APPENDIX B

FIRE SAFE REGULATIONS AND INFORMATION

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FIRE SAFE REGULATIONS AND INFORMATION

The following websites provide additional information about wildfire hazard reduction:

www.firesafecouncil.org

www.fire.ca.gov (See also attached information sheets regarding the 100-foot defensible space zone)

http://www.fs.fed.us/projects/hfi/index.shtml

http://www.wilderness.org/OurIssues/Wildfire/index.cfm?TopLevel=Home

The following website provides a link to the Adopted Fire Hazard Severity Zone Maps (11/2007) for State Responsibility Areas (SRA), provided by the California Department of Forestry and Fire Protection: http://frap.cdf.ca.gov/data/frapgismaps/download.asp

California Department of Food and Agriculture, website for Plant Health and Pest Prevention Services: http://www.cdfa.ca.gov/phpps/

California Department of Food and Agriculture, website for Sudden Oak Death: http://www.cdfa.ca.gov/phpps/PE/InteriorExclusion/SuddenOakDeath/index.html

Claremont Canyon Conservancy, a community based organization formed in 2001 to support long term stewardship of Claremont Canyon: www.claremontcanyon.org

http://www.hillsemergencyforum.org/Hills Emergency Forum (HEF), coordinates the collection, assessment and sharing of information on the East Bay Hills fire hazards and provides a forum for building interagency consensus on the development of fire safety standards and codes, incident response and management protocols, public education programs, multi-jurisdictional training, and fuel reduction strategies.

www.hillsemergencyforum.org

The HEF is comprised of the following members:
University of California, Berkeley
Lawrence Berkeley National Laboratory
City of Berkeley, Office of Emergency Services
City of Oakland
City of El Cerrito
East Bay Municipal Utility District
East Bay Regional Park District
California Department of Forestry and Fire Protection
Moraga Orinda Fire District

Office of Emergency Preparedness University of California Berkeley, Fire Mitigation: http://oep.berkeley.edu/programs/fire_mitigation/index.html

The following regulations are applicable to the Wildfire Hazard Reduction and Resource Management Plan area:

Healthy Forests Restoration Act (PL 108-148): Addresses hazardous fuels reduction projects on National Forest System lands and Bureau of Land Management lands aimed at protecting communities, watersheds, and certain other at-risk lands from catastrophic wildfire. Enhance efforts to protect watersheds and address threats to forest and rangeland health, including catastrophic wildfire, across the landscape, and for other purposes.

Bay Area Air Quality Management District Regulation 5: Generally prohibits open burning, but allows for exemptions such as agricultural burning, disposal of hazardous materials, fire training, and management burning of range, forest, and wildlife areas. Sections 5-200, 5-401, and 5-408 specifically address prescribed burning and wildland vegetation management burn requirements.

California Endangered Species Act (Fish and Game Code 1992, Sections 2050 et seq.; 14 CCR Sections 670.1 et seq.): Defines special-status plants and animals that are listed or proposed for listing as rare, threatened, or endangered.

California Fish and Game Code, Sections 3511, 4700, 5050, and 5515: Designates species that are fully protected in California and animals designated as "Species of Special Concern" by the California Department of Fish and Game.

California Government Code Sections 51179-51184: Sections 51179-51182 require that owners of lands designated as Very High fire hazard in a local jurisdiction create and maintain defensible space for 100 feet from each structure or to the property line, whichever is closer. Most EBRPD lands in the Study Area are located in such areas. California Government Code Section 51184 provides an exemption from these requirements for "open space lands that are environmentally sensitive parklands" and lands owned for other similar purposes. Additionally, this latter section exempts from defensible space standards those areas for which a specific fuel management plan is prepared and approved; other means of compliance, such as fire-safe construction and certain management practices within riparian zones are also allowed to substitute for the defensible space requirement.

California Health and Safety Code Section 7050.5: States that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coronet of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's

authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

California Penal Code Section 6522.5: States that every person, not the owner thereof, who willfully injures, disfigures, defaces, or destroys any object or thing of archaeological or historical interest or value, whether situated on private lands or within any public park or place, is guilty of a misdemeanor.

California Public Resources Code (PRC) Sections 4291-4299, 4125-4137, 4581-4592: Describes maintenance activities for owners with building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable materials. Also addresses Timber Harvesting Plans.

California Public Resources Code Section 5097.5: Prohibits excavation or removal of any vertebrate paleontological site or any other archaeological, paleontological, or historical feature situated on public lands, except with the express permission of the public agency having jurisdiction over such lands.

California Register of Historical Resources (PRC Section 5024.1(a)): Defines cultural resources that must be considered when a government agency undertakes a discretionary action subject to CEQA. The California Register of Historical Resources helps government agencies identify, evaluate, and protect California's historical resources and indicates which properties are to be protected from substantial adverse change.

EBRPD Ordinance 38, Sections 805-808: Addresses the disturbance of objects or features of cultural significance on EBRPD lands.

Federal Clean Water Act Section 303: Governs water quality within waterways that have been adversely affected by one or more pollutants.

Federal Clean Water Act Section 402: Authorizes the National Pollutant Discharge Elimination System (NPDES) Nonpoint Source Program, the objective of which is to control and reduce pollutants to water bodies from nonpoint discharges.

Federal Endangered Species Act (50 CFR 17.11 and 50 CFR 17.12): Defines animals (50 CFR 17.11) and plants (50 CFR 17.12) that are candidates for possible future listing as threatened or endangered species.

California Environmental Quality Act (14 CCR Section 15380): Informs governmental decision makers and the public about the potential significant environmental effects of

proposed activities, identifies ways that environmental damage can be avoided or significantly reduced, requires changes in projects through the use of alternatives or mitigation measures when feasible, and discloses to the public the reasons why a project was approved if significant environmental effects are involved. CEQA also includes a definition of rare or endangered species that may protect some species not found on State or Federal endangered species lists.

Porter-Cologne Water Quality Control Act (California Water Code, Division 7): Protects receiving waters in California from activities that could otherwise degrade water quality in these water bodies.

History

Initially introduced into the Bay Area from Australia in 1853, the blue gum eucalyptus tree first served as an ornamental landscaping tree. Large-scale planting occurred in anticipation that it would provide a good timber source; this was a very realistic need during the "hardwood famine" that resulted from rebuilding after the 1908 earthquake. Frank Havens is the man responsible for many of the eucalyptus plantations in the Bay Area. He had hoped to earn his fortune from its timber, but it was soon discovered that despite the wood's rapid growth rate, it was brittle and twisted, unsuitable for building. Eucalyptus trees were often employed by companies such as Judson Dynamite and Powder Company to muffle the sound of explosions and hide the ugly landscape created by blasts. They also served as a windbreak and indicator of property boundaries. Their rapid growth rate and great survival abilities in California's Mediterranean climate has resulted in their abundance along the coast. While many enjoy the smell and shade of the groves, they create a severe fire hazard and are key to fire prevention.

Some Practical uses

- Eucalyptol oil extracted from their leaves is used for medicinal purposes
- Wood chips are processed at co-generation plants to create energy
- Shavings can be placed in horse stalls as bedding
- Firewood
- Seed pods are said to make good flea collars for pets

Program Presented by the
East Bay Regional Park District
Department of Public Safety
and Fire Services.

Special Thanks to Jerry Kent and Tom Klatt for sharing their knowledge on the issue.

For more information visit
http://library.csustan.edu/bsantos/euctoc.htm
or
http://magazine.audubon.org/incite/incite0201.html

East Bay Regional Park District
2950 Peralta Oaks Court
Oakland, CA 94605-0381
(510) 635-PARK
www.ebparks.org

Blue Gum Eucalyptus

Eucalyptus globulus

A Wildfire Threat

East Bay Regional Park District
www.ebparks.org

Problems caused by Eucalyptus Trees

Eucalyptus trees threaten human safety and the health of ecosystems.

Safety Hazards

- The oil in dry leaves slows their decomposition and ignites readily and explosively, creating an easy route for fire spread.
- The bark and leaves of eucalyptus create thick flammable duff in abundance that releases twice as much heat as a grassland fire when ablaze.
- Their height contributes to convenient fire spread and, when ignited, their tops are very difficult and dangerous for firefighters to extinguish.

© John M. Randall/The Nature Conservancy

- Eucalyptus are called "widow makers" because of their limbs tendency to break easily and unexpectedly, causing injury or death to those beneath them.

Biodiversity

- Calcium concentrated in the leaves raises soil pH as leaf litter decays, creating an allelopathic effect that allows eucalyptus to outcompete native plants and animals.
- Eucalyptus flowers are deep and filled with gum that clogs the beaks of the local short-beaked birds, leading to suffocation.
- The trees create bird and butterfly sinks by giving them a false sense of security for nesting. They build their nests, which are easily knocked out by the wind. The Point Reyes Bird Observatory reports that in eucalyptus trees the fallout rate of Anna's hummingbird nests is 50% compared to 10% in more stable native vegetation.

Management

Trees

Cutting–Trees are removed in stages, the smaller ones cleared first to make room for the more complex removal of larger ones. Heavy machinery often aids this process. The Brontosaurus turns the tree into mulch by shredding it from the top down. The Feller Buncher cuts the trees at their base and collects them in piles.

Toppling–Heavy equipment knocks over and uproots the entire tree, bypassing the creation of stumps. This method is effective because it removes the entire root system; however it also creates erosion problems and cannot be used in hard to access areas.

Stumps

Herbicide application–Chemicals are applied around the circumference of the stump where the cambium is located to prevent regrowth.

Smashing–The stumps are revisited to physically monitor and destroy any new sprouts. This method is more time and labor intensive because it requires multiple visits and is not entirely effective.

Light deprivation–A tarp is place on top of the stump to avoid resprouting, also a rather impractical method because of its high cost and low effectiveness.

Slash (The debris created by management activities)

Haul away–Slash is removed for use as firewood.

Burning–If there are no on-site uses, slash can be burned under controlled conditions.

Chipping–Trees less than 24 inches in diameter can be chipped. If left on-site, they act as erosion and weed control. If transported off-site, they can be composted or burned to produce electricity.

The Situation at EBRPD

Many of Havens' former eucalyptus plantations are now property of the East Bay Regional Park District. Some areas contain up to 900 trees per acre and are extremely fire prone compared to the 30 to 50 trees per acre in fire-safe groves. The fire concern is intensified by the local topography. Mt. Diablo and the Carquinez Strait create a wind tunnel that funnels high winds into densely populated areas creating an inevitable path for rapid fire spread if ignition were to occur.

Efforts Taken by EBRPD

In zones of high density the Brontosaurus and Feller Buncher are used to remove trees. The resulting stumps are painted with the herbicide Garlon. The Park District determines which zones to cut based on areas of critical risk established by the Federal Emergency Management Agency in the publication "East Bay Regional Park Vegetation and Management HMGP #919-515-24". This analysis took into account available funds and historical disasters, such as the 1991 Hills Fire.

Measure CC was recently passed by homeowners in the Wildland Urban Interface that will fund fire hazard reduction projects over the next 15 years. The Park District's long term goal is to return selected parks to all natural vegetation.

Feller Buncher

Brontosaurus

Photos courtesy Tom Klatt

Fires in the Oakland - Berkeley Hills

The October 1991 "Tunnel" fire in the Berkeley- Oakland Hills provided the impetus for the development of the Hills Emergency Forum. However, it was not the first major urban-wildland intermix fire in this region. Historically the East Bay has proven prone to wildland fire.

The area's recorded fire history shows 15 major fires since the first fire documented in 1923. When mapped it becomes apparent that the fires often reoccur in the same general areas and show similar environmental conditions.

September 1923 - Berkeley / North of UC Berkeley campus. 584 homes destroyed and 130 acres. Diablo wind. Ignition: smoker.

June 1929 – Oakland/ Lake Temescal. 300 acres grassland. West wind, burned from Lake Temescal toward Skyline Boulevard and Tunnel Road. (Source Berkeley Daily Gazette June 22, 1929). Ignition: unknown.

November 1931 - Leona. 5 homes destroyed and 1800 acres burned. Diablo wind. Ignition: unknown.

November 1933 - Redwood / Joaquin Miller. 1 life, 5 homes and 1000 acres. Diablo wind. Ignition: smoker.

September 1937 - Broadway Terrace. 4 homes, 700 acres. West wind. Ignition: Backyard fire.

September 1940 - Broadway Terrace. 30 acres. West wind. Ignition: unknown.

September 1946 - Buckingham/ Norfolk. 1,000 acres. Diablo wind. Ignition: arson & rekindle.

November 1955 - Montclair. 10 acres. West wind. Ignition: unknown.

October 1960 - Leona. 2 homes, 1200 acres. Diablo wind. Ignition: unknown.

November 1961 - Tilden, Briones, Roberts & Chabot. 4 fires, 400 acres. South-west wind. Ignition: arson.

October 1968 - Oak knoll. 204 acres. West wind. Ignition: unknown.

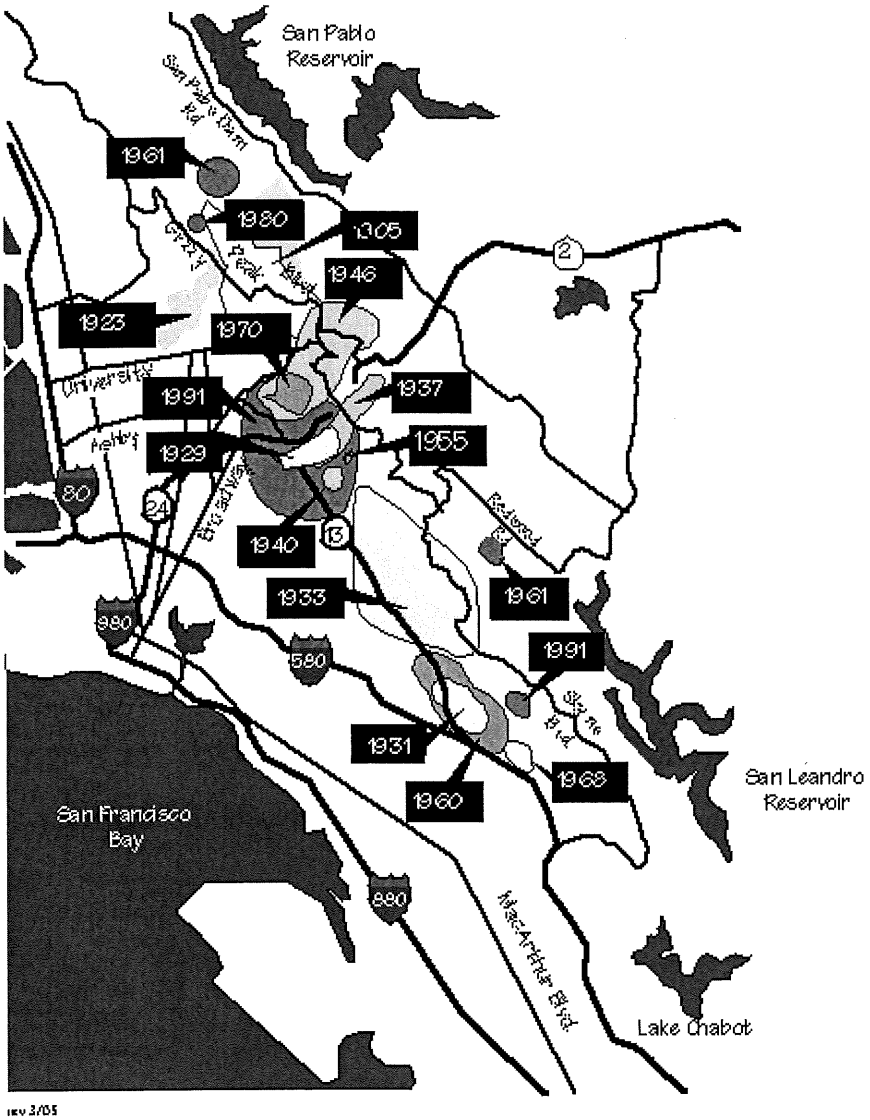
September 1970 - Buckingham/Norfolk. 37 homes destroyed, 21 homes damaged, 204 acres. Diablo wind. Ignition: arson.

December 1980 - Berkeley/ Wildcat. 5 homes, 2 acres. Diablo wind. Ignition: power line.

October 1990 - Leona. 200 acres. West wind. Ignition: vehicle accident.

October 1991 - Buckingham/Norfolk (Tunnel Fire). 25 lives. 3354 homes 456 apartments 1600 acres, estimated $1.5 billion damages. Diablo wind. Ignition: rekindle.

Fire Danger in the East Bay Hills



rev 3/05

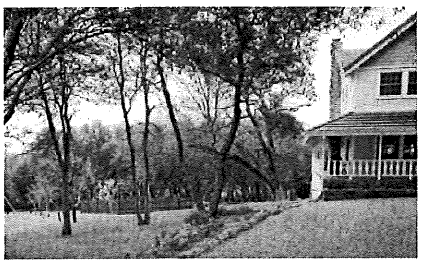
General Guidelines for Creating Defensible Space

State Board of Forestry and Fire Protection (BOF)
California Department of Forestry and Fire Protection

Adopted by BOF on February 8, 2006
Pending Filing with Office of Administrative Law

Contents

A. Purpose of Guidelines



Effective defensible space

Recent changes to Public Resources Code (PRC) 4291 expand the defensible space clearance requirement maintained around buildings and structures from 30 feet to a distance of 100 feet. These guidelines are intended to provide property owners with examples of fuel modification measures that can be used to create an area around buildings or structures to create defensible space. A defensible space perimeter around buildings and structures provide firefighters a working environment that allows them to protect buildings and structures from encroaching wildfires as well as minimizing the chance that a structure fire will escape to the surrounding wildland. These guidelines apply to any person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, and located within a State Responsibility Area.

The vegetation surrounding a building or structure is fuel for a fire. Even the building or structure itself is considered fuel. Research and experience have shown that fuel reduction around a building or structure increases the probability of it surviving a wildfire. Good defensible space allows firefighters to protect and save buildings or structures safely without facing unacceptable risk to their lives. Fuel reduction through vegetation management is the key to creating good defensible space.

Terrain, climate conditions and vegetation interact to affect fire behavior and fuel reduction standards. The diversity of California's geography also influences fire behavior and fuel reduction standards as well. While fuel reduction standards will vary throughout the State, there are some common practices that guide fuel modification treatments to ensure creation of adequate defensible space:

- Properties with greater fire hazards will require more clearing. Clearing requirements will be greater for those lands with steeper terrain, larger and denser fuels, fuels that are highly volatile, and in locations subject to frequent fires.

- Creation of defensible space through vegetation management usually means reducing the amount of fuel around the building or structure, providing separation between fuels, and or reshaping retained fuels by trimming. Defensible space can be created removing dead vegetation, separating fuels, and pruning lower limbs.

- In all cases, fuel reduction means arranging the tree, shrubs and other fuels sources in a way that makes it difficult for fire to transfer from one fuel source to another. It does not mean cutting down all trees and shrubs, or creating a bare ring of earth across the property.

- A homeowner's clearing responsibility is limited to 100 feet away from his or her building or structure or to the property line, which ever is less, and limited to their land. While individual property owners are not required to clear beyond 100 feet, groups of property owners are encouraged to extend clearances beyond the 100 foot requirement in order to create community-wide defensible spaces.

- Homeowners who do fuel reduction activities that remove or dispose of vegetation are required to comply with all federal, state or local environmental protection laws and obtain permits when necessary. Environmental protection laws include, but are not limited to, threatened and endangered species, water quality, air quality, and cultural/archeological resources. For example, trees removed for fuel reduction that are used for commercial purposes require permits from the

California Department of Forestry and Fire Protection. Also, many counties and towns require tree removal permits when cutting trees over a specified size. Contact your local resource or planning agency officials to ensure compliance.

The methods used to manage fuel can be important in the safe creation of defensible space. Care should be taken with the use of equipment when creating your defensible space zone. Internal combustion engines must have an approved spark arresters and metal cutting blades (lawn mowers or weed trimmers) should be used with caution to prevent starting fires during periods of high fire danger. A metal blade striking a rock can create a spark and start a fire, a common cause of fires during summertime.

Vegetation removal can also cause soil disturbance, soil erosion, regrowth of new vegetation, and introduce non-native invasive plants. Always keep soil disturbance to a minimum, especially on steep slopes. Erosion control techniques such as minimizing use of heavy equipment, avoiding stream or gully crossings, using mobile equipment during dry conditions, and covering exposed disturbed soil areas will help reduce soil erosion and plant regrowth.

Areas near water (riparian areas), such as streams or ponds, are a particular concern for protection of water quality. To help protect water quality in riparian areas, avoid removing vegetation associated with water, avoid using heavy equipment, and do not clear vegetation to bare mineral soil.

B. Definitions

Defensible space: The area within the perimeter of a parcel where basic wildfire protection practices are implemented, providing the key point of defense from an approaching wildfire or escaping structure fire. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures.

Aerial fuels: All live and dead vegetation in the forest canopy or above surface fuels, including tree branches, twigs and cones, snags, moss, and high brush. Examples include trees and large bushes.

Building or structure: Any structure used for support or shelter of any use or occupancy.

Flammable and combustible vegetation: Fuel as defined in these guidelines.

Fuel Vegetative material, live or dead, which is combustible during normal summer weather. For the purposes of these guidelines, it does not include fences, decks, woodpiles, trash, etc.

Homeowner: Any person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, and located within a State Responsibility Area.

Ladder Fuels: Fuels that can carry a fire vertically between or within a fuel type.

Reduced Fuel Zone: The area that extends out from 30 to 100 feet away from the building or structure (or to the property line, whichever is nearer to the building or structure).

Surface fuels: Loose surface litter on the soil surface, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches that have not yet decayed enough to lose their identity; also grasses, forbs, low and medium shrubs, tree seedlings, heavier branches and downed logs.

C. Fuel Treatment Guidelines

The following fuel treatment guidelines comply with the requirements of 14 CCR 1299 and PRC 4291. **All persons using these guidelines to comply with CCR 1299 and PRC 4291 shall implement General Guidelines 1., 2., 3., and either 4a or 4b., as described below.**

General Guidelines:

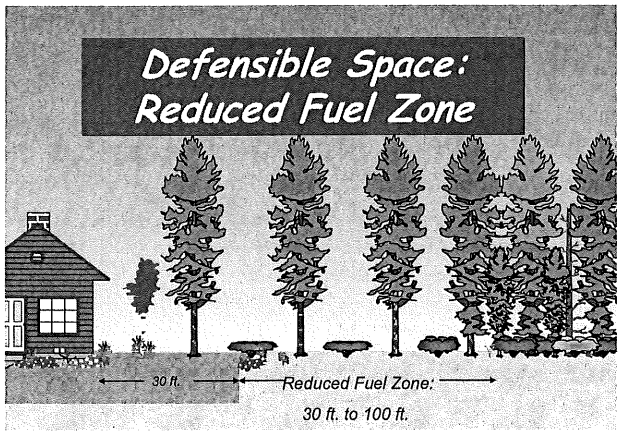
1. Maintain a firebreak by removing and clearing away all flammable vegetation and other combustible growth within 30 feet of each building or structure, with certain exceptions pursuant to PRC §4291(a). Single specimens of trees or other vegetation may be retained provided they are well-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a building or structure.

2. Dead and dying woody surface fuels and aerial fuels within the Reduced Fuel Zone shall be removed. Loose surface litter, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches, shall be permitted to a depth of 3 inches. This guideline is primarily intended to eliminate trees, bushes, shrubs and surface debris that are completely dead or with substantial amounts of dead branches or leaves/needles that would readily burn.

3. Down logs or stumps anywhere within 100 feet from the building or structure, when embedded in the soil, may be retained when isolated from other vegetation. Occasional (approximately one per acre) standing dead trees (snags) that are well-space from other vegetation and which will not fall on buildings or structures or on roadways/driveways may be retained.

4. Within the Reduced Fuel Zone, one of the following fuel treatments (4a. or 4b.) shall be implemented. Properties with greater fire hazards will require greater clearing treatments. Combinations of the methods may be acceptable under §1299(c) as long as the intent of these guidelines is met.

4a. Reduced Fuel Zone: Fuel Separation



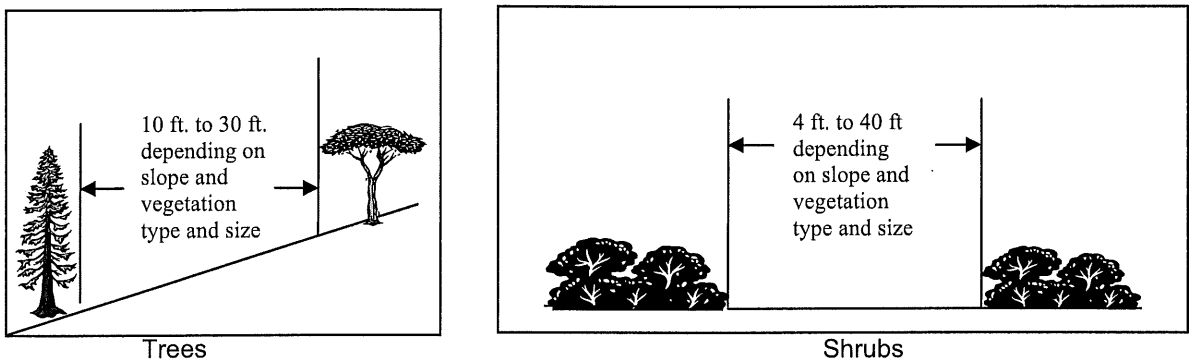
In conjunction with General Guidelines 1., 2., and 3., above, minimum clearance between fuels surrounding each building or structure will range from 4 feet to 40 feet in all directions, both horizontally and vertically.

Clearance distances between vegetation will depend on the slope, vegetation size, vegetation type (brush, grass, trees), and other fuel characteristics (fuel compaction, chemical content etc.). Properties with greater fire hazards will require greater separation between fuels. For example, properties on steep slopes having large sized vegetation will require greater spacing between individual trees and bushes (see Plant Spacing Guidelines and Case Examples below). Groups of vegetation (numerous plants growing together less than 10 feet in total foliage width) may be treated as a single plant. For example, three individual manzanita plants growing together with a total foliage width of eight feet can be "grouped" and considered as one plant and spaced according to the Plant Spacing Guidelines in this document.

Grass generally should not exceed 4 inches in height. However, homeowners may keep grass and other forbs less than 18 inches in height above the ground when these grasses are isolated from other fuels or where necessary to stabilize the soil and prevent erosion.

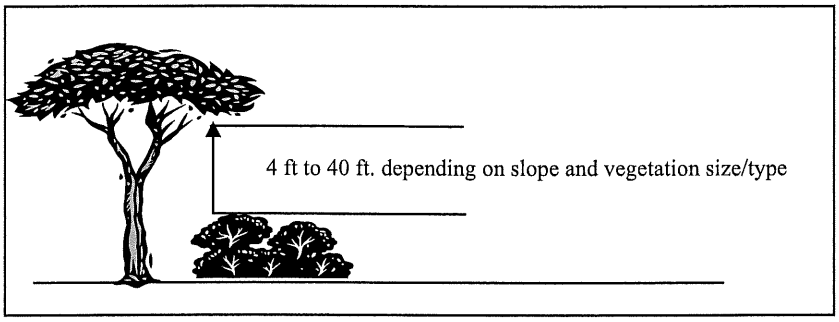
Clearance requirements include:

- Horizontal clearance between aerial fuels, such as the outside edge of the tree crowns or high brush. Horizontal clearance helps stop the spread of fire from one fuel to the next.



Horizontal clearance between aerial fuels

- Vertical clearance between lower limbs of aerial fuels and the nearest surface fuels and grass/weeds. Vertical clearance removes *ladder fuels* and helps prevent a fire from moving from the shorter fuels to the taller fuels.



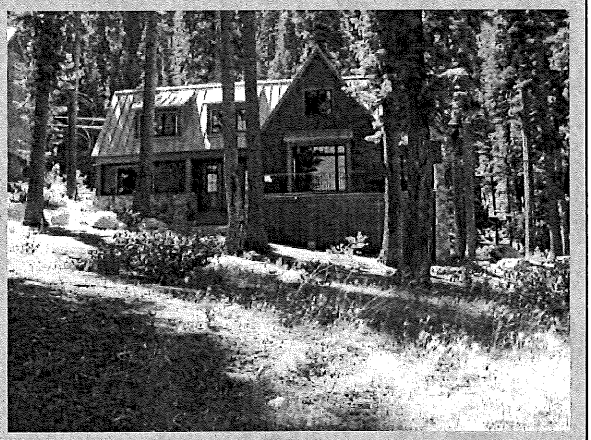
Vertical clearance between aerial fuels

Effective vertical and horizontal fuel separation
Photo Courtesy Plumas Fire Safe Council.

Plant Spacing Guidelines Guidelines are designed to break the continuity of fuels and be used as a "rule of thumb" for achieving compliance with Regulation 14 CCR 1299.		
Trees	**Minimum horizontal space from edge of one tree canopy to the edge of the next**	
	Slope	Spacing
	0% to 20 %	10 feet
	20% to 40%	20 feet
	Greater than 40%	30 feet
Shrubs	**Minimum horizontal space between edges of shrub**	
	Slope	Spacing
	0% to 20 %	2 times the height of the shrub
	20% to 40%	4 times the height of the shrub
	Greater than 40%	6 times the height of the shrub
Vertical Space	**Minimum vertical space between top of shrub and bottom of lower tree branches:** 3 times the height of the shrub	

Adapted from: Gilmer, M. 1994. California Wildfire LandscapingLandscaping

Case Example of Fuel Separation: Sierra Nevada conifer forests

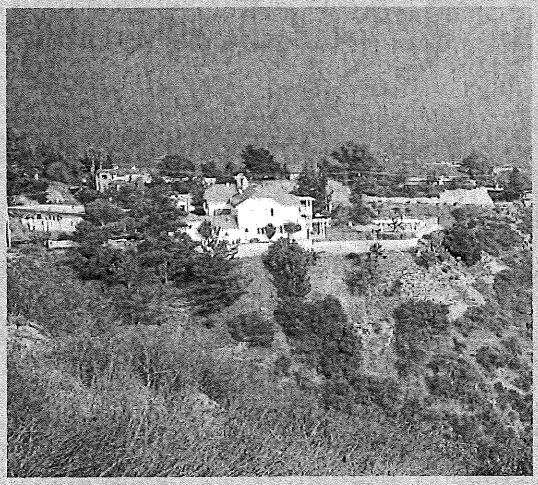


Conifer forests intermixed with rural housing present a hazardous fire situation. Dense vegetation, long fire seasons, and ample ignition sources related to human access and lightning, makes this home vulnerable to wildfires. This home is located on gentle slopes (less than 20%), and is surrounded by large mature tree overstory and intermixed small to medium size brush (three to four feet in height).

Application of the guideline under 4a. would result in horizontal spacing between large tree branches of 10 feet; removal of many of the smaller trees to create vertical space between large trees and smaller trees and horizontal spacing between brush of six to eight feet (calculated by using 2 times the height of brush).

Case Example of Fuel Separation: Southern California chaparral

Mature, dense and continuous chaparral brush fields on steep slopes found in Southern California represents one of the most hazardous fuel situations in the United States. Chaparral grows in an unbroken sea of dense vegetation creating a fuel-rich path which spreads fire rapidly. Chaparral shrubs burn hot and produce tall flames. From the flames come burning embers which can ignite homes and plants. (Gilmer, 1994). All these factors results in a setting where aggressive defensible space clearing requirements are necessary.



Steep slopes (greater than 40%) and tall, old brush (greater than 7 feet tall), need significant modification. These settings require aggressive clearing to create defensible space, and would require maximum spacing. Application of the guidelines would result in 42 feet horizontal spacing (calculated as 6 times the height of the brush) between retained groups of chaparral.

Case Example of Fuel Separation: Oak Woodlands

Oak woodlands, the combination of oak trees and other hardwood tree species with a continuous grass ground cover, are found on more than 10 million acres in California. Wildfire in this setting is very common, with fire behavior dominated by rapid spread through burning grass.

Given a setting of moderate slopes (between 20% and 40%), wide spacing between trees, and continuous dense grass, treatment of the grass is the primary fuel reduction concern. Property owners using these guidelines would cut grass to a maximum 4 inches in height, remove the clippings, and consider creating 20 feet spacing between trees.

4b. Reduced Fuel Zone: Defensible Space with Continuous Tree Canopy

To achieve defensible space while retaining a stand of larger trees with a continuous tree canopy apply the following treatments:

- Generally, remove all surface fuels greater than 4 inches in height. Single specimens of trees or other vegetation may be retained provided they are well-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a building or structure.

- Remove lower limbs of trees ("prune") to at least 6 feet up to 15 feet (or the lower 1/3 branches for small trees). Properties with greater fire hazards, such as steeper slopes or more severe fire danger, will require pruning heights in the upper end of this range.

Defensible Space retaining continuous trees

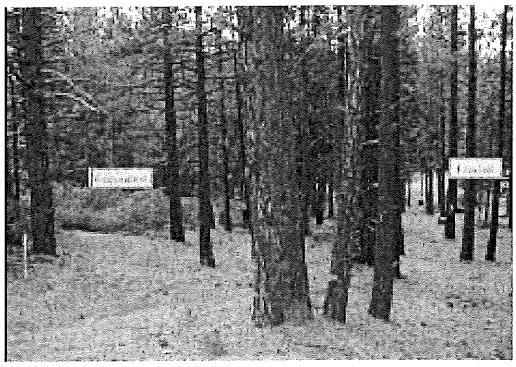
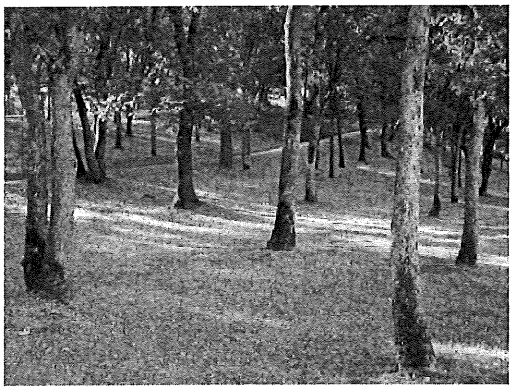


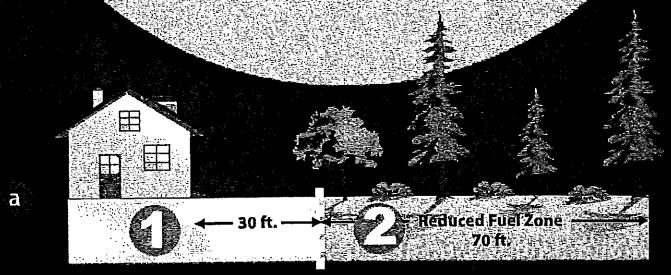
Photo Courtesy Plumas Fire Safe Council.



Defensible space with continuous tree canopy by clearing understory and pruning

Authority cited: Section 4102, 4291, 4125-4128.5, Public Resource Code. Reference: 4291, Public Resource Code; 14 CCR 1299 (d).

100' DEFENSIBLE SPACE
Make Your Home FIRE SAFE



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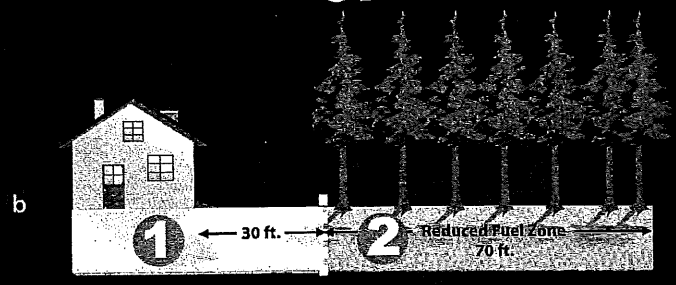

Contact your local CAL FIRE office, fire department, or Fire Safe Council for tips and assistance.

www.fire.ca.gov

Why 100 Feet?

Following these simple steps can dramatically increase the chance of your home surviving a wildfire!

A Defensible Space of 100 feet around your home is required by law.[1] The goal is to protect your home while providing a safe area for firefighters.

1 "Lean, Clean and Green Zone"

– Clearing an area of 30 feet immediately surrounding your home is critical. This area requires the greatest reduction in flammable vegetation.

2 "Reduced Fuel Zone"

– The fuel reduction zone in the remaining 70 feet (or to property line) will depend on the steepness of your property and the vegetation.

Spacing between plants improves the chance of stopping a wildfire before it destroys your home. You have two options in this area:

- **a** Create horizontal and vertical spacing between plants. The amount of space will depend on how steep the slope is and the size of the plants.
- **b** Large trees do not have to be cut and removed as long as all of the plants beneath them are removed. This eliminates a vertical "fire ladder."

When clearing vegetation, use care when operating equipment such as lawnmowers. One small spark may start a fire; a string trimmer is much safer.

Remove all build – up of needles and leaves from your roof and gutters. Keep tree limbs trimmed at least 10 feet from any chimneys and remove dead limbs that hang over your home or garage. The law also requires a screen over your chimney outlet of not more than ½ inch mesh.

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1. These regulations affect most of the grass, brush, and timber-covered private lands in the State. Some fire department jurisdictions may have additional requirements. Some activities may require permits for tree removal. Also, some activities may require special procedures for, 1) threatened and endangered species, 2) avoiding erosion, and 3) protection of water quality. Check with local officials if in doubt. Current regulations allow an insurance company to require additional clearance. The area to be treated does not extend beyond your property. The State Board of Forestry and Fire Protection has approved Guidelines to assist you in complying with the new law. Contact your local CAL FIRE office for more details.

CAL FIRE

July 2007

OUTSIDE

1 Design/Construction

(For new Wildland Urban Interface Construction or Remodels)

- ☐ Use ignition resistant construction (effective January 1, 2008) for roofs/roof assemblies, gutters, vents, desks, exterior walls, exterior windows.
- ☐ Enclose the underside of eaves, balconies and above ground decks with fire resistant materials
- ☐ Show your 100 feet Defensible Space on plot plan
- ☐ Build your home away from ridge tops, canyons and areas between high points of a ridge
- ☐ Consider installing residential sprinklers
- ☐ Make sure that electric service lines, fuse boxes and circuit breaker panels are installed and maintained per code
- ☐ Contact qualified individuals to perform electrical maintenance and repairs

2 Access

- ☐ Make sure that your street name sign is visibly posted at each street intersection
- ☐ Post your house address so it is easily visible from the street, especially at night
- ☐ Address numbers should be at least 3 inches tall and on a contrasting background
- ☐ Identify at least two exit routes from your neighborhood
- ☐ Clear flammable vegetation at least 10 feet from roads and five feet from driveways
- ☐ Cut back overhanging tree branches above access roads
- ☐ Construct roads that allow two-way traffic
- ☐ Make sure dead-end roads, and long drive ways have turn-around areas wide enough for emergency vehicles
- ☐ Design bridges to carry heavy emergency vehicles
- ☐ Post clear road signs to show traffic restrictions such as dead-end roads, and weight and height limitations

3 Roof

- ☐ Install a fire resistant roof. Contact your local fire department for current roofing requirements
- ☐ Remove dead leaves and needles from your roof and gutters
- ☐ Remove dead branches overhanging your roof and keep branches 10 feet from your chimney
- ☐ Cover your chimney outlet and stovepipe with a nonflammable screen of 1/2 inch or smaller mesh

4 Landscape

- ☐ Create a **Defensible Space** of 100 feet around your home. It is required by law
- ☐ Create a **"LEAN, CLEAN and GREEN ZONE"** by removing all flammable vegetation within 30 feet immediately surrounding your home
- ☐ Then create a **"REDUCED FUEL ZONE"** in the remaining 70 feet or to your property line

  You have two options in this area:

  A. Create horizontal and vertical spacing between plants. The amount of space will depend on how steep your property is and the size of your plants.

  B. Large trees do not have to be removed as long as all of the plants beneath them are removed.
- ☐ Remove lower tree branches at least six feet from the ground
- ☐ Landscape with fire resistant plants
- ☐ Maintain all plants with regular water, and keep dead braches, leaves and needles removed.
- ☐ When clearing vegetation, use care when operating equipment such as lawnmowers. One small spark may start a fire; a string trimmer is much safer

5 Yard

- ☐ Stack woodpiles at least 30 feet from all structures and remove vegetation within 10 feet of woodpiles
- ☐ Locate LPG tanks (butane and propane) at least 30 feet from any structure and maintain 10 feet of clearance
- ☐ Remove all stacks of construction materials, pine needles, leaves and other debris from your yard
- ☐ Contact your local fire department to see if debris burning is allowed in your area; if so, obtain a burning permit and follow all local air quality restrictions

6 Emergency Water Supply

- ☐ Maintain an emergency water supply that meets fire department standards through one of the following:
  - a community water/hydrant system
  - a cooperative emergency storage tank with neighbors
  - ~~a minimum storage supply of 2,500 gallons~~ on your property (like a pond or pool)
- ☐ Clearly mark all emergency water sources
- ☐ Create easy firefighter access to your closest emergency water source
- ☐ If your water comes from a well, consider an emergency generator to operate the pump during a power failure

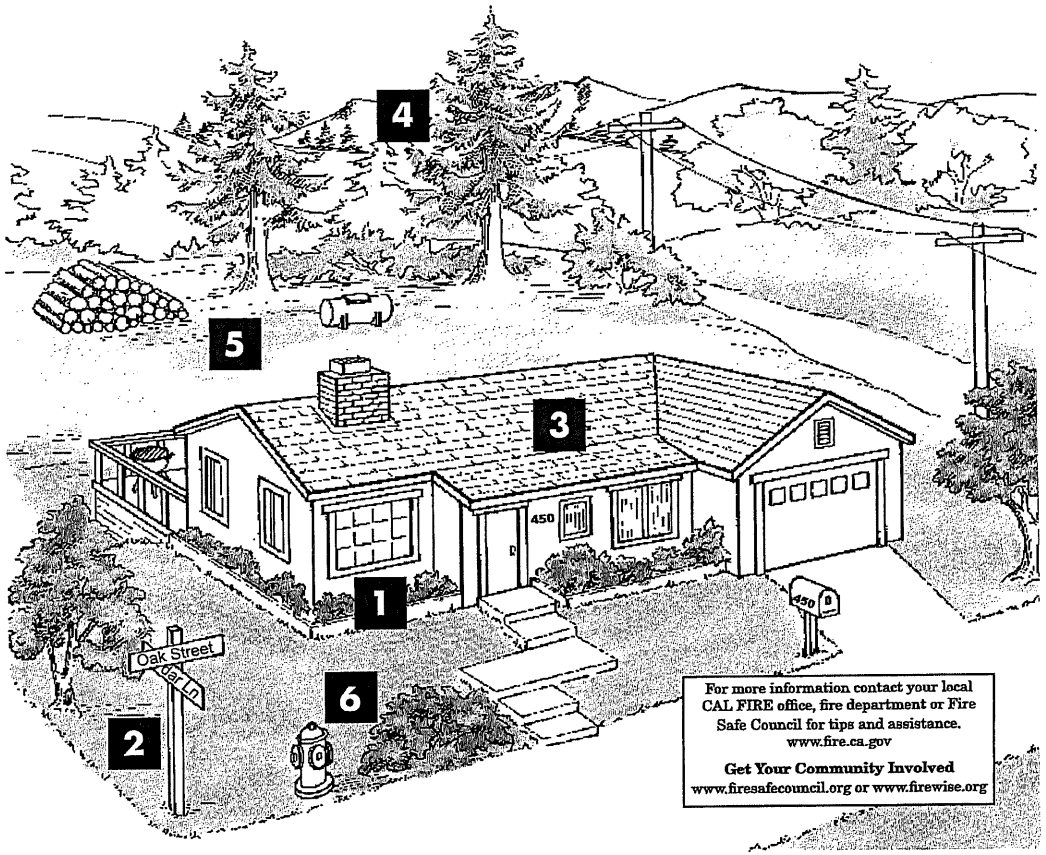
April 2007

California Department of Forestry and Fire Protection

Homeowners Checklist

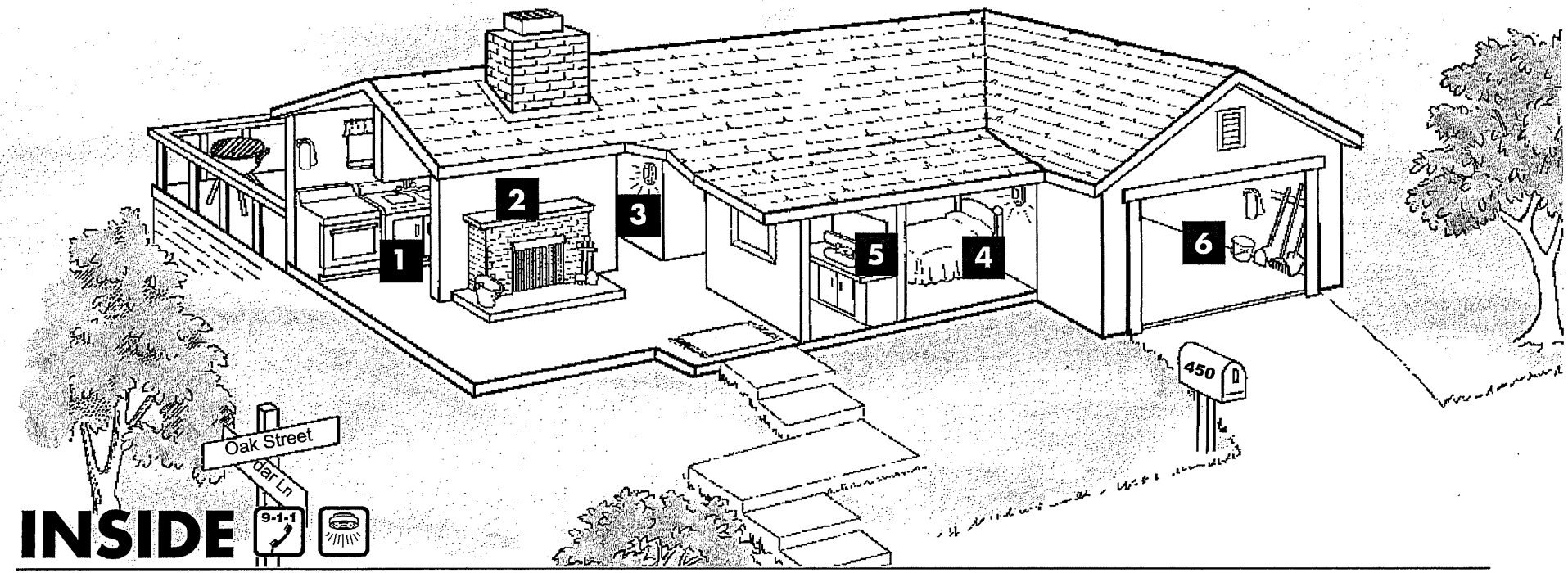
www.fire.ca.gov

How To Make Your Home Fire Safe



For more information contact your local CAL FIRE office, fire department or Fire Safe Council for tips and assistance.
www.fire.ca.gov

Get Your Community Involved
www.firesafecouncil.org or www.firewise.org



INSIDE

1 Kitchen

- ❑ Keep a working fire extinguisher in the kitchen
- ❑ Maintain electric and gas stoves in good operating condition
- ❑ Keep baking soda on hand to extinguish stovetop grease fires
- ❑ Turn the handles of pots and pans away from the front of the stove
- ❑ Install curtains and towel holders away from stoveburners
- ❑ Store matches and lighters out of reach of children
- ❑ Make sure that electrical outlets are designed to handle appliance loads

2 Living Room

- ❑ Install a screen in front of fireplace or wood stove
- ❑ Store the ashes from your fireplace (and barbecue) in a metal container and dispose of only when cold
- ❑ Clean fireplace chimneys and flues at least once a year

3 Hallway

- ❑ Install smoke detectors between living and sleeping areas
- ❑ Test smoke detectors monthly and replace batteries twice a year, when clocks are changed in the spring and fall
- ❑ Replace electrical cords that do not work properly, have loose connections, or are frayed

4 Bedroom

- ❑ If you sleep with the door closed, install a smoke detector in the bedroom
- ❑ Turn off electric blankets and other electrical appliances when not in use
- ❑ Do not smoke in bed
- ❑ If you have security bars on your windows or doors, be sure they have an approved quick release mechanism so you and your family can get out in the event of a fire

5 Bathroom

- ❑ Disconnect appliances such as curling irons and hair dryers when done; store in a safe location until cool
- ❑ Keep items such as towels away from wall and floor heaters

6 Garage

- ❑ Mount a working fire extinguisher in the garage
- ❑ Have tools such as a shovel, hoe, rake and bucket available for use in a wildfire emergency
- ❑ Install a solid door with self-closing hinges between living areas and the garage
- ❑ Dispose of oily rags in Ⓤ Underwriters Laboratories approved metal containers
- ❑ Store all combustibles away from ignition sources such as water heaters
- ❑ Disconnect electrical tools and appliances when not in use
- ❑ Allow hot tools such as glue guns and soldering irons to cool before storing
- ❑ Properly store flammable liquids in approved containers and away from ignition sources such as pilot lights

*Disaster Preparedness

- ❑ Maintain at least a three-day supply of drinking water, and food that does not require refrigeration and generally does not need cooking
- ❑ Maintain a portable radio, flashlight, emergency cooking equipment, lanterns and batteries
- ❑ Outdoor cooking appliances such as barbecues should never be taken indoors for use as heaters
- ❑ Maintain first aid supplies to treat the injured until help arrives
- ❑ Keep a list of valuables to take with you in an emergency; if possible, store these valuables together
- ❑ For safety, securely attach all water heaters and furniture such as cabinets and bookshelves to walls
- ❑ Have a contingency plan to enable family members to contact each other. Establish a family/friend phone tree
- ❑ Designate an emergency meeting place outside your home
- ❑ Practice emergency exit drills in the house (EDITH) regularly
- ❑ Make sure that all family members understand how to STOP, DROP AND ROLL if their clothes should catch fire

FULL TEXT OF MEASURE CC

RESOLUTION NO. 2004-7-157

July 20, 2004

APPROVAL OF RESOLUTION IMPOSING A 15-YEAR PARCEL TAX IN ZONE 1 FOR PUBLIC SAFETY AND ENVIRONMENTAL MAINTENANCE SUBJECT TO VOTER APPROVAL

BE IT RESOLVED by the Board of Directors of the East Bay Regional Park District, Oakland, California, as follows:

Section 1. Findings.

A. The East Bay Regional Park District ("District") includes all of Alameda County and all of Contra Costa County. The District operates 65 regional parks on more than 96,000 acres of parkland and over 1,100 miles of trails.

B. In 1988, more than two-thirds of the local voters approved a $225 million bond initiative, Measure AA, that made it possible for the District to purchase select properties and initiate specific programs that are aimed at enhancing the quality of life for residents throughout both Alameda and Contra Costa Counties. Through a combination of careful planning and attracting matching funds from both the public and private sectors, the District has been able to:

- Acquire 30,000 acres of new parklands, expanding the Regional Park District from 66,000 acres in 1988 to 96,000 acres today.
- Expand the District from 48 to 65 parks, and double the size of a dozen existing parks.
- Add more than 100 miles of new trails for walking, riding, and biking.

C. The District's revenue for operations and maintenance comes entirely from property taxes, assessments, user fees, interest, and rental/lease revenues. The District does not have the authority to impose a sales tax, nor does the District receive sufficient revenue from the State to undertake necessary operations and maintenance.

D. The boundary of the area referred to as "Zone 1" encompasses the cities of Alameda, Oakland, Piedmont, Albany, Richmond, San Pablo, El Sobrante, Kensington, Berkeley, Emeryville and El Cerrito. If approved by the voters of Zone 1, monies will be used to fund projects in the following areas/parks: Alameda Point, Anthony Chabot, Crown Beach, Eastshore State Park, Huckleberry, Kennedy Grove, Lake Chabot, Martin Luther King, Jr. Shoreline, Miller/Knox, Pt. Isabel, Pt. Pinole, Redwood, Roberts, Temescal, Tilden, Tilden Nature Area, Wildcat Canyon, Leona, Brooks Island, Claremont Canyon, Sibley, and Alvarado, and such new parks or properties that may be purchased and/or annexed to parks within this zone.

E. The Board of Directors ("Board") of the District does hereby determine that the cost to provide maintenance and operations of the District's parks and trails located within Zone 1 exceeds the amount of funds and revenues generated from all other sources of income available for such purpose. The Board does further determine that the imposition of a Public Safety and Environmental Maintenance tax on occupants of residential real property within Zone 1, for a 15-year period, as more fully set forth below, is necessary to maintain safe and usable parks and trails for recreational uses of residents within the District, to open new parks and trails for recreational use, to provide resource projects, and to enhance public access and safety.

F. The imposition of a Public Safety and Environmental Maintenance tax in Zone 1 will allow the District to provide essential services to occupants of residential real property within Zone 1 of the District for the next fifteen years, such as critically needed maintenance of the District's infrastructure; resource projects, and public safety and access projects.

G. The Board also recognizes that occupants of both residential and non-residential property use the parks and trails. However, the Board has determined that the use of the parks and trails by occupants of residential properties within Zone 1 greatly outweighs the use of parks and trails by occupants of non-residential properties. The most recent Association of Bay Area Government data indicates that 66.6% of residents of Alameda and Contra Costa Counties work in one of the two counties. It would be unfair to tax such persons twice; accordingly, the tax will be on the occupants of residential properties in Zone 1 only, and not on occupants of non-residential properties.

H. The tax on occupants of multiple family units is approximately 69% of the tax on occupants of single-family units for two reasons: (1) multiple family units in Alameda County and Contra Costa County have lower occupant densities than single-family units (2.86 persons/unit single family; 2.22 persons/unit multiple family); and (2) surveys conducted by the District indicate that actual usage by residents of single-family units is three times higher than similar use by residents of multiple-family units. The District therefore finds it is appropriate to tax multiple family units in Zone 1 at approximately 69% of the tax on a single family unit, reflecting the lower occupant densities of multiple family units and the survey data showing the parks and trails are used more by single family unit occupants than by multiple family occupants.

I. The tax rates established in this resolution are intended to be proportional to and based on estimates of typical use of and benefit from such facilities by occupants of different residential parcels within the Zone. The rates are not tailored to individual use both because such tailoring is not administratively feasible and because the District must make parks and trails available to all occupants of property equally.

J. One or more of the District's parks and/or trails is within ten (10) miles of virtually all occupants of residential properties within Zone 1.

K. Each occupant of property derives value from the availability of parks and trails within Zone 1. The value of such facilities is in their availability to all residents,

and it would be unfair to charge their costs only to those persons who actually use the services. Even if such facilities are not presently used by an occupant, they may be used in the future and, in any event, their availability benefits each occupant. The District's parks and trails in Zone 1 enhance the health, safety, and welfare of all occupants of property in Zone 1 and improve their quality of life both directly and indirectly. The recreational opportunities which the parks and trails make available to occupants of property within Zone 1 are vitally important to the health, safety, and welfare of the occupants.

L. Parcels which are unimproved contain no occupants who may avail themselves of park and trail facilities. Accordingly, the Board has determined that owners of unimproved parcels are not subject to the tax.

M. Parcels which are improved but vacant contain no occupants who may avail themselves of park and trail facilities. Accordingly, the Board has determined that owners of vacant improved parcels may receive a refund of the tax if they can prove that the parcel was vacant for more than six months during the year in which the tax was imposed.

N. Approximately 46% of the residential units in Zone 1 are owner-occupied. Because this percentage is so high, the overall tax impact is not significantly different if the tax is imposed on occupants as opposed to owners, but the owner is required to collect it. However, nothing in this resolution is intended to preclude owners from recovering the tax from the occupant. Whether the occupant is charged depends on the occupancy agreement and the requirements of any local rent control board.

O. It is not feasible for the District to collect the tax from the non-owner occupants on whom it is imposed because the records available to the District do not include the names of non-owner occupants. Therefore, the only practical way to collect a tax imposed on occupants is to collect it from the owners of the occupied properties. If the District contracts with the Counties for collection of the tax on the regular tax bill, as a convenience for property owners who would be required to submit the tax on behalf of property occupants, the Counties would be authorized to use all methods for enforcing collection pursuant to Government Code Section 50077, including placing a lien on the property.

P. The tax imposed by this resolution is an excise tax on the privilege of using and the use of property for residential purposes which generates the need for park and trail facilities. It is not a tax on real property, nor is it any other kind of tax on property or the ownership of property. It is not a transaction or sales tax on the sale of real property. Finally, because the tax proceeds are deposited in a special account and the account is restricted for operations and maintenance of park and trail facilities, the tax is a special tax.

Section 2. Definitions.

As used herein, the following definitions shall apply:

A. "Multi-family residential parcel" shall mean all parcels which are improved with more than one residential unit.

B. "Park and trail facilities" shall mean the parks located within Zone 1, i.e., Alameda Point, Anthony Chabot, Crown Beach, Eastshore State Park, Huckleberry, Kennedy Grove, Lake Chabot, Martin Luther King, Jr. Shoreline, Miller/Knox, Pt. Isabel, Pt. Pinole, Redwood, Roberts, Temescal, Tilden, Tilden Nature Area, Wildcat Canyon, Leona, Brooks Island, Claremont Canyon, Sibley, and Alvarado and such new parks or properties that may be purchased and/or annexed to parks within this zone.

C. "Occupant" shall mean the person or persons who rent, lease, reside in, or otherwise occupy the real property to which park and trail facilities are available.

D. "Operations and maintenance" shall mean all expenses, both direct and indirect, for personnel, services, equipment, and contracts incurred by the District, including salaries, benefits, and overhead, required to operate and maintain the District's parks and trails.

E. "Owner" shall mean the owner or owners of the real property to which park and trail facilities within Zone 1 are available as shown on Alameda County's and Contra Costa County's most recent assessment rolls.

F. "Single-family residential parcel" shall mean all parcels which are improved with only one residential unit.

G. "Year" shall mean the period from July 1 to the following June 30.

Section 3. Tax Imposed.

An annual park and operations maintenance tax ("tax") in the amounts set forth in Section 4 is hereby imposed on every occupant of real property used for residential purposes within Zone 1 in the District. Where there is more than one person who is an occupant, the tax shall not exceed the amounts set forth in Section 4 for the occupants of any parcel or unit.

The tax is an excise tax imposed on the occupant as of July 1 of each year; provided, however, that if any building or structure on any parcel is unoccupied on that date, the tax is imposed on the first occupant occupying the building or structure during the year.

Notwithstanding the tax liability of the occupant, the owner of each parcel giving rise to tax liability under this resolution shall be responsible for the collection and/or remittance of the tax due and payable hereunder. The tax required to be collected by the owner constitutes a debt owed by the owner to the District.

Section 4. Amount of Tax.

The amount of the tax shall be $12.00 per year on the occupant of all single-family residential parcels; $8.28 per year on the occupant of a unit located on a multi-family residential parcel with two or more units; and $12.00 per year on the occupant of all agricultural or ranch parcels (if a residence is located on the parcel).

There shall be a 50% discount available for an occupant who is a senior citizen (age 65 and over) whose annual

income is below the State-defined poverty level.

Where there is more than one person who is an occupant, the tax on each parcel or unit shall not exceed the amounts set forth above.

Section 5. Use of Tax Proceeds.

All proceeds of the tax levied and imposed hereunder shall be accounted for and paid into a special account designated for use of operations and maintenance of park and trail facilities only. Monies in such special account may only be used in the following manner:

A. Park Access, Infrastructure and Safety Improvements	57%
B. Resource-Related Projects	33%
C. Reserve for Unknown Events and Opportunities	10%
TOTAL:	100%

The overall commitment to natural resources shall be no less than 30 percent of the revenue raised by the entire measure.

The specific projects for which the proceeds of the tax have been deemed necessary will be described in the Spending Plan to be considered by the Board of Directors on August 3, 2004. Each listed project will legally require separate review and approval by the Board of Directors. Approval of the tax is not the equivalent of approval of any specific project listed and is not a guarantee that every project listed therein will be undertaken and completed in the time frame provided. However, the Board of Directors hereby commits, to the extent allowed by CEQA and similar environmental review laws, to pursuing completion of the listed projects.

The Board of Directors will hold annual public hearings on project selections and allocations funded by the Measure. Each year there will be a public accounting of the use of funds during the past year, as required by Government Code Section 50075.3, and approval of the use of funds for the next year, including review by the Board Finance Committee. The Board may hold public forums from time-to-time, whenever questions and/or issues arise that merit additional input from the general public, including stakeholder groups and organizations.

Section 6. Determination of Occupancy Uses.

The records of the County Assessor of the County of Alameda and the County of Contra Costa as of January 1 of each year and the records of the District and cities located within Zone 1 shall be used to determine the actual use of each parcel of real property and, for multi-family residential parcels, the number of units, for purposes of determining the tax hereunder.

Section 7. Collection.

The tax levied and imposed by this resolution shall be due on July 1 of each year, but it may be paid in two installments due no later than December 10 and April 10. The tax shall be delinquent if not received on or before the delinquency date set forth in the notice mailed to the owner's address as shown on the most current assessment role of the Alameda County or Contra Costa County Tax Collector and shall be collected from the owner in such a manner and at such times as the Board may provide. The tax due may, at the option of the Board and as a convenience for owners who are responsible for collection, be collected from the owner by Alameda County or Contra Costa County in conjunction with, at the same time, in the same manner, and subject to the same penalties as each county's collection of property taxes, as provided by Government Code Section 50077.

Section 8. Exemptions

The owner of real property that is unimproved is exempt from collection and payment of the tax.

The tax imposed hereby shall not apply to the occupant of any property who, for any reason, is legally exempt therefrom.

Section 9. Refunds–Improved Parcels.

The occupant or owner of an improved parcel which is unoccupied for at least six months of the year shall receive a refund of any tax paid, provided an application in a form satisfactory to the District's General Manager is filed no later than August 1 for the preceding year for which a refund is sought.

Section 10. Refunds–Claim Required.

Any person claiming a refund of the tax for any reason not provided herein shall first file a written claim with the Clerk of the Board of the East Bay Regional Park District on a form specified by the Clerk. Such claim must be filed no later than 100 days after payment of the tax. All claims must be filed by the person who paid the tax or his or her guardian, conservator, or the executor of his or her estate. No claim may be filed on behalf of other taxpayers or a class of taxpayers. Filing of a claim shall be a condition precedent to legal action against the District for a refund of the tax.

Section 11. Untimely or Unpaid Taxes.

A one-time penalty of ten percent (10%) of the tax due is hereby imposed on all taxpayers who fail to pay the tax provided by this resolution when due. The penalty shall become a part of the tax debt herein required to be paid. In addition, if the tax remains unpaid as of July 1 of the following year, an additional penalty of one and one-half percent per month shall accrue on all amounts unpaid. If collected by the Counties, the provisions of the Revenue and Taxation Code shall be applicable.

The amount of any tax or penalty imposed under the provisions of this resolution shall be deemed a debt to the District. Any person owing money under the provisions of this resolution shall be personally liable for such amount in any action brought in the name of the District for the recovery of the amount owed. The District will be entitled to recover from the person against whom such an action is brought its costs incurred in connection with such action including its reasonable attorney's fees.

Section 12. Appropriations Limitation.

In no case shall the revenues generated by the tax levied and imposed by this resolution exceed the limitation established by Article XIIIB of the Constitution of the State of California.

Section 13. Administrative Interpretation.

The Board may, by resolution, adopt guidelines for administrative matters related to the interpretation and enforcement of this resolution. Such guidelines may establish new uses or may modify uses listed in Section 5 provided that the maximum for any use can be no more than $12.00 per year.

Section 14. Savings Clause.

If any provision, sentence, clause, section or part of this resolution is found to be unconstitutional, illegal or invalid, such finding shall affect only such provision, sentence, clause, section or part, and shall not affect or impair any of the remaining parts of the resolution.

Section 15. Authority for Resolution.

This resolution is enacted pursuant to the authority of Public Resources Code Section 5566, Government Code Section 50077 and Article XIIID, Section 3(a) of the California Constitution.

Section 16. Challenge to Tax.

Any action to challenge the tax imposed by this resolution shall be brought pursuant to Government Code Section 50077.5 and Code of Civil Procedure Section 860 et seq.

Section 17. Election Required for Tax to be Effective.

This resolution shall take effect immediately. Notwithstanding the effective date of this resolution, the tax imposed pursuant to this resolution shall not become effective until submitted to a vote of the electorate at the November 2, 2004 election and approved by two-thirds of the voters voting at the election.

Section 18. Effective Date of Tax and 15-Year Sunset.

If this resolution is approved by two-thirds of the voters, the tax shall become effective on July 1, 2005 and shall terminate on June 30, 2020.

Moved by Director Sutter, seconded by Director Siri, and adopted this 20th day of July, 2004, by the following vote:

FOR:	Directors Beverly Lane, Ted Radke, Carol Severin, Doug Siden, Jean Siri, John Sutter, Ayn Wieskamp
AGAINST:	None
ABSENT:	None
ABSTAIN:	None

RESOLUTION NO. 2004-7-171

August 3, 2004

APPROVAL OF SPENDING PLAN
FOR ZONE 1 PARCEL TAX PROCEEDS

WHEREAS, over the past 14 years, the East Bay Regional Park District has increased in acreage by 45.5%, and during this same period funds for maintenance and operation of District facilities have grown slowly in constant dollars, and

WHEREAS, the Park District has taken steps to improve efficiencies in all areas, however, continued efficiencies are unlikely to provide sufficient savings to continue developing and opening land-banked properties, and

WHEREAS, the Zone 1 area contains the oldest parks in the system, some dating back to the 1930s, and the highest population density and park use in the District by the urban communities lining the eastern shoreline of the San Francisco Bay, and

WHEREAS, the parks and trails in Zone 1 are identified as having un-funded projects in excess of $85 million in capital projects and over $5 million per year in needed ongoing operational expenses, and

WHEREAS, the Board of Directors has determined that a parcel tax measure is necessary as a means to seek necessary revenues, and

WHEREAS, District Staff has recommended the proposed Spending Plan, which includes the necessary and optimal uses of the revenue from the proposed tax, and

WHEREAS, this Spending Plan has been reviewed by the Board Legislative Committee, and was recommended by the Committee for favorable consideration by the Full Board at their meeting of July 9, 2004,

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the East Bay Regional Park District hereby approve the Spending Plan for the Zone 1 Parcel Tax, as attached and made a part of this resolution, and

BE IT FURTHER RESOLVED that the percentages of the proceeds committed to projects is as follows:

A. Park Access, Infrastructure and Safety Improvements	57%
B. Resource-Related Projects	33%
C. Reserve for Unknown Events and Opportunities	10%
TOTAL	100%

BE IT FURTHER RESOLVED that approval of the Zone 1 parcel tax by the voters will assure funding for the projects listed in the Spending Plan, but will not constitute approval of any particular project, and

BE IT FURTHER RESOLVED that the Board of Directors will review and approve each project individually, and

BE IT FURTHER RESOLVED that approval of the Spending Plan itself does not guarantee that each and every project listed will be completed or undertaken in the time frame proposed, and within the overall percentage allocations listed above, the Board may make adjustments reflecting opportunities that arise over the life of the tax that are found to be beneficial resource and enhancement, or public access and safety projects within the zone but that are not necessarily identified on the current project list, and

BE IT FURTHER RESOLVED, that the Board of Directors hereby includes as an eligible project support for the operation and maintenance of the Oakland Zoo, not to exceed $100,000/year, which amount may be granted on an annual basis pursuant to terms and conditions of a Local Agency Grant contract to be established between the East Bay Regional Park District and the Oakland Zoo, and

BE IT FURTHER RESOLVED that the Board of Directors will hold annual public hearings on project selections and allocations funded by the Zone 1 Parcel Tax, and that each year there will be a public accounting of the use of funds during the past year and approval of the use of funds for the next year, including review by the Board Finance Committee, and

BE IT FURTHER RESOLVED that the Board of Directors may hold public forums from time-to-time, whenever questions and/or issues arise that merit additional input from the general public, including stakeholder groups and organizations, and

BE IT FURTHER RESOLVED that park facilities in Zone 1, in common with the majority of District facilities, are currently supported by General Fund monies derived from property tax revenues, grants, revenues from fees and charges, and other miscellaneous funding sources, and it is the specific intention of the Board of Directors that new funds raised by the parcel tax by these communities will augment existing funding sources, and

BE IT FURTHER RESOLVED that despite the Park District's commitment to the projects listed in the Spending Plan and the potential funding for them represented by the proposed tax, because approval of the necessary resolutions will not directly or indirectly lead to any identifiable work that could affect the environment, approving the proposed tax does not constitute a "project" as defined by CEQA, and

BE IT FURTHER RESOLVED that since the tax is a special tax, the District must identify the uses to which it will put the tax proceeds, however, approval of a tax for funding of those categories of work is not a commitment to a specific project that will affect the environment, and for those reasons, the action proposed is not a "project" requiring CEQA compliance, and

BE IT FURTHER RESOLVED that the Board of Directors of the East Bay Regional Park District hereby authorize the General Manager and Clerk of the Board to formally request the Alameda County Registrar of Voters and Contra Costa County Elections Office to print this resolution and full project list in the Voter Information Pamphlet, and

BE IT FURTHER RESOLVED that the General Manager is hereby authorized and directed, on behalf of the District and in its name, to execute and deliver such documents and to do such acts as may be deemed necessary or appropriate to accomplish the intentions of this resolution.

Moved by Director Radke, seconded by Director Sutter, and adopted this 3rd day of August, 2004, by the following vote:

FOR:	Directors Jean Siri, John Sutter, Carol Severin, Ted Radke, Ayn Wieskamp
AGAINST:	None
ABSENT:	Directors Doug Siden, Beverly Lane
ABSTAIN:	None

Adopted August 3, 2004

East Bay Regional Park District
Project List for 2004 Measure CC Parcel Tax -- Oakland to Richmond

Project List Subject to Annual Review Updating and Approval by Board of Directors

LINE NO	Park & Trail	Project Description	August 3 Version: Total Capital Project Cost	Ongoing Annual Cost	Years of Operation	Total Project and Operations Cost
		Improvements, Access, Safety				
1	Alameda Point	Operate two miles of Bay Trail at Alameda Point when completed as part of the base conversion process.	0	67,700	7	473,900
2	Alameda Point	Operate Triangle Park if received from the Naval Air Station redevelopment project.		75,000	7	525,000
3	Anthony Chabot Regional Park	Replace 4 Bort Meadows chemical toilets with vault disabled accessible toilets to reduce maintenance costs in improve customer convenience	50,000	0	15	50,000
4	Anthony Chabot Regional Park	Connect Chabot Stable to nearby municipal sewer to eliminate pumpouts	124,320	0	15	124,320
5	Anthony Chabot Regional Park	Replace 10 chem toilets (excludes Bort Meadows toilets in another project) with vault toilets- to reduce pumping cost improve visitor convenience	150,000	0	15	150,000
6	Claremont Canyon Regional Preserve	Complete trail system- with North to South and East to West connections in a route that is compatible with protection of rare species Maintain until stable	28,860	27,800	14	418,060
7	Robert Crown Memorial State Beach	Replace 84 deteriorating wood tables with tables that can withstand the salty environment	100,000	0	15	100,000
8	Robert Crown Memorial State Beach	Repave McKay Street	700,000	0	15	700,000
9	Robert Crown Memorial State Beach	Open and operate Crab Cove Visitor Center for added 3 months each year to provide year-round service.	0	97,200	15	1,458,000
10	Eastshore State Park	Construct the Bay Trail Extension around Golden Gate Fields.	100,000		10	100,000
11	Eastshore State Park	Initial operation of landbank properties, policing, fire response, resource protection, trail patrol, trash pickup, and maintenance. Includes operation following completion of resource restorations and careful debris removal. No constructed facilities except trail circulation. Negotiate joint operating and funding agreement with State Parks to cover operating costs. The project will require the use of $50,000 in annual revenue from concessions, interest and trust fund principal.	0	400,500	15	6,007,500
12	Kennedy Grove Recreation Area	Repair and repave pathways within the recreation area	39,960	0	15	39,960
13	Kennedy Grove Recreation Area	Renovate family and group picnic tables, barbecues, and drinking fountains	62,160	0	15	62,160
14	Martin Luther King Jr. Regional Shoreline	Fence the boundary of the Oakland Sports Field to control cars	13,320	1,000	16	29,320
15	Martin Luther King Jr. Regional Shoreline	Retrofit Boat launch ramp at Doolittle for disabled access	44,400	0		44,400
16	Martin Luther King Jr. Regional Shoreline	Undertake Phase II and III public access improvements and operate the Tidewater use area in concert with the Oakland Strokes Boathouse. Includes parking, staging, picnic, meadow, trail and access components.	2,900,000	233,010	12	5,896,120
17	Martin Luther King Jr. Regional Shoreline	Undertake a study to seek information on the permitting, environmental compliance and design options for construction of the trail around the west shore of San Leandro Bay along Doolittle Drive. Operate if constructed.	200,000	50,000	5	450,000
18	Miller/Knox Regional Shoreline	Implement a pavement management program for all park roads, paved trails, and parking lots	39,960	0	15	39,960
19	Miller/Knox Regional Shoreline	Renovate restrooms at Railroad Museum and install lift for disabled access to main museum floor	150,000	0	15	150,000
20	Miller/Knox Regional Shoreline	Renovate family and group picnic tables (78), barbecues, and drinking fountains	50,000	0	15	50,000
21	Miller/Knox Regional Shoreline	Add four more flush restrooms in main park area to eliminate long lines	191,453	5,000	13	256,453
22	Miller/Knox Regional Shoreline	Remove tracks, fencing and re-grade railroad right of way to provide public access from park to the bay and to Keller Beach. Implement a major renovation of meadow areas- vertical, topdress, seed, and extend irrigation	1,222,000	87,000	11	2,179,000
23	Oakland Zoo	Support operations of the Zoo, a regional facility that operates openspace contiguous to Anthony Chabot Regional Park.	0	100,000	15	1,500,000
24	Point Molate	Bay Trail – Extend and operate the Bay Trail north to Point Molate and Point San Pablo		50,000	10	500,000
25	Point Pinole Regional Shoreline	Bay Trail - Extend and operate the Bay Trail from Manways Steel north one mile to the Zone Boundary along the shoreline. Includes installation of one pedestrian bridge.	600,000	12,650	10	726,500
26	Pt. Isabel Regional Shoreline	Implement preventative maintenance program for shoreline path and both parking lots	39,960	0	15	39,960
27	Pt. Isabel Regional Shoreline	Convert 3 chemical toilets to vault toilets	100,000	0	15	100,000
28	Pt. Pinole Regional Shoreline	Replace old playground structure with new, safer ADA structure	140,000	0	15	140,000
29	Redwood Regional Park	Solve problem of at-surface waterline - Stream Trail between Tres Sendas & the main line vault at Old Fern Hut.	26,640	0	15	26,640
30	Redwood Regional Park	Paint Piedmont Stables	33,300	0	15	33,300
31	Redwood Regional Park	Regrade/re-route old fire roads to eliminate soil erosion and continuing winter damage	100,000	31,600	14	542,400
32	Redwood Regional Park	Renovate Piedmont Stables Residence	50,000	0	15	50,000
33	Roberts Regional Recreation Area	Renovate ballfield-upgrade irrigation and correct drainage	31,080	0	15	31,080
34	Roberts Regional Recreation Area	Renovate family and group picnic tables, barbecues, and drinking fountains	33,300	0	15	33,300
35	Roberts Regional Recreation Area	Repair and overlay pavement on internal paths and service trails	46,886	0	15	46,886
36	Roberts Regional Recreation Area	Implement preventative maintenance program on all paved trails and parking areas	63,936	0	15	63,936
37	Robert Sibley Volcanic Regional Preserve	Open and operate the landbanked former Stone Property. Install interpretive panels, construct a small staging area at Fish Ranch Road and trail links to existing Sibley trails.	250,000	25,000	14	600,000
38	Temescal Recreation Area	Sealcoat All Parking Lots	12,787	0	15	12,787
39	Temescal Recreation Area	Add 2 new picnic sites at the North end to add group picnics from overloaded south end	35,000	0	15	35,000
40	Tilden Regional Park	Install disabled accessible ramp to Pony Ride Restroom and Picnic area	5,550	0	15	5,550
41	Tilden Regional Park	Renovate the Brooks and Buckeye LUP/EIR picnic area rehabilitation plan	40,000	0	15	40,000
42	Tilden Regional Park	Construct Merry-Go-Round weather-tight enclosure.	200,000	0	15	200,000
43	Tilden Regional Park	Install automatic fire sprinkler system to protect historic merry-go-round	66,600	0	15	66,600
44	Tilden Regional Park	Replace 14 chemical toilets with vault toilets	199,800	0	15	199,800
45	Tilden Nature Area	Upgrade electrical service at the Little Farm	55,674	0	15	55,674
46	Tilden Nature Area	Roof two barn buildings.	16,650	0	15	16,650
47	Tilden Nature Area	Retrofit to make Disabled Accessible Exhibits in EEC	30,000	0	15	30,000
48	Tilden Nature Area	Finish exhibits and lighting at the EEC	70,000	0	15	70,000
49	Tilden Nature Area	Sewer for EEC	575,000	0	15	575,000
50	Wildcat Canyon Regional Park	Extend waterline to Staging Area for drinking fountain and fire hydrant	6,660	1,000	10	16,660
51	Wildcat Canyon Regional Park	Install emergency phone at Staging Area	6,660	500	10	11,660

Adopted August 3, 2004

East Bay Regional Park District
Project List for 2004 Measure CC Parcel Tax -- Oakland to Richmond

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52	Wildcat Canyon Regional Park	Gravel 2.5 miles of trail for all season use	100,000	3,500	10	135,000
53	Wildcat Canyon Regional Park	Install 3 flush toilets, install lift station to connect to replaced sewer line	400,000	10,000	10	500,000
54	Wildcat Canyon Regional Park	Clark-Boas Access -- Restore trailhead area, improve access from El Sobrante and Richmond.	100,000		15	100,000
55	Wildcat Canyon to Point Pinole Trail	Bay Trail - New trail segment around West County Wastewater facility connecting Wildcat Creek Trail to San Pablo Creek and Point Pinole to the Richmond Parkway. Approximately 1 mile.	400,000	53,950	9	885,550
56		**Subtotal Improvements, Access, Safety**	**10,001,916**	**1,332,410**		**26,488,086**
57						

Adopted August 3, 2004

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58		**Resources**				
59	Anthony Chabot Vegetation Management	Thin trees /or remove excessive fuels within 250 acres of eucalyptus groves- following EB Hills CEQA	450,000	40,910	15	1,063,650
60	Anthony Chabot and Lake Chabot Regional Parks	Manage vegetation for fuels reduction in coordination with the protection and enhancement of wildlife habitat in fuel break areas to provide defensible space near structures and meet the Hills Emergency Forum 8' flame length standard. Manage exotic plant species and promote fire resistant natives to reduce the risk of wildfires.	200,000	85,000	15	1,475,000
61	Brooks Island Regional Preserve	Enhance Caspian Tern nesting area. Includes placement of public access landing on the island.	200,000	18,200	12	418,400
62	Claremont Canyon Regional Preserve	Implement four-year research project for Alameda Whipsnake habitat enhancement	120,000	0	15	120,000
63	Claremont Canyon and Sibley Volcanic Regional Preserves	Manage vegetation for fuels reduction in coordination with the protection and enhancement of wildlife habitat in fuel break areas to provide defensible space near structures and meet the Hills Emergency Forum 8' flame length standard. Manage exotic plant species and promote fire resistant natives to reduce the risk of wildfires.	200,000	65,000	15	1,175,000
64	East Bay Hills Fire Hazard Reduction Plan EIR	Retain consultant(s) to work with staff and the Hills Emergency Forum to prepare the required environmental documents necessary to comply with the Natural Environmental Protection Act (NEPA) and the California Environmental Quality Act (CEQA) to complete the Fire Hazard Reduction Plan for the East Bay Hills.	650,000	35,000	15	1,175,000
65	Wildcat Canyon/Alvarado &Tilden Regional Parks	Manage vegetation for fuels reduction in coordination with the protection and enhancement of wildlife habitat in fuel break areas to provide defensible space near structures and meet the Hills Emergency Forum 8' flame length standard. Manage exotic plant species and promote fire resistant natives to reduce the risk of wildfires.	400,000	90,000	14	1,660,000
66	Martin Luther King Jr. Regional Shoreline	Damon Slough/San Leandro Bay marsh cleanup, Clapper Rail habitat enhancement, and spartina control.	0	5,000	14	70,000
67	Miller/Knox Regional Shoreline	Remove 16,000 cu/yds. of silt and vegetation to keep the park's lagoon healthy	372,961	0	15	372,961
68	Point Molate	Richmond Shoreline Restoration -- Removal of industrial debris, cleanup and enhancement of shoreline habitat north of Miller Knox Regional Shoreline to Point San Pablo.	900,000	50,000	9	1,350,000
69	Point Pinole Regional Shoreline	Giant Marsh Restoration -- cleanup, monitoring and management of the marsh at the south end of Point Pinole. Provide matching funds for future grant opportunities.	600,000	25,000	7	775,000
70	Point Pinole Regional Shoreline	Enhance wetland areas for black rail habitat (remove iceplant)	25,530	12,600	14	201,930
71	Point Pinole Regional Shoreline	Continue park-wide eucalyptus grove thinning and sprout control program	139,860	30,000	14	559,860
72	Point Pinole Regional Shoreline	Restore 100 acres of grasslands and sensitive plant species habitat	111,000	5,910	14	193,740
73	Redwood Regional Park, Leona Regional Open Space	Manage vegetation for fuels reduction in coordination with the protection and enhancement of wildlife habitat in fuel break areas to provide defensible space near structures and meet the Hills Emergency Forum 8' flame length standard. Manage exotic plant species and promote fire resistant natives to reduce the risk of wildfires.	230,000	60,900	14	1,082,600
74	Richmond Wetlands	Richmond Wetlands -- Habitat enhancement and shoreline restoration of wetlands in the vicinity of Point Pinole and other shoreline areas.	800,000	21,750	8	974,000
75	Robert Sibley Volcanic Regional Preserve	Rehabilitate 2 ponds on the Stone property to re-establish habitat values	46,620		15	46,620
76	Robert Sibley Volcanic Regional Preserve	Remove redgum and freeze damaged eucalyptus along the western boundary South of the Staging Area	55,500	5,660	13	131,680
77	Robert Sibley Volcanic Regional Preserve	Complete removal of non-native eucalyptus suckers, pine seedlings, and broom in the Sibley Triangle	104,895	11,025	14	259,245
78	Tilden Regional Park	Assess and remove hazardous trees, promote native tree regeneration	200,000	0	15	200,000
79	Tilden Nature Area	Remove Debris and Silt Between Dam and Bridge, and Rebuild Silt Dam	132,090	0	15	132,090
80	Wildcat Canyon Regional Park	Watershed sediment study	150,000	28,200	12	488,400
81	Wildcat Canyon Regional Park	Manage vegetation for fuels reduction in coordination with the protection and enhancement of wildlife habitat in fuel break areas to provide defensible space near structures and meet the Hills Emergency Forum 8' flame length standard. Manage exotic plant species and promote fire resistant natives to reduce the risk of wildfires.	382,950	88,545	14	1,622,580
82		**Subtotal Resources**	6,471,406	678,900		15,547,756

Adopted August 3, 2004

East Bay Regional Park District
Project List for 2004 Measure CC Parcel Tax – Oakland to Richmond

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83		Zone Proposed Projects:					
84			Improvements, Access, Safety	10,001,916	1,332,410		26,488,086
85			Resources	6,471,406	678,900		15,547,756
86			Total	16,473,322	2,011,310		42,035,842
87							
88		Totals, Operating and Capital for 15 years		Capital	Annual		
89			Improvements, Access, Safety	10,001,916	16,486,170		
90			Resources	6,471,406	9,076,350		
91			15 Year Totals	16,473,322	25,562,520		
92							
93		Combined Totals, Capital Expenses and Operating Expenses for up to15 years		Total Operating and Captial			
94			Improvements, Access, Safety	26,488,086			
95			Resources	15,547,756			
96			10% contingency	4,696,300			
97			Total for the measure	46,732,142			
98							
99		Percentages by Category, Over 15 Years					
100			Improvements, Access, Safety	57%			
101			Resources	33%			
102			10% contingency	10%			
103				100%			

FUELS MANAGEMENT ITEMS FROM THE BOARD ADOPTED MEASURE CC PROJECT LIST- AUGUST 3, 2004

Park & Trail	Project Description	Total Capital Project Cost	Ongoing Annual Cost	Years of Operation	Total Project and Operations Cost
Resources					
Anthony Chabot Vegetation Management	Thin trees /or remove excessive fuels within 250 acres of eucalyptus groves- following EB Hills CEQA.	450,000	40,910	15	1,063,650
Anthony Chabot and Lake Chabot Regional Parks	Manage vegetation for fuels reduction in coordination with the protection and enhancement of wildlife habitat in fuel break areas to provide defensible space near structures and meet the Hills Emergency Forum 8' flame length standard. Manage exotic plant species and promote fire resistant natives to reduce the risk of wildfires.	200,000	85,000	15	1,475,000
Claremont Canyon Regional Preserve	Implement four-year research project for Alameda Whipsnake habitat enhancement.	120,000	0	15	120,000
Claremont Canyon and Sibley Volcanic Regional Preserves	Manage vegetation for fuels reduction in coordination with the protection and enhancement of wildlife habitat in fuel break areas to provide defensible space near structures and meet the Hills Emergency Forum 8' flame length standard. Manage exotic plant species and promote fire resistant natives to reduce the risk of wildfires.	200,000	65,000	15	1,175,000
East Bay Hills Fire Hazard Reduction Plan EIR	Retain consultant(s) to work with staff and the Hills Emergency Forum to prepare the required environmental documents necessary to comply with the Natural Environmental Protection Act (NEPA) and the California Environmental Quality Act (CEQA) to complete the Fire Hazard Reduction Plan for the East Bay Hills.	650,000	35,000	15	1,175,000
Wildcat Canyon/Alvarado & Tilden Regional Parks	Manage vegetation for fuels reduction in coordination with the protection and enhancement of wildlife habitat in fuel break areas to provide defensible space near structures and meet the Hills Emergency Forum 8' flame length standard. Manage exotic plant species and promote fire resistant natives to reduce the risk of wildfires.	400,000	90,000	14	1,660,000
Redwood Regional Park, Leona Regional Open Space	Manage vegetation for fuels reduction in coordination with the protection and enhancement of wildlife habitat in fuel break areas to provide defensible space near structures and meet the Hills Emergency Forum 8' flame length standard. Manage exotic plant species and promote fire resistant natives to reduce the risk of wildfires.	230,000	60,900	14	1,082,600
Robert Sibley Volcanic Regional Preserve	Remove redgum and freeze damaged eucalyptus along the western boundary South of the Staging Area	55,500	5,860	13	131,680
Robert Sibley Volcanic Regional Preserve	Complete removal of non-native eucalyptus suckers, pine seedlings, and broom in the Sibley Triangle	104,895	11,025	14	259,245
Wildcat Canyon Regional Park	Manage vegetation for fuels reduction in coordination with the protection and enhancement of wildlife habitat in fuel break areas to provide defensible space near structures and meet the Hills Emergency Forum 8' flame length standard. Manage exotic plant species and promote fire resistant natives to reduce the risk of wildfires.	382,950	88,545	14	1,622,580
	Subtotal Measure CC Fuels Management	**2,793,345**	**482,240**		**9,764,755**

East Bay Regional Park District

Background Report: The East Bay Hills Wildfire Problem Statement

(Prepared in 2001 by the Hills Wildfire Working Group)

Introduction

The District's Fire Hazard Reduction EIR/NEPA Working Group developed this consensus Problem Statement, during its meetings in 2001, as a summary of the complex issues and concerns that the consultant teams responding to the Park District's request for proposals for a Vegetation Management Plan and Environmental Document would need to be aware of. Back to top

Background on Wildfire Risks

The East Bay Hills have lost more than 3,542 homes to major wildfires...almost as many as all of the high risk Southern California Counties combined at the turn of this century, three years before the catastrophic fires that occurred in Southern California in 2003. The 1991 Oakland/Berkeley fire ranked first as the state's largest home loss from wildfire, and the 1923 Berkeley fire ranked fourth. Thirty-nine percent (39%) of the residences destroyed in California's' 30 major wildfires, taking more than 50 structures were lost in the East Bay Hills. The LA basin was second with 21% and Santa Barbara County was third with 11%. The $1.7 billion Oakland/Berkeley wildfire was this nation's fifth most costly catastrophe. The 1991 Oakland/Berkeley wildfire disaster was preceded only by hurricanes Andrew, Hugo, the 1993 East Coast floods, and the Northridge earthquake. In terms of direct threat to residences, it is now clear that the East Bay Hills are one of the most severe fire risk areas in the state and nation.

State residential losses changed drastically after the disastrous 2003 Wildfire Siege in Southern California. In a 15-day period in late October, 3,710 homes were destroyed, 750,043 acres were burned, 24 lives were lost, and with a 1.2 billion dollar cost when 14 major fires occurred at the same time. Losses from the State's largest residential wildfires now place San Diego County at 27%, Alameda County at 26%, Los Angeles Area at 14%, and San Bernardino County at 11%.

Equally ominous is the number of homes lost in major wildfires in California during the past thirteen years. For the 80-year period between 1923 and 2003, major fires resulted in the loss of 13,600 homes. For the thirteen-year period between 1990 and 2003, 11,055 homes were destroyed (73% of the homes that were lost in the entire 80 year period). This increasing rate in home losses make it clear that a dramatic change in fire-safe construction for existing and new residences combined with fire-safe clearances should be required and inspected annually in all high-risk wildfire areas throughout the State. It may also mean that the State of California needs a more strategic and powerful fire fighting approach for confronting extreme wind driven wildfires as they approach residential areas.

East Bay communities have made some improvements over the past 7 years in residential and neighborhood safety and fire fighting capability. However, the fire prevention efforts in many of the hill neighborhoods appear to have fallen well short of optimum. Also, in spite of sincere efforts at wildland vegetation management on public lands, fuel loads remain high and the most cost-effective ways for dealing with severe Diablo wind wildfires remains elusive. The reasons why the 1991 fire could not be stopped still exist today in many locations throughout the East Bay Hills.

- Residential developments in the Hills have occurred, over the past 70 years, in areas at risk from major Diablo wind-driven wildfires.
- Major increases in flammable vegetation, over the past 70 years, have significantly increased the wildfire risk. Steep hillsides have been converted from grazed grasslands to brush with hillside and ridge top homes, surrounded with flammable vegetation, often under or adjacent to groves of unmaintained pine or eucalyptus.
- Neighborhoods currently exist with large numbers of homes with wood shingle roofs and excessive levels of flammable vegetation on the lot. Some homes have been placed in locations that are undefendable today, given the wildfire characteristics of unmanaged vegetation on steep hillside slopes.
- Narrow roads, overhead power lines, variable water pressure and volume at Hill fire hydrants all make fire fighting difficult under the best of conditions in the Hills, and impossible under the worst of conditions.
- Unmaintained eucalyptus and pine groves, on both private and public lands, represent a serious crown fire and spotting threat to adjacent residential areas.
- Unmaintained native brush and invasive exotics that cover, without interruption, several canyon areas and slopes above, in, and below many Hill residential neighborhoods.
- Diablo wind fires under the worst conditions of high wind speed, low humidity, and high temperature, move so quickly that positioning fire crews and obtaining air support for rapid containment and control may not be possible given current fuel levels.
- With Redflag, Diablo winds blowing across ridge tops and down steep hillsides, fire fighters, given today's fuels, may not be able to directly control an early morning, wind driven wildfire ... until the late afternoon when our typical weather patterns change in the East Bay Hills and the winds slow.
- Urban fire departments may be called upon to fight a rapidly expanding East Bay Hills Diablo wind fire once every 10, 20 or 40 years, and therefore cannot have the same level of experience, resources, and equipment equivalent to their more traditional structural fire fighting mission.

Back to top

Fire History

Fire records for the East Bay Hills are sketchy, yet newspaper clips and old fire planning studies document an active and dangerous fire history. During the 75-year period between 1923 and 1998, eleven Diablo wind fires alone burned 9,840 acres, destroyed 3,542 homes, and took 26 lives, with over 2 billion dollars in financial loss. During the same period, three large west wind fires burned 1,230 acres of grass, brush,

trees, and 4 homes.

News reports document the major fires that have threatened the East Bay Hills:

1923 Berkeley- A Diablo wind fire that started East of the Main ridge at 12 noon on a Monday in September destroyed 584 homes North of the U.C. Campus. "No conflagration was ever more out of control. None ever demonstrated more vividly its power to defy all defensive resources once it gained headway. It was extinguished only by an act of providence."

1931 Leona- 5 homes were lost and 1,800 acres burned by a Diablo wind fire that started at 7 a.m. on a Monday morning in November. "Splitting of the fire into two huge infernos left the hundreds of fire fighters almost helpless to combat the double conflagration."

1933 Redwood/Joaquin Miller- 1 life and 5 homes were lost with 1,000 acres burned by a Diablo wind fire that started on the ridge at 7 a.m. on a Monday morning in November. "The fire traveled along the tops of the thick groves of trees for great distances, never reaching the ground until after the main blaze had passed."

1937 Broadway Terrace- 4 homes were lost and 1,000 acres burned by a West wind fire that started at 3 p.m. on a hot Saturday afternoon in September. "Lack of water caused by exhaustion of reservoirs in the hills hampered fire fighters. The fire at times crept slowly through the brush and at other times leaped from treetop to treetop."

1946 Buckingham/Norfolk- 1,000 acres were burned by a rekindled ridge top Diablo wind fire at 5 a.m. on a Monday morning in September. "Sheer-walled canyons were quickly raging infernos. Flames raced so fast in the stiff wind they formed a fiery canopy over stands of pine and eucalyptus." In the ten years following this fire, at least 2 other large fires occurred in Claremont Canyon (Claremont above water tank to stonewall) and Panoramic Hill (South of Panoramic to fire road) that did not involve structures because few existed at the time.

1960 Leona- 2 homes were lost and 1200 acres were burned by a Diablo wind fire that started at 11 a.m. on Saturday morning in October. "The 84-degree temperature and low humidity aided the flames which roared with express train speed up steep slopes. Flames roared 50 ft. into the air."

1970 Buckingham/Norfolk- 37 homes lost, 36 damaged, and 204 acres burned in a Diablo wind fire that started near the ridge at 10 a.m. on a Tuesday morning in September. "The wind was swirling in every direction. The heat was so great that some houses were exploding before the fire actually reached them."

1980 Berkeley/Wildcat- 5 ridge top homes were lost in a Diablo wind fire that started at 2 p.m. on a Saturday afternoon in December. "The blaze, fed by thick underbrush and tree (eucalyptus) debris, was so hot and fast that homes literally exploded."

1991 Oakland/Berkeley- The fire was rekindled at 10:45 a.m. below Buckingham/Norfolk roads, on a Sunday morning in October by a ridge top Diablo wind. "The firestorm burned over three square miles...killed 25 people, gutted 2,900 homes and caused $1.68 billion in damage. It was the most destructive wildfire in California history."

1994 Castro Valley- 3 homes were lost in a windy October afternoon near Lake Chabot Road when fireworks ignited a grass fire in a horse pasture below homes that provided no defendable space behind their residences. Back to top

Diablo Wind, the Key Environmental Factor

Under normal conditions, fires that start in the East Bay hills are efficiently controlled by firefighters, with no loss of homes. During most of the year, temperatures are moderate and vegetation is relatively moist and fire-safe. Summers bring overnight and morning fog along the hills until noon, with moist mid-day winds blowing westerly in from the coast. However, there are a few days each year when all of the high fire danger conditions are extreme with low humidity, high temperatures, and hot dry Diablo winds blowing in from the east. These high fire danger conditions are labeled Red Flag days, and usually occur in the September to November fall months.

Diablo Winds turn everything around. They blow from the east, often in the early morning, when we least expect a major fire. They can fan the flames of the smallest spark into a wildfire that can move down from the ridge in 30 minutes, expand to one square mile in one hour, and consume hundreds of residences in one hot, dry, windy, fall day.

We now know that firefighters may not be able to stop all Diablo Wind fires, and that several areas in the East Bay Hills can produce flame fronts that can't be controlled with water from hydrants, fire truck hoses, helicopter buckets, or with retardant drops from air tankers.....until the wind slows in the late afternoon.

Quotes from two key fire-planning documents describe the wind-weather factor:

March 1936- General Fire Plan for the Proposed East Bay Regional Park by Mr. L.E. Gray, Fire Weather Official of the U.S. Weather Bureau. "The East Bay Hills are in a predominantly transitional marine environment on the average, but which are subject, especially during the fall months, to occasional continental influences which transfer, in effect, the interior climate to the coastal belt. Hence, from a fire viewpoint, the zone represents on the average a region of low to very low climatic hazard, with occasional very serious danger, especially in the fall months of September, October, and sometimes November. "The normal fire business in the zone is small. However, during the prevalence of upper air winds of north to east directions, dynamic heating and drying of air descending from the mountains to the north and east creates exceptionally critical conditions in the zone, especially near the toes of leeward slopes. Such winds are occasionally very strong, reaching velocities as high as 80 miles per hour at two to three thousand feet above sea level. All such air movement is associated with and caused by high pressure over the Northern and Central Great Basin region, and materially lower pressure to the south, southwest and west, over and to westward of California." "It may be pointed out that the largest fires affecting California have all occurred with dangerous winds from north to east, and in the transitional coastal zone. Northeast winds from altitudes of 7000 feet or more in the Sierra and Siskiyou mountains are heated 1 degree F, by compression, for every 183 feet of descent. If the air starts over the Sierra at a temperature of 30 and a humidity of 50%, by the time it reaches the Grizzly Peak region the humidity would become as low as 6% to 8%, with a temperature of over 90 degrees."

October 20, 1991-The Oakland/Berkeley Hills Fire, National Wildland/Urban Interface Fire Protection Initiative Report "Weather contributes as much to the life of a wildfire as the fuels do. Temperature, lack of precipitation, and humidity provide the conditions for a fire to start, and the wind nourishes the blaze. Relative humidity and temperature are interrelated. As the temperature rises, relative humidity drops. If the temperature rises by 20 F, the relative humidity will drop by about 50 percent. Relative humidity controls the moisture content of fuels, and therefore their susceptibility to fire. Fuels with 20 percent moisture can catch fire; light fuels with 2 percent moisture can burn like gasoline." "So-called Diablo winds in the East Bay occur in May and October. These winds occur when an inversion layer builds up in the Bay area and forces air moving west from the San Joaquin Valley to speed up as it moves down the west, or lee, side of the hills. When it can go no farther laterally, it moves up and over the ridges and then down. As it flows downward it increases in temperature. The Diablo winds are foehn winds that force the convection currents

down against the natural flow that normally blows up the hills. The phenomenon represents a swirling effect much like a tornado, picking up embers from one place and depositing them in another. Another phenomenon that led to the rapid spread of the 1991 fire was development of a thermal inversion layer. The thermal inversion layer during the Oakland Hills fire was at 3,500 feet. The layer trapped heat from the fire and spread it out, adding to the preheating of vegetation and structures in the area." Back to top

Style of Development Significantly Increased Fire Risks

By the 1930s residential development began to replace grazed grasslands by creeping up the slopes of the hills to take advantage of the spectacular views of the Bay. Narrow and winding road systems were laid out for pre-W.W.II residential developments. During the next 60 years, thousands of new homes were placed on the ridges and steep hillsides, with no real access behind homes for fire crews to quickly attack fires moving through the flammable and unmaintained grass, brush lands, pine, and eucalyptus groves. Wood shingle or shake-roofed houses with wood siding were constructed in great numbers throughout the hills, often surrounded by junipers and native brush under dense tree canopies. Wood roofs, siding, decks, stairs, outbuildings, and fences represent some of the most flammable fuels in the hills. Power lines were hung on wooden poles, often under tall trees. Hill water and fire hydrant systems evolved over a 60-year period with numerous areas of low pressure, low water flows, and limited 2-hour reserves of water for fire fighting. Landscapers and homeowners planted the ever-popular juniper in great quantities. Some homes are literally wrapped with junipers and other flammable ornamental plantings, some covering the wood siding and reaching up to the wooden eves. Back to top

Unmaintained, Aging Plantations Significantly Increase Fire Risks

The East Bay's eucalyptus and pine plantations were established in the early 1900s. Eucalyptus was planted for hardwood production, and Monterey pines were planted to forest the barren hills in preparation for coming real estate developments. Many of the older pines are now showing the effects of time. Eighty-year old pine trees are beginning to fail as they become senescent, with beetle damage and pine pitch canker taking increasing numbers of trees. The Tasmanian blue gum eucalyptus has produced unusually dense and flammable woodlands with up to 400 trees per acre 12 inches or larger in diameter far exceeding the 30 to 50 trees per acre found in maintained fire-safe groves in a few locations in the hills. Large unmaintained groves of blue gum eucalyptus are recognized worldwide as high fire risk trees with their habit of producing large quantities of flammable bark, branches and oily leaves that can provide fuel ladders to the crown, potentially carrying burning embers miles ahead of a fire front. Litter under dense Eucalyptus groves often exceeds 50 tons of combustible material per acre, far above a fire safe standard of 5 tons per acre. Excessive fuel loads on the forest floor and fuel ladders to their high crown mean that these groves would be extremely flammable under any summer or fall high wind condition with control of a moving flame front in the groves almost impossible and with serious ember spotting into adjacent neighborhoods. Back to top

The 1995 Fire Hazard Mitigation Program and Fuel Management Plan

Following the disastrous Oakland/Berkeley fire of 1991, the East Bay Hills Emergency Forum was formed to coordinate emergency planning and to develop a new fire hazard mitigation program and plan for the Hills. The Hills Emergency Forum's members currently include Oakland, Berkeley, East Bay Regional Park District, East Bay Municipal Utility District, Lawrence Berkeley Laboratory, and University of California at Berkeley. The Hills Forum created a Vegetation Management Consortium (VMC) that was commissioned to develop a new fire hazard mitigation program and plan for the hills. A draft of the new VMC Plan was completed in the summer of 1995 and was reviewed and approved by the East Bay Hills Emergency Forum at their October 19, 1995 meeting. After a full review and considerable public debate, the East Bay Regional Park District Board accepted the principles described in the VMC Plan at their

October 15, 1996 meeting.

The new VMC Plan uses up-to-date fire science concepts and recommends a unified approach for public agencies and homeowners to follow in reducing the considerable fire risks present in hill residential areas, and wildlands that threaten "values at risk."

- Summary of Residential Area Hazards and Mitigation Proposals
  Approximately 50% of the planning area is classified as residential for which four different products were developed to address mitigating fire hazards on private property. A geographic information system (GIS) was used to rate residential areas by structural roofing and siding, vegetation fuels, defensible space, wildland threat, and road condition.
  These ratings classified residential areas of similar characteristics in the following manner:
  - 4,747 acres (33%) as having extreme fire hazard potential,
  - 6,158 acres (43%) as having high hazard potential,
  - 3,024 acres (21%) as having moderate hazard potential, and
  - 359 acres (3%) as having low hazard potential.
- Summary of GIS Products and Derivatives
  The Fire Study Area GIS is an interactive computer program that includes a number of factors used in fire hazard assessment for both wildlands and residential areas. The Study Area GIS is composed of layers of digital information displayable in map form with relevant data attributes spatially connected. The GIS data set is available in CD format, making extensive inventory and research data available to public agencies, homeowners, and others interested in mitigating wildfire risks. The GIS was used to produce a technical chart that identifies all of the Vegetation polygons, charting attributes for vegetation type, acres, fuel model, development stage, crowning potential, slope class, flame lengths, rate of spread, heat per area and ignition potential rating.
- Summary of Wildland Hazards and Mitigation Proposals
  The Eastern 50% of the 15 mile long and 3 mile wide planning area is classified as wildlands for which a number of products were prepared to identify wildland fire hazards. The VMC Plan recommend tools for managing vegetation, and proposes strategies for creating defensible zones at the residential/wildland interface to mitigate the risks of wildfires moving from wildland areas into residential communities. Wildland vegetation was modeled for fire conditions set at a 90% worst-case condition under a Diablo Wind. Flame lengths greater than 8' are considered "out of control" and are possible on 10,500 acres of wildland areas within the study area with 8,000 acres having less than 8' flame lengths. The VMC Plan recommends that fuelbreaks should be created at the residential/urban interface and along evacuation routes and maintained to keep flame lengths below 8' in the areas where firefighters are most likely to attempt to protect residences and other "values at risk."

There is ongoing debate about how to achieve the 8' flame standard. Some believe that the full 500' wide and 3,200-acre planning zone must be managed, and some believe that it is possible and preferable to manage a smaller 125' zone that achieves the 8' flame length with fewer environmental impacts and long-term maintenance costs.

Also, the findings of the VMC Plan have not met with full acceptance by all those involved with the report, nor all who have reviewed it. Valuable information is acknowledged to be contained within the Plan and its technical appendix. However, there is concern among some in the environmental community that the VMC Plan was formulated mainly along wildfire control lines, did not use a 100% Diablo Wind fire weather condition in its computer modeling, and inadequately reflected environmental and aesthetic concerns. Given these and other circumstances, some suggest that the Plan's recommendations need reevaluation during this EIR review process to determine their relative usefulness. Back to top

The Role of the East Bay Regional Park District

The District, since its creation in 1934, has been a major property owner in the East Bay Hills, and has long been concerned with the risks of uncontrolled wildfire. Under current State Law, the State Department of Forestry (CDF) is the primary fire fighting agency in the unincorporated wildland, watershed areas of the East Bay Hills, and the Cities of Oakland, Berkeley, El Cerrito, and Kensington Fire District have primary responsibilities within their boundaries. The District has secondary fire fighting responsibilities within its parklands and has its own Fire Department that cooperates and coordinates with both State and Local Departments. Back to top

Park District Resource Management and Fire Mitigation Policies

The Park District has conducted numerous vegetation management programs to reduce wildfire risks, and has created and maintains 20 miles of fuelbreak as a mosaic of grassland, thinned brush, and well spaced trees along the western boundary of its East Bay Hill parks. The original fuelbreak was a joint agency project and was created in 1974 as a 300' wide clearance of freeze damaged eucalyptus trees on Park District, City of Oakland, Water District and UC property. Renewed interest in fire safety and fuelbreak maintenance resurfaced in 1980 following the Berkeley fire that destroyed 5 ridge top homes. At the request of the mayor of El Cerrito and the mayors of several East Bay cities, the District formed a multi-agency Blue Ribbon Fire Safety Committee to prepare an updated fire safety plan for the East Bay Hills. The Blue Ribbon Report recommended that cities take steps to make hill residential areas fire-safe, and also recommended continued maintenance of the original fuelbreak with additions in several locations to provide defensible space for ridge top residences that were not protected by the 1974 fuelbreak. The new fuelbreaks generally involved vegetation other than eucalyptus and are defined as a 125' vegetation management zone below homes along the ridge. Homeowners were responsible for removing flammable vegetation to their property line with the District and other public agency landowners to maintain vegetation on public lands to achieve the 125-foot defensible zone. The 1982 Blue Ribbon Fire Hazard Reduction Report was completed and adopted by all of the participating agencies.

The District's Board of Directors also has adopted a number of policies that guide the District in responding to the risk of wildfire. Two of the most recent and relevant policies are the "Fire Weather Operating Plan for Park Closures" and the "Fire Hazard Mitigation Program and Fuel Management Plan for the East Bay Hills." The District's Master Plan, the Wildlands Manual, and the Integrated Pest Management (IPM) Manual also provide direction for staff in protecting wildlife, special features, important habitat, and the use of IPM strategy (including minimizing and careful use of chemicals) for managing pest species. The District's Board of Directors, in adopted Park Plans and Environmental Impact Reports, has authorized fuelbreaks and wildland fire hazard reduction efforts at Anthony Chabot, Redwood, Huckleberry, Sibley, Claremont Canyon, Tilden, Temescal, and Wildcat Parks. Board-adopted park plans also include a number of specific policies for managing eucalyptus, pine, brush lands, grasslands, and other resources to maintain desired native plant ecosystems, and to meet other park objectives. There is ongoing concern and disagreement within the environmental community about specific aspects of vegetation management expressed in the adopted park LUPD/EIR's which need to be addressed in the proposed new EIR.

Management of "natural" park resources may seem an inappropriate concept. However, vegetation in the East Bay Hills has always been managed. Native plant communities adapted to the use of fire by Ohlones and animal grazing, until native people, fire, and native herds were removed from the land or eliminated in the early 1800s. Introductions of European grasses, logging of redwood forests, and plantings of extensive eucalyptus and pine plantations had significantly impacted future park plant communities by the early 1900s. These impacts, along with large scale tree plantings, invasion of broom, thistle, and densely overgrown brush lands have contributed to making some plant communities less native, more dense and

unnatural, and more flammable.

Fortunately, some East Bay Hill park plant communities have resisted many of the impacts of human introductions and are rebounding to become healthy and relatively fire safe ecosystems that are sustainable into the future. Second growth redwoods, bay-oak woodlands, riparian woodlands, and many native brush land and grassland areas, with a reasonable level of care and attention can form excellent natural environments in hill park wildlands.

The District has formulated vegetation management policies in adopted LUDP/EIR's for the East Bay Hill parks using the following principles:

- Oak/Bay woodlands, riparian, and redwood plant communities are natural, relatively fire safe, and should not generally be managed except that substitutes for naturally occurring process, i.e. cool fires, and light hand crew thinning, may be carefully used to recreate a more open and natural-like plant ecosystem.
- North/East facing slopes should be allowed to progress naturally from grassland to brush land to Oak/Bay woodland.
- Interior park vegetation should not generally be managed except for the purpose of encouraging more native and natural plant communities.
- Grassland areas should be preserved and in some cases re-established to retain this important plant community in East Bay Hill parks. Ridge tops and south/west slopes are appropriate as grasslands, and in most cases will require ongoing grazing, mechanical, or other IPM strategy to control brush invasion.
- Eucalyptus and pine conversion to native species is a long-term goal with economics and public acceptance being the main factors in determining the pace of this transition. Management of eucalyptus and pine plantations to reduce fire risks is necessary and appropriate. Conversion from eucalyptus or pine will not be accomplished easily, with transition to a grassland/brush mix, oak/bay woodland, or other appropriate native, plant community a long-term goal.
- Management of natural park vegetation is currently limited to designated fuelbreaks along the ridge top or residential boundary, and to the management of eucalyptus and pine plantations by thinning, removal, or use of prescribed fire to reduce fuel volume and the threat of crown fire.

Back to top

Property Owner Responsibilities

Property owners who choose to live next to wildland areas or in especially high-risk environments must assume primary responsibility for ensuring that their homes are sufficiently fire hardened to survive the heat and embers that can be expected in a Diablo Wind wildfire. In hill areas of the East Bay, it is prudent to maintain a minimum 100-foot defensible zone around residences with all structures having a class A roof and fire resistant siding. In many areas urban developments have encroached into wildland settings without adequate consideration given to fire risks and fire protection. Property owners who have placed themselves in this situation will need to maintain expanded defendable clearings around their structures and possibly add additional protective measures like automatic or manual foam systems to protect their structures. The spread of wildfire across property boundaries will occur given the steep slopes and vegetation found in most Hill wildland areas. However, the fire risk can be minimized through cooperative fire hazard reduction planning and implementation involving all landowners and fire fighting agencies. Protecting life and property at the residential interface requires coordinated resource management, careful site planning, public education, strategic fuel management, and aggressive fire fighting capabilities. Back to top

The Controversy About Fire Hazard Reduction

It is surprising that hill residents and officials have yet to develop a real consensus about the actions required of them for improved Diablo Wind wildfire safety ...especially after the October '91 firestorm. The multitude of divergent opinions by hill residents, environmental groups, public officials, and the general public will need to be focused before it will be possible to implementing more forceful and effective programs of fire hazard reduction and to achieve funding for required programs.

Also, the controversy among some scientists, environmentalists, and concerned citizens about how to achieve a reasonable level of fire safety in the wildland areas of the hills must be addressed and hopefully resolved. All of the ramifications of that controversy cannot be briefly summarized in this short Problem Statement. Fortunately, complete and chronologically organized records of all communications and position papers that were offered by a wide range of individuals during the development of the VMC Plan and its acceptance by the District. It is believed that these records contain many ideas and views important to understanding the details and depth of this controversy, and they will be made available for review by the EIR consultant.

All of the individuals that have participated in the debate about wildland fire safety and environmental protection have unique knowledge, expertise and opinions about the region's plants, animals, geology, fire behavior, and a wide range of other disciplines. Their views must be considered during the process of sorting out the elements of this very complex problem. The Park District and its selected consultant will obviously need to develop a clear process for enlisting this talent during the preparation of the final Plan and EIR. Back to top

Public Officials and Residents Must Work Together

The magnitude of the East Bay Hills fire hazard problem calls out for a new public consensus about what must be done to be reasonably safe. While public and media interest during each fire is high, real progress in creating and maintaining a fire safe condition in the hills is lagging seriously.

The 1991 Oakland/Berkeley fire aptly demonstrated that blame can't successfully be placed at the feet of a single "culprit," a single property owner, unsafe neighborhoods, unsafe wildlands, or unsuccessfully executed emergency actions. The 1991 wildfire was an unfortunate, but predictable, chain-like combination of all of the above. The chain is still weak and strengthening one or two links will not be sufficient. Solutions must address each of the multiple elements of the problem. To be effective, long term commitments of resources by the 28,000 landowners, and 6 Hills Emergency Forum member agencies who own property and provide fire fighting services will be essential if we are to reduce the significant residential and wildland wildfire risks that exist today in the East Bay Hills. Back to top

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Source URL:
http://www.ebparks.org/stewardship/fireplan/bg_report

CLAREMONT CANYON CONSERVANCY

A COMMUNITY BASED ORGANIZATION FORMED IN 2001
TO SUPPORT LONG TERM STEWARDSHIP OF CLAREMONT CANYON
www.ClaremontCanyon.Org

Q&A FOR OUR MEMBERS AND THE PUBLIC

By the Board of Directors (revised April 28, 2009)

The Claremont Canyon Conservancy is dedicated to the preservation and restoration of Claremont Canyon's natural landscape and to the promotion of fire safety throughout the canyon and in adjacent residential neighborhoods. The Conservancy works closely with public and private property owners and various government agencies to ensure the best possible stewardship of the canyon as a whole. We support educational programs designed to improve fire safety and seek out the most effective measures that private property owners can take to protect their own properties from wildfire. Using a frequently asked question-and-answer format, the Conservancy board offers the following information to residents who live in or near the canyon, and to the public agencies that own property in the canyon.

LIVING SAFELY AND UNDERSTANDING NATURAL CYCLES

Those of us who live in Claremont Canyon and surrounding areas know that this is a spectacular location for a residence, and one of the best areas in the hills to raise a family. We are fortunate to be in this natural setting close to parks and open spaces with all of the urban conveniences nearby.

Natural cycles are a fact of life in the East Bay Hills, so residents must quickly learn that homeowner preparation or lack of preparation can be directly related to the amount and extent of damage that both natural and human aided events can cause. Our weather is usually comfortable and mild with only a few months of rain and winter weather extremes. However, natural cycles of extreme fire-weather occur regularly in the late summer and fall when hot, dry, blustery winds rush in from the east. These winds are called "Diablo Winds", and they can be very dangerous if a fire were to ignite at such a time. We must pay attention to these conditions and be ready to respond appropriately and sometimes quickly because it will be impossible to predict the exact location, source, and timing of an ignition that can transform high winds into a raging wildfire.

Predictions about what might happen in the way of weather extremes, climate change, and wildfire during this century should be included in neighborhood and agency discussions to ensure appropriate preparation for wildfire and appropriate planning for wise management of natural resources. As an example, the events of the past hundred years suggest that in this century; there are likely to be three Diablo wind mega-fires, seven "normal" Diablo wind fires, possibly as many as 150 "normal" west wind fires, hundreds of small fires that are quickly controlled, four El Nino events, four extended freezes, and four drought cycles that will all impact wildland vegetation and residential areas. Fortunately, there are reasonable steps that can be taken to be safe and to protect one's property with good family emergency planning, appropriate home and property preparation, and defensible space landscape maintenance.

WHAT SHOULD HOMEOWNERS IN THE CANYON BE DOING?

Creating and maintaining defensible space is one of the most important ways to protect your home from wildfire. Defensible space will allow an ember resistant house to have a chance to survive on its own, and greatly improving the odds for firefighters who will attempt to defend your home. Defensible space can be a designed landscape or area of

maintained plants surrounding your home with fuel management of 100 feet as required by state law or by city code. The Claremont Canyon Conservancy supports and is in complete concurrence with the recent, excellent state and local guidelines. For further details please refer to the Oakland Wildfire Protection District web page at: http://www.Oakland WPD.org

Preparing your home to resist burning embers is the next most important thing to do. New building codes are creating more fire-safe homes and communities, but all structures are vulnerable to wildfire and many older structures are especially vulnerable. All of Claremont Canyon is a high fire-risk area, and some homes need to be retrofitted as soon as possible. Embers can travel a mile or more and ignite a home surrounded by unlimited green landscape.

Staying behind in a major wildfire is serious business and must not be attempted when the order to evacuate is given or you determine on your own to leave early. Evacuation is essential to save lives, knowing that property will be covered by homeowners insurance that is essential for those who choose to live in our beautiful canyons and hills.

WHAT SHOULD AGENCIES THAT OWN LAND IN THE CANYON BE DOING?

Public agencies should create and maintain ridgetop fuelbreaks in planned locations along the west boundary of regional parks and along Grizzly Peak Boulevard on city or other agency lands. Ridgetop fuelbreaks are a zones of managed vegetation where firefighters could attempt to stop a fire before it raced over the ridge into residential areas. Residential edge fuelbreaks should also be created and maintained to provide a minimum of 100 feet and sometimes up to 200 feet of managed vegetation (including what the homeowner is required to do for defensible space) at the wildland/urban edge where firefighters could safely work to protect homes.

- We urge the East Bay Municipal Utility District to complete its Grizzly Peak Blvd. ridgetop fuelbreak and address the risks created by eucalyptus trees overhanging a powerline between the road and ridgetop.
- We urge the East Bay Regional Park District to complete its fuelbreak (with neighbors doing their portion) along the residential edge of Gwin Canyon, and in a similar fashion for a fuelbreak behind residences along the North side of Claremont Avenue, and in the shrubland east of the eucalyptus grove above the Clark Kerr Campus.
- We urge public agencies to eliminate the potential for eucalyptus and pine on their lands to produce dramatic flame fronts and throw embers that could quickly overcome firefighters and significantly reduce evacuation time for homeowners.
- We support the University's efforts to remove all of the eucalyptus trees on its property in Claremont Canyon.
- We urge the Park District to determine, in its Fire/Resouce Plan and EIR, whether or not the Stonewall eucalyptus grove will aid or hinder firefighters in stopping a wildfire that might come down through the Canyon before it can ignite residential areas along the Canyon bottom.

THE 1991 FIRE WAS THE WORST DISASTER IN OUR HILLS. HOW DID IT START, AND WHAT WAS ITS IMPACT?

Javier Trelles, and Patrick J. Pagni, both distinguished UC Berkeley professors with funding from a FEMA grant, analyzed the role of early "Diablo" winds and burning embers during the first hour of the 1991 rapid fire spread. They also analyzed and modeled the very different spread rates from fire generated winds during the fire's next nine-hours. In their report, they described the Sunday morning fire start and the environmental conditions at the start as follows:

"On October 20, at 6:00 a.m., the normal weather pattern was interrupted as winds in excess on 10/ms arose from N 35 degrees E and the relative humidity dropped below 10%. This strong, dry convective current began to dramatically lower the moisture level of the previously soaked burn area of the Saturday fire. The ambient temperature climbed to 90 degrees. The few embers that remained buried overnight were by 10:45 a.m. spotting to new areas of dry fuel. Between 11:15 and 11:30 a.m., extremely rapid fire spread in windward direction overwhelmed fire crews called in to help. The initial brand material came primarily from Monterey pine, Pinus radiata. About 650 meters from the fire origin, the fire engaged a 35-meter high stand of Eucalyptus globules that quickly became an inferno releasing copious brands. Once structures became involved, the shakes and shingles they liberated further exacerbated the flaming brand problem."

Of the 11,055 people living in the 1,500 acre fire area, 25 were killed, 150 injured, and most residents were left homeless. The average price of the 3,354 single-family dwellings destroyed was $350,000 for a total cost of $1,200,000,000. Four hundred forty-six apartment units were destroyed. In addition, 2,000 automobiles were destroyed. 10,000 people were evacuated from the area, the Red Cross answered 3,000 inquiries from concerned family members, and non-profit groups served 100,000 meals. 4,407 families registered for assistance, 1,221 temporary housing grants were issued, 842 individual family grants were issued, and 3,921 Small Business Administration loan applications were filed. The total estimated cost of the fire was more than 1.5 billion dollars.

WHAT FACTORS MAKE SOME HILL FIRES SO DIFFICULT TO CONTROL?

Wildland/urban interface fires are often complex and fast moving fires that have multiple causes. The Hills Emergency Forum and the Park District have often used the following narrative to describe the East Bay Hills wildfire problem.

" •Residential developments in the Hills have occurred, over the past 70 years, in areas at risk from major Diablo wind-driven wildfires.

•Major increases in flammable vegetation, over the past 70 years, have significantly increased the wildfire risk. Steep hillsides have been converted from grazed grasslands to brush with hillside and ridge top homes, surrounded with flammable vegetation, often under or adjacent to groves of unmaintained pine or eucalyptus.

•Neighborhoods currently exist with large numbers of homes with wood shingle roofs, wood siding and decks, and excessive levels of flammable vegetation on the lot. Some homes have been placed in locations that are indefensible today, given the wildfire characteristics of unmanaged vegetation on steep hillside slopes.

•Narrow roads, overhead power lines, variable water pressure and volume at Hill fire hydrants all make fire fighting difficult under the best of conditions in the Hills, and impossible under the worst of conditions.

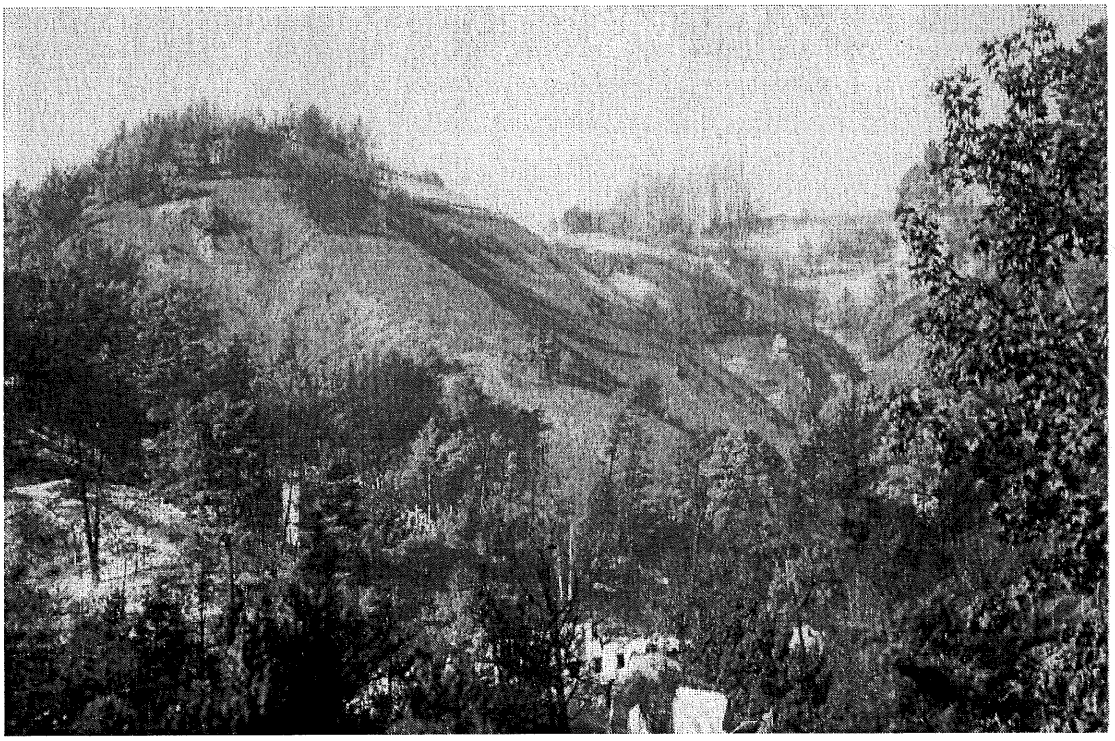
•Un-maintained eucalyptus and pine groves, on both private and public lands, represent a serious crown fire and spotting threat to adjacent residential areas.

•Diablo wind fires under the worst conditions of high wind speed, low humidity, and high temperature, move so quickly that positioning fire crews and obtaining air support for rapid containment and control may not be possible given current fuel levels.

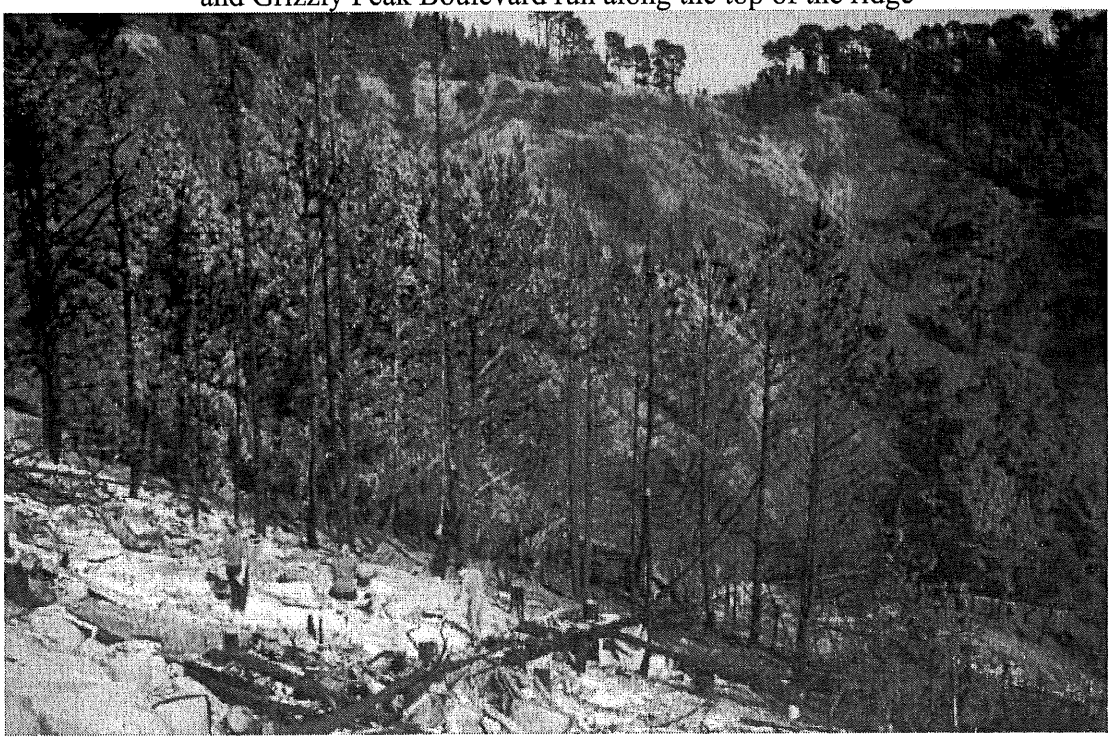
•Urban fire departments may be called upon to fight a rapidly expanding East Bay Hills Diablo wind fire once every 10, 20 or 40 years, and therefore cannot have the same level of experience, resources, and equipment equivalent to their more traditional structural fire fighting mission."

WHAT DID THE AREA LOOK LIKE BEFORE AND AFTER THE 1991 FIRE?
Public memory about what existed in the 1991 fire area fades quickly after dead trees and destroyed homes are demolished and building sites are prepared for new home construction. The first photo shows the area where the fire started, and the next four show examples of what the vegetation and structures looked like the week after the fire.

(see next page)



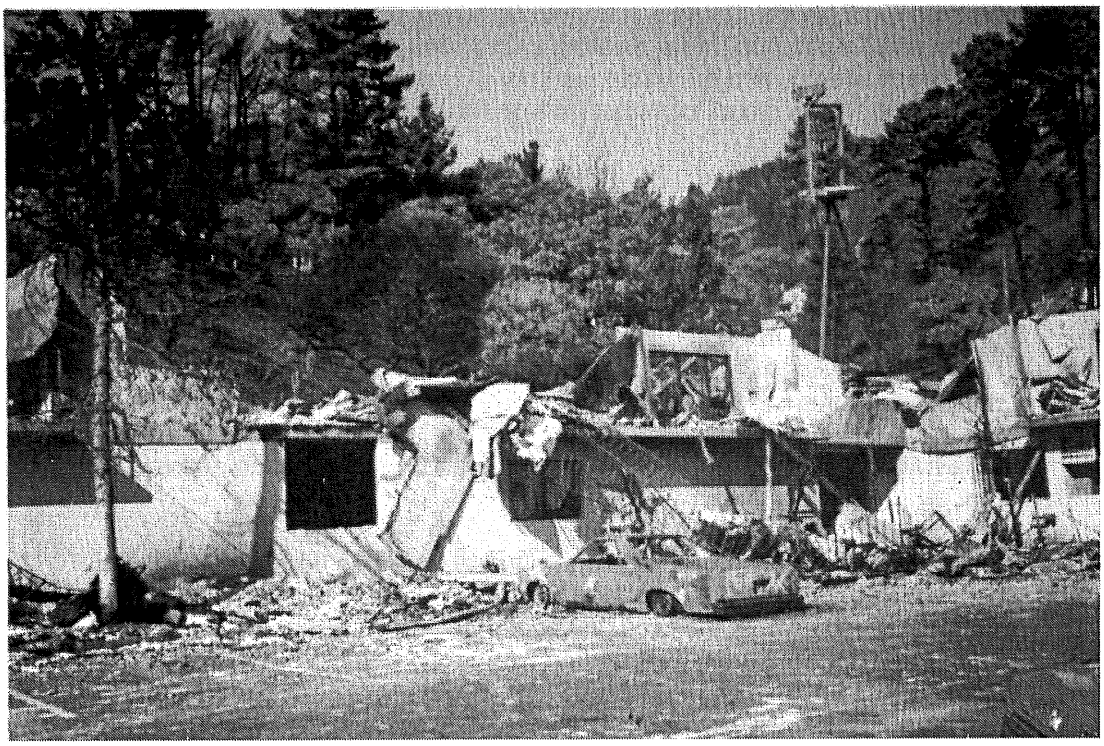
Steep slope above Buckingham Boulevard where the 4-acre Saturday West Wind fire occurred, followed by the 1,500 acre Sunday Diablo Wind fire. Marlborough Terrace and Grizzly Peak Boulevard run along the top of the ridge



View, looking toward the area of fire origin. The left flank of the fire spread laterally behind the homes on Buckingham Boulevard and up toward the area in the foreground.

Buckled steel beams and burned trees, that appear to be seedlings from the 1970 fire, mark the location of a home on Buckingham Boulevard.

View across the upper portion of the Hiller Highlands complex.



These ruins are the remains of the 4-story Parkwoods Apartments. The ruins and surrounding vegetation were soon removed to make way for new construction

ARE EUCALYPTUS TREES BEING SCAPEGOATED BECAUSE OF THE 1991 FIRE?

There has not been an effort to scapegoat this or any other tree species for their role in the 1991 fire. But, we should not forget what burned and the acreages that were involved in the 1,500-acre wildfire that are summarized below. (Source: Comparison of Fuel Load, Structural Characteristics and Infrastructure Before and After the Oakland Hills "Tunnel Fire". USDA forest Service Gen. Tech. Rep. PSW-GTR-158. 1995)

40% of the acres involved 3,355 structures
21% of the acres involved Eucalyptus trees
18% of the acres involved Northern coast scrub
9% of the acres involved Monterey pine
5% of the acres involved Coastal scrub, grassland mosaic
3% of the acres involved Coast live oak & coastal scrub mosaic
3% of the acres involved highways
.5% of the acres involved Grassland
.4% of the acres involved Monterey pine and coastal scrub mosaic

After the acreage attributable to structures, eucalyptus trees occupied the largest percentage of acreage involved in the fire. Vegetation was involved in 57% of the acres throughout the fire area and structures 40% of the acres. This was a classic wildland/urban interface fire that did its damage in one terrible afternoon. Wildfire does not usually distinguish between plants and houses, so both were fuel during the fire.

The FEMA report about the 1991 fire, produced in its immediate aftermath said:

"Eucalyptus and Monterey Pine have been identified as fire hazards and their spread should be controlled... It should be stressed that these target species are not the only vegetation threat existing in this area. Acres of coyote brush, scotch and French broom, and the vast inventory of ornamental shrubs that are now thirty to forty years old all constitute a significant fire hazard."

The more complete and definitive 1991 fire report is titled The East Bay Hills Oakland-Berkeley Fire that was investigated by J. Gordon Outlay. His report was conducted under contract to the United States Fire Administration, Federal Emergency Management Agency. The following quotes are taken from this report.

"Fire has been a part of the history of the Oakland-Berkeley Hills area throughout its history. As with many other marine climates, fuel moistures are such that during most periods, fires do not cause dramatic damage but rather help maintain a balance of fuel types and reduce fuel loads. The native flora and fauna had adapted correspondingly with the natural occurrence of fire in the area.

In modem times, the natural fire pattern in the area has been substantially changed. Fire suppression has reduced the natural cycle of fires, which normally would have occurred in the area. Without prescribed burning or some other type of fuel reduction, the native vegetation has caused an increased fuel load through the area.

Additionally, the introduction of vegetative species that are not native to the area has dramatically impacted fuel loading. This is particularly true of the introduction of eucalyptus. Fuel accumulations in some areas under eucalyptus plantations have been estimated between 30 and 40 tons per acre. Monterey Pine was also introduced into the area and contributed significantly to the fuel loading.

Eucalyptus was first introduced to the East Bay Hills with extensive planting in the early 1900s. The eucalyptus has a tremendous production of both leaf and bark litter, which is not readily consumed or broken down in the normal decomposition process and leads to the presence of high volumes of fuel.

Additionally, eucalyptus is susceptible to freeze damage, as occurred in 1972, when large numbers of eucalyptus were killed due to an extended period of below freezing temperatures, and again in December of 1990. The dead trees and limbs added a significant amount of dry fuel in the area. Also, eucalyptus sprouts back from the stump and this sprouting after freezing or after logging operations have also increased fuels in some areas.

Between 1986 and 1991 most of California experienced drought conditions. This situation was recognized as creating more and more critical fire risk conditions each year. The unprecedented drought was accompanied by an unusual period of freezing weather, in December of 1990, which killed massive quantities of the lighter brush and eucalyptus.

Dead fuel accumulated on the ground in many areas and combined with dropped pine needles and other natural debris to create a highly combustible blanket. Due to the fiscal cutbacks, governmental programs to thin these fuels and create fuel breaks were severely curtailed, so the fuel load was much greater than normal by the second half of 1991. In addition, no measurable rainfall was recorded during the summer and early fall of 1991.

HOW DID THE LARGE GROVES OF EUCALYPTUS AND PINE GET HERE?

Most of the eucalyptus and pine groves in the hills are today's remnants of the tree planting efforts of two Oakland businessmen between 1895 and 1913. They planted the hills with pine, eucalyptus, and cypress for future residential developments and blue gum eucalyptus for hardwood lumber production. Both enterprises would not be repeatable today, and have created increasingly significant environmental and cost impacts, as trees become decadent and unsafe, that today's residents and agencies must increasingly address. We use the common term of "non-native" as the appropriate description for blue gum and red gum eucalyptus trees from Australia, and for describing pines and cypress trees from the coastal regions of central California.

SINCE DENSE EUCALYPTUS AND PINE GROVES ON PUBLIC LANDS IN CLAREMONT CANYON ARE A HAZARD, WHAT ARE THE OPTIONS?

Virtually every professional involved with fire suppression, wildland management or the study of fire science/fire ecology who has studied Claremont Canyon cites the high fuel load that eucalyptus and pine trees contribute to the Canyon and the surrounding area. At this point there is universal agreement among fire professionals that something needs to be done.

A CLEAR CUT IS NOT RECOMMENDED

Opponents to the removal of highly invasive, flammable, non-native species such as eucalyptus and acacia trees are misleading the public on this score by inappropriately using clear cutting as a term that arouses one's worst fears. Clear cutting is a forest logging method in which all trees are removed to form a new stand of timber. Clear cutting has never been done in Claremont Canyon and there are no plans to ever do so.

This is a clear-cut, and it is not recommended by anyone.

CONVERSION TO NATIVE PLANT COMMUNITIES IS RECOMMENDED

The University and Park District approach has been to remove eucalyptus and leave native oaks, bays, and other native vegetation and is correctly called selective logging for forest conversion purposes to improve wildfire safety.

This is the 2006/2007 University, Claremont Canyon Phase 6 eucalyptus to native vegetation conversion project that is recommended. The native understory will be different but equally acceptable in each grant area.

IS NATIVE VEGETATION IN OUR HILLS RELATIVELY FIRE SAFE?

Nineteen percent of the existing vegetation in the East Bay Hills is non-native. Most of today's wildland vegetation (by counting numbers of species represented in that vegetation) is composed of "truly native" species or similar and is relatively fire safe. However, most of the plant communities, in their current locations and size, are relatively young and will continue to change through stages of succession, development and rebirth during the next 200-years. This 19% of East Bay Hill vegetation includes mostly non-native eucalyptus and pine that produce dramatic flames that are less controllable, and can throw embers long distances into residential areas.

There should be no confusion about the type of vegetation that is possible and desirable today when converting from higher-risk plant communities to lower-risk plant communities that were identified in the 1995 Hills Emergency Forum Vegetation Dataset. Our native and similar plant communities have evolved here, and can be re-established to grow well with few maintenance requirements other than invasive weed control.

Acres	Native and Similar Plant Communities (mostly natives by species count)
4,100	Oak/Bay Forest- Mixed
3,847	Grassland (mostly areas that are grazed)
3,309	Dry North Coastal Shrubland
1,418	Redwood Forest
918	Successional Shrubland
855	Oak/Bay Woodland- Mixed
332	Wet North Coastal Shrubland
79	Chaparral- Mixed
71	Riparian Forest
10	Oak Savannah
14,940	Subtotal (81% of Oakland/Berkeley Hill wildland vegetation)

DOES 'SPECIES NEUTRAL' WILDFIRE RISK REDUCTION MAKE SENSE?

The fire risks attributed to individual species are very real, and some species do support more intense fire behavior than others. Our native and similar plants listed above are generally below 40' in height (except for comparatively safe native redwoods), and are less prone to unmanageable fire behavior. Non-native eucalyptus and pine groves can exceed 120' in height and can be prone to dramatic fire behavior. When wind drive wildfire reaches their crown, flames above 150' can be expected with burning embers blowing downwind well beyond one half mile. Non-native eucalyptus and pine are some of the most dense and flammable plant communities in the hills. Un-maintained pine groves are also extremely flammable with deep needle duff on the ground and dense pine seedling growth within and around the grove. We also know that major freezes (1922, 1931, 1949, 1972, and 1991) have killed or damaged eucalyptus trees, and that many fires have killed pine trees. We also anticipate that global warming will result in further extremes in weather that will affect plant species and make the 21st century even more risky.

WHAT IS THE STORY ABOUT LEAVING CHIPS AFTER A UC FOREST CONVERSION PROJECT?

The University has used eucalyptus chips, from logs and branches run through a chipper, as a ground mulch to keep logging trucks off our pubic roads if logs and chips were otherwise hauled to off site locations. A secondary benefit is to retain all or most of the plant biomass on site as a mulch to control weed invasion. Some feel the chips that are spread over a eucalyptus or pine tree conversion area are a fire hazard, but no credible evidence has ever been offered to prove that the chips are anywhere near the fire hazard of the standing dense trees. Fire professionals agree that wood chips, which retain extensive moisture, are unable to carry a fast moving flame front, although they could smolder and require additional "mop-up" work to extinguish. There has never been a fire in one of the UC projects where chips have been used during the past seven years.

The University has chipped during several Claremont Canyon projects including its most recent mid-canyon project in 2006/2007. The remaining native vegetation in mid-canyon between Claremont Canyon Avenue and Grizzly Peak Boulevard is healthy and doing well now that the dominating eucalyptus cover has been removed. The chipped areas vary in depth, but in this part of the canyon chips are now less than eight inches in depth except at a few confined chipping areas that now form open meadows that surrounding vegetation that will soon occupy. The University's Claremont Canyon phased projects (2001-2007) are one of the most successful eucalyptus conversion efforts for restoring native vegetation while reducing fire-hazards in the East Bay Hills.

WHAT ABOUT THE ISSUE OF CLIMATE RISK VERSUS FUEL RISK?

Renowned experts including Dr. Jon Keeley, who spoke at the 2007 annual meeting of the Claremont Canyon Conservancy, have made it clear that wholesale reduction of fuel load in remote open space areas does not mitigate the risk of a Diablo Wind-driven fire.

Dr. Keeley's concluding statement in his paper, *Fire history of the San Francisco East Bay region and implications for landscape patterns*, published after the Claremont Canyon Conservancy meeting, contained the following closing paragraph.

> "Under these severe fire weather conditions, fire spread is extremely rapid and the area has a history of devastating fires. These, however, have all been relatively small fires that involved fuels at the wildland-urban interface. Fuels far removed from this interface zone played very little role in these conflagrations. Thus, it would seem the most cost-effective approach to fire hazard reduction should be focused at the interface zone and here the problem is often as much due to exotic fuels as it is to natural successional processes."

Dr. Keeley has published extensively on the futility of using prescribed fire to reduce the fuel load in expansive Southern California shrublands where much of his research has been focused, and recommends that fuel management occur at the residential interface. Also, East Bay fires are small compared to larger 100,000 acre fires in Southern California and elsewhere, but have destroyed equally large numbers of homes in our "smaller" under 2,000 acre fires.

SHOULD CLIMATE RISKS AND FUEL RISKS BE EVALUATED AND ADDRESSED SEPARATELY?

The conclusions of Dr. Jon Keeley and the conclusions of every recognized fire expert who has reviewed the East Bay Hill fire problem agree that climate risks and fuel risks need to be evaluated and addressed together.

The following statements about climate and fuel risks are taken from sections of the Forest Encyclopedia Network.

> "Climate fire risks are directly related to wind speed that has one of the greatest effects on fire intensity and rates of spread. As wind blows across a fire, it pushes the flame forward and closer to the unburned fuel in front of the fire. This increases convection and radiation, which dry the fuel and increase its combustibility. In general, the higher the wind speed, the further the flame leans and the faster it dries the fuels, increasing both fire intensity and rate of spread. Wind also adds oxygen to the existing fire, further increasing combustion rates in the flaming zone."
>
> "There is a direct relationship between fire line intensity and wind speed. This relationship has also been quantified in fire behavior prediction models. Wind also influences the direction of spread and can carry sparks and firebrands downwind of fires, greatly increasing spread rates. A shift in wind direction could rapidly turn a slower moving flanking fire to a head fire, increasing its rate of spread."
>
> "Fuel risks involve a number of factors with fuel load being one of the most important factors controlling fire intensity. Fire intensity is directly proportional to a fuels heat of combustion, the amount of fuel consumed, and a fires rate of spread. Fuel loads are dependent on vegetation type, life stage (older, over-mature plant communities may have an accumulation of large woody debris), and

time since the last fire."

IT HAS BEEN SUGGESTED THAT THE JUNE 2008 FIRE RAGED IN SPITE OF THE REMOVAL OF PINE TREES.

Bob Sieben, fire prevention coordinator for Hiller Highlands provided the following account of this recent fire, in which he credits prior removal of non-native species for minimizing what might have been a much more damaging fire:

> "This potentially catastrophic fire began at or before 11:15 am on Thursday June 12th on a declared Red Alert day with high winds. There was dense regrowth of Monterey pines in the exact area of this fire following the firestorm of 1991. Prior to the firestorm the pines were so dense that one could not see across this canyon. Survivors of the firestorm reported hearing one pine tree after another exploding in fire: Monterey pines may ignite simply from being heated without an actual flame. All 200 Monterey pines in Hiller Phase V and all 600 on the adjacent property just East of it were removed in 2003 by volunteers and workers paid with funds raised from the entire Hiller Highlands community. There were easily 600 pines in the area occurring in dense, at times impenetrable, groves of as many as a dozen or more in a square yard. Many were already 20 to 30 feet tall. The lower branches died back as the trees reached for light and there was dense pine duff underneath, constituting an extreme fire danger.
>
> I personally walked this area before the June 12th fire and cut the few pines that had reseeded. The fire of June 12th would have been far worse had these pines not been removed. The fire burned into the exact steep area where pine trees had been. The fire in the recovering sparse woodland of live oaks, bays and elderberries was therefore manageable by firefighting forces. In fact, it was successfully contained in this area and prevented from spreading northeastward toward homes on Charing Cross Road, and beyond.
>
> The part of the fire threatening homes on Charing Cross entered a very steep area where coyote brush had not been cleared, trees had not been laddered and planting poles still attached to redwoods contributed to the fire crowning into the trees. A patch of prostrate coyote bush used in landscaping helped leapfrog the fire up the hill. These problems have been reduced or eliminated since the fire. From personal experience I can attest that this is a very steep and risky hill to work on. There was only one ember caused fire at a distance from the fire front. A water drop put out the resulting spot fire promptly by an alert East Bay Regional Parks helicopter flying overhead.
>
> The speedy response of the OFD was laudatory. They could not have contained this fire in the 90 minutes they did if the residents had not eliminated the Monterey pines from this area well before the fire occurred, giving the firefighters the chance to control it. In other words the vegetation management plan was successful in that this fire was manageable and failed to spread by embers beyond the area. The firemen on the scene thanked us profusely for the work we had done in advance, giving them the chance to control this fire. Clear cutting the entire slope or covering it with cement would have prevented a fire, but was never considered. We learned that even on very steep slopes appropriate fire prevention measures can be taken without damage to the slope."

WHAT IS HAPPENING WITH THE THREE FEMA PRE-DISASTER MITIGATION GRANTS?

The three grants are:

PDMC-PJ-09-CA-2005-011 Strawberry Canyon
PDMC-PJ-09-CA-2005-003 Claremont Canyon
PDMC-PJ-09-CA-2006-004 Oakland/Frowning Ridge

These grants were awarded in 2005 and 2006 in a nationwide competition for pre-disaster mitigation funds in which 130 California agencies participated. In 2006, only three grants were awarded in this state and only 19 grants were awarded nationally. This speaks to the recognized wildfire risks faced by agencies and residents in the East Bay Hills, the quality of the three agency projects, and the need for completing all three projects without delay.

The FEMA UC Strawberry Canyon Draft Environmental Assessment comment period closed on January 26, 2008. FEMA then referred a list of technical questions to the University. The University responded to FEMA on April 10, 2008 and again on June 6, 2008. Nothing happened during the next five months until November 17, 2008 when FEMA wrote to the State Office of Emergency Services (who is the intermediary between FEMA and local agencies) asking the University to respond to six additional questions. More than a year has passed with various questions and challenges to the project that have held up authorization to proceed, but as this is written we are hopeful that the remaining issues can soon be resolved.

WHAT IS THE CONSERVANCY DOING TO GET THESE GRANTS BACK ON TRACK AND WORK COMPLETED?

Officers of the Claremont Canyon Conservancy are working with officials at U.C, the City of Oakland, and the Hills Emergency Forum as well as our elected representatives to ensure that the work that these FEMA grants were awarded for is commenced and successfully completed. The CCC is urging FEMA to meet with agency representatives to finalize and issue the Environmental Assessment for Strawberry Canyon. The Conservancy is also urging the issuance of the Draft Environmental Assessments for the Claremont Canyon and Oakland Hills grant projects for public comment.

This information has been compiled and posted on the Conservancy's website as a public service. The Conservancy is convinced that the issue of fire safety in Claremont Canyon is important enough to be worthy of our best efforts as people of good will. Only by working together as a community and using the best available information can we hope to understand and significantly reduce the widely recognized fire hazard that exists in the vicinity of the canyon.

Membership in the Claremont Canyon Conservancy is open to everyone. Please consider joining the organization if you have not already done so.

Statewide Forestry Services
607 Poirier Street
Oakland CA 94609-1226
(510) 654-6310
email — hipkin@pacbell.net

Date: 25 March 2010

To: John R. Swanson, Assistant Fire Chief, EBRPD

Subject: Registered Professional Forester review of EBRPD Wildfire Hazard Reduction & Resource Management Plan and associated Environmental Impact Report.

Background:

The East Bay Regional Park District has a long and deep history serving the communities of the San Francisco East Bay region. Since its inception in the 1930's, the District has managed its lands and vegetation consistent with its mission and goals, and for the benefit of the public. The District increased its fire hazard reduction operations on its lands in response to the destructive 1991 'Tunnel' Wildfire, which greatly increased concerns in the general public and local public safety agencies of the hazardous conditions of fuels and unmanaged vegetation along the wildland urban interface of the East Bay hills.

The District, along with other land management agencies in the area impacted by the fire, including University of California at Berkeley and East Bay Municipal Utilities District, joined together with other concerned citizens, organizations, and agencies to form the Hills Emergency Forum to "*coordinate the collection, assessment and sharing of information on the East Bay Hills fire hazards and, further, to provide a forum for building interagency consensus on the development of fire safety standards and codes, incident response and management protocols, public education programs, multi-jurisdictional training, and fuel reduction strategies*"[1]. In the years after the fire, the District, along with other land management agency Forum member-partners have all developed and carried out numerous hazardous fuels reduction operations in the wildland urban interface lands of the East Bay; under various management plans, assessed by Environmental Impact Report(s), and supported by a variety of funding sources.

More recently, the District initiated a new round of planning for more hazardous fuels reduction operations, based on wildfire hazard studies of its wildland urban interface lands completed in 2006 – 2007. A new comprehensive *Wildfire Hazard Reduction & Resource Management Plan* (Plan) was completed in July 2009. The District released a *Notice of Preparation* of a Draft *Environmental Impact Report* (EIR), a study required under the

[1] Hills Emergency Forum Mission/Goals Statement. http://www.hillsemergencyforum.org/

California Environmental Quality Act (CEQA), to evaluate the environmental impacts of the Plan on 16 April 2008. The *Public Review Draft* EIR is dated July 2009. The extended comment period on the Draft Plan and Draft EIR closed on 30 October 2009.

During the fall of 2009, the District had discussions and several meetings with the California Department of Forestry and Fire Protection (CalFire) regarding the District's ongoing activities to reduce fire hazards. In December 2009 I was retained by the District to consult on the District's Plan and associated EIR with reference to CalFire's comment that the services of a Registered Professional Forester (RPF) may be required on Recommended Treatment Areas (RTA) that meet the criteria for commercial timberland. In the process of my consultation, I reviewed both the District's Plan and EIR, and made site visits to various RTAs. I concur that Public Resources Code (PRC) Sections 4526 and portions of Section 4527 may pertain to the District's fuels reduction operations, and that the services of a RPF may be required.

Please let me know if I can answer any questions, or if I can be of further assistance.

For Statewide Forestry Services, by: 

Christopher Hipkin, RPF 2300, CF 2244