbicides in such a manner as to avoid high concentrations.

Based on the information presented above, no significant impact to water quality and biological resources is anticipated from the use of herbicides to control emerging exotic invasive plants in previously treated Vegetation Management Units. The impact would be considered **less than significant (Class III)**. However, additional environmental protection is recommended (see Mitigation Measure BIO-4) to further ensure that no significant impact would occur under the Plan.

#### Beneficial Impacts of Weed Removal

The removal of exotic invasive plant species during the initial vegetation management actions, and during post-treatment maintenance would result in a beneficial impact to the overall condition of native habitats in the High Fire Hazard Area because it would reduce the seed source and hinder further expansion of these species which displace native habitats. This action is considered a **beneficial impact (Class IV)** of the proposed Plan.

#### **Community Fuels Treatment Network**

Under the proposed Plan, a Community Fuels Treatment Network would be established in the Extreme Foothill Zone to provide a break between continuous decadent stands of chaparral fuel outside the City. The network will be an area where multiple property owners expand their individual defensible space areas to treat continuous strips of hazardous vegetation across property boundaries to form a larger vegetation management network. Three Community Fuels Treatment Network areas have been identified in the Plan as shown on Figure 1 and Figures 8a. Maintenance of the vegetation management areas will involve: (1) selective hand cutting of hazardous vegetation that has re-established; and (2) selective removal of invasive or exotic invasive plants and grass vegetation..

Under the Plan, these areas would be subject to the same vegetation management actions described for the Vegetation Management Units. Vegetation management would involve reducing the amount

of flammable vegetation within the Community Fuels Treatment Network (but outside the property owners defensible space requirements) by approximately 33 to 66 percent. The objectives and method of vegetation management would be identical to that described for the Vegetation Management Units. The key differences would be that the maximum extent of vegetation management would increase from 50 to 66 percent.

The biological impacts of the proposed fuel reduction in Community Fuels Treatment Network would be similar to those described above for the Vegetation Management Units, with the following exceptions: (1) Maintenance of the treated areas would not include exotic removal, and as such, no herbicides would be used. (2) few if any special status species are known or expected to occur in the Community Fuels Treatment Network areas, which consist primarily of typical high foothill chaparral and grassland habitats. Hence, the implementation of the vegetation management actions to create the Community Fuels Treatment Network would only result in the following impacts:

- General disturbance to wildlife during work due to temporary noise and direct physical disturbance during vegetation management operations - **less than significant (Class III)**.
- Disturbance to nesting birds due to vegetation management activity near breeding and nesting birds during the breeding season would be avoided by seasonal restrictions - **less than significant (Class III)**.
- Increase in non-native plants due to reduction of native plant cover and creation of conditions favorable for invasion and establishment of weedy plant species, would be offset by removing exotics during vegetation management - **less than significant (Class III) impact**.
- Removal of exotic invasive plant species would enhance the overall condition of native habitats in the High Fire Hazard Area - **beneficial impact (Class IV)**

### **Vegetation Management on City Lands (1993 Plan)**

As described in Section 2.5, the Department has been conducting vegetation management on City owned-lands, both in and outside the City's High Fire Hazard Area, based on a 1993 Plan. These lands consist of parks, open space, and water-related facilities (Figures 9a-c). They are subject to the same vegetation management actions described for the Vegetation Management Units (Section 2.3). The work involves reducing the amount of flammable vegetation within designated areas of City-owned lands by approximately 33 to 66 percent. The objectives and method of vegetation management would be identical to that described for the Vegetation Management Units, except that the maximum amount of vegetation management (in designated areas) would be increased from 50 to 66 percent.

The acreage of vegetation to be managed on City owned properties is difficult to estimate. In general, the work is less intensive than the proposed fuel reduction on private property, and focused on establishing a defensible space around City structures, and creating vegetation management buffers along the perimeter of City owned land to protect adjacent residences. An estimate of the

acreage of potential fuel reduction that has occurred on these lands, and that has yet to be completed, cannot be developed at this time. However, the amount of land affected by the vegetation management would be less than the 277 acres to be treated in the Vegetation Management Units on private property.

The biological impacts of vegetation management on City owned properties would be the same as those described above for the Vegetation Management Units. However, the magnitude of the impacts would generally be less because the extent of vegetation would be less, and because most of the vegetation management has already occurred because the program began in 1993.

### **Summary of Impacts**

A summary of the biological impacts due to the proposed Wildland Fire Plan is presented below:

- Various special status plant and wildlife species may occur in the vegetation management units (private lands), Community Fuels Treatment Network areas, and 1993 fuels management units (City owned land). Fuel reduction activity (i.e., vegetation thinning and pruning) could temporarily or permanently displace certain wildlife species, and possibly damage or destroy sensitive plant species. The number and likelihood of special status species in the proposed treatment areas are expected to be low. Significant, but mitigable (Class II).
- Vegetation management in a creek could reduce the quality of the riparian habitat by removing understory vegetation that provides cover for wildlife; removing dead wood that provides shelter and food for insects, invertebrates, and reptiles; and reducing canopy cover that may be important in moderating temperatures in the creek. Significant, but mitigable (Class II).
- The habitat values of oak woodlands may be degraded by the removal of understory vegetation and lower branches, which reduces food and cover for wildlife. This impact applies to fuel reduction in the Vegetation Management Units (private lands), Community Fuels Treatment Network, and 1993 fuel management units (City owned land). Less than significant impact (Class III)
- The removal of oak tree branches and understory will cause trampling and damage to understory vegetation, which could adversely affect oak seedlings and saplings. This impact applies to fuel reduction in the Vegetation Management Units (private lands), Community Fuels Treatment Network, and 1993 fuel management units (City owned land). Less than significant impact (Class III)
- Field crews conducting vegetation management under the proposed Plan would cause noise and direct physical disturbance to natural areas occupied by wildlife. Noise would emanate from chainsaws, chipping machines, and trucks. This disturbance, while short-term and localized, would potentially cause wildlife to temporarily leave areas where they burrow, nest, take refuge, forage, roost or perch. Less than significant impact (Class III)

- Fuel reduction activities in the vegetation management units (private lands), Community Fuels Treatment Network areas, and 1993 fuels management units (City owned land) may interfere with breeding and nesting of both sensitive and more common birds, including raptors. Activity during the breeding season could disturb mating pairs and cause them to abandon the area. Less than significant impact (Class III)
- The physical disturbances to native vegetation due to fuel reduction in the vegetation management units (private lands), Community Fuels Treatment Network areas, and 1993 fuels management units (City owned land) could facilitate colonization by weedy non-native plants. The expansion of invasive exotic species at the expense of native perennial vegetation could degrade habitat values for wildlife. Less than significant impact (Class III)
- Vegetation management activities in eucalyptus groves in the management units could disturb monarch butterflies which may utilize some of these groves during migration, and possibly during their overwintering period on the South Coast. At this time, none of the eucalyptus groves in the various management units under the Plan represent monarch butterfly aggregation sites. Less than significant impact (Class III)
- The use of herbicides to control emerging exotic invasive plants in or near a creek could adversely affect water quality and aquatic organisms if there was substantial overspray, excessive application, or accidental spills. This impact applies to fuel reduction in the Vegetation Management Units (private lands), Community Fuels Treatment Network, and 1993 fuel management units (City owned land). Less than significant impact (Class III)
- The removal of exotic invasive plant species during the initial vegetation management actions, and during post-treatment maintenance would result in a beneficial impact to the overall condition of native habitats in the High Fire Hazard Area because it would reduce the seed source and hinder further expansion of these species which displace native habitats. Beneficial impact (Class IV)

### **3.2.4 Consistency with Applicable Local Plans and Policies**

Applicable biology policies from the City General Plan, Conservation Element, are listed below:

*Applicable Goals:*

*Enhance and preserve the City's critical ecological resources in order to provide a high-quality environment necessary to sustain the City's ecosystem.*

*Applicable Policies*

4. *Remaining coastal perennial grassland and southern oak woodland shall be preserved, where feasible.*
5. *The habitats of rare and endangered species shall be preserved.*

The proposed Plan would result in several impacts to oak woodlands and habitats of special status species (e.g., riparian woodlands) as listed below. No impacts to perennial grasslands are anticipated.

- Impacts to special status plant and wildlife species due to vegetation modification activities that temporarily or permanently displace certain wildlife species and damage or destroy sensitive plant species - potentially significant, but mitigable (Class II).
- Adverse effects on riparian and aquatic habitats due to limited vegetation thinning in a creek or along the 15-foot wide exclusion at the top of the bank which could reduce the quality of the riparian habitat for wildlife, insects, invertebrates, and aquatic species - potentially significant, but mitigable (Class II) impact.
- Degradation of wildlife habitat due to oak tree limbing and removal of understory vegetation in oak woodlands - less than significant (Class III)
- Adverse effect on oak tree regeneration due to trampling and damage to understory vegetation in and near oak woodlands - less than significant (Class III).
- Disturbance to eucalyptus tree groves used by foraging monarch butterflies - less than significant (Class III).

Most of these impacts are considered less than significant. Potentially significant impacts would be reduced to less than significant levels due to various environmental protection measures included in the Plan, and from the application of mitigation measures listed below. Hence, the proposed Plan would be consistent with the General Plan goals and policies listed above.

Only a very small portion of the High Fire Hazard Area occurs in the Coastal Zone – the southern half of the Coastal Fire Hazard Zone (Figure 3). None of the vegetation management units on private land occur in the Coastal Zone. Only three fuel management units on City-owned lands occur in the Coastal Zone: (1) Hope Reservoir Booster Station; (2) Cliff Drive Lift Station; and (3) La Mesa Park. La Mesa Park is located adjacent to Lighthouse Creek; the other sites are located on flat terrain in developed neighborhoods. Coastal Act wetlands and Environmentally Sensitive Habitat Areas (ESHAs) are not known to occur at these sites, which either contain an industrial building or structure, or represent an active park.

With the absence of wetlands and EHSAs at the three Coastal Zone project sites, only the following Local Coastal Plan (LCP) policies on biological resources apply to the Plan:

***Policy 6.8.** The riparian resources, biological productivity, and water quality of the City's coastal zone creeks shall be maintained, preserved, enhanced, and, where feasible, restored.*

***Policy 6.10.** The City shall require a setback buffer for native vegetation between the top of the bank and any proposed project. This setback will vary depending upon the conditions of the site and the environmental impact of the proposed project.*



***Policy 6.11.*** Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) Necessary water supply projects; (2) Flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or; (3) Developments where the primary function is the improvement of fish and wildlife habitat.

The above policies relate to the protection of riparian resources of coastal streams. The only stream in the Coastal Zone that could be potentially affected by vegetation management is Lighthouse Creek at Las Mesa Park. This stream contains a mixture of weeds, eucalyptus, and willows. The Department does not have any plans to work in this creek at this time. Any future work in the creek would be designed to avoid significant impacts to riparian resources. Vegetation management may occur outside the creek, as described in Section 2.3.2 of the EIR. This work would not significantly affect the riparian resources in the creek, as described above. Hence, the proposed Plan is consistent with the applicable biological resource policies.

### **3.2.5 Mitigation Measures**

BIO-1. To avoid direct impacts to the special status species that could occur in the Fire Plan vegetation management units (see Table 3-13), the Department shall consult with a qualified biologist during the preparation of work plans for each unit that could support a special status species. Based on this consultation, the Department shall develop site-specific measures to avoid or reduce impacts to special status species known or likely to occur at the unit. A reconnaissance survey shall be conducted of the proposed work areas to identify biological sensitivities such as: (1) locations of oak trees and oak woodlands, where the Department would implement BMPs to reduce impacts to oaks; (2) top of creek bank, in the event that work will occur near the creek; (3) potential habitat for special status plants or wildlife species; and (4) raptor nests. Based on this information, the Department shall modify the proposed vegetation management actions to reduce impacts to special status species.

The Department shall consider the following modifications: (1) delay the work until the late fall (e.g., September or later) if it appears that nesting by riparian birds is still ongoing in August; (2) avoid disturbance to any trees with occupied or unoccupied raptor nests; (3) avoid or reduce the amount of vegetation management in areas that could support special status species; (4) consolidate foot paths and work corridors in areas with well developed native scrub and oak woodland in order to reduce the amount of ground disturbance; (5) include a biological monitor if there is a potential for direct impacts; (6) implement post-treatment restoration efforts to facilitate the use of the affected areas, and the nearby areas, by the special status species; and (7) further restrict or prohibit the use of herbicides for post treatment weed control.

BIO-2. During the preparation of work plans for all vegetation management units under the Plan, the Department shall identify the extent of non-native weeds in the fuel reduction areas, and develop a plan to reduce or eradicate these plants from the work areas during the initial treatment, and/or during post-treatment maintenance. The plan shall include post-treatment

inspections and weed treatment at suitable intervals until the next fuel reduction project at that unit, as funding allows.

BIO-3. Prior to conducting work in a creek, or within 15 feet of the top of bank, the Department shall consult with a qualified biologist during the preparation of the work plan to identify methods to achieve the vegetation management without significant impacts to riparian resources. Based on this consultation, the Department shall develop site-specific measures to avoid or reduce impacts to riparian resources. These measures shall include (among others) the following:

- a) To the extent feasible, all work near a creek shall be conducted when surface water is absent.
- b) Vegetation shall not be thinned, removed, or pruned, nor shall dead wood be removed, within 15 feet of a creek channel when flowing water is present
- c) The only plants that can be removed from a creek bed (that is, below the line of the ordinary high water mark) are live or dead eucalyptus trees and dead native shrubs/trees that are deemed to be a fire hazard, and invasive exotics (including, but not limited to giant reed).
- d) Cut stems, tree trunks or other vegetative debris shall not be dragged across a creek bed that contains riparian vegetation, wetlands, or surface water
- e) No trees shall be felled across a creek while there is flowing water
- f) No eucalyptus chipping or cut stems shall be left on the creek banks or any upper stream terrace, when present.
- g) Chipped native vegetation shall not be placed on creek banks, unless a qualified biologist determines that placement of the chipping would provide needed erosion protection without an adverse impact on aquatic habitats and water quality in the creek. Native plant chippings can be spread outside the top of bank.
- h) To the extent feasible, the Department shall incorporate low-cost riparian restoration measures into vegetation management work in creeks when the work reduces the canopy coverage, such as when large eucalyptus trees are thinned from a creek. These measures would include installing inexpensive and easy-to-establish riparian plants such as willow and mulefat stems, blackberry plants, or mugwort plants. This restoration would be a one-time, opportunistic event at the work site.

BIO-4. No herbicide use shall occur within the 15-foot wide exclusion zone at the top of the creek bank, on the creek bank, or in the creek bed unless the herbicide use is to remove invasive exotics during a post-treatment maintenance project that is authorized in a creek under the Fire Plan. Herbicide use in the creek channel shall be conducted in accordance with a site specific plan prepared by the Department in consultation with a qualified biologist, consistent with the City's IPM, and consistent with all other mitigation measures and environmental BMPs under the Fire Plan.

### **3.2.6 Residual Impact**

The proposed Plan would result in various impacts to biological resources. Most of these impacts are considered less than significant. Potentially significant impacts would be reduced to less than significant levels due to various environmental protection measures included in the Plan, and from the application of mitigation measures listed above. Hence, there would be no significant residual impact.

## 3.3 VISUAL RESOURCES

### 3.3.1 Existing Conditions

The High Fire Hazard Area exhibits a wide range of visual characteristics and qualities. The area contains complex landforms with extensive tree and shrub cover, along with a mosaic of roads and homes. The visual characteristics are complex due to a wide range of colors, textures, and points of visual interest. Often, the most striking visual quality is the presence of large trees or groves, including both native (e.g., oak trees) and ornamentals (e.g., eucalyptus). The coastal hills and the foothills of the Santa Ynez Mountains provide a pleasing visual backdrop for the low-lying portions of the City.

The Scenic Highway Element identifies State Routes 144 and 192 as potential state scenic highways. The route includes Sycamore Canyon Road (Route 144), Stanwood Drive (Route 192), and Mission Ridge Road (Route 192). The latter two roads pass through the High Fire Hazard Area. This route “runs primarily through rural residential areas of extraordinary scenic value, which should be protected and enhanced for the residents of Santa Barbara as a semi-rural scenic highway.” The Element also states the essence of this highway as a scenic route is its exposure to quiet hillsides, mountainous terrain, natural vegetation, and beautiful views available in Santa Barbara’s foothills.” Although the City has indicated that the route may qualify for state scenic highway designation, the state has not taken action to make a formal designation.

The Scenic Highway Element also identifies Cabrillo Boulevard (Route 225) as a potential state scenic highway. This highway is the primary access to the beach which is a major tourist attraction. The Element states that the essence of Cabrillo Boulevard is its proximity and exposure to the shoreline. The primary scenic views to be protected and enhanced are of the ocean and beach. Although the City has indicated that the route may qualify for state scenic highway designation, the state has not taken action to make a formal designation.

State Route 154 is the only officially designated State Scenic Highway in or near the City.

### 3.3.2 Thresholds of Significance

Applicable visual resource impact thresholds from the *CEQA Guidelines* Appendix G, (Aesthetic section) are listed below: Will the project:

- a) Have a substantial adverse effect on a scenic vista?
- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- c) Substantially degrade the existing visual character or quality of the site and its surroundings?
- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

### 3.3.3 Impacts

#### **Modified Defensible Space Requirements**

Under the proposed Plan, the current 100-foot wide defensible space requirement will be reduced to 30 to 50 feet in the Coastal Interior Fire Hazard Zone, and to 50 to 70 feet in the Coastal Fire Hazard Zone. As such, landowners would have an opportunity to increase the density and extent of native or ornamental vegetation on their property.

There will be no change in the requirements in the Foothill Fire Hazard Zone, where the current defensible space requirement is 100 feet. However, the requirements will increase to 150 feet in the Extreme Foothill Fire Hazard Zone, and up to 300 feet in all zones in situations where slopes exceed 30 percent (see Table 2-1). Increasing the width of the defensible space would reduce the density and vegetative biomass of native or ornamental vegetation near structures on foothill properties.

The types of native vegetation that would be affected include oak woodlands, coastal sage scrub, and chaparral. Fuel reduction would alter the visual appearance of the affected areas. The magnitude of the visual change and its effect on the larger visual setting would range greatly based on the proximity and quality of views from public viewpoints (i.e., parks, public roads) and the extent of vegetation reduction on individual private parcels. Expanded defensible spaces on hillsides that are highly visible from public roads would have the potential for the greatest change in the visual setting.

The expanded defensible space requirements and the associated reduction in vegetative fuels on private property in the Extreme Foothill Zone would cause a **less than significant (Class III)** visual impact on public viewers. This impact is not considered significant because of the following reasons:

1. Most private properties, particularly in the Extreme Foothill Zone, are not visible from a public viewing locations or scenic highways due to the complex topography of this zone, and the presence of obstructive vegetation along roads.
2. Distant views of parcels in the Extreme Foothill Zone from the coastal plain (e.g., from the center of the City) are generally very hazy or “washed out,” as shown in the oblique air photo of Foothill Zone parcels provided in Appendix B.
3. The change in visual quality due to expanded vegetation management near structures would be minor and consistent with the current visual setting. That is, modification of vegetation on a private parcel is a commonly observed condition in Santa Barbara. In addition, under the defensible space requirements, woody vegetation would be allowed to remain at a certain density and height (see examples in Appendix B). Low ground cover may also remain. Hence, the visual changes would be minor and incremental in nature, and would not cause a significant change in the nature and quality of the visual setting on private parcels in the Extreme Foothill Zone.

As described in Section 3.1.3, the acreage of defensible space throughout the City would be reduced under the proposed Plan. The reduction in defensible space in the Coastal and Coastal Interior zones (about 75 acres) would more than offset the increase in defensible space in the Extreme Foothill Zone (18.9 acres). As such, the modified defensible space requirements under the proposed Plan could result in a net increase in native habitat in the City if landowners allowed native habitats to re-establish themselves in the smaller defensible space. Hence, no significant cumulative effect from all Fire Hazard Zones would occur due to the modified defensible space requirements.

### **Vegetation Management Units (Private Property)**

Under the proposed Plan, the amount of flammable vegetation within targeted portions of the Vegetation Management Units would be reduced by approximately 33 to 50 percent by a general thinning or removal of flammable vegetation, limbing of trees, removing lower limbs of oak trees, pruning out of dead material on trees, and reducing the density of eucalyptus trees.

The vegetation management methods would not result in defoliation of the terrain. The removal of dead branches and understory vegetation and the thinning of shrubs and eucalyptus trees would be perceived as an overall reduction in the density of greenery on the landscaping. However, the change would not be inconsistent with the visual quality of the landscapes of the management units.

The vegetation removal would not entirely remove vegetation to bare ground. The proposed thinning of understory material and removal of dead vegetation would not expose bare soil or otherwise disturb the ground, as the ground leaf litter would be retained and the chipped debris would be spread onsite. Treated areas would re-establish over time with successive young vegetation, resulting in a continual revitalization of the visual quality of the landscape. Examples of the change in visual quality due to fuel reduction work at Honda Valley, Skofield Park, and Circle Drive are illustrated in “before and after” photographs in Appendix B.

Public views of the Vegetation Management Units range greatly. For some units, there are no public views, while other units are situated on hillsides or landforms that can be viewed from public parks or major roadways, often at long distances. The visibility of the management units is summarized in Table 3-14. Vegetation management in several units would be highly visible because they represent parks or public open spaces where people are located in or near the areas to be treated, such as at Elings Park or Hale Park. Other units are visible due to their locations on hillsides, such as Loma Alta or Eucalyptus Hill Road units.

The quality of the views for most of these units from public viewing locations is generally poor for several reasons. One, views from roadways such as Mountain Drive or Highway 101 are fleeting, and often ignored. Two, views from public viewing locations are often obscured by distance, haze, and intervening vegetation. Examples of this condition are presented in Appendix B. Finally, it would be difficult to detect changes in management units from more distant public views, as shown by the oblique aerial photograph of the City (Appendix B). As shown on the photograph., management units blend into a large mosaic of trees and houses along the foothills.

**TABLE 3-14**  
**SUMMARY OF VISIBILITY CONDITIONS OF THE VEGETATION MANAGEMENT UNITS\***

Name	Acreage	On-Site or Proximate Public Views	Distant Public Views
<b><i>Coastal Units</i></b>			
Flora Vista	40.2	<i>None or negligible</i>	<i>None or negligible</i>
Honda Valley	82.7	Views from park users	<i>None or negligible</i>
Las Positas Road	217.1	Views from inside Elings Park	Partially obstructed, moving views from autos on Las Positas Road
Loma Alta	42.0	<i>None or negligible</i>	Partially obstructed, moving views from autos on Highway 101
<b><i>Foothill Units</i></b>			
Alston Place	39.1	<i>None or negligible</i>	Partially obstructed, very distant, and moving views from autos on Highway 101, and from East Beach
Alturas Del Sol	18.2	<i>None or negligible</i>	Partially obstructed and very distant views from parks and streets in the center of the City
Camino Viejo	23.8	<i>None or negligible</i>	Partially obstructed, very distant, and moving views from autos on Highway 101
Circle Drive/Las Barrancas	47.4	<i>None or negligible</i>	<i>None or negligible</i>
Cima Linda Lane	15.7	<i>None or negligible</i>	Partially obstructed, very distant, and moving views from autos on Highway 101, and from East Beach
Cleveland School Area	7.9	<i>None or negligible</i>	<i>None or negligible</i>
Conejo Road	86.1	Passing views of lower portions of the unit from Stanwood Drive (SR 192), eligible for scenic highway status	Views from Parma Park trails
Coyote Circle	10.5	<i>None or negligible</i>	<i>None or negligible</i>
Coyote Road	12.0	<i>None or negligible</i>	<i>None or negligible</i>
Eucalyptus Hill Drive	63.1	<i>None or negligible</i>	Partially obstructed, very distant, and moving views from autos on Highway 101, and from East Beach

Name	Acreage	On-Site or Proximate Public Views	Distant Public Views
Fire Station 7	2.4	Passing views from Stanwood Drive (SR 192), eligible for scenic highway status	<i>None or negligible</i>
Garcia/Ferrelo Canyon	5.5	<i>None or negligible</i>	Partially obstructed and very distant views from parks and streets in the center of the City
Hillcrest Road	66.9	Passing views of lower portions of the site from Mountain Drive (SR 192), eligible for scenic highway status	<i>None or negligible</i>
Jimeno/Garcia Canyon	63.7	<i>None or negligible</i>	Partially obstructed and very distant views from parks and streets in the center of the City
Las Canoas Road	52.8	Unit includes Skofield Park. Views from park users	<i>None or negligible</i>
Mountain/Las Tunas	43.4	<i>None or negligible</i>	<i>None or negligible</i>
Owens Road	25.2	<i>None or negligible</i>	Partially obstructed, very distant, and moving views from autos on Highway 101
San Roque Creek	82.4	<i>None or negligible</i>	<i>None or negligible</i>
Stevens Park Area	15.4	Views from park users	Partially obstructed and moving views from autos on Cathedral Oaks Road
Upper Coyote Road	20.9	<i>None or negligible</i>	<i>None or negligible</i>

\* Locations are shown on Figure 3.



The proposed prescribed burning of brush piles, cut brush spread out on the ground, or dense grassland areas would result in a sharply contrasting landscape element consisting of darkened patches where burn piles were located, or darkened ground areas. These areas would often be difficult to observe from public viewing locations because the burned areas would be located in complex terrain of the foothill areas. More importantly, the visual impact would be temporary, as the darkened vegetative debris and/or ground surface quickly disappears after the first rainfall.

Based on the above considerations, the visual impact of vegetation management is considered **less than significant (Class III)**. However, the Department would implement certain measures during vegetation management to further reduce the magnitude of visual impacts, as described in Section 3.3.5.

It should also be noted that vegetation thinning can be perceived as visually pleasing. Properly planned, the pruning and thinning of vegetation can incorporate artistic and design elements that are compatible with the visual character of the area. In general, thinning vegetation in a mosaic pattern creates a natural appearance. The reduction in the accumulation of heavy fuel and the elimination of large stands of dense, dead and decadent brush may also create a pleasing open vista, and establish a park-like setting.

The proposed Plan does not include any new structures. Fuel reduction would not block any views. The proposed Plan would not add any new light or reflective surfaces. Vegetation management would not occur at night. Hence, there would be no impact on light and glare.

### **Community Fuels Treatment Network**

Under the Plan, a Community Fuels Treatment Network would be established in the Extreme Foothill Zone (Figures 1 and 8a-b) to provide a break between continuous decadent stands of chaparral fuel along the top of the foothills above the City. The network will be an area where multiple property owners expand their individual defensible space areas to treat continuous strips of hazardous vegetation across property boundaries to form a larger vegetation management network. Under the Plan, these areas would be subject to the same vegetation management actions described for the Vegetation Management Units. The objectives and method of vegetation management would be generally the same as that described for the Vegetation Management Units.

The proposed fuel reduction in Community Fuels Treatment Network is not expected to cause a significant visual impact because the Community Fuel Treatment Network areas are located at great distance from any public viewing locations. Modifying vegetation in these areas would not be readily discernible to even an interested viewer in the City. Clear and unobstructed views would be infrequent.

### **Vegetation Management on City Lands (1993 Plan)**

As described in Section 2.5, the Department has been conducting vegetation management on City owned-lands, both in and outside the City's High Fire Hazard Area since 1993. These lands consist of parks, open space, and water-related facilities (Figures 9a-c). The objectives and method of

vegetation management would be almost identical to that described for the Vegetation Management Units.

However, the vegetation management on City lands would generally be less intensive than the proposed fuel reduction on private property, and focused on establishing a defensible space around City structures, and creating vegetation management buffers along the perimeter of City owned land to protect adjacent residences.

Public views of the City owned parcels range greatly. Most of the smaller parcels with pump stations or reservoirs are not visible because they are purposely screened or hidden from view. Some of the parcels are highly visible because they are either public parks, or are located on hillsides or landforms that can be viewed from public parks or major roadways. The visibility of the parcels is summarized in Table 3-15. Vegetation management in several parcels units would be highly visible because they represent parks or public open spaces where people are located in or near the areas to be treated, such as at Honda Valley or Rocky Nook Park. Other units are visible due to their locations on hillsides, such as Parma Park.

Based on the above information, the visual impacts of vegetation management on City owned properties would be the same as those described above for the Vegetation Management Units. That is, the impacts would be **less than significant (Class III)**.

### **3.3.4 Applicable Local Plans and Policies**

The following Conservation Element policies from the General Plan related to visual resources are directly applicable to the proposed project:

Goals:

- *Restore where feasible, maintain, enhance, and manage the creekside environments within the City as visual amenities, where consistent with sound flood control management and soil conservation techniques.*
- *Prevent scarring of hillside areas by inappropriate development*
- *Protect and enhance the scenic character of the City*
- *Maintain the scenic character of the City by preventing unnecessary removal of significant trees and encouraging cultivation of new trees.*
- *Protect significant open space areas from the type of development which would degrade the City's visual resources.*

**TABLE 3-15**  
**SUMMARY OF VISIBILITY CONDITIONS IN THE 1993 MANAGEMENT UNITS (CITY OWNED LAND)\***

Property (see Figures 4a-d, and 5)	Subareas	On-Site or Proximate Public Views	Distant Public Views
Equestrian Circle/Mission Park	Equestrian Circle Mission Park Reservoir #3 Rocky Nook Pump Station Sheffield Pump Station	Mission Park visible from visitors at the park; views of Equestrian Circle by users; views of Rocky Nook Park Pump Station by park users	<i>None or negligible</i>
Parma Park	Parma Park Fire Station No. 7 Sheffield Reservoir (to be converted to open space)	Views of Parma Park from park users and travelers on Stanwood Drive; views of Fire Station No. 7 and Sheffield Reservoir open space from visitors and from travelers on Mountain Drive	Distance views of Parma Park from center of the City
Honda Valley Area	Honda Valley Open Space Thornberry Park Vic Trace Reservoir	Views of Honda Valley from park users	<i>None or negligible</i>
Gould Park	East Mountain Drive at park entrance Cold Springs Trail	Views of park entrance from travelers on East Mountain Road; views of park from park users	<i>None or negligible</i>
Tunnel Reservoir Area	Trails and roads in the Tunnel Reservoir property Rattlesnake Ck parcels 48 and 49	Views of property from trail users	<i>None or negligible</i>
Rattlesnake Canyon Area (Park)	Skofield Reservoir Rattlesnake Canyon	Views of property from trail users	<i>None or negligible</i>
Stevens Park Area	Stevens Park Cater Treatment Plant Laurel Canyon Area La Vista Reservoir	Views of Stevens Park and Laurel Canyon Area from park users	<i>None or negligible</i>
Hale Park Area	Hale Park Reservoir 1	Views of Hale Park from park users	<i>None or negligible</i>
Hidden Valley		Views of Open Space from park users	<i>None or negligible</i>
Skofield Park	Skofield Park El Cielito Reservoir	Views of park from park users	Views from mountain trails
Sylvan Park/Loma	Sylvan Park	Views of park from park users	<i>None or negligible</i>

Property (see Figures 4a-d, and 5)	Subareas	On-Site or Proximate Public Views	Distant Public Views
Media Park	Loma Media Park		
Francheschi Park	Upper Franceschi Park Lower Franceschi Park	Views of park from park users	Distance views from center of the City
Coastal City Facilities	Escondido Reservoir Cliff Drive Lift Station Hope Reservoir Booster Station La Mesa Park	Views of La Mesa Park from park users	<i>None or negligible</i>
Las Positas Area	Elings Park 601 Las Positas Campanil Booster Station	Views of Elings Park and 610 Las Positas from park users, travelers along Las Positas Road	<i>None or negligible</i>
Oak Park		Views of park from park users	<i>None or negligible</i>

\* A complete listing of all vegetation management actions in the 1993 Plan for each City owned property is shown in Appendix D.

## Policies

1. *Development adjacent to creeks shall not degrade the creeks or their riparian environment.*
2. *Development on hillsides shall not significantly modify the natural topography and vegetation.*
3. *New development shall not obstruct scenic view corridors, including those of the ocean and lower elevations of the City viewed respectively from the shoreline and upper foothills, and of the upper foothills and mountains viewed from the beach and lower elevations of the City.*
4. *Trees enhance the general appearance of the City's landscape and should be preserved and protected.*
5. *Significant open space areas should be protected to preserve the City's visual resources from degradation.*

There are 12 specific goals specified in the Scenic Highway Element for Cabrillo Boulevard and seven specific goals specified in the Scenic Highway Element for the Sycamore Canyon/Stanwood/Mission Ridge route. None of these goals would have a direct applicability to the proposed Plan.

The proposed Plan would be consistent with the above goals and policies because the magnitude of the visual impacts would be minimized to the extent feasible, and because the visual impacts on public viewing locations would be less than significant.

None of the vegetation management units on private land occur in the Coastal Zone. Only three fuel management units on City-owned lands occur in the Coastal Zone: (1) Hope Reservoir Booster Station; (2) Cliff Drive Lift Station; and (3) La Mesa Park. La Mesa Park is visible to the public because it is a public park. The other sites are hidden behind landscaping and designed to be inconspicuous to the surrounding neighborhood. Only the following Local Coastal Plan (LCP) policy on visual resources would apply to the Plan: *Policy 9.1 - The existing views to, from, and along the ocean and scenic coastal areas shall be protected, preserved, and enhanced.* The proposed Plan would be consistent with this policy because the magnitude of the visual impacts would be minimized to the extent feasible, and because the visual impacts in the Coastal Zone on public viewing locations would be less than significant.

### **3.3.5 Mitigation Measures**

Visual impacts associated with the proposed project would be less than significant. However, the following measures are recommended to further reduce the magnitude of visual impacts from vegetation management on private and public lands.

VIS-1 The following measures shall be considered when conducting vegetation management on private and public parcels:

- Straight line boundaries and other strong linear configurations that tend to detract from the natural appearance of the landscape shall be avoided as much as practicable.
- Vegetation removal or thinning shall follow natural or existing landscape features such as streamcourses, native vegetation type lines, ridgetops, and existing roads.

- Fireline edges on the outside-of-the-burn side shall be feathered into the natural landscape, with brush cuttings used to disguise the lines.

### **3.3.6 Residual Impacts**

No significant, unavoidable impacts would occur to visual resources after application of Measure VIS-1. In addition to the application of Mitigation Measure VIS-1.

## 3.4 CULTURAL RESOURCES

The potential to affect prehistoric and historic resources due to vegetation management is evaluated below. Because no structures will be affected by the Plan, historic resources are not addressed below.

### 3.4.1 Existing Conditions

Archeological sites are found throughout the High Fire Hazard Area, reflecting 10,000 years of human habitation. A wide variety of sites are present, although most sites in the project area which has complex topography are small midden sites reflecting temporary hunting or camping activities. To more accurately assess the extent of potential archeological sites in the High Fire Hazard Area, an archival search was conducted at the Central Coast Information Center (CCIC) of the California Historic Resources Information Service. The City of Santa Barbara USGS 7.5' Series quadrangle map was reviewed for previously known sites and surveys within, or immediately adjacent to, each Vegetation Management Unit (private and public lands).

There have been over 40 previous surveys that have occurred at or near the various units. In most instances, the coverage was partial and did not include the entire unit. Nine previously recorded archaeological sites occur within three vegetation management units. Four sites are known within the Las Canoas Unit, four within the San Roque Creek Unit, and one within the Jimeno/Garcia Canyon Unit. All sites are prehistoric except CA-SBA-1959H, which consists of an historic period sandstone quarry site. One site, CA-SBA-1957, contains human remains, and site CA-SBA-ISO 331 consists of an isolated find spot containing weathered shell. Nineteen previously recorded sites occur in the following City parcels: Oak Park, Stevens Park, Franceschi Park, Tunnel Reservoir Area, Gould Park, Hidden Valley, Skofield Park, and Rattlesnake Canyon.

In addition, vegetation management units that occur adjacent to creeks, or on the floodplain of major creeks in the High Fire Hazard Area include areas with a potential to contain unknown buried archeological resources because these landforms were used extensively by Native Americans prior to colonization. The floodplains along major creeks in the City are designated as sensitive archeological areas that require mitigation to avoid significant impacts.

### 3.4.2 Thresholds of Significance

Will the project:

- a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?
- c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
- d) Disturb any human remains, including those interred outside of formal cemeteries?

In considering impact significance under CEQA, the significance of the resource itself must first be determined. At the state level, consideration of significance as an “important archaeological resource” is measured by cultural resource provisions considered under CEQA Sections 15064.5 and 15126.4, and the draft criteria regarding resource eligibility to the California Register of Resources (CRHR). A property that is eligible for the National Register of Historic Places (NRHP) is also eligible to the CRHR. Generally under CEQA, a historical resource (these include built-environment historic and prehistoric archaeological resources) is considered significant if it meets the criteria for listing on the CRHR. These criteria are set forth in CEQA Section 15064.5 and defined as any resource that:

- (a) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- (b) Is associated with lives of persons important in our past;
- (c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- (d) Has yielded, or may be likely to yield, information important in prehistory or history.

Section 15064.5 of CEQA also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under Public Resources Code (PRC) Section 5097.98.

Impacts to “unique archaeological resources” and “unique paleontological resources” are also considered under CEQA, as described under PRC Section 21083.2. A unique archaeological resource implies an archaeological artifact, object, or site about which it can be clearly demonstrated that—without merely adding to the current body of knowledge—there is a high probability that it meets one of the following criteria:

- (a) The archaeological artifact, object, or site contains information needed to answer important scientific questions, and there is a demonstrable public interest in that information; or
- (b) The archaeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type; or
- (c) The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

A non-unique archaeological resource indicates an archaeological artifact, object, or site that does not meet the above criteria. Impacts to non-unique archaeological resources and resources which do not qualify for listing on the CRHR receive no further consideration under CEQA. Under CEQA Section 15064.5, a project potentially would have significant impacts if it caused substantial adverse change in the significance of one of the following:

- (a) A historical resource (i.e., a cultural resource eligible for the CRHR);
- (b) An archaeological resource (defined as a unique archaeological resource which does not meet CRHR criteria);
- (c) A unique paleontological resource or unique geologic feature (i.e., where the project would directly or indirectly destroy a site or resources);



(d) Human remains (i.e., where the project would disturb or destroy burials).

### 3.4.3 Impacts

Little to no ground disturbances would occur during the fuel reduction by landowners that must enlarge their defensible space or by the City when working in the vegetation management units. Crews would access work sites by foot and reduce vegetation using hand tools. The ground would not be disturbed. Cut vegetation would be left on site. Chippers would be parked on existing ground without any grading.

In preparation for a prescribed burn, crews will use hand-held tools to clear surface vegetation for burn piles and to create berms on edge of burn pile. Ground disturbance would not exceed a 2-inch depth so that root structures would remain in place. The burn piles would typically be no greater than approximately 60 feet in diameter. Burning the cut vegetation would not adversely affect buried archeological sites.

Based on the minimal ground disturbance and relatively small areas involved, the potential of substantially impacting the integrity of prehistoric archeological sites is low. Hence, impacts to cultural resources are considered **less than significant (Class III)**.

There is a remote possibility that an archeological deposit could be discovered during the course of the work by the Department. In such instances, the Department would implement Mitigation Measure CR-1, which would avoid a significant impact to previously unknown archeological resources.

### 3.4.4 Applicable Local Plans and Policies

The following goals and policies from the City's Conservation Element of the General Plan are directly applicable to the proposed Plan:

- *Goal 1. Sites of significant archeological, historic, or architectural resources will be preserved and protected wherever feasible in order that historic and prehistoric resources shall be preserved.*
- *Policy 1. Activities and development, which could damage or destroy archeological, historic, or architectural resources are to be avoided.*
- *Implementation Strategy 1. Activities and development which could damage or destroy archeological, historic, or architectural resources are to be avoided.*

The proposed Plan would be consistent with the above goals and policies.

### 3.4.5 Mitigation Measures

CR-1 Prior to the initiation of fuel reduction work, Department personnel shall instruct the field crew of the potential to uncover unanticipated archeological deposits and features. If any suspected archeological artifacts, shell, or bone are discovered, the Department shall temporarily halt work in the area of the discovery, and a City-approved archeologist shall

evaluate the find, and provide a recommendation on how to proceed with the fuel reduction work without substantially affecting archeological resources.

### **3.4.6 Residual Impact**

No significant, unavoidable impacts to cultural resources are anticipated due to the implementation of the Plan.

## **3.5 PUBLIC SAFETY RELATED TO FIRE HAZARD**

### **3.5.1 Existing Conditions**

Currently, there is a significant fire risk in the High Fire Hazard Area of the City due to a combination of factors that contribute to the occurrence of a wildland fire. The risk increases each year, and can only be reduced through additional fuel reduction efforts as outlined in the proposed Plan.

In the following paragraphs, the potential for the use of prescribed burning of vegetative debris to cause an accidental fire that could result in loss of property or lives is evaluated. A brief narrative by Firewise 2000, Inc., a wildland fire consulting firm, is first provided as background on situations that create accidental fires.

#### **Overview of Accidental Fires From Prescribed Burning (From Firewise 2000)**

The amount of data on the number of wildfires caused by escaped prescribed fires is low. After the disastrous Mack Lake Fire of 1980, prescribed fire policy received national attention and direction, followed by some much needed training, establishment of standards, and job descriptions and Go/No Go checklists. As a result, prescribed fire escapes are rare today, but not totally eliminated.

There is also some clarification needed on what constitutes an escape. Often in the course of conducting a prescribed fire project there will be a small slop over where the prescribed fire is burning beyond the boundaries of the project. This is often a result of embers drifting over the fire line starting a spot fire or in some cases the prescribed fire making a run and bumping the fireline fairly hard. Because of the favorable conditions prescribed fires are burned under, these situations are planned for with holding forces moved into position to pick up the fire outside the project boundary. These situations are not considered escapes, nor is the prescribed fire considered out of prescription. The spots are routinely contained and the project continues.

In the event the spot fire could not be picked up because of deteriorating weather conditions (hotter, drier, winds increasing), the prescribed fire is considered an escaped prescribed fire and declared a wildfire. At this point, a full wildfire suppression response is initiated to suppress the wildfire.

What usually happens in the case of disastrous escapes, some days or weeks after the prescribed fire is initiated the weather takes an unforecasted change for the worse. The adverse weather, usually in the form of unseasonably strong hot, dry winds kicks up the prescribed fire causing embers to blow over the control lines and suddenly everyone has a rampaging wildfire on their hands. The National Park Service Los Alamos Fire in June of 2001 is a perfect example of this situation.

In April of 1980 two prescribed fires consisting of several hundred acres each were ignited early in the week on two different fuel modification projects on the Angeles National Forest. The prescriptions were well designed and the decision to ignite was supported with a favorable long-range weather forecast. The burns were executed flawlessly. Several days later a large high-pressure

cell was moving east over the Rocky Mountains when part of the cell broke off and slid back into the Great Basin. At the same time a strong low-pressure system was lying just off the coast of southern California. On Friday morning of that week everyone knew something was different; there was no coastal fog, the skies were clear and it was unusually warm. By 10:00 AM excessively strong Santa Ana winds had surfaced, rekindling both prescribed fires, pushing them through the San Gabriel Mountains into the urban interface. Fortunately, the winds died just as each wildfire burned into the foothill areas of the Forest.

On June 19, 1990 the Cleveland National Forest ignited the 650-acre Bedford Prescribed Fire. There was a very favorable long-range weather forecast and wind and fuel moisture readings were well within the prescription. The burn went flawlessly. Holding forces remained on the project for several days mopping up. On Sunday June 24 at about 1:00 PM one of the holding crews radioed the Cleveland National Forest Emergency Operations Center that there was a spot over the line and it was burning aggressively. At that point the Bedford Prescribed Fire was declared a wildfire and an Incident Management Team and suppression resources were brought in to suppress it. By Monday morning the Bedford Wildfire was in the mop up stages. On Tuesday June 26, plans were made to demobilize the overhead team and scale the suppression forces down to a few holding crews as of the evening of June 27. On June 27, southern California experienced a totally unpredicted weather event consisting of unusually early morning extreme temperatures causing rapid heating of the earth's surface and massive atmospheric instability. On that day numerous wildfires broke out threatening homes all across southern California.

At about 3:00 PM crews were experiencing 60 mph. winds along the top of the Bedford Wildfire. Cold dry heavy air pulled over from the west side of the Santa Ana Mountains literally pushed the rekindled Bedford Wildfire down the mountain slopes towards the I-15 Freeway at Cajalco Road. The fire was driven by strong winds through approximately 250 homes. Fortunately there was no loss of life. Eight homes were burned to the ground along with many barns, out buildings and vehicles.

Normally, it is not the day of the prescribed burn that causes problems, but rather the next several days following the initial burn. Holding crews need to remain on site through the first evening and during the day for several days following the burn to insure all hot spots and sparks are out.

There are a number of burning techniques that reduce the risk of prescribed burning. Pile burning is safe as it is usually accomplished during inclement weather. It is very important to make sure that all piles are fully extinguished prior to crews leaving for the day. Windy conditions can rekindle fire in the pile residue that results in an escape; however, this is usually rare. Prescribed fires in grass are the easiest to execute in that they are over quickly and there is very little chance of a holdover fire. Mop up is accomplished very quickly. Intensity can be controlled by the firing pattern. Strip burning allows for the top edges to be burned out or black lined. Subsequent strips are then run into the black line. The wider the strip, the greater the intensity. Backing fires burn much slower, are of low intensity and consume fuels more completely.

Broadcast burns generate the highest fire intensities. Broadcast burns are usually black lined around the entire perimeter. After black lining is completed the edges are ignited and fire is introduced out

into the middle of the area to be burned. The interior fire will suck all of the edges inward resulting in rapid combustion, high intensities and good convection of the smoke up and away from populated areas. Broadcast burning can be used on small plots or on large projects consisting of hundreds of acres. Mop up is very important because of the potential for holdover fire on large areas.

### **3.5.2 Thresholds of Significance**

The applicable threshold of significance from *CEQA Guidelines* Appendix G is listed below. Would the project:

- h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

### **3.5.3 Impacts**

The proposed vegetation management methods include the use of prescribed burning for two applications: (1) reduction in vegetative debris generated by manual fuel reduction; and (2) the reduction in grassland areas that represent a high fire hazard. Prescribed burning would occur on a very limited basis, when all other options to address these vegetation management requirements have been exhausted. Prescribed burns would occur under carefully controlled circumstances following Department policy that would minimize the risk of wildland fire. The area of prescribed burns would be limited to sites that are less than one acre in size, and only one burn would occur at any one time. Prescribed burns would only occur during a designated burn day.

Prescribed burning would be conducted under safe burning conditions outside the Department's designated fire season and will require a California Air Resources Board designated burn day and the development of a pile burn plan that will be approved by the Fire Chief and Santa Barbara County Air Pollution Control District. A pile burn plan will outline weather, topography and fuel within the work area, the prescribed burn objectives, the required fire organization and resources needed to control the fire, and the weather parameters under which the burn can be conducted safely and with minimal smoke disturbance.

Standard precautions during a prescribed burn to prevent the possible spread of the fire beyond the burn limits include: (1) establishment of a small earthen berm at the bottom of slopes to prevent rolling embers from leaving the site; (2) presence of an engine and seven Department personnel. The burn would occur from 8 AM to 2 PM, with mop up until 5 PM, and a patrol crew for as long as is required.

Although the Department would follow the above procedures to minimize the risks of a prescribed burn igniting a wildfire, there is a potential for accidental fire to occur. Accidental fires due to prescribed burns typically occur due to a sudden change in weather conditions that cause high temperatures and high winds, coupled with inadequate perimeter control or inspections. Accidental fires also occur days after a prescribed burn has ended, when a smoldering ember that was not

extinguished ignites a new fire. The Department is aware of the risk factors associated with prescribed burns and the conditions that have led to previous accidental fires. The Department has the knowledge, experience, and resources to reduce the risk of an accidental fire during a prescribed burn to an acceptable level. As such, the impact of the proposed Plan on public safety, as it relates to accidental fires, **is less than significant (Class III)**.

### **3.5.4 Applicable Local Plans and Policies**

The California Fire Code authorizes an agency to establish a High Fire Hazard Area (and zones within it) and identifies defensible space requirements for structures in the High Fire Hazard Area. The proposed Plan expands an existing High Fire Hazard Area, provides four zones within it, and increases the defensible space requirements for structures.

The Safety Element contains the following recommendations related to fire hazards, including mitigation planning for wildland fires:

1. Require that all land development proposals in the High Fire Zones be accompanied by detailed plans for fire prevention and control measures, prepared in accordance with City regulations. These plans shall be received by the City Fire Chief, Building Official, and other appropriate agencies.
2. Average road grades for new development shall not exceed 16 percent in order to facilitate access by emergency vehicles.
3. Construct turnouts on roads in the High Fire Hazard Zones every 1,000 yards to improve fire fighting
4. Install approved fire hydrants at 500 foot intervals along roads.
5. Strictly enforce the special building provisions for fire safety and prevention in the High Fire Hazard Zones.
6. Encourage homeowners in the High Fire Hazard Zones with low water pressure to install their own emergency water supplies for fire fighting operations. This could be swimming pools, water storage tanks, and other acceptable facilities.
7. Encourage the US Forest Service to put the highest priority on fuel management programs in areas of their jurisdiction near the City limits.
8. Encourage and promote the planting of orchards on the margins of High Fire Hazard Zones as productive fuel breaks.
9. When feasible, comprehensive fuel management programs shall be instituted in the High Fire Hazard Zones within the City.

10. Minimum brush clearance provisions in the High Fire Hazard Zones shall be strictly enforced. Where applicable, measures shall be taken to reduce the threat of spreading flames wherever fire-hazardous trees (eucalyptus, gum) are planted near structures.
11. Review existing ordinances and amend if necessary to require new developments in High Fire Hazard Zones to use fire-resistant plantings in landscape plans.
12. Encourage and promote the planting of fire retardant plants throughout the High Fire Hazard Zones in the City.
13. Periodically review, and if necessary, revise the High Fire Hazard Zone maps to reflect new data regarding vegetation age and density.
14. Review and amend the Circulation Element of the General Plan to insure that emergency access route for new subdivisions are adequate to allow fire and other emergency service vehicles to gain access.

The proposed Plan, including the use of prescribed burning, is consistent with the above recommendations.

### **3.5.5 Mitigation Measures**

No significant impact related to fire safety is anticipated. Hence, no mitigation measure is required.

## 3.6 SOLID WASTE

### 3.6.1 Existing Conditions and Background Information

Since 1993, the Department has accomplished approximately 220 acres of vegetation management on City parcels. Assuming average tons per acre of biomass at 22 tons, the total biomass generated is estimated at 4,849 tons. To date, all biomass from the fuel hazard program has been placed back onto the ground at the site where the fuel was cut.

The anticipated biomass to be generated by this program over a 5 to 10 year period is estimated at 22,000 to 44,000 tons of biomass. Of this biomass, 65-75 percent of the amount would likely be placed back onto the ground at or nearby the cutting location.

The Department seeks to make beneficial use of the remaining 25-35 percent, or 1,100-1,540 tons per year, and to avoid disposal at a landfill. To the extent that biomass generated from the proposed vegetation management efforts can be used for energy or products, the demand for landfill capacity will be avoided.

Under the proposed Plan, in areas where it is not physically feasible to put chippings or multi-cut material back on the ground, the Department would remove the vegetative debris from the work site for off-site beneficial use. The Department has reviewed the Santa Barbara County's green waste management program to determine if their program would provide an opportunity for beneficial uses of the biomass. A summary of the opportunities for alternative uses is provided below.

As part of the effort to divert materials from landfills and comply with state mandated diversion goals, the County of Santa Barbara has implemented a number of programs designed to reduce the generation of organic waste materials, and recycle those organic materials that end up in the waste stream for beneficial reuse. As a source-reduction method, the County has administered a home composting program since 1992. Residential source-separated green waste has been collected at the curbside by franchise haulers in most unincorporated areas of Santa Barbara County since 1997. Green waste consists of grass clippings, dried leaves, branches, and other organic yard trimmings generated by residents and gardening services. Self-haul green waste and wood waste, consisting of dimensional lumber and tree debris, is also accepted at the South Coast Recycling and Transfer Station (SCT&RS) as well as Foxen Canyon Landfill. In 2002, County facilities received 51,376 tons of green and wood waste.

In the South County, green and wood waste is processed at two sites: the SCR&TS and the Tajiguas Landfill. Self-hauled green and wood waste, and a small amount of curbside green waste is processed at the SCR&TS using a large tub grinder. Most of the green waste collected at the curbside by franchise haulers in South County is direct hauled to the Tajiguas Landfill, where a contractor processes it using a portable tub grinder.

A Quality Assurance and Control Program is in place at the SCR&TS to ensure the production of a clean mulch product. Through their franchise agreements with the County, solid waste hauling companies are responsible for ensuring that residentially collected green waste has a low level of



contamination. On the SCR&TS pad, refuse checkers remove inappropriate materials such as lead-painted, treated and ply woods, prior to grinding. Electromagnets remove all ferrous metals from the ground material. Processed mulch cures on the pad for 2-3 days to generate enough heat to destroy most weed seeds. In the event that processed mulch becomes contaminated before distribution, it is used as Alternative Daily Cover (ADC) at the landfill. The County also tests the mulch quarterly for the presence of the herbicide clopyralid.

The mulch produced at the Tajiguas Landfill and SCR&TS is distributed to a variety of end uses. From July, 2002 through June 2003, 34,000 tons of product were distributed as follows:

- 43% was used in agricultural operations such as orchards, commercial nurseries and vineyards
- 19% was used by a variety of home owners, schools, churches, parks, government agencies like Caltrans, and by various non-profit organizations (4-H, Urban Creeks Council, Goleta Beautiful) for habitat restoration and beautification projects.
- 16% was used as compost feedstock, most ending up at the Engel & Gray Regional Composting Facility in Santa Maria.
- 11% was sent to various biomass to energy facilities in the San Joaquin Valley where it is used for the generation of electricity. The materials that get routed to the biomass to energy facilities generally consists of construction lumber as the moisture content is much lower than that of standard green waste.
- 11% has landfill uses, including alternative daily cover, slope stabilization, and dust reduction. Note that the only green waste sent into the landfill is the small amounts that somehow get contaminated or are highly fibrous species as described below.

### 3.6.2 Impacts

The biomass generated by the proposed Plan would generally be suitable for delivery to the Santa Barbara County green waste management program. The County would likely require an initial evaluation of the expected biomass in order to gauge its quality for processing purposes. The County will not accept certain non-native invasive species such as ivy, palm fronds, yucca, pampas grass, and other highly fibrous plants, as they are problematic (binding the tub grinders) and are instead generally routed to a landfill, as there are no known beneficial uses for these types of plants. In order for the County to process the green waste, the Department will need to ensure that the chip size is suitable, and that the materials do not include objectionable plant material.

Based on the above analysis, the disposal of vegetative debris generated from fuel reduction work through the County's green waste program would not cause a significant impact on current solid waste processing and disposal facilities. The impact would be considered **less than significant (Class III)**.

### **3.6.3 Mitigation Measures**

No significant impact related to solid waste disposal and landfill capacity is anticipated. Hence, no mitigation measure is required.

## 3.7 IMPACTS PREVIOUSLY ADDRESSED IN THE INITIAL STUDY

The following impact analyses were presented in the Initial Study prepared by the City Community Development Department. They are repeated in the EIR for the sake of completeness. For all issue areas, the City determined that impacts would be less than significant.

### 3.7.1 Air Quality

#### **Background**

The Federal Clean Air Act Amendments of 1970 established National Ambient Air Quality Standards (NAAQS) for six "criteria pollutants." These include photochemical ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter, and lead. The California Clean Air Act of 1977 created stricter California Ambient Air Quality Standards (CAAQS) for the state. Additionally, the California Air Resources Board has designated areas of the state that are in attainment or nonattainment of the CAAQS. An area is in nonattainment for a pollutant if the applicable CAAQS for that pollutant has been exceeded more than once in three years.

For environmental review purposes, the City of Santa Barbara utilizes CAAQS, as these standards are more stringent than the NAAQS. Presently, the County of Santa Barbara is in nonattainment with CAAQS for ozone (O<sub>3</sub>) and particulate matter (PM<sub>10</sub>). There are also heavily congested intersections within the City that may approach the California 1-hour standard of 20 parts per million for carbon monoxide (CO) during peak traffic hours.

The City of Santa Barbara uses the Santa Barbara Air Pollution Control District's (APCD) thresholds of significance for air quality impacts. The APCD has determined that a proposed project will not have significant air quality impact on the environment, if operation of the project will:

- Emit (from all project sources, both stationary and mobile) less than 240 pounds per day for ROC and NO<sub>x</sub> (ozone is formed in the atmosphere through a series of photochemical reactions involving oxides of nitrogen [NO<sub>x</sub>] and reactive organic compounds [ROC], referred to as ozone precursors, and sunlight occurring over a period of several hours), 80 pounds per day for PM<sub>10</sub> (sources of PM<sub>10</sub> include mineral quarries, grading demolition, agricultural tilling, road dust, and vehicle exhaust). For CO, the significance threshold may be triggered if the project contributes more than 800 peak hour trips to an individual intersection; and
- Emit less than 25 pounds per day of ROC or NO<sub>x</sub> from motor vehicle trips only; and
- Not cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone); and
- Not exceed the APCD health risks, public notification thresholds adopted by the APCD Board; and
- Be consistent with the adopted federal and state air quality plans for Santa Barbara.

## **Fugitive Dust Emissions**

The project would involve landscaping-type activities which could cause localized nuisance dust related impacts and increases in particulate matter (PM<sub>10</sub>). Dust-related impacts would be temporary and limited in scope and therefore would be considered **less than significant (Class III)**. The SBAQMD and Clean Air Plan require that standard dust control mitigation measures be implemented for any discretionary project involving earth-moving activities. The proposed project would not involve substantial earth-moving activities. The proposed project would be subject to recommended standard APCD dust control mitigation measures, such as site watering, applied as conditions of approval. These measures would minimize dust effects, and are listed below as recommended mitigation measures.

## **Vehicular and Equipment Emissions**

*Vehicle and Equipment Emissions:* Long-term project emissions primarily stem from trucks and motor vehicles associated with the project and from sources such as chain saws and chippers. Equipment used to transport workers to the site and equipment used by the workers to clear brush (chain saws) and chip or cut brush (chippers) would emit exhaust that would add to the emissions in the area. The proposed project does not contain any stationary sources, which require permits from APCD. However, the proposed project will result in approximately 52 new average daily trips (ADTs) and use of a chipper for 4 hours a day and chain saw for 4 hours a day. Because the proposed project will generate less than 800 peak hour trips to an existing congested intersection, CO impacts are considered **less than significant (Class III)**.

Utilizing the URBEMIS2001 computer model, chainsaw and industrial engine emission factors, it is estimated that the proposed project (transportation and equipment use) would generate a total of 13.6 pounds per day of NO<sub>x</sub>, 10.1 pounds per day of ROG, 0.5 pounds per day of SOX, and 0.8 pounds per day of PM10. The project emissions are lower than the significance thresholds. Therefore, the proposed project equipment emissions are expected to have a **less than significant impact (Class III)** on long term air emissions.

*Particulates:* The proposed project could expose soils to wind erosion causing an increase in particulate matter in the air. The project proposes vegetation thinning and root structures of grasses and shrubs would not be removed. Some trees may be removed to reduce the density of these trees, reducing fuel loads for fires. Vegetation may be stacked in some areas, protected by shallow excavations to prevent embers from rolling downhill, and burned. This could expose the soils to wind erosion since the vegetation in the area would be burned leaving the soils unprotected. This impact would be reduced to a less than significant level by implementation of mitigation measures requiring trucks to be covered, dust control measures, and compliance with SBAQMD rules for prescribed burns.

*Prescribed burns:* The SBAPCD has the additional regulations that relate prescribed burns proposed as a part of the project. These are:

- Rule 312, Open Fires
- Rule 313, Fires Set Under Public Authority

- Rule 402, Enforcement (This rule indicates that penalties can be applied if the regulations are not followed).
- Rule 403, Burning Permit for Non-Burning Days: Reporting Requirements

The APCD proposal for amended Rule 401 will not change the acreage or tonnage of needed burning in any given year; the amount of burning that occurs is much more a function of the budgets of the burn operators. However, the amendments will allow the APCD to control the timing, location and acreage on any given day. The amendments will add the designation of “marginal” burn day to existing designations of “permissive” and “no burn” days to Rule 401.

The existing rule does not have a marginal day designation, allows prescribed burning only on permissive days and prohibits them on no-burn days. While marginal burn days theoretically provide more opportunities for burning on days that would have otherwise be no burn days under existing Rule 401, burning on a marginal burn day is burning that would have taken place on another permissible day under existing Rule 401. Put in other terms, a burn is conducted because of the need to dispose material; it is not conducted because one is allowed to do so on a particular (e.g., marginal) day. With the proposed amendments, the addition of a marginal day designation would enable APCD to allow limited amounts of prescribed burning. No agricultural or residential (backyard) burning would be allowed on those days. Although it is not codified in existing Rule 401, the current APCD practice does not allow agricultural and backyard burning when prescribed burning is authorized. The proposed rule amendments clarify current practice and make it more certain, predictable and enforceable.

The proposed rule amendments contain three new basic provisions: requirements for a “burn authorization system”; requirements for a “smoke management plan”; and provisions for the use of a “marginal” burn day. A more complete discussion is provided in the staff report for amended Rule 401. That staff report is incorporated herein by reference. Burning of vegetation would increase air emissions. These emissions would need to comply with the requirements of the SBAPCD and obtain permits for the proposed burns. Impacts of prescribed burns would be **less than significant (Class III)** provided that the applicable regulations are followed and the SBAQMD permit is obtained. Recommended mitigation measures to reduce the impact are listed below.

Sensitive receptors are defined as children, elderly, or ill people that can be more adversely affected by air quality problems. Types of land uses typically associated with sensitive receptors include schools, parks, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and clinics. There are potentially sensitive receptors in the area near where some of the vegetation management activities, including prescribed burns, may occur. Compliance with prescribed burn requirement of the SBAPCD and other air quality mitigation to minimize exposure of bare soils to wind erosion and properly maintaining equipment would, when combined with the temporary intermittent nature of the project emissions, ensure that this impact would be **less than significant (Class III)**.

## **Mitigation Measures**

The following recommended mitigation measures are based, in part, on standard APCD dust control mitigation measures to reduce vehicular and equipment emissions, and fugitive dust generation.

- AQ-1 Trucks transporting cut vegetation material shall be covered from the point of origin.
- AQ-2 The haul route(s) for all construction-related trucks, three tons or more, entering or exiting the sites, shall be approved by the Transportation Engineer.
- AQ-3 After clearing, grading, earth moving or excavation is completed, the entire area of disturbed soil shall be treated to prevent wind pickup of soil. This may be accomplished by: Seeding and watering until vegetative cover is grown; spreading soil binders; sufficiently wetting the area down to form a crust on the surface with repeated soakings as necessary to maintain the crust and prevent dust pickup by the wind; other methods approved in advance by the Air Pollution Control District.
- AQ-4 All prescribed burns shall be conducted in compliance with applicable SBAPCD rules and regulations and appropriate permits required shall be obtained from the SBAPCD.

### **3.7.2 Geologic Hazards**

The proposed Plan would not cause, nor be adversely affected by, geologic hazards such as seismic ground shaking, fault movement, expansive soils, landslides, and subsidence.

### **3.7.3 Public Health and Safety**

The proposed project would not create or expose the public or workers to any health hazards except those hazards normally associated with use of equipment for vegetation management (e.g. chain saws, chippers, vehicles). Use of equipment in the workplace is subject to State and Federal workplace laws that would minimize the risk to workers from use of equipment and result in a **less than significant impact (Class III)**.

### **3.7.4 Noise**

#### **Impact Assessment**

Noise guidelines are established in the City's Noise Element and in Chapter 9.16 of the Santa Barbara Municipal Code. The Noise Element states that the maximum acceptable exterior Day-Night Noise Level ( $L_{dn}$ ) for residential uses is 60 dB(A) and 45 dB(A) for interior noise levels. For most commercial land uses, the maximum acceptable exterior  $L_{dn}$  is 75 dB(A) and for interior noise levels 50 dB(A)  $L_{dn}$ . For parks, the maximum acceptable exterior  $L_{dn}$  is 65 dB(A). It is important to note that these guidelines are intended for long-term, permanent land uses, and do not address short-term construction activities. The City noise ordinance governs short-term and intermittent noise such as from construction, mechanical, and mechanical noise.

The proposed project would result in a temporary increase in noise in different areas of the City as vegetation management crews remove vegetation. Equipment including chippers and chainsaws would temporarily generate noise levels higher than allowed for long-term noise sources in the City. However, these noise events would be temporary in any one location and would occur outside of more sensitive times of the day (weekends and evenings) except where private landowners are doing their own vegetation removal, usually on weekends. This impact would be **less than significant** due to its intermittent nature and varied location. A mitigation measure is recommended restricting City vegetation clearance activities involving equipment use by City employees to weekday daytime hours. A similar mitigation measure would address vegetation removal efforts not undertaken by, but recommended to private landowners by the City.

Workers in the vicinity of operating equipment, such as chainsaws and wood chippers, would be subject to noise from this equipment, and due to their close proximity to the equipment, they would be exposed to this relatively high level of noise. Compliance with existing workplace noise protection requirements, including use of ear mufflers or plugs, would ensure that this impact would be **less than significant (Class III)**.

### **Mitigation Measures**

The following mitigation measures are recommended.

- NS-1 Noise generating public vegetation management activity shall be prohibited Saturdays, Sundays, and holidays and between the hours of 5 p.m. to 8 a.m. Holidays are defined as those days which are observed by the City of Santa Barbara as official holidays by City employees.
- NS-2 All construction equipment, including trucks, shall be professionally maintained and fitted with standard manufacturers' muffler and silencing devices.
- NS-3 All workers using or within close proximity to operating chain saws, chippers and other noisy equipment shall utilize noise protection (ear plugs) consistent with Cal OSHA Federal OSHA requirements and other legal workplace requirements.

### **3.7.5 Population and Housing**

The project is limited to fire hazard management activities such as vegetation management. The project would not involve new development in undeveloped areas, extension of major infrastructure, or displacement of housing. Therefore, there would be **no impact** related to growth inducement or housing.

### **3.7.6 Public Services**

The proposed project is a wildland fire risk reduction plan that would decrease the overall impacts on the fire fighting resources in the City because the wildland fire risk would be reduced. There

would be continuation of ongoing efforts to reduce wildland fire hazards that could utilize firefighting resources including guidance on techniques to be used, management of prescriptive burns, and vegetation management activities. There would be no increase in demand for firefighter services as a result of the project.

The proposed project, due to its nature would, not increase the amount of public services required but does provide some policy to guide future use of these resources. The Police Department is given guidance on how evacuation planning for wildland fires would be accomplished. Vegetation management on roadways would occur but is not a part of the way ordinary roadway maintenance is conducted. No new water service is proposed. The proposed project would not have any direct impacts on schools facilities, regular maintenance of roadways, provision of other government services, provision of electrical, natural gas and water treatment and distribution facilities, and sewerage treatment facilities. Indirect impacts on schools and water supply facilities would likely be beneficial because the reduced risk of wildland fires would allow for continued operation of the schools which could have been subject to wildland fire risk and less water would be required to address any reduced risk of wildland fires. These indirect impacts would be **beneficial (Class IV)**.

### **3.7.7 Recreation**

#### **Potential Impacts**

The proposed project would have little effect on demand for park space due to its nature.

The project proposes vegetation management in public areas including parks in the wildland fire area. This vegetation activity would occur temporarily and repeated periodically when inspections of the area indicate that substantial fuel has accumulated that presents a fire hazard. This vegetation removal activity could temporarily disturb recreation activities in the areas where vegetation removal is being conducted. The impact would be temporary, lasting only as long as the vegetation removal and disposal is being conducted. Therefore, this impact would be **less than significant (Class III)**. Although this impact does not require mitigation, it is recommended that the Fire Department limit simultaneous vegetation management activities in nearby parks.

#### **Mitigation Measures**

REC-1 The Fire Department shall consult with Parks and Recreation staff to ensure that recreational opportunities are not precluded simultaneously in several parks in the same portion of the City.

### **3.7.8 Transportation and Circulation**

The Institute of Transportation Engineers does not include standard trips generation rates for vegetation removal projects. Therefore, trip generation estimates are based upon an estimate of the numbers of proposed operations of vegetation management crews and assumptions regarding the crew size and the estimated existing number of trips for this activity. Project trip generation was estimated as follows:



#### EXISTING TRIPS

There are 4,000 homes in the study area and in the past year an estimated 800 homes performed vegetation clearance using crews that generate 6 trips each.

*Private Defensible Space (Ds)* -  $800 \times 6 = 4,800$  Trips/Year

*Road Clearance (Rc)* -  $30 \times 8$  (Trips/Crew) = 240 Trips/Year

*Vegetation Management (Vm)* -  $60 \times 8$  (Trips/Crew) = 480 Trips/Year

Total Existing Trips/Year = 5,520

#### PROPOSED TRIPS

Of the 4000 homes in the area, 50% of homeowners (2000) would hire on an annual basis a 6 person crew to complete the work.

Ds -  $2,000 \times 6$  (Trips/Crew) = 12,000 Trips/Year

Rc -  $30 \times 8$  (Trips/Crew) = 240 Trips/Year

Vm -  $60 \times 8 + 130 \times 8 + 100 \times 8$  (Trips/Crew) = 2360 Trips/Year

Total Proposed Trips/Year = 14,600

Total New Trips =  $14,600 - 5,520 = 9,080$  Trips/Year

The crews would work for 176 days per year based on weekday construction for the portion of the year that would not be subject to vegetation management when sensitive bird species may be roosting in trees. Therefore on average  $9,080/176 = 52$  trips per day increase would be expected due to this project. The proposed project would result in an estimated 52 new trips per day City-wide during the 176 days of operation per year. These trips would not be generated from the same location because crews would move from one area to another to conduct vegetation management. Vegetation management would clear vegetation from roadways improving access to these areas, especially during emergencies.

The new 52 trips per day would occur throughout the day and would not all occur during peak periods of use, although some of the trips may occur during peak use hours. Vegetation clearance and, therefore, vehicular trips would occur at different locations throughout the wildland fire hazard area and so a simple trip distribution is not possible. Also, the companies providing vegetation clearance are based at various locations and environmental review for these trip generating uses have often already been accounted for. In addition, many of the trips may be linked as company employees move from site to site.

The proposed new plan would not create any new trips that have not already been accounted for in other environmental assessments. When homes, parks, or buildings for businesses are created, they must go through a traffic assessment. This traffic assessment accounts for trips associated with services, such as landscape maintenance. There is nothing new or unusual about brush clearing. Evaluating the environmental impacts again for these trips would constitute double counting. Transportation Planning staff do not believe that the additional trips would result in any significant traffic impacts to the City's existing street network. When the trips that may be associated with the proposed project are dispersed throughout the project area, no significant traffic will enter any impacted intersections; therefore, **less than significant (Class III)** traffic impacts are expected from the Wildland Fire Plan.

The proposed Plan would include temporary road or land closures which could create a minor hazard to traffic. Standard traffic management procedures such as placing signs warning approaching traffic that vegetation clearance activities are occurring and use of flagmen and other warning devices would ensure that this impact would be less than significant.

The proposed project would result in implementation of roadway and driveway vegetation clearance standards that would improve emergency access within the Wildland Fire area of the City.

The project would not result in a need for additional permanent parking at the sites proposed for wildland fire vegetation management. Temporary parking for the crews and inspectors would be available by the roadside or in the areas where work is being conducted. Project impacts on parking would therefore be **less than significant (Class III)**.

Temporary lane or road closures would occur during roadway vegetation management activities. This impact would be less than significant because there are standard procedures already in place to ensure that pedestrians and cyclists are adequately warned of the potential hazard and this hazard would occur only intermittently.

### **3.7.9 Hydrology and Flooding**

The proposed project would result in periodic vegetation removal projects and maintenance of areas where vegetation removal has already been conducted. The proposed project could remove vegetation and conduct controlled burns in areas where steep slopes occur and this could result in minor increases in flows from these areas because vegetation in these areas would no longer absorb a portion of the runoff in the area. Due to the limited nature of the project proposal to conduct small area prescribed burns (one acre maximum), and the limited number of these prescribed burns, the increase in runoff would be small and would be **less than significant (Class III)**.

## 4.0 ALTERNATIVES

---

### 4.1 CEQA REQUIREMENTS

The key requirements under CEQA to identify and evaluate alternatives in an Environmental Impact Report are listed below:

- 15126.6(a) states that *“An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.”*
- 15126.6 (b) states that *“...the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.”*
- 15126.6(c) states *“The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects.”*

Under CEQA, the City must identify feasible alternatives that will avoid, or at least lessen, any significant impacts associated with the project. The City must determine what represents a feasible alternative, taking into account costs and engineering feasibility, and how the alternative may inhibit meeting the project objectives. An alternative cannot be dismissed simply because it prevents the project objectives from being fully realized. Any new environmental impacts of an alternative must also be considered. In addition, the No Project Alternative must be evaluated in an EIR.

### 4.2 NO PROJECT ALTERNATIVE

Under the No Project Alternative, the Department would not implement any vegetation management actions in the identified Vegetation Management Units. The current vegetation management actions on City parcels, initiated in 1993, would continue. The current defensible space requirement of 100 feet in the High Fire Hazard Area would remain unchanged.

Under this alternative, the impact of wildland fires would be greater than under the proposed Plan because there would be a higher potential for damage to structures and loss of life due to a wildland fire in or adjacent to the City. The increased risk of larger and more damaging wildland fires in the City would also cause environmental impacts that would be greater than from a wildland fire that occurred after implementation of the proposed Plan. The more destructive wildland fires would cause greater damage to native vegetation and cause more post-fire erosion due to the higher temperatures reached by a fire with greater fuel. These impacts would be considered significant and unavoidable under this alternative, and of a greater magnitude compared to similar impacts under the proposed Plan.

### **4.3 ALTERNATIVES THAT AVOID OR REDUCE SIGNIFICANT IMPACTS**

The proposed Plan would result in the following types of significant impacts (Class I or II): loss or disturbance to riparian habitats, loss or disturbance to special status plant and wildlife species, and increased erosion and possible downstream sedimentation.

There are no feasible alternatives to reduce wildland fire hazard and the effects of wildland fires in the City that would avoid or reduce the above impacts. Reduction in fuel near structures and at strategic locations is the most effective solution in an already built urban environment such as the City of Santa Barbara. There are other methods of reducing vegetative fuel that have greater environmental impacts, such as the use of mechanical equipment to clear brush or the use of large scale prescribed burning to remove live stands of vegetation. However, in both instances, the environmental impacts of these alternative methods would be substantially greater than for the proposed Plan.

## 5.0 CUMULATIVE IMPACTS

---

Under CEQA Guidelines Section 15130, an EIR must discuss cumulative impacts of a project when the project's incremental effect is “cumulatively considerable,” which means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (Section 15065). Section 15355 of the CEQA Guidelines defines cumulative impacts as two or more individual effects, that when considered together, are either considerable or compound other environmental impacts. These cumulative impacts are changes in the environment that result from the incremental impact of the proposed project and other nearby related projects.

The potential cumulative impacts of the proposed Plan, when considered with other past, present, and future projects, is assessed below. The potential cumulative impacts of the various elements of the proposed Plan (e.g., modified defensible space, fuel reduction in different locations of the City) are addressed as part of the project impacts in Section 3.0.

The proposed Plan represents a long-term program that affects a wide geographic area in the City of Santa Barbara. Impacts would be dispersed over time and space. The significant impacts of the project are related to effects on riparian habitat, effects on sensitive plant and wildlife species, and, increased erosion. These impacts have the potential to interact and combine with similar impacts from other land disturbing actions in and around the City, such as residential land development on individual lots, small subdivisions, road and other infrastructure improvements, flood control channel maintenance, and discretionary land development projects in Goleta and the unincorporated portions of the County surrounding the City. The proposed Plan has the potential to overlap in time, and in effect, with these other types of projects, resulting in potential cumulative impacts. Two **significant, unavoidable cumulative impacts (Class I)** would result over time from the implementation of the proposed Fire Plan, as follows:

### **Biological Resources**

The proposed Fire Plan would affect biological habitats by thinning native vegetation, pruning oak trees, removing understory plants, and using herbicides to control exotic plants. At any one location, these actions are not expected to cause a significant biological impact based on the proposed vegetation management methods and environmental protection measures incorporated in the Plan. However, these impacts would, over time, contribute to past, present, and future projects and actions by public and private parties that result in habitat removal and/or degradation. Most of the City has been developed, and native habitat occurs in fragments on steep slopes, in canyons, and along creek corridors. Any future action that continues to reduce or otherwise degrade native habitat would contribute to a past and ongoing significant impact to the biological resources of the City.

## **Visual Resources**

The proposed Fire Plan would result in the thinning of native and non-native vegetation on public and private properties, including removal of large eucalyptus trees, limbing of oak trees, and removal of dense understory plants in high fire hazard areas. These modifications to the landscaping at any specific location are not expected to significantly affect public views of the City's aesthetic landscape. However, the modification of vegetation and landscaping under the Plan could contribute to a past and ongoing cumulatively significant impact due to land development in the City and outside the City limits that removes native vegetation, creates barren slopes or road cuts, and establishes landscaping elements that are out of character with the native landforms and vegetation.

## 6.0 EIR PREPARERS

---

City of Santa Barbara, Community Development Department, Planning Division

Jan Hubbell, AICP - Senior Planner

Michael Berman – Environmental Analyst and Project Planner

URS Corporation:

John Gray – project manager

Autumn McKee – visual resources, general environmental analyses

Johanna La Claire – biology

Byron Bass – archeology

Jeremy Rowlands – solid waste

Lisa Huntsberry – Geographic Information System

FIREWISE2000:

Mike Rogers – Principal and Senior Consultant

## 7.0 REFERENCES

---

- California Native Plant Society, 2001. Inventory of Rare and Endangered Plants of California. Sacramento.
- California Division of Mines and Geology, 1966. Geology of the Central Santa Ynez Mountains, Santa Barbara County, California.
- City of Santa Barbara, 2003. Draft Wildland Fire Plan.
- City of Santa Barbara, 2000. Final Mitigated Negative Declaration, Honda Valley Vegetative Fuels Management Program. Prepared by the Community Development Department, Planning Division for the Fire Department.
- City of Santa Barbara, 2002. Final Mitigated Negative Declaration, Las Barrancas-Circle Drive Fuel Reduction Project. Prepared by the Community Development Department, Planning Division for the Fire Department.
- City of Santa Barbara, 2003. Initial Study, Wildland Fire Plan,. Prepared by the Community Development Department, Planning Division for the Fire Department.
- Firewise2000, 2003. Technical report and information provided to URS Corporation. September 2003. Prepared by Mike Rogers, FIREWISE2000.
- Rachel Tierney Consulting, 1999. Honda Valley Biological Assessment and Management Plan. Prepared for the City of Santa Barbara Fire Department and Parks and Recreation Department.
- Rachel Tierney Consulting, 2001. Biological Assessment, Parma Park Master Plan. Prepared for the City of Santa Barbara Parks and Recreation Department.
- Jones & Stokes, 2002. Biological Assessment, Hale Park. Prepared for the City of Santa Barbara Parks and Recreation Department.
- Jones & Stokes, 2002. Biological Assessment, Douglas Family Preserve. Prepared for the City of Santa Barbara Parks and Recreation Department.