

Appendix E
Details from Chapter 4, Goals, Policies, and Actions

Policy 1, Action 1.5 – Adopt language to the CFC, Appendix IIA outlining the authority of the Fire Chief to maintain the boundaries of the high fire hazard area. See Appendix E for adoption language.

The following wording is proposed to adopt language to the City Municipal Code to Section 1 of the 2001 California Fire Code, Appendix IIA outlining the authority of the Fire Chief to maintain the boundaries of the high fire hazard area. Underlined wording outlines the proposed changes.

2001 California Fire Code, Appendix IIA, Section 1 - Scope

The unrestricted use of grass-, grain- or brush covered land in hazardous fire areas is a potential menace to life and property from fire and resulting erosion. Safeguards to prevent the occurrence of fires and to provide adequate fire-protection facilities to control the spread of fire which might be caused by recreational, residential, commercial, industrial or other activities conducted in hazardous fire areas shall be in accordance with Appendix II-A.

Add:

1.1 It shall be the responsibility of the Fire Chief to maintain the Official Fire District Map with respect to the boundaries of the High Fire Hazard Area and any zones within. The Fire Chief shall review the boundaries of the High Fire Hazard Area as necessary, and shall adjust the boundaries thereof as brush and vegetation conditions warrant. There shall be a city map prepared and maintained by the City Fire Chief with the High Fire Hazard Area boundaries and any zones within that area shown. This map shall be on file in the City Clerk's office and the office of the Chief Building Official.

Policy 1, Action 1.6 – Adopt the following defensible space standards to all structures within each high fire hazard zone as follows (See Appendix E for adoption language):

Coastal Interior	30 to 50 feet defensible space
Coastal	50 to 70 feet defensible space
Foothill	100 feet defensible space
Extreme Foothill	150 feet defensible space

**** Within any high fire hazard zone additional defensible space may be required on slopes greater than 30%. Slopes ranging between 30 and 40 % slope may require 200 feet defensible space. Slopes ranging from 41 to 60% may require 250 to 300 foot defensible space.****

The following wording is proposed to adopt language to the City Municipal Code to Section 16 of the 2001 CA Fire Code, Appendix IIA. Highlighted wording shows language to be removed and underlined wording is proposed new language. The standards to which defensible space will be completed are included at the end of this appendix.

2001 CA Fire Code, Appendix IIA, Section 16 - Clearance of Brush or Vegetative Growth from Structures

16.1 General. Persons owning, leasing, controlling, operating or maintaining buildings or structures in, upon or adjoining hazardous fire areas, and persons owning, leasing or controlling land adjacent to such buildings or structures, shall at all times:

1. Maintain an effective firebreak by removing and clearing away flammable vegetation and combustible growth from areas within 30 (9144 mm) to 150 feet of such buildings or structures as outlined in the following zones:

Coastal Interior	30 to 50 feet brush clearance from structures
Coastal	50 to 70 feet brush clearance from structures
Foothill	100 feet brush clearance from structures
Extreme Foothill	150 feet brush clearance from structures

** Within any high fire hazard zone additional brush clearance may be required on slopes greater than 30%. Slopes ranging between 30 and 40 % slope may require 200 feet clearance. Slopes ranging from 41 to 60% may require 250 to 300 foot clearance.**

EXCEPTION: Single specimens of trees, ornamental shrubbery or similar plants used as ground covers, provided that they do not form a means of rapidly transmitting fire from the native growth to any structure.

2. Maintain additional fire protection or firebreak by removing brush, flammable vegetation and combustible growth located from 30 feet to 100 feet (9144 mm to 30480 mm) from such buildings or structures, when required by the chief because of extrahazardous conditions causing a firebreak of only 30 feet (9144 mm) to be insufficient to provide reasonable firesafety.

EXCEPTION: Grass and other vegetation located more than 30 feet (9144 mm) from buildings or structures and less than 18 inches (457 mm) in height above the ground need not be removed where necessary to stabilize the soil and prevent erosion.

3. Remove portions of trees which extend within 10 feet (3048 mm) of the outlet of a chimney,
4. Maintain trees adjacent to or overhanging a building free of deadwood, and
5. Maintain the roof of a structure free of leaves, needles or other dead vegetative growth

Policy 10, Action 10.2 – Incorporate and update the 1993 Vegetative Fuels Management Plan into the Wildland Fire Plan.

The 1993 Vegetative Fuels Management Plan addressed City lands both within and outside the high fire hazard area. The Plan outlined vegetation management projects on these lands and is incorporated into the Wildland Fire Plan. Additional vegetation management areas are included in the Wildland Fire Plan to ensure that Fire Department Defensible Space Standards are met for City lands. Specific project specifications and project areas are outlined below.

Vegetation Management will involve reducing the amount of flammable vegetation within the specified area by approximately 1/3 to 1/2 in areas outside the Fire Department's defensible space requirements within each zone. Vegetation management will be targeted on the removal of flammable vegetation (brush and understory) by preferentially removing invasive exotic plants, thinning, pruning and limbing of vegetation to remove fire ladders, limbing up of oak overstory, pruning out of dead material, and thinning out continuous areas of brush using a mosaic pattern.

In areas where City lands are in close proximity to structures and within the structures defensible space requirements the focus of vegetation removal will be to meet the Fire Department's Defensible Space Requirements (See enclosed High Fire Hazard Defensible Space Requirements).

In areas with heavy accumulations of eucalyptus, trees may be thinned to obtain 6 to 12 trees per 1,000 square feet. Eucalyptus trees 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. 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. Chips will be placed in eucalyptus areas.

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.

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 13.6 inches vertically (See enclosed roadway requirements).

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. The hours of work will include weekdays between the hours of 8:00 to 5:00 pm. No work will be completed on weekends or designated holidays.

Within the vegetation management areas no entry will 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 City project manager prior to any work occurring in drainage areas.

Vegetation management in creeks will be conducted on a very limited basis. All thinning and placement of chipped material will occur outside the 15 foot buffer area from the top of bank. However, the removal of dead brush and exotic plants (by hand only) may extend to top of bank.

There may be limited instances where vegetation management in a creek or within the 15 buffer area from the top of bank would occur. This would only occur if 1) there is an abundance of dead wood in the under story vegetation that has created a fire ladder near structures or a key defensible space are that would be used during fire fighting; 2) eucalyptus trees, giant reed, and pampas grass (or similar plants) dominate the riparian corridor and have created a hazardous fuel condition due to their density or the 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. A specific vegetation management plan must be completed each time work is proposed within the creek area and the environmental document shall address specific mitigation measures to protect aquatic and riparian resources. The City would acquire a CDFG Streambed Alteration Agreement for any vegetation project in a creek.

To maintain adequate regeneration rates of oak trees within vegetation management areas the following procedures will be followed:

- No live oak trees will be removed.
- Oak saplings will be protected from damage or cutting during the project.
- As much as possible other healthy native understory components such as toyon, lemonadeberry and current will be retained within oak forests, as long as they do not create fire ladders.
- Lower oak branches (to six feet) of oaks will be thinned of branches to reduce the total plant volume, dried grasses, dead branches and resinous woody species shall be removed.
- Young coast live oak saplings and seedlings shall not be removed during brush modification in grasslands and scrublands.
- 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.
- Any eucalyptus debris (e.g. chips, branches, and leaves) should be kept out of native habitats, as this material tends to inhibit the germination of most species.
- All removed oak limbs shall be clean-cut, using the best industry standard practices.

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

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 of vegetation, or 4) prescribed burning of vegetation.

- 1) **Hand cutting and chipping** - Hand cutting and chipping vegetation 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 project area where physically feasible and shall be spread no greater than 12 inches in depth. No chipped material will be placed into any streambeds. 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. The chipper will not be placed within sensitive habitat areas as outlined in the Biological Assessment. 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.

- 2) **Hand cutting and multi-cutting** - Hand cutting and then multi-cutting involves cutting vegetation (using hand tools, chainsaws, weed whips, and mowers) and cut vegetation is then reduced in size by cutting into lengths no longer than 6 inches long. The multi-cut vegetation is then left on the ground within the project area no greater than 12 inches in depth. 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.
- 3) **Hand cutting and prescribed burning** - Hand cutting and using prescribed burning involves vegetation being hand cut (using hand tools, chainsaws, weed whips, and mowers) and then vegetation is prescribed burned using two prescribed burn techniques. The first prescribed burn technique is called pile burning. It involves cut vegetation being stacked into piles on site. The vegetation in the piles is allowed to dry and the piles are then ignited to consume dry vegetation. Piles will range in size from 10 * 10 * 10 feet to 12 * 12 * 25 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, not more than 1 acre in size.

All prescribed burning would be conducted under safe burning conditions outside of the Fire Department's designated fire season and will require a California Air Resources Board designated burn day and the development of a 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 project 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.

- 4) **Prescribed burning** - Prescribed burning is a broadcast burn technique where dry grass is left standing and then ignited over a small area not more than 1 acre in size.

All prescribed burning would be conducted under safe burning conditions outside the Fire Department's designated fire season and will require a California Air Resources Board designated burn day and the development of a prescribed burn plan that will be approved by the Fire Chief and Santa Barbara County Air Pollution Control District. A prescribed burn plan will outline weather, topography and fuel within the project 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 (pulaski's, McLeod's, shovels) 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.

A copy of the Santa Barbara City Fire Department Pile Burn Plan and Prescribed Burn Plan are available by request at City Fire Station 1, located at 121 W. Carrillo, Santa Barbara, CA, 93101.

In areas where it is not physically feasible to put chip or multi-cut material back on the ground, alternative uses for the generated biomass will be developed. Biomass created from this project may provide for economic opportunities for alternative sources of products and energy within the community. These alternatives must be economically viable for the project and will be developed during environmental review.

A plan to eradicate and minimize the potential spread of invasive exotic plants will be developed for this plan and be implemented for each project area. Invasive exotic plants identified in the project area will be removed during initial vegetation management work. Any follow-up treatments to eradicate invasive exotic plants shall be the responsibility of the City according to the exotic plant plan. The City proposes to use herbicides to selectively remove invasive exotic plants that have colonized a treated area. Herbicides will be used only as a last resort and only for eradication of invasive exotic plants. Selective application methods will be utilized. The City will follow the herbicide selection, application, safety precautions, and record keeping as outlined in the City Integrated Pest Management Plan (IPM), which is currently being finalized for consideration by City Council.

A monitoring plan will be developed for the project areas and shall be the responsibility of the City project manager to complete according to schedule.

Maintenance of vegetation management within each City area will vary. Areas that require grass, weed-whipping, and removal of invasive exotic pest plants will require annual maintenance. Maintenance of vegetation management work in areas with shrubs, brush, and trees will be generally be on a five-year rotation, but may occur sooner if it is required to reduce fire hazard.

Outlined in the following pages is the City lands identified in the 1993 Plan, recommendations to be incorporated into the Wildland Fire Plan, and updated recommendations for City lands.

EQUESTRIAN CIRCLE/ MISSION PARK AREA

Equestrian Circle

- **Completed** - Implement vegetation management treatment to provide defensible space for firefighting apparatus and personnel and extend this perimeter control line along Mountain Drive. Vegetation management will extend 100 feet along north edge of Mountain Drive (**Area A**) or to the riparian zone. This vegetation management should consist of pruning out dead material, limbing or thinning of eucalyptus (**Area B**), and chipping and scattering biomass throughout the site.
- **Completed** - Weed-whip or mow entrance road (**Area C**) and import chipped biomass material for weed/grass control.
- **Completed** - Import chipped material and spread around horse area (**Area D**).
- **New** - Implement High Fire Hazard Area Defensible Space Requirements as needed throughout park area.

Mission Park

- **New** - 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.
- **New** - 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.
- **Completed** - Chipped material should be spread for grass and weed control and reduce potential for spontaneous combustion. Import additional chipped material as necessary.
- **Completed** - Grass and weeds will need annual weed-whipping or mowing unless chipped biomass material is used.

Reservoir #3

- **New** - Insure that vegetation road clearance meets Fire Department's High Fire Hazard Area Defensible Space Requirements.
- **New** - Remove dead vegetation throughout parcel.

Rocky Nook Pump Station

- **New** - Implement vegetation management throughout the Rocky Nook Pump Station.

Sheffield Pump Station

- **New** - Implement vegetation management throughout the Sheffield Pump Station.

PARMA PARK AREA

Parma Park

- **Completed** - **Area A** - Thin and remove chaparral and limb trees 75 feet on each side of the access road through the middle of the open space. Focus of work will be to remove of ladder fuels and dead vegetation. Grasses in this area will be mowed or weed whipped annually.
- **Completed** - **Area B** – Thin and remove 1/3 to 1/2 of the vegetation along open space boundary. Width of vegetation management in this area will be 100 to 200 feet from the open space boundary. Focus of work will be removal of ladder fuels and dead vegetation.. Grasses in this area will be mowed or weed whipped annually.
- **Not Completed** - **Area C** - 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.
- **Partially completed** - **Area D** - Thin and remove 1/2 of the chaparral along the open space boundary.
- **Completed** - **Area E** - Remove 50 percent of the understory chaparral in oak woodland in northwest area of the open space. Prune out dead material, limb oak trees up to 6 feet oak branches. Remove ladder fuels.
- **Completed** - **Area F** - Thin and remove understory vegetation in olive orchard. Prune out dead material, limb trees up six feet off the ground, chip and scatter chips on site not more than 12 inches in depth. Mow or weed-whip grass areas under trees annually.
- **Not completed** - **Area G** - 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.
- **Not Completed** - **Area H** – 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.
- **Not Completed** - **Area 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
- **New** - **Access Road** - 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 road. The project proposes to open up the lower portion of the road to maintain this safety route. This portion of the road will require construction of a new road to connect with the Southern CA Edison that exits onto Stanwood Road. This will allow a safe exit for fire resources.
- **New** - Implement thinning, limbing, and pruning along parcel 019-031-002.
- **New** - 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.

Fire Station 7

- **Completed** - Implement vegetation management throughout parcel 021-120-012 (area around Fire Station 7).
- **New** - Restore parcel 021-120-012 to native oak woodland by eradicating scotchbroom and other non-native plants and reseed with native perennial grasses.

Sheffield Reservoir

- **Completed** - Mow or weed whip weed as needed throughout reservoir area.
- **** This area will become an open space and is covered under the maintenance plan developed for Sheffield Open Space. Specific vegetation management actions are outlined in part of the Sheffield Reservoir Project Plan .

HONDA VALLEY / THORNBERRY PARK AREA

Honda Valley Park

- **Completed** - Implement vegetation management treatment 100 feet around the entire perimeter (**Area A**) of both parks. This involves pruning out all dead material, partially thinning clusters of brush, limbing up (6 feet from the ground) large bushes and trees, chipping or multi-cutting and scattering cut biomass on-site.
- **Not completed** - 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.
- **Completed** - Import and spread chipped biomass material along the canyon bottom riparian zone (**Area C**) for erosion control and weed abatement.
- **Completed** - Maintain fire access road, with locked gate, for fire protection and park access.
- **Completed** - Mow or weed whip grass area to maintain a low fuel volume vegetation zone along a key ridgetop, in (**Area D**).
- **Ongoing** - 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**).

Vic Trace Reservoir

- **Completed** - Continue moving of grass/weeds at this site and import chipped biomass for future weed control.
- **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.

GOULD PARK

Gould Park

- **Not completed** - 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.
- **Not completed** - 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.
- **Completed** - Continue grass and weed control along Mountain Drive and Cold Springs Trail.

TUNNEL RESERVOIR AREA

Tunnel Reservoir

- **Not completed** - Implement vegetation management treatment to provide defensible space for firefighting apparatus and personnel in addition to reducing the risk from ignitions along Tunnel Road/Trail from the road at the end of Tunnel Road to just past the South Portal Water Resource facility for a distance 50 feet on each side of the road.
- **Completed** - Implement vegetation management around Tunnel Reservoir for a distance of 50 feet around reservoir.
- **Completed** - Complete vegetation road clearance for a distance of 10 feet on each side of the dirt road from South Portal Water Resource area, running northeast to the end of City property to ensure firefighter equipment access.
- **Not completed** - Complete vegetation management within entire portions of parcels 23-060-48 and 23-060-49 to reduce fuel loading.
- **Not completed** - Complete grass and weed control along Tunnel Road/Trail from the road at the end of Tunnel Road to just past the South Portal Water Resource facility (approximately 1 mile) for a distance 10 feet on each side of the road.
- **Not completed** - Ensure vegetation clearance around power line poles that provide electrical power to South Portal meet high fire hazard clearance requirements per 2001 California Fire Code, Appendix IIA, Section 15.

RATTLESNAKE CANYON AREA

Rattlesnake Park

- **Not completed** - 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.
- **Not completed** - 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.
- **Completed** - Continue grass and weed control along Gibraltar Road, Las Canoas Road and any accessible areas along Rattlesnake Trail.

STEVENS PARK / CATER WATER TREATMENT FACILITY/ LAUREL RESERVOIR AREA

Stevens Park

- **Not completed** - Implement vegetation management treatment 100 feet along the western perimeter of parcel 55-160-48.
- **Completed** - Implement vegetation management treatment 50 feet around the perimeter of parcel 53-032-01, which includes the developed park site.
- **Completed** - Continue mowing, weed whipping and weed control along trial, roads, within meadow, and as needed throughout park.

Cater Water Treatment Facility

- **Not completed** - Implement vegetation management treatment behind Cater water treatment facility within 100 ft along site perimeter.
- **Completed** - Continue grass and weed control throughout reservoir parcels.

Laurel Reservoir

- **New** - Implement vegetation management perimeter treatment around west and south perimeter of Laurel Canyon Park for a distance of 100 feet.
- **Completed** - Continue grass and weed control throughout Laurel Canyon Park and along Laurel Canyon Road.

La Vista Reservoir

- **Completed** - Continue grass and weed control throughout reservoir parcels.

HALE PARK AREA

Hale Park

- **Not 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.
- **New** - Implement 50 foot vegetation management buffer around perimeter of park, with exception of 100 feet along southwest perimeter.
- **Completed** - Reduce the amount of fuel in brush ravine by implementing vegetation management treatment by using the cut and chip method. Maintain green fuels in natural state. Tie work into mowed areas, perimeter, and eucalyptus vegetation management areas.
- **Partially completed** - Thin, limb and prune eucalyptus areas throughout the park to 10 to 16 trees per 1,000 feet.
- **Completed** - Continue annual grass control by mowing or weed whipping throughout the park.

Reservoir 1

- **New** - Implement vegetation management treatment along perimeter of reservoir for a distance of 50 to 100 feet around perimeter.
- **Completed** - Continue annual grass control by mowing or weed whipping throughout reservoir area.

HIDDEN VALLEY

Hidden Valley

- **Completed** - Continue vegetation management treatment along perimeter slopes 50 feet from the park boundary adjacent to homes (parcel 049-040-034), except in the riparian zone. Leave riparian zone in natural state.
- **New** - Implement vegetation management treatment throughout parcel 049-030-035 and 049-330-013.
- **Completed** - Limb up eucalyptus branches, prune behind pump station, chip biomass and spread chips along trails, roads for grass/weed control.
- **Completed** - Continue to maintain grass area.

SKOFIELD PARK

Skofield Park

- **Completed** - Continue vegetation management treatment to provide defensible space for firefighting apparatus and personnel in addition to reducing the risk from ignitions along Las Canoas road. Treatment to extend 150 feet below Las Canoas road.
- **New** - Implement 100 foot vegetation management buffer along the south portions of parcels 021-071-001, 021-040-024, and 021-030-007.
- **Not completed** - Implement vegetation management treatment 50 feet on each side of primary trails through parcel 021-040-024.

El Cielito Reservoir

- **Completed** - Continue vegetation management treatment throughout parcel.
- **Completed** - Continue grass and weed control throughout parcel.

SLYVAN PARK /LOMA MEDIA

Loma Media Park

- **New** - Implement 50 foot vegetation management buffer along southern perimeter of Loma Media Park.
- **Completed** - Continue weed control and brush thinning on eastern perimeter of park.
- **Completed** - Continue grass and weed control throughout park.

Slyvan Park

- **New** - Implement 70 foot vegetation management buffer on the western perimeter of parcel 019-201-005.
- **Completed** - Continue weed control and brush thinning on western perimeter of park.
- **Completed** - Continue grass and weed control throughout park.

FRANCESCHI PARK

Upper Franceschi Park

- **Completed** - Implement vegetation management treatment throughout parcel 19-101-18.
- **New** - Parcels 019-090-006, 019-090-007, 019-090-008, and 019-090-009 together form the western area of Upper Franceschi. Implement Fire Department Defensible Space requirements around the perimeter of the western area made up of the 4 parcels.
- **Completed** - Implement vegetation management and weed whipping where feasible throughout parcel 019-101-008.
- **Completed** - Implement vegetation management throughout parcel 019-101-009. Fire Department Defensible Space Requirements must be met for the existing structures on the property.

Lower Franceschi Park

Not completed - 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.

COASTAL CITY AREAS

Escondido Reservoir

- **New** - Implement vegetation management treatment throughout reservoir area.

Cliff Drive Lift Station

- **Not completed** - Implement vegetation management treatment throughout parcel.

Hope Reservoir Booster Station

- **Completed** - Implement vegetation management treatment throughout reservoir area.

LAS POSITAS AREA

Ellings Park (City owned however managed by Ellings Park Foundation)

- **New** - 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).
- **New** - Implement 50 foot vegetation management buffer on the west, north, and east portions of parcel 049-150-050.
- **New** - 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).

601 Las Positas Road

- **New** - Within parcel 047-010-009 limb up all dead palm frawns to 20 feet.
- **New** - Implement 50 foot vegetation management buffer on the west and south portions of parcel 047-010-009.

Campanil Hills Booster Station

- **Completed** - Continue annual mowing and weed whipping.
- **New** - Thin, prune, and trim hedges throughout parcel as needed.

OAK PARK/TALLANT ROAD

Oak Park / Tallant Road

- **New** - 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.

Policy 12, Action 12.1 - Create a community fuels treatment network within the Extreme Foothill Zone. A community fuels treatment network is an area where multiple property owners interlink their individual defensible space zones and treat continuous strips of hazardous vegetation to form a vegetation management network to reduce fire hazard

The community fuels treatment project will involve the Fire Department working with individual property owners to reduce the amount of flammable vegetation within the community fuels treatment network by approximately 1/3 to 2/3. The focus of vegetation management will be vegetation outside the Fire Department's 150 foot modification requirements from all structures within the Extreme Foothill Zone (Defensible Space Requirements). Vegetation management will be targeted on the removal of flammable vegetation (brush and understory) by preferentially removing invasive exotic plants, thinning, pruning and limbing of vegetation to remove fire ladders, limbing up of oak overstory, pruning out of dead material, and thinning out continuous areas of brush using a mosaic pattern.

In areas with heavy accumulations of eucalyptus, trees may be thinned to obtain 6 to 12 trees per 1,000 square feet. Eucalyptus trees 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. 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. Chips will be placed in eucalyptus areas.

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.

Roadways within the project area 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 13.6 inches vertically (See enclosed roadway requirements).

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. The hours of work will include weekdays between the hours of 8:00 to 5:00 pm. No work will be completed on weekends or designated holidays.

Within the vegetation management area no entry will 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 City project manager prior to any work occurring in drainage areas.

Vegetation management in creeks will be conducted on a very limited basis. All thinning and placement of chipped material will occur outside the 15 foot buffer area from the top of bank. However, the removal of dead brush and exotic plants (by hand only) may extend to top of bank.

There may be limited instances where vegetation management in a creek or within the 15 buffer area from the top of bank would occur. This would only occur if 1) there is an abundance of dead wood in the under story vegetation that has created a fire ladder near structures or a key defensible space are that would be used during fire fighting; 2) eucalyptus trees, giant reed, and pampas grass (or similar plants) dominate the riparian corridor and have created a hazardous fuel condition due to their density or the 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. A specific vegetation management plan must be completed each time work is proposed within the creek area and the environmental document shall address specific mitigation measures to protect aquatic and riparian resources. The City would acquire a CDFG Streambed Alteration Agreement for any vegetation project in a creek.

To maintain adequate regeneration rates of oak trees within the community fuels treatment network the following procedures will be followed:

- No live oak trees will be removed.
- Oak saplings will be protected from damage or cutting during the project.
- As much as possible other healthy native understory components such as toyon, lemonadeberry and current will be retained within oak forests, as long as they do not create fire ladders.
- Lower oak branches (to six feet) of oaks will be thinned of branches to reduce the total plant volume, dried grasses, dead branches and resinous woody species shall be removed.
- Young coast live oak saplings and seedlings shall not be removed during brush modification in grasslands and scrublands.
- 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.
- Any eucalyptus debris (e.g. chips, branches, and leaves) should be kept out of native habitats, as this material tends to inhibit the germination of most species.
- All removed oak limbs shall be clean-cut, using the best industry standard practices.

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

Three vegetation management methods will be utilized; 1) hand cutting and chipping of vegetation, 2) hand cutting and multi-cutting of vegetation, or 3) hand cutting and prescribed burning of vegetation

- 5) **Hand cutting and chipping** - Hand cutting and chipping vegetation 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 project area where physically feasible and shall be spread no greater than 12 inches in depth. No chipped material will be placed into any streambeds. 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. The chipper will not be placed within sensitive habitat areas as outlined in the Biological Assessment. 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.
- 6) **Hand cutting and multi-cutting** - Hand cutting and then multi-cutting involves cutting vegetation (using hand tools, chainsaws, weed whips, and mowers) and cut vegetation is then reduced in size by cutting into lengths no longer than 6 inches long. The multi-cut vegetation is then left on the ground within the project area no greater than 12 inches in depth. 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.
- 7) **Hand cutting and prescribed burning** - Hand cutting and using prescribed burning involves vegetation being hand cut (using hand tools, chainsaws, weed whips, and mowers) and then vegetation is prescribed burned using two prescribed burn techniques. The first prescribed burn technique is called pile burning. It involves cut vegetation being stacked into piles on site. The vegetation in the piles is allowed to dry and the piles are then ignited to consume dry vegetation. Piles will range in size from 10 * 10 * 10 feet to 12 * 12 * 25 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, not more than 1 acre in size.

All prescribed burning would be conducted under safe burning conditions outside of the Fire Department's designated fire season and will require a California Air Resources Board designated burn day and the development of a 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 project 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 (pulaski's, McLeod's, shovels) 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.

A copy of the Santa Barbara City Fire Department Pile Burn Plan and Prescribed Burn Plan are available by request at City Fire Station 1, located at 121 W. Carrillo, Santa Barbara, CA, 93101.

In areas where it is not physically feasible to put chip or multi-cut material back on the ground, alternative uses for the generated biomass will be developed. Biomass created from this project may provide for economic opportunities for alternative sources of products and energy within the community. These alternatives must be economically viable for the project and will be developed during environmental review.

A plan to eradicate and minimize the potential spread of invasive exotic plants will be developed for this plan and be implemented for each project area. Invasive exotic plants identified in the project area will be removed during initial vegetation management work. Any follow-up treatments to eradicate invasive exotic plants shall be the responsibility of the private property owner and/or the City according to the invasive exotic plant plan and the responsible party shall be identified in the Letter of Understanding between the City and private property owner. The City proposes to use herbicides to selectively remove invasive exotic plants that have colonized a treated area. Herbicides will be used only as a last resort and only for eradication of invasive exotic plants. Selective application methods will be utilized. The City will follow the herbicide selection, application, safety precautions, and record keeping as outlined in the City Integrated Pest Management Plan (IPM), which is currently being finalized for consideration by City Council.

The community fuels treatment network will require working with each property owner and insuring that each property owner maintains their defensible space to acceptable standards. These types of projects have been completed by the Fire Department in the past. They will require a Letter of Understanding between the City and private property owners before any work can proceed on the ground. The project will require cooperation with the Santa Barbara Fire Safe Council and surrounding fire agencies to connect the community fuels treatment network from Montecito continuing west to San Marcos Pass (*See Figures 22 and 23*). Montecito Fire Protection District is currently implementing vegetation management on a community fuels treatment network within their jurisdiction that will tie into the City of Santa Barbara.

A monitoring plan will be developed for the project area and shall be the responsibility of the City project manager to complete according to schedule.

Maintenance of areas within the Community Fuel Treatment Network will vary. Areas that require grass, weed-whipping, and removal of invasive exotic pest plants will require annual maintenance. Maintenance of vegetation management work in areas with shrubs, brush, and trees will be generally be on a five-year rotation, but may occur sooner if it is required to reduce fire hazard.

Policy 13, Action 13.5 - Develop project standards for each Vegetation Management Unit based on vegetation type, slope, aspect, biological concerns, and erosion potential. Reference Appendix F – Glossary for definitions of terms used in this action item.

The projects within each vegetation management unit will involve the Fire Department working with individual property owners to reduce the amount of flammable vegetation within the area by approximately 1/3 to 1/2. The focus of vegetation management will be vegetation outside the Fire Department's defensible space requirements within each zone. Vegetation management will be targeted on the removal of flammable vegetation (brush and understory) by preferentially removing invasive exotic plants, thinning, pruning and limbing of vegetation to remove fire ladders, limbing up of oak overstory, pruning out of dead material, and thinning out continuous areas of brush using a mosaic pattern.

In areas with heavy accumulations of eucalyptus, trees may be thinned to obtain 6 to 12 trees per 1,000 square feet. Eucalyptus trees 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. 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. Chips will be placed in eucalyptus areas.

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.

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 13.6 inches vertically (See enclosed roadway requirements).

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. The hours of work will include weekdays between the hours of 8:00 to 5:00 pm. No work will be completed on weekends or designated holidays.

Within the vegetation management units no entry will 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 (Except as described below). 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 City project manager prior to any work occurring in drainage areas.

Vegetation management in creeks may be conducted on a very limited basis. As stated above all thinning and placement of chipped material will occur outside the 15 foot buffer area from the

top of bank. However, the removal of dead brush and exotic plants (by hand only) may extend to top of bank.

There may be limited instances where vegetation management in a creek or within the 15-foot buffer area from the top of bank would occur. This would only occur if 1) there is an abundance of dead wood in the under story vegetation that has created a fire ladder near structures or a key defensible space are that would be used during fire fighting; 2) eucalyptus trees, giant reed, and pampas grass (or similar plants) dominate the riparian corridor and have created a hazardous fuel condition due to their density or the 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. A specific vegetation management plan must be completed each time work is proposed within the creek area and the environmental document shall address specific mitigation measures to protect aquatic and riparian resources. The City would acquire a CDFG Streambed Alteration Agreement for any vegetation project in a creek.

To maintain adequate regeneration rates of oak trees within vegetation management areas the following procedures will be followed:

- No live oak trees will be removed.
- Oak saplings will be protected from damage or cutting during the project.
- As much as possible other healthy native understory components such as toyon, lemonadeberry and current will be retained within oak forests, as long as they do not create fire ladders.
- Lower oak branches (to six feet) of oaks will be thinned of branches to reduce the total plant volume, dried grasses, dead branches and resinous woody species shall be removed.
- Young coast live oak saplings and seedlings shall not be removed during brush modification in grasslands and scrublands.
- 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.
- Any eucalyptus debris (e.g. chips, branches, and leaves) should be kept out of native habitats, as this material tends to inhibit the germination of most species.
- All removed oak limbs shall be clean-cut, using the best industry standard practices.

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

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) prescribe burning may occur. Table E-1 at the end of this section outlines proposed method of vegetation management for each vegetation management unit.

- 1) **Hand cutting and chipping** - Hand cutting and chipping vegetation 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 project area where physically feasible and shall be spread no greater than 12 inches in depth. No chipped material will be placed into any streambeds. 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. The chipper will not be placed within sensitive habitat areas as outlined in the Biological Assessment. 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.

- 2) **Hand cutting and multi-cutting** - Hand cutting and then multi-cutting involves cutting vegetation (using hand tools, chainsaws, weed whips, and mowers) and cut vegetation is then reduced in size by cutting into lengths no longer than 6 inches long. The multi-cut vegetation is then left on the ground within the project area no greater than 12 inches in depth. 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.
- 3) **Hand cutting and prescribed burning** - Hand cutting and using prescribed burning involves vegetation being hand cut (using hand tools, chainsaws, weed whips, and mowers) and then vegetation is prescribed burned using two prescribed burn techniques. The first prescribed burn technique is called pile burning. It involves cut vegetation being stacked into piles on site. The vegetation in the piles is allowed to dry and the piles are then ignited to consume dry vegetation. Piles will range in size from 10 * 10 * 10 feet to 12 * 12 * 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, not more than 1 acre in size.
- 4) **Prescribed burning** - Prescribed burning is a broadcast burn technique where dry grass is left standing and then ignited over a small area not more than 1 acre in size.

All prescribed burning would be conducted under safe burning conditions outside the Fire 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 project 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. A copy of the Santa Barbara City Fire Department Pile Burn Plan is available by request at City Fire Station 1, located at 121 W. Carrillo, Santa Barbara, CA, 93101.

Prescribed burning of cut vegetation would result in minimal ground disturbance. Hand tools (pulaski's, McLeod's, shovels) 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.

In areas where it is not physically feasible to put chip or multi-cut material back on the ground, alternative uses for the generated biomass will be developed. Biomass created from this project may provide for economic opportunities for alternative sources of products and energy within the community. These alternatives must be economically viable for the project and will be developed during environmental review.

A plan to eradicate and minimize the potential spread of invasive exotic plants will be developed for this plan and be implemented for each project area. Invasive exotic plants identified in the project area will be removed during initial vegetation management work. Any follow-up treatments to eradicate invasive exotic plants shall be the responsibility of the private property owner and/or the City according to the exotic plant plan and the responsible party shall be identified in the Letter of Understanding between the City and private property owner. The City proposes to use herbicides to selectively remove invasive exotic plants that have colonized a treated area. Herbicides will be used only as a last resort and only for eradication of invasive exotic plants. Selective application methods will be utilized. The City will follow the herbicide selection, application, safety precautions, and record keeping as outlined in the City Integrated Pest Management Plan (IPM), which is currently being finalized for consideration by City Council.

Projects within each vegetation management unit will require working with each property owner and insuring that each property owner maintains their defensible space to acceptable standards. These types of projects have been completed by the Fire Department in the past. They will require a Letter of Understanding between the City and private property owners before any work outside the Fire Department's defensible space requirements can proceed on the ground.

A monitoring plan will be developed for the project areas and shall be the responsibility of the City project manager to complete according to schedule.

Maintenance of areas within each vegetation management unit will vary. Areas that require grass, weed-whipping, and removal of invasive exotic pest plants will require annual maintenance. Maintenance of vegetation management work in areas with shrubs, brush, and trees will be generally be on a five-year rotation, but may occur sooner if it is required to reduce fire hazard.

Table E-1

Vegetation Management Unit	Proposed Vegetation Management Method				
	Hand Cutting & Chipping	Hand Cutting & Multi-cutting	Hand Cutting & Prescribe Burning	Prescribe Burning	Combination of Methods
Las Canoas Road	x	x	x	x	x
Upper Coyote Road	x	x	x	x	x
Circle Drive/Las Barrancas	x	x	x		x
Coyote Road	x	x	x		x
Coyote Circle	x	x	x		x
Conejo Road	x	x	x		x
Fire Station 7	x	x	x	x	x
San Roque Creek	x	x	x		x
Hillcrest Road	x	x			x
Eucalyptus Hills Road	x	x			x
Alston Place	x	x			x
Owens Road	x				
Cleveland School area	x				
Jimeno/Garcia Road	x	x			x
Stevens Park area	x	x	x	x	x
Mountain/Las Tunas	x				
Camino Viejo	x	x			x
Cima Linda	x	x			x
Alturas Del Sol	x	x			x
Garcia/Ferrello Canyon	x	x			x
Honda Valley	x				
Las Positas Road	x				
Flora Vista	x				

*****Example of Defensible Space Requirements*****

**High Fire Hazard Area
Defensible Space Requirements
Ordinance #5257**

Vegetation within Santa Barbara's "High Fire Hazard" areas, native or otherwise, must be maintained to create an effective fuelbreak by thinning dense vegetation and removing dry brush, flammable vegetation and combustible growth from areas within **30 to 150 feet** of all buildings or structures. All parcels in the high fire hazard area shall meet these Fire Department requirements per Appendix IIA of the California Fire Code (2001 Edition), as adopted by Ordinance #5257. Adhering to these requirements will decrease the destructive impact of wildfire. It will minimize structure loss and increase the safety of firefighters protecting your home.

You Must Annually

- ✓ Cut and remove hazardous brush, shrubs, and flammable vegetation such as dry grass and weeds within **30 to 150 feet** of any structure and within **2 inches** of the ground.
- ✓ Clear brush from streets and driveways both horizontally and vertically along your 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 your public or private driveway and any public or private streets that border your 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 your 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.

Exceptions

Shrubs, hedges, and bushes may be retained throughout the 100 feet, provided:

- ✓ They are spaced at least **18 feet** from other shrubs, bushes or structures.
- ✓ 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.
- ✓ They do not form a means of rapidly transmitting fire to a structure.

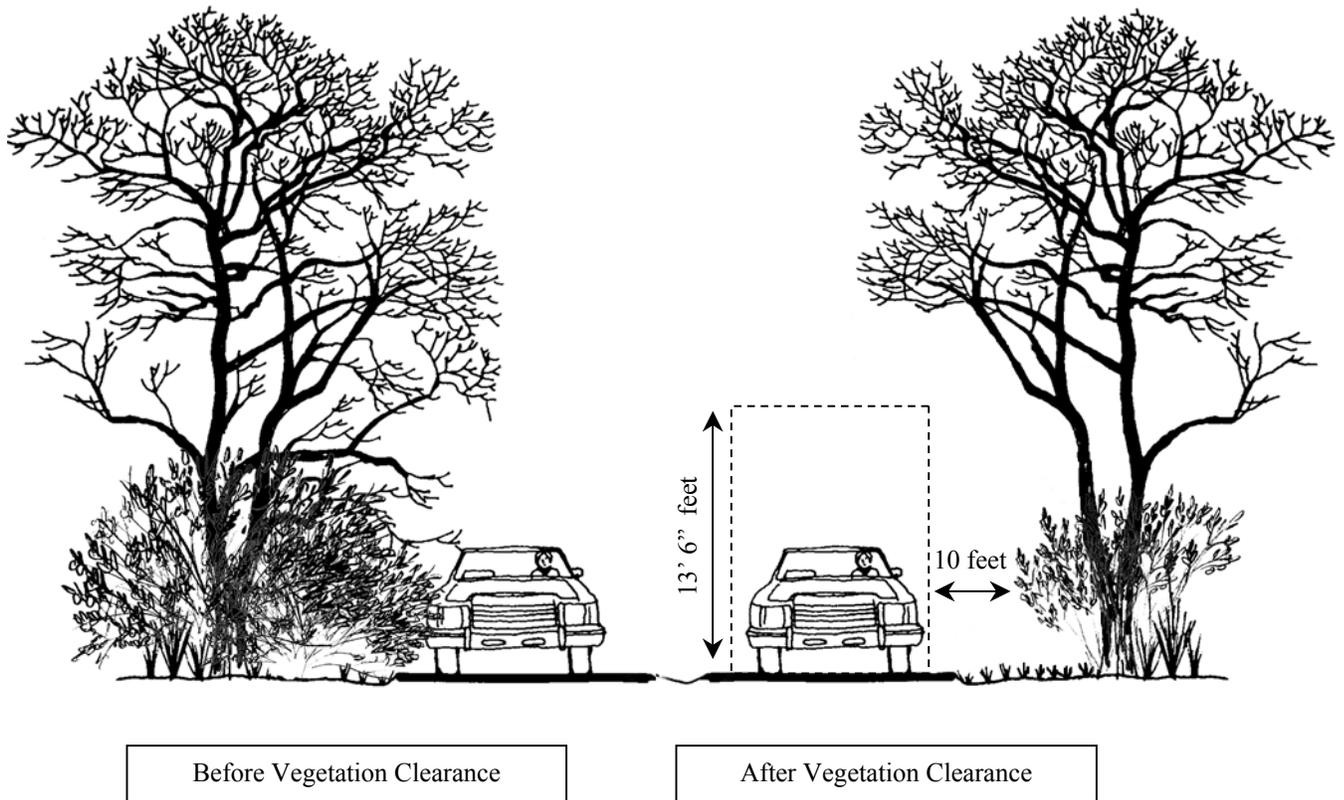
Oak trees and other native specimen trees may be retained throughout the 100 feet, provided:

- ✓ All dead wood is removed and lower branches are trimmed and limbed to **6 feet** above the ground.
- ✓ They do not form a means of rapidly transmitting fire to a structure.

Special Considerations

- ✓ The Fire Department supports increasing the distance of defensible space beyond the 100 foot requirement on slopes greater than 20 percent. Before completing this work, contact the Fire Department (564-5702) for approval.
- ✓ When thinning vegetation and removing dry brush avoid creating erosion problems, causing siltation or pesticide contamination into creeks or drainages, and damaging the habitat of protected wildlife species. Contact the Fire Department (564-5702) for advice regarding erosion control.
- ✓ If you need to remove a tree greater than 4 inches in diameter you must contact the Parks and Recreation Department (564- 5433) to obtain a permit.

Maintain Road Clearance



Maintaining horizontal and vertical vegetation clearance along public and private streets bordering your property and your driveways ensures safe evacuation during a wildfire. It also enables firefighters to respond safely to protect your property.



City of Santa Barbara
Fire Prevention Bureau
High Fire Hazard Area Landscape Guidelines
Ordinance #5257

*******Example of High Fire Hazard Area Landscape Guidelines*******

The following landscape guidelines should be utilized to incorporate fire resistant landscaping on all parcels within the High Fire Hazard area. The guidelines meet the requirements for the Fire Department “Minimum Brush Clearance Standards,” per Appendix IIA of the California Fire Code (2001 Edition), as adopted by Ordinance #5257. These standards apply to all parcels within the High Fire Hazard area (See “Minimum Brush Clearance Standards” handout). Fire resistant landscaping with proper plant spacing and maintenance can impede the progress of a wildfire, reduce its intensity, and provide a safe buffer to protect a structure.

Incorporation of the High Fire Hazard Area Landscape Guidelines into the review process will assist the City in complying with existing regulations for vegetation modification, balance the aesthetic beauty of our area, protect our resources, and reduce the risk associated with wildfire and habitat resources.

Guidelines

Landscape plans submitted for review shall include the following:

- A vegetation plan that details existing native vegetation with species name and locations.
- Include on the vegetation plan which plants will be removed or retained.
- Include the method used to remove vegetation (for example: mechanical or hand cutting).
- Landscape plans should include new plantings with species name and specific location of plantings to scale.
- Recommendations for plant placement should be followed as outlined in Table 1.
- Landscape plans must delineate landscape zones around all structures for a distance of 100 feet as follows:

Zone 1 - (0-30 feet from structure)

Zone 2 - (30 to 50 feet from structure)

Zone 3 - (50 to 70 feet from the structure)

Zone 4 - (70 to 100 feet or greater from the structure)

All landscape plant species must be fire resistant (See enclosed Desirable Qualities for Fire Resistant Landscape Plants, Table 2). Certain plant species are considered to be undesirable in the High Fire Hazard area landscape. The enclosed list of Undesirable Plant Species (Table 3) should not be planted within 100 feet of any structure, unless listed otherwise.

Slopes over 20% are at increased risk from wildfire; therefore the Fire Department recommends additional vegetation modification for a total distance of 150-200 feet from any structure.

Many homes in the High Fire Hazard area do not have the space surrounding their property to obtain the 100-foot clearance. Using the above zone concept becomes critical on these properties.

Table 1: Recommendations for Plant Placement

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. Trees should not be planted closer than 15 feet from a structure.
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.
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. 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.
SLOPES > 20%	If additional vegetation modification is required on slopes over 20% vegetation should be reduced through thinning of existing plants, pruning, removal of dead material, and removal of fire ladders (Fire ladders exist if a fire’s flames can spread from the ground into shrubs and trees up to a house).

TABLE 2 - Desirable Qualities for Fire Resistant Landscape Plants

..... Plant qualities that are desirable for fire resistant plants are:

- 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 resprout after a fire.

Table 3: Undesirable Plant List

Certain plants are considered to be undesirable in the landscape due to characteristics that make them highly flammable. 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 plants are notorious as species containing these volatile substances.

Plants with these characteristics should not be planted in High Fire Hazard areas. They are referred to as target species since their partial or complete removal is a critical part of hazard reduction. The following is a list of plants that should be avoided within the landscape zones defined in Table 1.

Undesirable Plant Species

Natives	Domestics
<i>Adenostoma fasciculatum</i> – Chamise	<i>Acacia</i> species
<i>Adenostoma sparsifolium</i> – Red Shank	<i>Casuarina</i> species - Beefwood
<i>Artemisia californica</i> – California Sagebrush	<i>Cortadera</i> species – Pampas Grass
Baccharis species (low growing form OK)	<i>Cupressus</i> species – Cypress
<i>Eriogonum fasciculatum</i> – Common Buckwheat	<i>Eucalyptus</i> species – Eucalyptus
<i>Olneya tesota</i> - Iron wood	<i>Juniperous</i> species – Juniper (except species which grow less than 1 foot)
	<i>Melaleuca</i> species
	<i>Pennisetum</i> - Fountain Grass
	<i>Pinus</i> species – Pine
	<i>Schinus molle</i> – California pepper tree (within 50 feet of structure)

Other plants may be considered undesirable because of their ability to naturalize and become a pest. These types of plants should be avoided, especially in sensitive riparian or coastal areas where they could become established and compete with native vegetation.

On steep slopes care should be taken to avoid erosion problems created or enhanced by vegetation removal. Deep rooted ground covers and landscape plants should be utilized to hold soil in place. Avoid shallow rooted ground covers. For example, iceplant while an effective ground cover on flat surfaces would be undesirable on a steep slope because its shallow rooted nature may increase erosion when the root zone becomes saturated during heavy rains, exposing bare soil. In areas where target species compromise the total vegetation, partial removal is recommended to obtain Fire Department “Minimum Brush Clearance Requirements.”

Summary of Policies Identified in the Wildland Fire Plan.

- Policy 1** Classify the City high fire hazard area based on hazard and risk as identified by the City Wildland Fire Plan.
- Policy 2** Increase the survivability of homes in the high fire hazard area through the adoption of fire safe building codes.
- Policy 3** Increase the survivability of homes in the high fire hazard area through the adoption of defensible space standards and landscape guidelines on new, remodeled and existing homes.
- Policy 4** Create a defensible community by increasing the number of homes that comply with the Fire Department “High Fire Hazard Defensible Space Requirements”.
- Policy 5** Develop funding sources and incentive programs for residents of the high fire hazard area to encourage reduction of wildfire hazards and risks.
- Policy 6** Post fire rehabilitation guidelines should be established for the City.
- Policy 7** Increase evacuation safety for residents and the general public in the high fire hazard area.
- Policy 8** Reduce fire engine response times in all high fire hazard areas to 4 minutes.
- Policy 9** Provide the highest level of fire protection services to the firefighters and residents within the high fire hazard area.
- Policy 10** Provide community protection from wildland fire through fuels management projects on City owned lands within the high fire hazard area.

- Policy 11** Support collaborative fuels management projects between the City and residents of the high fire hazard area to encourage fire hazard reduction and protection of natural resources. This includes compliance with Fire Department “High Fire Hazard Defensible Space Requirements”, as well as additional defensible space projects requested by homeowners.
- Policy 12** Create a community fuels treatment network within the Extreme Foothill Zone to provide a fire buffer between continuous stands of chaparral fuel adjacent to the City boundary and more densely populated areas within the City. To be effective this project should be a collaborative project between County, City, and Montecito Fire Protection District.
- Policy 13** Identify and prioritize vegetation management projects on private lands in the Wildland Fire Plan to reduce fire hazard.
- Policy 14** Look at creating economic alternatives and incentives for local businesses for the use of biomass generated from vegetation management projects.
- Policy 15** Increase the community’s knowledge and awareness of wildland fire and develop training and education programs to prepare, motivate, and educate the community.
- Policy 16** Work with all City departments and staff to increase their knowledge, awareness, prevention, and preparedness for wildland fire.
- Policy 17** Work cooperatively with Federal, State, and Local jurisdictions to provide the highest level of fire protection, prevention and mitigation projects and programs in the county’s urban wildland interface areas.