



El Cerrito - Kensington

Wildfire Action Plan

An Appendix to the Contra Costa Countywide
Community Wildfire Protection Plan (CWPP)
Contra Costa County

Prepared by
Diablo Fire Safe Council

In conjunction with the
El Cerrito Fire Department
Kensington Fire Protection District
Stakeholder Committee Members



Table of Contents

Executive Summary
Introduction
Scope and Purpose

Section 1: El Cerrito - Kensington Information

- 1.1 Area Overview
- 1.2 The Planning Process & Stakeholders

Section 2: Wildfire Hazard and Risk in the Wildland Urban Interface

- 2.1 Wildfire Environment
- 2.2 Wildland Urban Interface Risk & Hazard Assessments
 - 2.2.1 Potential for Wildfire to Occur
 - 2.2.2 What to Protect - Values at Risk within the WUI
 - 2.2.3 Protection Capabilities
- 2.3 Strategies for Reducing Risk within the WUI

Section 3: Recommended Action Plan

- 3.1 Selection of Recommended Priorities
- 3.2 Information, Education and Collaborative Planning Priorities
- 3.3 Enhanced Suppression Capability and Emergency Preparedness Priorities

Section 4: Prioritizing Hazardous Fuel Reduction Treatments

- 4.1 Hazardous Fuels Management
- 4.2 Fuel Reduction Treatments – Geographically Based Projects
- 4.3 Fuel Reduction Treatments – Related Priorities
- 4.4 Environmental Review and Permitting

Section 5: Prioritizing Treatment of Structure Ignitability

- 5.1 Structure Ignitability
- 5.2 Key Ignition Resistance Factors
- 5.3 Improving Structure Survivability in the WUI
- 5.4 Retrofitting an Existing Structure for Survivability

Section 6: Sustaining the Plan

- 6.1 Updates of the Wildfire Action Plan
- 6.2 Monitoring, Evaluating and Adapting Strategies
 - 6.2.1 Evaluating Information, Education and Collaborative Planning
 - 6.2.2 Evaluating Suppression Capability and Emergency Preparedness
 - 6.2.3 Evaluating Fuel Reduction
 - 6.2.4 Evaluating Reducing Structure Ignitability

Section 7: Signature Page

Additional Materials from the planning process available at:
www.diablofiresafe.org/El-Cerrito-Kensington-CWPP-AP.html

Executive Summary

The El Cerrito - Kensington Wildfire Action Plan provides an analysis of wildfire hazards and risk in the wildland-urban interface (WUI) of the City of El Cerrito and unincorporated community of Kensington in Contra Costa County, California. The Plan is an appendix to the Contra Costa Countywide Community Wildfire Protection Plan (CWPP) and follows the standards for CWPPs established by the federal Healthy Forest Restoration Act, including:

1. Identifying and prioritizing fuel reduction opportunities across the county
See Section 2: Fire Hazard and Risk in the Wildland Urban Interface and Section 4: Prioritizing Fuel Reduction Vegetation Management Treatments
2. Addressing structural ignitability
See Section 5: Prioritized Treatment of Structural Ignitability
3. Collaborating with stakeholders
See Section 1.2: The Planning Process and Stakeholders

Based on analysis, recommendations have been identified to aid stakeholders in reducing the threat of wildfire. The Plan complements local agreements and existing plans for wildfire protection for a coordinated effort in determining appropriate fire management actions.

The Contra Costa Countywide CWPP is the result of an area-wide planning effort. The El Cerrito Kensington Fire Action Plan looks at similar issues, but allows for a more detailed investigation and customized recommendations for El Cerrito and Kensington communities. The first countywide CWPP in 2009 began with compilation of existing documents, analysis of fire behavior potential (based on fuels, topography and historical weather conditions) and collaboration with homeowners, representatives of special interest groups and agency officials. In 2014 - 2015 an Updated Plan was revised through a similar area-wide planning effort that reviewed the plan, updated relevant sections and refined priority actions.

The goal of the plan is to reduce hazard through increased information and education about wildfires, hazardous fuels reduction, actions to reduce structure ignitability and other recommendations to assist emergency preparedness and fire suppression efforts. Most important, it facilitates a coordinated effort between the various stakeholders.

Recommendations

The El Cerrito Kensington Fire Action Plan recommendations are organized into four categories of mitigation related to:

- Information, Education and Collaborative Planning
- Enhanced Suppression Capability and Emergency Preparedness
- Fuel Reduction Treatments around Homes and on Public Lands
- Improving Structure Survivability

Priority Action overviews are provided for a four of priority activities. These summaries identify implementation steps, lead and partners, timeframes and funding needs. A list is included of geographically-based, priority fuel reduction projects and prevention strategies.

The El Cerrito Kensington Fire Action Plan is a multi-year guiding document that will facilitate the implementation of present and future mitigation efforts. It is important to note that the El Cerrito - Kensington Fire Action Plan is a working document and will need to be updated bi-annually and after major "events" such as wildfire, flood, insect infestation, significant new home development as well as the regional update of the Multi-Hazard Mitigation Plan or General Plan Safety Elements.

Introduction

Wildfire records for the western portion of Contra Costa County around El Cerrito and Kensington document an active, damaging and costly wildfire history. There is little question that the area's unique ecology – particularly the topography, climate and vegetation – provides the setting for catastrophic wildfire to strike. While large-scale wildfires do not occur every year, wildfire incidents driven by extreme wind conditions have repeatedly been difficult to contain. Residential development in the wildland urban interface (WUI) along with the introduction and proliferation of exotic species exacerbates this problem by putting more people, property, critical infrastructure and natural resources in harm's way. In order to reduce the risk of loss of life and property due to wildfire, the Diablo Fire Safe Council and project partners have worked with residents, representatives of federal, regional, state and local agencies, and community organizations to develop this focused Appendix to the Contra Costa County Community Wildfire Protection Plan.

Although the format of this plan is guided by the Healthy Forest Restoration Act's (HFRA) call for such plans, the principles behind it are not new. The National and State Fire Plans, the Federal Emergency Management Agency Disaster Mitigation Act of 2000 and several locally developed documents all mandate community-based planning efforts, coordination, project identification, prioritization, funding review and multi-agency cooperation. Unique benefits of the CWPP include:

- The opportunity to establish a locally appropriate definition and boundary for the WUI.
- The requirement for federal agencies, when planning fuel reduction projects, to give priority to projects that provide for the protection of at-risk communities or watersheds, or that implement recommendations in a CWPP.
- Expedited National Environmental Policy Act (NEPA) procedures for federal agencies implementing fuel reduction projects identified in a CWPP.

Since within Contra Costa County there are few federally owned lands, the stakeholder group discussed what the Contra Costa County CWPP Update should include and why both the County-wide plan and the focused Appendices are of value to us. The ideas can be grouped around several themes including overall planning and participation, fuel reduction projects, increased public awareness and involvement in prevention, balance of wildfire hazard reduction and environmental protection, fire resistant structures. Many common challenges and shared solutions were identified and a few selected for development with action plans.

*Funding provided by a grant from the
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through the California Fire Safe Council*

Scope

The scope of this Fire Action Plan focuses on the City of El Cerrito and the unincorporated community of Kensington in western Contra Costa County. The plan does the following:

1. Describes the fire environment of the area.
2. Identifies values at risk as defined by the stakeholders.
3. Provides maps that show high fire hazard areas, as defined by federal, state and local authorities.
4. Establishes the rationale for prioritization of fuel management projects and treatment methods, as well as outlines principles for selection of projects when funding is available.
5. Describes measures communities and homeowners can take to reduce the ignitability of structures.
6. Identifies sources for Best Management Practices for fuel reduction treatments included in the plan.
7. Identifies federal, state and local resources (fire, wildlife, regulatory agencies, landscape groups, etc.)

Purpose

The purpose of the El Cerrito - Kensington Wildfire Action Plan is to protect human life and reduce loss of property, critical infrastructure and natural resources due to wildfire. The document builds on the Countywide CWPP and is intended to help agencies, communities and local homeowners define, plan and prioritize types of actions that will limit the damage associated with the inevitable wildland fire event. This plan can be used to reduce the risk of conflagration by the following actions:

1. Increased collaborative planning and cooperative actions that will build useful relationships between communities and agencies.
2. Reduction of hazardous fuels in the WUI.
3. Creation and maintenance of defensible space for structures and properties.
4. Reduction of structural ignitability hazards.
5. Planning of evacuation protocols and drills.

The stakeholders in this effort believe that the work outlined above requires a collaborative approach that combines the following elements:

- Development and implementation of strategic, cost effective, sustainable and environmentally sensitive hazardous fuel management plans;
- Educational programs that explain fire risk, promote voluntary citizen involvement and emphasize long-term strategies for creating and maintaining fire resistant communities.
- Application of resources to areas and projects where efficacy is most probable.

To that end, stakeholder participation and regular review are central to maintaining the ideas and priorities of the Fire Action Plan in the future. The dynamic nature of the plan will reflect changes in practices, technology and information available to prevent and minimize loss from wildfire.

El Cerrito - Kensington Information

1.1 Area Overview

The City of El Cerrito is located on the eastern shore of the San Francisco Bay in the western portion of Contra Costa County. Immediately to the southeast is the unincorporated community of Kensington located in the east bay hills.

The City of El Cerrito was incorporated in 1917. As of the 2010 census, El Cerrito's population was 23,549 (with a 2014 estimated population of 24,599). The census also lists the city with a total area of 3.7 square miles for a total of 6,385.3 people per square mile.¹ There are 10,142 households and homeownership rate is 60.6% (from 2009-2013), well over the state rate of 55.3%, with 2.39 persons per household and a median house value of \$589,100. Population age distribution is: 17.4% under the age of 18, 5.4% aged 18 to 24, 29.4% aged 25 to 44, 22.9% aged 45 to 64 and 17.9% aged 65 or older. A 2011 economic forecast listed Contra Costa County, along with Alameda County (East Bay metro area), as the third highest median family income in California, with El Cerrito's median household income at \$88,380. Population growth was positive with an increase between the 2010 census and the 2014 estimate of 4.3%, slightly faster than the state average of 4.2%.²



City of El Cerrito and unincorporated community of Kensington are located in the western portion of Contra Costa

The unincorporated community of Kensington has a total population of 5,077 in an area, just under 1 square mile. There are 2,199 households and homeownership rate is 82.9%, with an average of 2.31 persons per household. Property values vary greatly in this area depending on acreage and improvements, from \$550,000 to \$2.3 million.³

Contra Costa County has experienced two very large growth spurts, one in the World War II years and another over the last 20 years. By 2030, Contra Costa County is anticipated to have over 1.2 million residents (or an additional 228,500 people).⁴ El Cerrito and Kensington experienced their major growth post World War II. In 1950, El Cerrito's population grew from 7,000 to 16,000, and Kensington's peaked at 6,061.⁵ Both communities are primarily built out. Future growth is limited by land available, in-fill development and re-use of existing sites. These two communities are closely tied to the entire San Francisco Bay area, a region with well-educated residents, a robust economy, an increasingly diverse population and high cost of living.

¹ Data from: <http://www.census.gov/quickfacts/table/PST045215/0621796,0621782,0613882> accessed 3/23/2015.

² Data from http://www.dot.ca.gov/hq/tpp/offices/eab/socio_economic_files/2013/Contra_Costa.pdf accessed 11/18/2014.

³ Data from: http://www.zillow.com/homes/recently_sold/Kensington-CA/39222_rid/37.909339,-122.268133,37.901551,-122.284162_rect/15_zm/ accessed 1/31/2017

⁴ Data from: <http://www.bayareavision.org/bayarea/cc.html/> accessed 11/29/11

⁵ "El Cerrito Historical Evolution," by Edward Staniford. <http://www.el-cerrito.org/index.aspx?NID=365> accessed 1/31/17.

Geographic Features

El Cerrito and Kensington are located on the west-facing slope of the East Bay Hills, within the northern portion of the Coast Range characterized by northwest-southeast trending mountain ranges. Highest Peak is William Rust Summit at 1010 feet elevation. The range formed millions of years ago as a result of uplift along the San Andreas, San Pablo and Hayward faults and other subsidiary faults. The Hayward fault is the nearest active fault. The complex geological history has resulted in diverse soils, hydrology and topography. Virtually all the hillsides in the north and east of El Cerrito and in Kensington are prone to landslide. El Cerrito is divided into two topographic regions: the lower elevations characterized by a traditional grid street pattern and the steeper slopes with a street pattern that follows the contours of the land. Kensington is entirely located within steep terrain resulting in numerous people inhabiting areas where narrow roads make it difficult to access under emergency conditions.

Climate, Temperature and Rainfall

El Cerrito and Kensington have a "Mediterranean" climate with mild winters and hot dry summers. Winter lows are typically in the 30s and summer highs can be above 90° Fahrenheit. Precipitation depends upon the season, location and topography with an average of 22 inches annual rainfall.

Natural Resources

Over the years the region has seen significant acreage set aside as parkland, open space and protected watershed lands. East of El Cerrito and Kensington are Tilden Regional Park and watershed lands for East Bay Municipal Utility District's San Pablo Reservoir. Within El Cerrito the most significant public open space is the Hillside Natural Area. Additional public open space is in 11 developed parks, the Ohlone Greenway, school playfields and several pocket parks. Private open space includes: Mira Vista County Club, Sunset View Cemetery and Camp Herms Boy Scout Camp. Kensington public open space includes Kensington Park. Private open space includes large private properties such as Blake Garden and the Carmelite Monastery, and community facilities such as the Unitarian Universalist Church.

Watersheds

The El Cerrito and Kensington area has two historically important watersheds that drain from the ridge to the San Francisco Bay: Baxter Creek and Cerrito Creek.⁶ Baxter Creek is located in the north with three branches in Richmond and El Cerrito. Cerrito Creek in Kensington and El Cerrito forms the boundary of Contra Costa County with adjacent Alameda County. Cerrito Creek includes several additional tributaries, including the North Fork of Cerrito Creek stretching through both communities. Many of the creeks in these two watersheds were lined or culverted during the first half of the 20th century. A large percentage of the creeks and drainage-ways are located on private property. Other reaches run through neighborhood parks or have more recently been "daylighted" and the natural creek restored.

⁶ Source: Contra Costa County Watershed Atlas. 2003 <http://cocowaterweb.org/publications/> Accessed 1/31/2017.

<http://www.sfei.org/documents/east-contra-costa-historical-ecology-study>

Vegetation and Wildlife Habitat

The scarcity of undeveloped land in El Cerrito and Kensington has a limiting effect on vegetation and wildlife habitat. Important ecological communities include:

- Grass dominated communities: predominantly annual grasslands dominated by grasses and forbs, but also areas of native grassland (valley needlegrass grassland) and ruderal (disturbed areas with sparse typically weedy non-native vegetation).
- Scrub dominated communities: consisting of woody vegetation dominated by shrubs (soft chaparral) with scattered trees. Dominant species include coyote brush, toyon, ceanothus, California sagebrush, with lupine and sticky monkeyflower as associates.
- Oak woodland communities: oak woodland (coast live oak), mixed with California bay, and deciduous trees such as buckeye and big leaf maple.
- Riparian woodland/ riparian scrub associated with drainages, intermittent, ephemeral and permanent streams and permanent water sources. May contain understory of shrubs and forbs. Salt marsh habitats are found near the San Francisco Bay.
- Other landscape features: rock outcrops, springs and seeps; landslides; ecotones; disturbed areas and developed landscaped areas.
- Exotic invasive species: stands of exotic and invasive species such as French broom, pampas grass and eucalyptus groves can be found throughout the El Cerrito and Kensington area.

A review of the California Natural Diversity Data Base (CNDDB) indicates three sensitive natural communities occur within the "Richmond Quad" including El Cerrito and Kensington:⁷ North Coastal Salt Marsh, Northern Maritime Chaparral and Valley Needlegrass Grassland.

Several plants and animals that are designated as "special status" occur near El Cerrito and Kensington (rare, threatened or endangered species, or candidates for such designation). These include both federally- and state-listed species, as well as those identified by the California Native Plant Society. Information about Federally protected species, vegetation and habitat is included in the *Best Management Practices Guidebook for Fuel Management Treatments in Contra Costa County* (developed for in 2009 as part of the Contra Costa County CWPP),⁸ and other resource documents. Rare and sensitive species that are known to occur or have the potential to occur in the area include:

Plants

- Halls redtop (*Agrostis hallii*)
- Bent-flowered fiddleneck (*Amsinckia lunaris*)
- Coast rockcress (*Arabis blepharophylla*)
- Pallid manzanita (*Arctostaphylos pallida*)
- Longtail wild ginger (*Asarum caudatum*)
- Alkali milk-vetch (*Astragalus tneer var tener*)
- Cascades Oregon grape (*Berberis nervosa*)
- Big tarplant (*Blepharizonia plumose*)

⁷ Source: California Natural Diversity Database: <https://map.dfg.ca.gov/bios/?tool=cnddbQuick> based on 9 quad search accessed 2/14/17.

⁸ *Best Management Practices Guidebook for Fuel Management Treatments in Contra Costa County* is available online at www.diablofiresafe.org/publications.html - BMP

- Round-leaved filaree (*California macrophylla*)
- Oakland star tulip (*Calochortus umbellatus*)
- Coastal bluff morning-glory (*Calystegia pururata ssp. saxicola*)
- Hill sun cup (*Camissonia graciflora*)
- Congdon's tarplant (*Centromadia parryi spp. congdoni*)
- Smooth stem sedge (*Carex laeviculmis*)
- Bolander's water hemlock (*Cicuta maculate var. bolanderi*)
- Franciscan thistle (*Cirsium andrewsii*)
- Alameda County thistle (*Cirsium quercetorum*)
- Presidio clarkia (*Clarkia francisana*)
- Point Reyes bird's beak (*Cordylanthus maritimus spp palistris*)
- Torrey's cryptantha (*Crpthanata torreyana*)
- Western leatherwood (*Dirca occidentalis*)
- California wheat grass (*Elymus stebbinsii*)
- Jepson's coyote thistle (*Eryngium jepsonii*)
- Minute pocket moss (*Fissidens pauperculus*)
- Fragrant fritillary (*Fritillaria liliacea*)
- San Francisco gumplant (*Grindelia hirsutula var. maritime*)
- Diablo helianthella (*Helianthella castanea*)
- Congested headed hayfield tarplant (*Hemixonia congesta spp. congesta*)
- Hogwallow starfish (*Hesperervax caulescens*)
- Loma Prieta hoita (*Hoita strobilina*)
- Santa Cruz tarplant (*Holocarpa macradenia*)
- California horkelia (*Horkelia californica ssp. californica*)
- Douglas' iris (*Iris douglasiana*)
- Central coast iris (*Iris longipetala*)
- Carquinez goldenbrush (*Isocoma arguta*)
- Southern California black walnut (*Juglans californica*)
- Pointed rush (*Juncus oxymeris*)
- Contra Costa goldfields (*Lasthenia conjugens*)
- Tall layia (*Layia hieracoides*)
- San Francisco lessingia (*Lessingia germanorum*)
- Lovage (*Ligusticum apifolium*)
- Mason's lilaeopsis (*Lilaeopsis masonii*)
- Manycolored lupine (*Lupinus variicolor*)
- Woolly malacothrix (*Malacothrix floccifera*)
- Mt. Diablo cottonweed (*Micropus amphibious*)
- Oregon meconella (*Meconella oregonana*)
- Large leaved sandwort (*Moehringia macrophylla*)
- Woodland woolythreads (*Monolopia gracilens*)
- California wax myrtle (*Morella californica*)
- Robust monardella (*Monardella villosa globosa*)
- Fire poppy (*Paperver californicum*)
- White-rayed pentachaeta (*Penachaeta bellidiflora*)
- Western coltsfoot (*petasites frigidus var. palmatus*)
- Choris' popcornflower (*Plagiobothrys chorisianus var. chorisianus*)
- San Francisco popcorn flower (*Plagiobothrys diffuses*)
- Michael's piperia (*Piperia michaelii*)
- Lobb's aquatic buttercup (*Ranunculus lobbii*)
- Golden current (*Ribes aureum var. gracillimum*)
- Nootka rose (*Rosa nutkana var nutkana*)
- Adobe sanicle (*Sanicula maritime*)
- Chaparral ragwort (*Senecio aphanactis*)
- California skullcap (*Scutellaria californica*)

- Most beautiful jewel flower (*Streptanthus albidus ssp. peramoenus*)
- California seablite (*Suaeda californica*)
- White panicle aster (*Symphotricum lanceolatum var. hypericum*)
- Saline clover (*Trifolium hydrophilum*)
- Pacific trillium (*Trillium ovatum spp. Ovatum*)
- Coastal triquetrella (*Triquetrella californica*)
- Oval leaved viburnum (*Viburnum llipticum*)

Amphibians & Reptiles

- California tiger salamander (*Ambystoma californiense*)
- California giant salamander (*Dicamptodon ensatus*)
- Western pond turtle (*Emys marmorata*)
- Alameda striped racer (whipsnake) (*Masticophis lateralis euryxanthus*)
- Foothill yellow legged frog (*Rana boylei*)
- California red-legged frog (*Rana draytonii*)
- Coast horned lizard (*Phrynosoma blainvillii*)
- Coast range newt (*Taricha torosa*)

Birds

- Cooper's hawk (*Accipiter cooperi*)
- Sharp shinned hawk (*Accipiter striatus*)
- Tricolored blackbird (*Agelaius tricolor*)
- Grasshopper sparrow (*Ammodramus savannarum*)
- Tule greater white fronted goose (*Anser albifron elgasis*)
- Golden eagle (*Aquila chrysaetos*)
- Great egret (*Ardea alba*)
- Great blue heron (*Ardea Herodias*)
- Short eared owl (*Asio flammeus*)
- Long eared owl (*Asio otus*)
- Burrowing owl (*Athene cunicularia*)
- Oak titmouse (*Baeolophus inornatus*)
- American Bittern (*Botaurus lentiginosus*)
- Ferruginous hawk (*Buteo regalis*)
- Cackling goose (*Branta hutchinsii leucopareia*)
- Western snowy plover (*Charadrius alexandrinus nivosus*)
- Vaux's swift (*Chaetura vauxi*)
- Northern harrier (*Circus cyaneus*)
- Snowy egret (*Egretta thula*)
- White tailed kite (*Elanus leucurus*)
- Willow flycatcher (*Empidonax trillii*)
- California horned lark (*Eremophila alpestris actia*)
- Merlin (*Falco columbarius*)
- American peregrine falcon (*Falco peregrinus anatum*)
- Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)
- Bald eagle (*Haliaeetus leucocephalus*)
- Caspian tern (*Hydroprogne caspia*)
- California black rail (*Laterallus jamaicensis coturniculus*)
- Loggerhead shrike (*Lanius ludovicianus*)
- Alameda song sparrow (*Melospiza melodia pusillula*)
- San Pablo song sparrow (*Melospiza melodia samuelis*)
- Long billed curlew (*Numenius americanus*)
- Black-crowned night heron (*Nycticorax nycticorax*)
- Osprey (*Pandion Haliaeetus*)
- Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*)
- California brown pelican (*Pelecanus occidentalis californicus*)

- Double crested cormorant (*Phalacrocorax auritus*)
- Yellow billed magpie (*Pica nuttalli*)
- California clapper rail (*Rallus longirostris obsoletus*)
- Bank swallow (*Riparia riparia*)
- Rufous hummingbird (*Selasphorus rufus*)
- Yellow warbler (*Setophaga petechial*)
- Lawrence's goldfinch (*Spinus lawrencei*)
- California least tern (*Sternula antillarum*)
- Yellow headed blackbird (*Xanthocephalus xanthocephalus*)

Fish

- Green sturgeon (*Acipenser medirostris*)
- White sturgeon (*Acipenser trnsmontanus*)
- Sacramento perch (*Archoplits interruptus*)
- Tidewater goby (*Eucyclogobius newberryi*)
- Delta smelt (*Hypomesus transpacificus*)
- Sacramento–San Joaquin tule perch (*Hysterocarpus traski traski*)
- River lamprey (*Lampetra ayresii*)
- Coho salmon (*Oncorhynchus kisutch*)
- Steelhead (*Oncorhynchus mykiss irideus*)
- Chinook salmon spring + winter run (*Oncorhynchus tsawytscha*)
- Sacramento splittail (*Pogonichthys macrolepidotus*)
- Longfin smelt (*Spirinchus thaleichthys*)
- Eulachon (*Thaleichthys pacificus*)

Insects + Invertebrates

- Opler's longhorn moth (*Adlea oplerella*)
- Obscure bumble bee (*Bombus caliginosus*)
- Vernal pool fairy shrimp (*Branchinecta lunchi*)
- Sand beach tiger beetle (*Cicindela hirticollis gravida*)
- Monarch butterfly (*Danaus plexippus*)
- Bay checkerspot butterfly (*Euphydryas editha bayensis*)
- Bridges' coast range shoulderband (*Helminthoglypta nicklianiana bridgesii*)
- Bumblebee scarab beetle (*Lichnanthe ursine*)
- Lee's micro-blind harvestman (*Microcina leei*)
- Plebejus icarioides missionensis (*Mission blue butterfly*)
- Callippe silverspot butterfly (*Speyeria callippe callippe*)
- San Francisco's Bay area leaf cutter bee (*Trachusa gummifera*)

Mammals

- Pallid bat (*Antrozous pallidus*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)
- Berkeley kangaroo rat (*Dipodomys heermanni berkeleyensis*)
- Southern sea otter (*Enhydra lutris nereis*)
- Silver-haired bat (*Lasionycteris noctivagans*)
- Western red bat (*Lasiurus blossevillii*)
- Hoary bat (*Lasiurus cinereus*)
- San Pablo vole (*Microtus californicus sanpabloensis*)
- Yuma myotis (*Myotis yumanensis*)
- San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)
- Big free-tailed bat (*Nyctinomops macrotis*)
- Salt marsh harvest mouse (*Reithrodontomys raviventris*)
- Angel Island mole (*Scapanus latimanus insularis*)
- Alameda Island mole (*Scapanus latimanus parvus*)

- Suisun shrew (*Sorex ornatus sinuosus*)
- Salt-march wandering shrew (*Sorex vagrans halicoetes*)
- American badger (*Taxidea taxus*)
- Point Reyes jumping mouse (*Zapus trinotatus orarius*)

The area also contains federally designated "critical habitat" for two species⁹:

- Alameda striped racer (formerly called Alameda whipsnake) (*Masticophis lateralis euryxanthus*),
- Red-legged frog (*Rana draytonii*),

Contra Costa County (covering Kensington) and the City of El Cerrito both have tree related ordinances. Contra Costa County includes protection of "Heritage Trees" with diameter breast height more than 22.9 inches and trees or groves of trees worthy of protection due to historical or ecological interest. Contra Costa County also has "Protected Trees" which are indigenous trees (oaks, pines, buckeye, black walnut, willows, redwood, maple, elderberry, toyon, alder, cottonwood and madrone with diameter breast height of 6 ½ inches or more).

The El Cerrito Municipal Code prohibits five species from being planted in the City of El Cerrito due to their rapid growth, height at maturity, dense foliage, shallow root structure, flammability, breakability or invasiveness. These include: coast redwood, Monterey cypress, Monterey pine, blue gum eucalyptus and red gum eucalyptus. The City also has an ordinance related to obstruction of views by trees on private property.¹⁰ An Urban Forest Management Plan and Urban Greening Plan offer additional strategies for the management of city vegetation.

Public Lands Management

There are three public entities that manage large areas of lands in or adjacent to El Cerrito and Kensington for public access and recreation.

East Bay Regional Park Districts (EBRPD) is a special district that offers developed and dispersed recreation opportunities in over 120,931 acres in Alameda and Contra Costa Counties. The 2,789-acre Wildcat Canyon Regional Park, 740-acre Tilden Nature Area and a portion of Tilden Regional Park are located east of El Cerrito and Kensington. Dispersed park activities include hiking, biking, horseback riding and picnicking. The Nature Area includes the Tilden Little Farm and Environmental Education Center, regional destinations that offer interpretive programs for schools, organized groups as well as the general public.¹¹ Hazardous fuel management activities in the areas adjacent to El Cerrito and Kensington include seasonal goat grazing, cattle grazing and hand labor. A seven-member elected Board of Directors manages the Park District.

City of El Cerrito manages El Cerrito's largest open space, the 102.5-acre Hillside Natural Area. Located on steep slopes, the area is surrounded by single-family residences.¹² The area includes an abandoned quarry, woodlands, grasslands and several intermittent watercourses. Recreational use of the area includes hiking, walking, dog walking and biking along the trails and fire roads, with access through several neighborhood entry

⁹US Fish and Wildlife Service. Critical Habitat Mapper. <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77> accessed 2/8/2017

¹⁰ Source: <http://ca-elcerrito.civicplus.com/index.aspx?NID=467> and https://www.municode.com/library/ca/el_cerrito/codes/code_of_ordinances?nodeId=TIT10PUPEMOWE_CH10.900B_VITRPRPR accessed 2/21/2017.

¹¹ Source: <http://www.ebparks.org> accessed 2/2/2017.

¹² Source: El Cerrito. Urban Greening Plan 2015. <http://www.el-cerrito.org/index.aspx?NID=928>

points. The Hillside Natural Area has three areas: "Motorcycle Hill" located north of Portrero Avenue, "Madera Property" acquired in 2014 south of Portrero Avenue and the main portion of the area that extends south from Wildwood Creek to the PG&E property on Moeser Lane. The City of El Cerrito is governed by a five-member City Council.

Kensington Police Protection and Community Services District (KPPCSD) is a special district that provides police protection services, park and recreation programs and manages garbage pickup and park operations. They manage the 9-acre Kensington Community Park. A five-member elected Board governs KPPCSD.

Federal Lands

Bureau of Land Management (BLM): While there are no BLM lands in the El Cerrito and Kensington area, local stakeholders work with BLM staff from the Hollister Office in conjunction with federal grants for public education and fuel reduction projects.

US Forest Service (USFS): While there are no USFS lands in the El Cerrito and Kensington area, local stakeholders work with USFS staff from the Vallejo Office in conjunction with federal grants for public education and fuel reduction projects. The USFS often provides grant funding through the California Fire Safe Council.

US Fish and Wildlife Service (USFWS): While there are no USFWS lands in the El Cerrito and Kensington area, local stakeholders work with USFWS regional and zone fire management programs, the Recovery Program on critical habitat for the Alameda Whipsnake, and in Section 7 consultations for Biological Opinions related to fuel modification projects. USFWS funded the Diablo Fire Safe Council's development of the Best Management Practices Guidebook for Hazardous Fuel Treatments in Contra Costa County, California in 2009 by a grant through the California Fire Safe Council.

Other Land Managing Entities

Pacific Gas and Electric Company (PG&E), incorporated in California in 1905, is one of the largest combination natural gas and electric utilities in the United States. Based in San Francisco, their service area stretches from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east. PG&E utilizes a program of Integrated Vegetation Management (IVM) to manage vegetation on transmission rights-of-ways. Properly maintained right-of-ways (ROW) are essential for the safety of the public and workers. The long-term goal of their vegetation management program is to provide for public safety, worker safety, and environmental safety while providing for reliable service.¹³ El Cerrito and Kensington are located in PG&E's East Bay Division. PG&E high-voltage transmission lines are located in El Cerrito along Moeser Lane and run from the Sobrante and Valley View substations to a substation located between Schmidt Lane and Portola Drive immediately south of the Hillside Natural Area.¹⁴ Local distribution lines also serve individual homes and businesses throughout the community.

East Bay Municipal Utilities District (EBMUD): In addition to the San Pablo Reservoir watershed lands to the east, EBMUD manages two facilities in Kensington: the 22-acre San Pablo Water Treatment Plant and Summit Reservoir which is in the process of being replaced with a new tank, associated facilities and additional native plantings on the 7-acre site. EBMUD also manages two tank sites in El Cerrito (Summit North and Arlington reservoirs) along with other facilities for water delivery.

¹³ Source: <http://www.pge.com/> accessed 1/5/16

¹⁴ Source: Solar Photovoltaic (PV) and Renewable Auction Mechanism (RAM) Program <https://www.pge.com/b2b/energysupply/wholesaleelectricissolicitation/PVRFO/PVRAMMap/index.shtml> accessed 1/5/16

Fire Protection Agencies

The El Cerrito Fire Department and Kensington Fire Protection District provide professional fire protection services to the communities. Beginning in 1995, the Kensington Fire Protection District entered into a contract with the City of El Cerrito whereby El Cerrito would provide all fire prevention, fire suppression and emergency services within Kensington for an annual fee. The efforts of these local fire protection agencies are made even more effective through common training in the national incident management systems (NIMS), incident command system (ICS) and the California standardized emergency management system (SEMS) that are used to manage response to multi-agency, multi-jurisdiction emergencies. Master mutual aid plans and automatic aid agreements also bring together resources from outside of the region.

California Forestry and Fire Protection Agency (CAL FIRE): Santa Clara Unit (SCU) provides fire protection for state responsibility areas (SRA). These include East Bay Regional Park District lands in Wildcat Canyon and Tilden Regional Parks located outside of City of El Cerrito and Community of Kensington. SCU also provides fire protection in the SRA of other portions of Contra Costa, Alameda, Santa Clara counties and a portion of San Joaquin County.

East Bay Regional Park District Fire Department: EBRPD Fire Department provides professional fire, medical and aquatic services for emergencies that occur within and adjacent to park district lands. A branch of the Public Safety Division, services include emergency response, search and rescue, fuels management, fire danger and weather information and lifeguard services.

Other Local Stakeholders

Bay View Refuse and Recycling provides curbside green material pickup every other week to the community of Kensington to recycle yard trimmings.

Contra Costa County: The unincorporated community of Kensington is governed by the Contra Costa County Board of Supervisors, and represented by District I Supervisor John Gioia. Supervisor Gioia also serves the unincorporated communities of El Sobrante, North Richmond, Montalvin Manor, East Richmond Heights, Tara Hills and Rollingwood, in addition to Kensington. A five-person volunteer citizen advisory group, Kensington Municipal Advisory Council (KMAC), provides input to the Board of Supervisors on Kensington issues. Other stakeholders in Contra Costa County include: Animal Service, Conservation and Development, Department of Public Works and the Sherriff's Department.

Diablo Fire Safe Council (DFSC) a non-profit organization formed in 1992 to bring together homeowners and agencies in Alameda and Contra Costa Counties to reduce the impact of wildfire. Programs include planning, outreach, education and cost share assistance for hazardous fuel removal.

El Cerrito Community Emergency Response Training (CERT) teaches neighbors to help themselves and each other. The City of El Cerrito Fire Department and the Kensington Fire Protection District have been strongly committed since 1992 providing its citizens with the ability to be self-sufficient for up to 72 hours and beyond in the event of a major disaster. In addition, the CERT Program is a founding member of the Contra Costa County CERT Committee, which oversees citizen preparedness throughout the County.

El Cerrito Trail Trekkers formed in order to build, maintain, publicize and use the little known urban trails of El Cerrito, California.

Friends of Five Creeks, founded in 1996, is an all-volunteer citizens group operating under the fiscal sponsorship of Berkeley Partners for Parks, a 501(c)3 nonprofit corporation. They are a hands-on group that mobilizes volunteers of all ages to restore, maintain, and

enjoy the creeks and watersheds of the East Bay from North Berkeley to Richmond. In year-round work parties, they help revitalize creeks, improve habitat and water quality, eliminate invasive plant species, and increase public access and stewardship. They have several projects in the El Cerrito Hillside Natural Area.

Kensington Amateur Radio Operators (KARO) and El Cerrito Ham Operators (ECHO) are two groups of amateur radio operators who live in Kensington and El Cerrito and have agreed to support these communities' emergency preparedness activities in conjunction with local CERT programs.

Kensington Public Safety Council (KPSC) has a mission to educate the community on how to prepare for emergencies, strengthen citizen emergency response infrastructure and promote community public safety initiatives. KPSC is integrated with CERT training through the Kensington Fire Protection District.

Kensington Fuel Reduction Group ("the Elves") consist of several groups of homeowners who develop and manage fuel reduction projects along the boundary of Kensington and Wildcat Canyon Regional Park in partnership with EBRPD and DFSC. Since 2009, "Right of Entry" agreements have been in place to guide this work.

Kensington Outlook is a community newsletter that covers local events and issues. The nonprofit Kensington Community Council publishes the Outlook ten times a year.

Mt. Diablo Silverado Council, Boy Scouts of America (MDSC) owns and operates Camp Herms, a year-round camp located on James Place in the El Cerrito hills. Opened in 1930, camp activities include campouts and training. Facilities include a meeting lodge with kitchen, campsites and sleeping shelters.

West Contra Costa Unified School District (WCCUSD): Based in Richmond, WCCUSD covers the cities of El Cerrito, San Pablo, Pinole and Hercules and the unincorporated areas of Bayview-Montalvin Manor, East Richmond Heights, El Sobrante, Kensington, North Richmond and Tara Hills.

1.2 The Planning Process & Stakeholders

The development of the El-Cerrito Kensington Wildfire Action Plan: An Appendix to the Contra Costa Countywide CWPP was made possible through a grant from the Cooperative Fire Program of the U.S. Forest Service, Department of Agriculture, Pacific Southwest Region, through the California Fire Safe Council. The grant would not have been possible without matching in kind services of many stakeholders.

The planning process followed a four-step process that included 4 stakeholder meetings and outreach to the community. Materials were posted on the Diablo Fire Safe Council web site at <http://www.diablofiresafe.org/El-Cerrito-Kensington-CWPP-AP.html>.

State, local and private agencies, companies, organizations and special interest groups, as well as the residents of El Cerrito and Kensington participated in the development and review of this Plan. Stakeholders included:

CAL FIRE Santa Clara Unit
Camp Herms (Mt. Diablo Silverado
Council, Boy Scouts of America)
California Native Plant Society
Carmelite Monastery, Kensington
Contra Costa County
Diablo Fire Safe Council
East Bay Regional Park District Fire
Department
East Bay Regional Park District Wildcat
Canyon Regional Park
East Bay Municipal Utility District
ECHO and KARO (amateur radio groups)
El Cerrito City Arborist
El Cerrito Community Garden Network
El Cerrito Garden Club

El Cerrito Fire Department
El Cerrito Historical Society
El Cerrito Public Works
El Cerrito Trail Trekkers
El Cerrito Tree Committee and Green
Teams
Friends of Five Creeks
Friends of Kensington Community Center
Kensington Fire Protection District
Kensington Fuel Reduction Group
Kensington Police Protection Community
Services Board
Mira Vista Golf Club
Pacific Gas and Electric Company
Villa Mira Vista HOA
West Contra Costa Unified School District

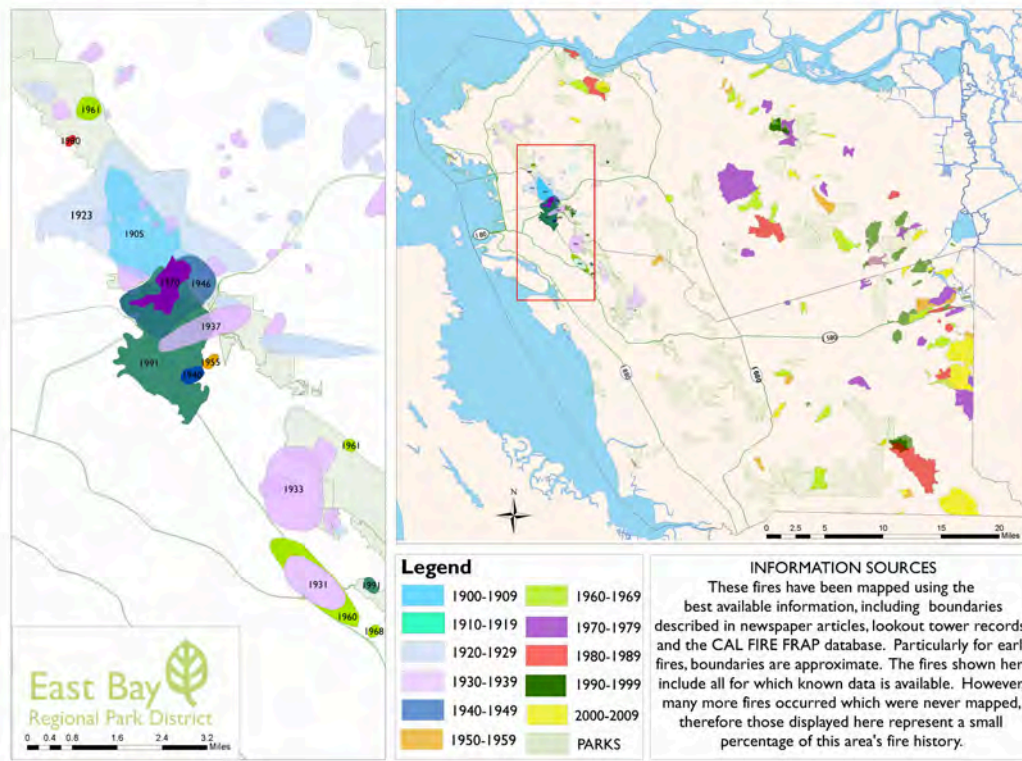
Wildfire Hazard and Risk in the Wildland Urban Interface

2.1 Wildfire Environment

Wildfires are a part of the natural ecosystem in the El Cerrito and Kensington area. The Mediterranean-like climate with no summer rains, the steep, wind-conductive topography, and fire adapted native vegetation set the stage for periodic burns. The fire environment is made more dangerous by the abundant hazards and risk associated with a large population and dense pattern of development. The urban side of the wildland-urban interface brings new hazards into the equation with introduced vegetation, structures constructed of flammable materials and many potential ignition sources.

Contra Costa County has a rich history of over 51 fires since the 1950s resulting in loss of lives, property and natural resources. The most recent was the 3,111-acre Morgan Fire that started on September 8, 2013 (in the eastern part of the County near Clayton). The 1991 "Tunnel Fire" took place seven miles south in the Berkeley and Oakland hills. The 1991 fire destroyed 2,900 structures, the largest recorded number in California history, and is the state's second deadliest fire with 25 fatalities.¹ Historically, more frequent wildfires of lesser intensity were common. Drought and human behaviors, particularly in the arenas of land-use and fire suppression, have

Fire History in the East Bay



Historically fires in Contra Costa County have clustered in 3 areas: East Bay Hills and along border with Alameda County; east areas of county around Mount Diablo and north areas of central county around Martinez.

¹ Source: http://cdfdata.fire.ca.gov/incidents/incidents_details_info?incident_id=908. And <http://www.fire.ca.gov/SCU/> accessed 2/8/2017.

had a profound impact on the County's fuel complex and fire regime. This increases the possibility of catastrophic wildfire, especially as the hazards of vegetation, topography, structures and fire weather are present.

Weather

Chief among fire hazards is the area weather. Despite efforts to improve neighborhood safety and fire fighting capability, uncontrollable fire storms will occur under the extreme but periodic conditions of "Red Flag" weather days. The National Weather Service issues "Red Flag" warnings when weather elements such as low relative humidity and strong winds could lead to rapid increases in wildfire activity.

"Red Flag" weather can mean the occurrence of strong, hot, dry offshore winds (technically called "foehn" winds). These winds are known locally as "Diablo Winds" and they come from the north, northeast. They carry extremely dry air at high velocity. They quickly desiccate vegetation and other flammable materials and can push a fire down or up a slope with amazing speed. These can occur at any time of year, but are especially dangerous in the driest months of summer and fall. During these times, fighting a fire becomes far more difficult.

Fuel – Structures and Vegetation

Due to the number and density of homes built in the high fire hazard zone and changes in the natural fire-cycle, El Cerrito and Kensington have areas of highly flammable structures amongst an over-accumulation of flammable vegetation. This massive fuel load of homes and vegetation in the area's steep topography makes fires very difficult to contain. In addition, non-native and invasive weedy vegetation has replaced the more fire resistive and ecologically stable native species in many places, adding to the threat.

Years of drought and associated pests and disease have increased tree mortality. The Contra Costa County region has seen a decline in tree health due to drought, pine beetles and Sudden Oak Death. Ongoing tree mortality assessments will provide additional information on declining conditions.

Topography

The area's steep topography, with canyons and swales, influences fire behavior and in many instances intensifies fire effects. Westward facing slopes are more arid (due to long exposure to the afternoon sun) and thus more combustible. The narrow roads in the steep hillside areas of both El Cerrito and Kensington make ingress and egress difficult and delay fire fighter response time.

2.2 Wildland Urban Interface Risk & Hazard Assessments

The wildland urban interface (WUI) is defined as an area in which wildlands and communities are sufficiently close to each other to present a credible risk of fire spreading from one to the other. Nationally, the WUI has gained increasing importance as more Americans build homes in rural settings adjacent to public lands.

The housing density and geography of El Cerrito and Kensington are such that most of the developed areas not only border WUI areas, but also include conditions within the urbanized areas that can fuel wildfires. The two communities include locations considered "*Very High Fire Hazard Severity Zones*" and are at significant risk for loss of life and property if a fire were to occur on a normal or extreme weather day. For the purposes of this plan, the CAL FIRE Fire Hazard Severity maps were used as a starting point to determine where significant fire hazards

exits both in the wildland and urban areas. Both El Cerrito and Kensington and the adjacent EBRPD parklands have been identified as at significant risk from wildfire.

2.2.1. Potential for Wildfire to Occur

Factor 1 – Risk of Wildfire Occurrence

Fire History Locations

Contra Costa County has a history of fire. The map “*Fire History in the East Bay*” shows many fires throughout the county over the past century. Three areas show clusters of fire:

- East Bay Hills – Richmond, El Cerrito Kensington and Alameda County boundary
- East areas of county around Mount Diablo, Walnut Creek, San Ramon
- North areas of central-county around Martinez.

Fire History Patterns, Climate Change Impact and Ignitions

There is limited detailed information on fires in the El Cerrito and Kensington area. However, a regional look at the 15 fires in the vicinity of the Caldecott Tunnel from 1923 – 1991 shows a common pattern of ignitions during critical Diablo Wind conditions in the Fall, occurring every 10 to 20 years. Similar conditions occur in the El Cerrito and Kensington area.

Climate change has the potential to affect multiple elements including fire behavior, ignitions, fire management and vegetation fuels. Hot dry spells may dry out fuels faster and increase disease and insect infestations resulting in higher fuel loads. Increased winds may result in more erratic fire behavior making fires harder to contain.

As a part of its fire management plan, EBMUD looked at causative agents for fires on its watershed from 1980-1997. Many ignitions were “unknown,” but known causes were primarily human and included arson, camping and picnic activities, power lines, fireworks, fuel reduction activities, smoking, children, automobiles and rekindles. Only 2 out of the 174 fires analyzed were caused by lightning. EBMUD used this information to help identify high fire risk areas including:

- All interface or intermix areas
- High use or recreational areas
- High travel transportation corridors with roadside grasslands.

EBRPD did a similar analysis of 1,900 fires over twelve years in Alameda and Contra Costa Counties and reached similar conclusions. While there has been no specific fire history developed for the El Cerrito - Kensington area, stakeholders and fire personnel familiar with the communities’ fire history felt that these causes and patterns could be extrapolated to this area.

Fire Weather

Another factor that has been assessed is fire weather or periods of “Diablo winds” that bring low relative humidity and higher temperatures. Alameda and Contra Costa Counties have 11 remote automated weather stations (RAWS) that provide localized information on the weather. Many fire departments also take local weather readings to supplement these regional data. National Oceanic and Atmospheric Association’s National Weather Service also provides “red flag warnings” and “Fire Weather Watch” of periods of high fire danger. www.wrh.noaa.gov/firewx/cafw/



Communities at Risk

In association with the development of the National Fire Plan, the Federal Register published a list of Communities at Risk in 2001.² Twenty-five communities in Contra Costa County were identified, including El Cerrito and Kensington. This list provided another confirmation of El Cerrito and Kensington as high priority areas for wildfire prevention.

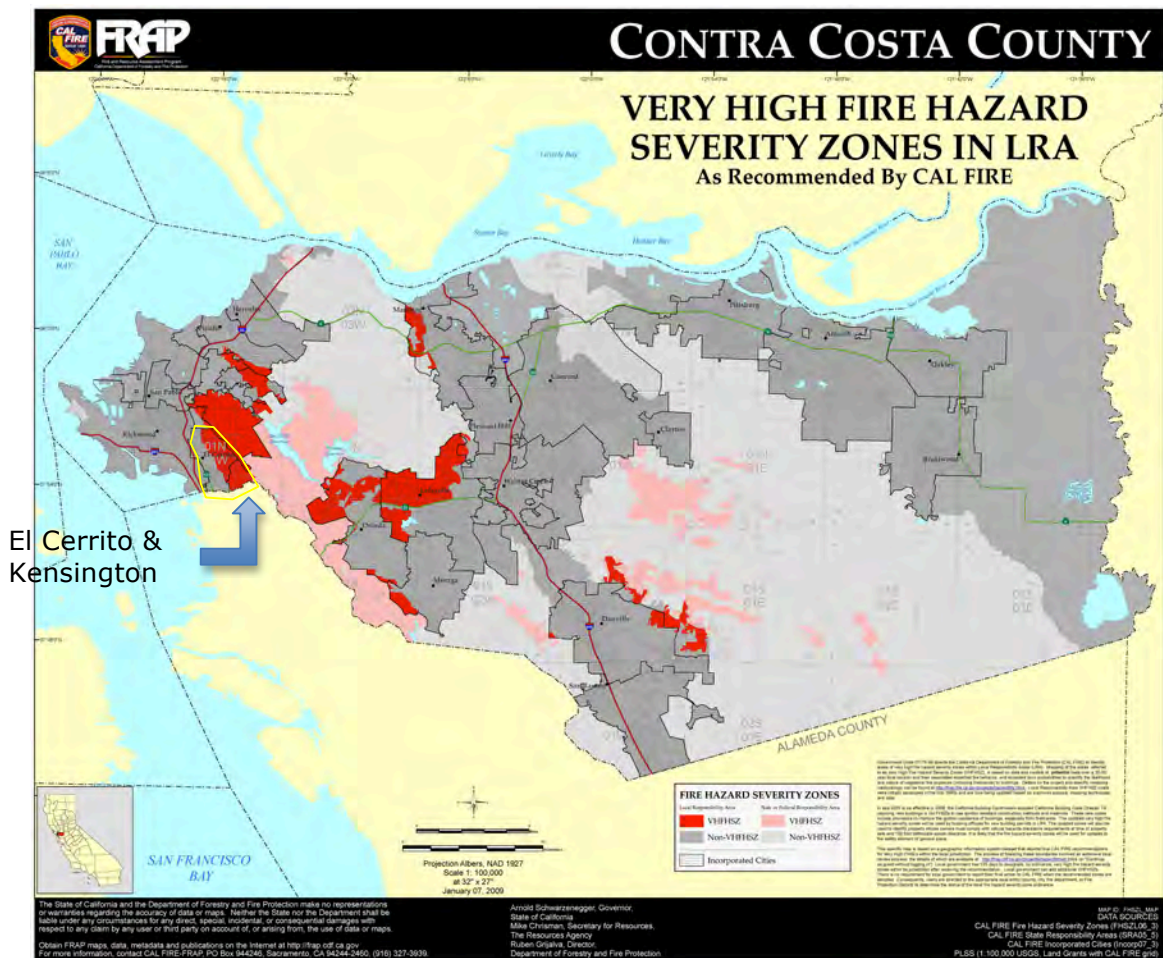
Factor 2 – Fuel Hazards

CAL FIRE Statewide Hazard Assessment Maps

The CAL FIRE statewide hazard assessment maps have served as the basis for much of the analysis in Contra Costa County. Very High Fire Hazard Severity Zones for State Responsibility Areas (SRA) and Local Responsibility Areas (LRA) are identified on these maps based on:

- Flame length modeled based on vegetation, topography and weather.
- Crown fire potential, ember production and ember movement
- Likelihood of burning based on fire history and other factors.³

The hills portion of El Cerrito (see detailed map in Appendix) and all of Kensington were identified as very high wildfire hazard severity zones, as well as the adjacent EBRPD lands.



² http://cdfdata.fire.ca.gov/fire_er/fpp_planning_car?filter_text=Contra+Costa&filter_field=county_name&action=Search accessed 2/8/2017

³ Map from: http://www.fire.ca.gov/fire_prevention/fhsz_maps_contracosta.php accessed 2/8/2017.

2.2.2. What to Protect - Values at Risk within the WUI

Factor 3 – Homes, businesses, critical infrastructure and other values to protect

Millions of people are exposed to the destructive forces of wildfire by virtue of living, working or visiting areas in the WUI. Much of what people value most highly – their lives, family, community, property, as well as cultural, economic and ecological interests is at risk of loss in an uncontrollable wildfire.

During planning meetings, area stakeholders identified homes, businesses, parklands and protected watersheds among values at risk. Regional roads are at risk, as are power and water supply facilities and substations, communications networks.

In addition to looking at fuel hazards, it is important to identify things that should be protected from the hazards. Some of the values at risk to protect include:

- Homes and businesses. The 2010 census shows a population of 23,549 with 10,142 housing units in the City of El Cerrito. Approximately 10,795 people live in 5,250 housing units located in the very high fire hazard severity zone. The unincorporated community of Kensington has a population of 5,077 and 2,199 households all of which are located within the very high fire hazard severity zone.⁴ Of particular concern are those who for whatever reason would not be able to leave during an evacuation without assistance. Total monetary value of structures in the area is estimated at more than \$4.39 billion.⁵
- Schools. El Cerrito includes four public elementary schools (including public pre-school), a middle school, a high school and a charter school, as well as five private schools. Kensington includes one public elementary school. In addition there are several churches and other private facilities that operate pre-schools and day care.
- Other public facilities. There are no hospitals or critical care facilities in El Cerrito or Kensington. An urgent care facility, the Shields Nursing Center and other private residential care facilities are located primarily in El Cerrito outside of the very high fire hazard severity zone. Other public facilities include the El Cerrito Community Center, El Cerrito Library, Kensington Community Center and Kensington branch of the Contra Costa Library.
- Infrastructure. The PG&E high voltage transmission lines that cross east of Kensington and through El Cerrito to the El Cerrito sub-station are part of the national electric grid, as well as providing power to the region. Similarly, the water facilities operated by EBMUD are critical to the region, as well as for local water delivery. Telecommunication networks and public emergency communication systems also serve the region. A network of local roads maintained by the City of El Cerrito and Contra Costa County provide both emergency access and evacuation routes for residents. Many of these roads are narrow and steep, reflecting the topography.
- Other things to consider. Contra Costa County is seismically active with nearby faults including the Hayward, San Andreas, and other related faults.⁶ Seismic activity could impact access, reliability of water supply and result in potential ignitions from gas or fuel lines following an earthquake. The steep hillsides are also geologically unstable, with areas of slides located throughout the hills.

⁴ Data from: <http://quickfacts.census.gov/qfd/states/06/0613882.html> accessed 2/8/17.

⁵ Source: Based on average house value of \$589,100

⁶ Source: <http://earthquake.usgs.gov/hazards/qfaults/map/> Accessed 11/18/2015

While fire is a natural and critical ecosystem process in much of California's diverse terrestrial ecosystem, many of the existing "fire regimes" in the El Cerrito and Kensington area have been drastically altered from their natural variability. Introduced species, fire suppression, disease and insect infestations, and fire suppression are just a few of the reasons why some ecosystems now experience fires that are more intense and damaging. Severe environmental impacts from wildfires can include:

- Damaged fisheries, with increased water temperatures, sedimentation and changes in water quality
- Soil erosion from both wind and water erosion. Accelerated soil erosion can lead to landslides as well as threaten nearby aquatic habitats. Hot fires can also damage soil nutrients or make soil water repellent (hydrophobic).
- Disease and insect infestations as non-native plant species invade burned areas
- Damage to critical wildlife habitat.

Critical wildlife habitat

US Fish and Wildlife Service has identified critical habitat for the Alameda Whipsnake and Red Legged Frog in the East Bay Regional Park lands adjacent to El Cerrito and Kensington. Other federal listed species are identified in the "Best Management Practices Guidebook for Hazardous Fuels Treatments in Contra Costa County" and the *Vegetation Management Almanac for the East Bay Hills*.

Local watersheds, creeks and riparian areas

The City of El Cerrito and Contra Costa County have recognized the value of protecting their local watersheds, creeks and riparian areas and have local storm water management, stream protection ordinances and regulations to protect these resources.⁷ State regulatory agencies, including the California Department of Fish and Wildlife (CDFW) and the San Francisco Bay Regional Water Quality Control Board (SFRWQCB), oversee protection of riparian areas, including along seasonal or ephemeral channels, and issue permits required for removal of riparian vegetation. Replanting or revegetation may be required in some areas when vegetation is removed to reduce wildfire hazards.

Significant recreation, scenic areas and areas of historical, economic or cultural value

El Cerrito and Kensington contain publically-owned open spaces with significant values related to recreation and scenic areas. The communities also contain areas of economic and cultural value both as documented historical and undocumented archeological sites.

2.2.3. Protection Capabilities

Factor 4 - Local Preparedness and Fire Fighting Capabilities

As identified in Section 1, local fire protection agencies leverage their resources through participation in emergency management systems and common incident command system. Local preparedness and firefighting capabilities include community preparedness and emergency personnel response. During fire incidents law enforcement, including the El Cerrito Police Department and the Contra Costa County Sheriff, are responsible for coordinating evacuation. Volunteer resources, such as local resident groups, both El Cerrito and Kensington CERT groups, ECHO, KARO and RACES, Contra Costa Medical Reserve Corps and Contra Costa County Office of the Sheriff Volunteers, also play critical roles in both preparedness and during response to wildfires.

⁷ Source: <http://ca-elcerrito.civicplus.com/index.aspx?nid=141> accessed 2/8/17

In November 2011, the County Office of Emergency Services produced an Emergency Operations Plan for the Contra Costa Operational Area “for effective and economical allocation of resources for protection of people and property in time of an emergency.”⁸ The plan establishes the emergency organization, assigns tasks, specifies policies and general procedures, and provides for the coordination of planning efforts of the various emergency staff and service elements utilizing the California Standardized Emergency Management System (SEMS) and National Incident Management System (NIMS).

2.3 Strategies for Reducing Risk within the WUI

Wildfire is a natural process in the Contra Costa County ecosystem. The natural hazards of the fire environment – weather, climate, topography and fire adaptive vegetation – all are immutable. Attention to decreasing the human impacts and risk factors can reduce the incidence of catastrophic wildfire. The following potential strategies for reducing risk are organized to focus on each of the existing risk and hazard assessments.

1. Collaborative Partners

Identifying and working with collaborative partners (including friends and volunteer groups) lays the groundwork for other strategies to reduce the risk of fire. Collaborative efforts may include:

- Information, including sharing ideas and cross messaging to reach wider audiences.
- Education - Existing programs include: “Ember Awareness, “FIREWISE, “Ready, Set, Go”, Smokey Bear, CERT, volunteers in prevention that can be customized for each community, neighborhood or special interest group.
- Collaborative planning on a local level with more detailed assessments and project development to reduce risk of fire occurrence. This could also include identifying friends and volunteer groups for project work and facilitating roles for residents.
- Sharing best practices related to wildfire prevention, hazardous fuel reduction, natural resource conservation and stewardship.
- Developing policy, such as for planting restrictions or removal of highly flammable plant species.

Potential collaborative partners identified during the planning process include: the Boy and Girl Scouts of America, CERT, California Office of Emergency Services, planning and building departments, El Cerrito City Council members, Board of Supervisors, Contra Costa Fire Chiefs Association, Master Gardeners, University of California Extension, Institute of Building and Home Safety, California Landscape Contractors Association, local media (such as the aboutkensington.com and El Cerrito Patch), Contra Costa County OES, non profit habitat restoration organizations (such as Friends of Five Creeks), California Native Plant Society, special interest groups (such as El Cerrito Trail Trekkers or Kensington Home Owners Association) and utilities including PG&E and EBMUD.

Electronic distribution allows for customization and distribution through existing partners networks. Communicating fire safety messages year-round, and identifying and facilitating roles for residents working with agencies could foster collaborative partnerships.

⁸ Source: <http://www.contracosta.ca.gov/DocumentCenter/View/7352>

2. Recommendations to address risk of ignitions

Target key causes of ignitions in areas with ignition history, high equipment use and people (arson or accidents) through:

- Ignition Prevention Education – A specific ignition prevention campaign targeting contractors and public works agencies may help reduce equipment-caused fires. Existing ignition campaigns include “One Less Spark,” fire department staff outreach, equipment rental operations and contractors (spark arrestors), mowing guidelines, drought related information. Develop ignition prevention education aimed at both residents and visitors (recreation or trail users).
- Enforcement – enforce restriction on certain activities: support consumer fireworks exclusions (including sky lanterns), fire investigations and working with law enforcement and defensible space inspections/ enforcement. Limit access or activities during periods of high fire danger (red flag warnings). Increase staffing levels and patrols on red flag days. Develop new policy and associated enforcement, such as for planting restrictions or removal of highly flammable plant species.
- Engineering – equipment safety, fuel reduction activities. This could include roadside clearance of vegetation or a juniper removal campaign.
- Areas of high tree mortality due to drought, disease or pest where there may be higher potential for ignition.

3. Recommendations to address fire weather

Improve communication of hazardous weather conditions (red flag weather) through:

- Awareness of hazard conditions and what to do/ not do – red flag program flags, fire danger signs (through community and in parks), education, shared responsibility of agencies and residents. National weather service (NOAA/ Monterey) and remote area weather stations (RAWS).
- Restrictions on specific uses, certain activities, specific operations or equipment (abatement work) during periods of high fire danger weather. Fire weather operations plans.
- Local media alerts during red flag weather. Additional partners can get the word out over a variety of communication systems (newsletters, Nixel, websites, Contra Costa County Warning System emergency alerts, etc.). Shared responsibility – patrols, community watch type activities.

4. Recommendations to address community at risk hazards

- Monitor tree decline mortality due to drought, disease (e.g. Sudden Oak Death) or pest infestation (key areas include: Madera Open Space and “Motorcycle Hill”).
- Develop new policy and associated enforcement mechanisms, such as for planting restrictions or removal of highly flammable plant species.
- Project planning and funding to deal with increase in tree mortality.
- Public education and exterior hazard abatement:
 - Reduce surrounding fuels and ignitability of existing homes and structures – from the house out.
 - Focus on dense vegetation directly adjacent to homes and homes themselves.
 - Weed abatement/ defensible space inspections and enforcement.

- Home ignition zone improvements (beyond weed abatement or fire code requirements).
- Reduce structure ignitability.
- Evacuation routes
- Special needs populations (who, where they are, and needs in event of emergency).

5. Recommendations to further support defensible space programs

- Talk to people about what to do. Prevention programs, communication and education. "How to do" training. Information on flammability of specific plants (e.g. juniper)
- Inspections, enforcement and abatement, including on vacant lots where no structures are present.
- Funding and incentives for private property owners. "Seed" funding for community projects.
- Share effective techniques. Balancing habitat needs and defensible space. Effective techniques to reduce noxious weed invasion after soil disturbing hazardous fuel reduction treatments.
- Chipping programs.
- Green waste pickup or other programs for disposal.
- Hazardous (dead) tree removal programs. Right tree right place program (existing PG&E program)
- Demonstration garden. Showcase successful treatments of private properties where habitat values, aesthetics and fuel reduction (defensible space) goals have been met.



6. Recommendations to support improving structure survivability

- Education regarding home ignition, WUI building standards and existing code requirements. Local building and remodeling standards reflective of the State adopted WUI Chapter 7A or better (recognizing these are minimum standards). Including: Class A roofs, smoke detectors, fire extinguishers, street address numbers. Educational materials to address inside the home, external shell, ember hardening and non-ignition zone (fences, outdoor structures). Use a variety of outreach tools including DVD, website, flyers and presentations.
- Practical retrofit techniques and building materials for roofs, gutters, windows, siding, vents, decks, outbuildings, especially information regarding what can be done without major remodels.
- Sprinkler systems required for new homes or if more than 50% of home is remodeled.

7. Recommendations to support fuel management on public and large scale private lands

- Pre-fire hazardous fuel management program and plans.
- Integrating fire with scientifically based resource and vegetation management that protects and improves native habitat values. A lot of collaborative planning work has been done in the region that should be incorporated. Balance protection of biological

resources with hazardous fuel removal (e.g. bird nesting and 100' defensible space). Support for further research on post fire effects.

- Share project implementation resources (contractors, equipment, specifications), best management practices (BMP) and lessons learned. Use of goats, cattle, control burns, disk or mow fire containment lines, understory maintenance, etc. Including use of volunteers to reduce fuel loads. Identify stakeholders and customize information and delivery methods.
- Project and funding support, for both the individual large property owner and for homeowner associations with private open space (e.g., Villa Mira Vista and Wildwood).
- Access for firefighter and equipment.
- Enforcement for abatement on public lands.

9. Recommendations for protecting homes, businesses, other facilities & essential infrastructure at risk

- Identify infrastructure to protect: roads, power grid, water treatment facilities, communications and utilities. Support hazardous fuel reduction projects, such as those on watersheds, roadside clearances and power-line clearance.
- Identify network of roads for fire response and resident evacuation.
- Water for fire fighting, including public and private sources.
- Provide extra patrols during high fire (Red Flag) days.

10. Recommendations to support Local Preparedness and Firefighting Capability

- Develop local evacuation plans and educate residents on preparedness, including special needs communities and animal rescue and sheltering. Recognize parking on narrow roads further limits fire access and evacuation.
- Support local volunteers and community readiness. Participate in and enhance existing CERT/ Neighborhood Watch programs. Ready Set Go. FIREWISE.
- Continue to support fire department response improvements: expanded mutual aid, wildland fire training, equipment, etc. Coordination between agencies and land managers.
- Continue to support public notifications systems –community warning sirens, Nixel, etc.

Recommended Action Plan

3.1 Selection of Recommended Priorities

The El Cerrito Kensington Wildfire Action Plan was developed through collaboration of stakeholders and residents that attended work sessions, public presentations or commented on draft versions of this plan. Participants were invited to submit project ideas that provide protection and reduce risk. The following recommended priorities are based on this collaboration, as well as the Countywide CWPP, analysis and the recommended strategies for reducing the risk with the WUI detailed in Sections 1 and 2.

Each of the following topics outlines specific recommendations and associated actions. It is anticipated that additional opportunities for actions will be identified as the Fire Action Plan is implemented. Projects, workshops, demonstrations and education efforts will be recommended for implementation and funding based on the following attributes:

- Protects life, property and infrastructure in areas of El Cerrito and Kensington where risk of catastrophic wildfire is most severe.
- Reduces risk of fire spreading between private lands to public lands (regional parklands, open space, or watershed lands) or areas where significant natural or cultural resources are at risk.
- Seeks to create a detailed implementation plan for fire prevention or mitigation at the local level in an area identified as “at risk”.
- Involves stakeholders at all levels, which is to say there is strong community support, as well as support from applicable agencies and landowners. Intensity of local support will be a significant factor when choosing projects.
- Demonstrates the capacity to continue to manage and maintain the project effectively, and/or supports ongoing, previously planned efforts.
- Projects that will improve firefighting response, wildfire control capabilities and residential evacuation plans and operational programs.
- Removal of invasive plants of known high flammability listed in a recognized source such as Cal-IPC California Invasive Plant Inventory (publication 2006 or updated).

Many of the recommended actions will take long-term commitment over multiple years to address the complex hazards. Some actions have current funding, but additional funding and efforts are needed to continue to address the issue.

3.2 Information, Education and Collaborative Planning Priorities

Education is viewed as a force multiplier and stakeholders felt it should be a high priority. A key recommendation is working with potential partners to find common ground, share ideas and develop joint implementation of local projects. These partners may expand beyond the traditional agency partners to include volunteer groups who have interest in neighborhood or

nearby open spaces. They may also include organizations, such as the Friends of Five Creeks, El Cerrito Trail Trekkers, California Native Plant Society or Contra Costa County Master Gardeners, offices of the mayor or elected officials, homeowner associations or local businesses. One such recommendation includes supporting fire prevention educational program for ignition prevention.

Priority Action: Fire Prevention Educational Program

Recommendation: Support year-round community efforts with education programs regarding wildfire safety and ignition prevention. These should identify inexpensive things a homeowner, contractors and others can do.

Implementation Actions:

- Identify various audiences (e.g. residents, contractors, special interest groups). Identify the needs of residents versus special interest or recreational users.
- Develop topics including:
 - How the home can ignite (e.g., the ignition chain of how a wildfire or adjacent house fire can be transmitted through the landscape or house to house).
 - Importance of neighborhood defensible space, especially critical on dead end streets or where homes are close together. This information should be made available before inspections.
 - General awareness (e.g. wildfire season, red flag days)
 - Demonstration garden (see discussion in Section 4 Fuel Reduction treatments)
 - How to identify, develop and fund a hazardous fuel reduction project
- Delivery methods: Direct mail, information on existing electronic/ social networks (county, city and community list serves), open houses at Fire Stations and other community events.
- Encourage resident participation

Lead and Partners: Diablo Fire Safe Council and partner agencies.

Time frame: Short-term timeframe. On-going 9 month or year round program.

Estimated Funding Need: \$ to development/ distribution of materials and evaluate additional needs.

3.3 Enhanced Suppression Capability and Emergency Preparedness Priorities

Each year wildfires reinforce the importance of local emergency preparedness and evacuation plans. The emergency service agencies (County Office of Emergency Services, El Cerrito Police, County Sheriff, and the various fire departments) are interconnected through mutual aid agreements and common training of the Incident Command System and National Incident Management System. To expand this preparedness to a local and neighborhood level, there are Citizen Emergency Response Training (CERT) programs offered through the El Cerrito and Kensington Fire Departments. One priority recommendation focuses on assisting in the development of local evacuation plans. Another opportunity is to collaborate with updates to local hazard mitigation plan or general plan safety elements.

Priority Action: Evacuation Planning and Preparedness

Recommendation: Collaborate with partners (CERT, Neighborhood Watch, Red Cross) to assist community groups in developing neighborhood evacuation plans so residents know what to do in the event of a wildfire.

Implementation Actions:

- Tie to general education of wildland urban interface issues, red flag warnings, “Ready Set Go!”. Community warning systems such as Weather Radio, Nixel and Community Warning System.
- Focus on community groups and block level.
- Explain community evacuation procedures and develop appropriate expectations about access/ egress, parking, evacuation routes, role of police and sheriff, notifications etc.
- Identify essential supplies to maintain (Go Pack).
- Identify special populations or needs at the block level.
- Identify primary and secondary evacuation routes. Reinforce understanding that law enforcement is in charge of the evacuation.
- Pre-designate suitable evacuation shelters.
- Physical improvements to the routes as needed (parking restrictions, vegetation clearance, roadside maintenance, signage etc.)

Lead and Partners: Coordinate with other groups that address evacuation trainings such as CERT and Red Cross, as well as outreach to home owner association, fire department and police/sheriff departments.

Time frame: Short to identify, medium to long term to implement improvements.

Estimated Funding Need: \$ for maps and brochures; \$\$\$\$ for physical improvements.

Prioritizing Hazardous Fuel Reduction Treatments

4.1 Hazardous Fuel Management

Hazardous fuel management, ideally a subset of sound vegetation and ecosystem management, is the practice of removing or modifying vegetation in order to reduce wildfire ignitions, rate of spread and intensity. Fuel management requirements depend on the vegetation type, location, condition and configuration. Given the dynamic nature of the fuels in El Cerrito and Kensington, a single treatment type or prescription is not effective. Follow up is often needed to avoid encroachment by weedy, non-native invasive species. Rigorous oversight, active management and an adaptive approach are required to achieve fuel management goals with a positive by-product of ecosystem improvement.

Generally five fuel management methods are available and used within the WUI:

- Manual (hand labor such as pulling or cutting)
- Mechanical treatment (equipment used for mowing, selective cutting of trees, masticating or crushing)
- Prescribed herbivory (targeted grazing by sheep, goats or cattle)
- Chemical treatment
- Prescribed fire

Specific fuel management treatment goals and methods are addressed more fully in the *Best Management Practices Guidebook for Hazardous Fuel Treatments in Contra Costa County*. These best management practice guidebooks will continue to be refined based on environmental compliance documents, adaptive management practices and other lessons learned by the various stakeholders.

The sustainability of fuel management is an on-going challenge at all landscape scales – from the single residence, neighborhoods, public open space, watershed and parklands. Existing residential areas typically depend upon private property owners and their fire agency's fire prevention programs to reduce fuel loads. El Cerrito and Kensington both have the ability to enforce compliance with local fire codes. However, they are limited by the extent of local codes. Any new or in-fill residential development needs not only a plan for fire hazard reduction, but also funding mechanisms for long term vegetation management of any commonly held open space. Funding must include not only initial treatments, but also on-going maintenance on an annual or multi-year cycle.

4.2 Fuel Reduction Treatments – Geographically Based Projects

Public agencies, private owners, and fire districts establish hazardous fuel reduction treatment priorities on a regular basis as a part of their long-range planning or annual budgeting procedures. Some of the public land managers have detailed plans that incorporate fuel reduction treatments. Regionally such plans have not only identified geographically based projects, but also have developed best management practices and mitigation measures that should be incorporated into projects to reduce the impact of fuel

reduction treatments on the environment (see on-line Appendix for further resources and references).

Typically, fuel treatment is done around structures, by roadways and in areas of extreme fire behavior. Treatments addressed in the *Best Management Practices Guidebook for Hazardous Fuel Treatments in Contra Costa County*¹ are organized by zone as follows:

- From the Home: 0-30', 30-100'
- Critical Infrastructure: 0-300'
- Emergency Access Roads: 0-30', 30-100'
- Community Protection: 100-300'
- Community Wildland Interface: 1.5-mile area around a community unless otherwise designated.

Regionally, stakeholders in Contra Costa County have further refined this list with the following areas as appropriate for fuel management, which is supported in this El Cerrito Kensington Fire Action Plan:

- Areas within 200 feet of homes in the wildland urban interface (WUI) with excessively flammable vegetation that would produce greater than 8-foot flame lengths.
- Areas within 200 feet of high-value or irreplaceable public facilities in the WUI with excessively flammable vegetation that would produce greater than 8-foot flame lengths.
- Areas within 30 foot to 100 foot of private residences in the WUI with excessively flammable vegetation that would exceed state or local defensible space codes.
- Areas with excessively flammable vegetation due to extreme amounts of litter or ground fuel levels. These may be areas where ground fuels exceed six-inches deep with occasional jackpots of fine material up to three-inch diameter. It may be with greater than two to six tons per acre with ribbon bark and understory fuel ladders in identified high risk forest like eucalyptus or Monterey pine that are subject to torching and crown fires with potential high ember flight rates into residential areas.
- Areas critical to strategic fire fighting operations in the event of a wildfire with excessively flammable vegetation.
- Areas with excessively flammable vegetation within 30 feet of wildfire evacuation and fire fighting access along paved roads and strategic fire trails.
- Areas of invasive plants that will increase the flammability of adjacent natural plant communities or displace more fire safe and fire adapted native species.

The list of current geographically based priority projects follows at the end of this section. An intended outcome of the Fire Action Plan is for this list to be updated annually to ensure that efforts are coordinated whenever possible. Past hazardous fuel reduction projects have included working on public lands, with special interest groups and small groups of homeowners on private property including:



¹ *Best Management Practices Guidebook for Hazardous Fuel Treatments in Contra Costa County* (page 7). Available at www.diablofiresafe.org/publications.html#BMP

El Cerrito	Kensington
<ul style="list-style-type: none"> • Balra Drive • Bates Avenue • Camp Herms • Contra Costa Dr/ King St • Dorothy Rosenberg Park/ Shevlin Drive • Hillside Natural Area • Mira Vista Golf Club • Villa Mira Vista HOA • Prospect Sierra School 	<ul style="list-style-type: none"> • Cambridge Avenue • Carmelite Monastery • EBRPD - Wildcat Canyon Regional Park with adjacent homeowners on: <ul style="list-style-type: none"> ○ Kensington Court ○ Purdue Meadow ○ Lake Drive ○ Los Altos Drive ○ Beloit Ave ○ Canon Drive • Edgecroft Road • Highland Boulevard • Kensington Community Center • Kensington Elementary School • Kingston Road

When funding is available, fuel reduction treatment projects with the following attributes should be given the highest priority:

- Project reduces hazardous fuels that, if left untreated, would generate high intensity burning adjacent to structures or communities at risk, or produce large quantities of airborne burning embers that would carry into communities or other important resources.
- Project reduces hazards along strategic emergency access and evacuation routes, or other critical infrastructure.
- Project includes vegetation modification treatments that will reduce the threat of unacceptable impacts of high intensity fire to high value ecosystems, sensitive watersheds and high concentration recreation areas, including regional parklands or state lands. Projects to include strategies and funding for on-going maintenance, especially follow-up management of non-native invasive species that could create hazardous fire conditions.

4.3 Fuel Reduction Treatments – Related Priorities

In addition to geographically based projects, the stakeholders reinforced the need for a link between education and fuel reduction projects. Wildfire safety requires a partnership between homeowners and agencies, as well as an understanding of what we are trying to achieve if we implement the wildfire safety program or fuel reduction projects.

Priority Action: Demonstration Garden + Other Links Between Education and Projects

Recommendation: Showcase successful treatments of private and public properties for reducing potential for ignition and spread of wildfire.

Implementation Actions:

- Collaborate with others who have shared interest in community
- Look at successful examples in other communities where multiple goals have been met along with fuel reduction (defensible space) including: beautification, habitat values, creek restoration, removal of invasive species, sustainability, etc.
- Explore options for demonstration gardens: developing on public land (such as Kensington Community Center or other locations), in median strips and other small public spaces, showcasing private properties through contests, campaigns (juniper removal), adopt a spot.
- Select initial projects/ programs and outreach methods. Explain role of project – how it works to calm a fire (e.g., role of defensible space and fuel reduction, why some plants are more hazardous than others, what to remove and what to plant).
- Widely disseminate information and gather additional support. Show what community will look like if fire safety projects are implemented. Provide tours, open houses, guides, or pamphlets.
- Provide one-on-one services to talk to individual homeowners about actions they need to take in their homes.
- Develop or disseminate existing companion materials on topics such as: ember awareness, plant flammability, how invasive plants increase fuel loads. Link to websites such as <http://www.diablofiresafe.org/tolerance.html> on plant performance.

Lead and Partners: Not yet identified

Time frame: On-going

Estimated Funding Need: \$ or \$\$\$\$

4.4 Environmental Review and Permitting

The El Cerrito Kensington Action Plan, an Appendix to the Contra Costa Countywide CWPP, is an advisory document. The Plan was prepared by the Diablo Fire Safe Council in collaboration with public agencies and other interested stakeholders pursuant to the Healthy Forests Restoration Act. The committee was composed of stakeholders (or their representatives) living in at-risk communities, and the contents of this CWPP are opinions of these stakeholders following the procedures outlined in The Wildland Fire Leadership Council's handbook, *"Preparing a Community Wildfire Protection Plan, A Handbook for Wildland Urban Interface Communities."* More specifically, landscape and fire science

discussions, WUI designation, priority of at-risk communities, regulatory interpretation and other discussions set forth in this Plan are findings and recommendations by these stakeholders to help protect their communities from wildfires. Because this Plan is an advisory document, the Plan does not legally commit any public agency to a specific course of action or conduct and thus, is not a project subject to CEQA or NEPA. At least twelve counties in California have signed CWPPs without considering the CWPP as a project subject to CEQA.

However, if and once funding is received from local, state or federal agencies and prior to work performed, or prior to issuance of discretionary permits or other entitlements by any public agencies to which CEQA or NEPA may apply, the lead agency must consider whether the proposed activity is a project under CEQA or NEPA. If the lead agency makes a determination that the proposed activity is a project subject to CEQA or NEPA, the lead agency must perform environmental review.

In addition to NEPA or CEQA, it is recognized there are a number of permits that may need to be obtained prior to fuel reduction work including:

- US Army Corps of Engineers: Clean Water Act Section 404 or Rivers and Harbors Act Section 10 Nationwide Permit or Individual Permit
- US Fish and Wildlife Service or National Marine Fisheries Service: Section 7 or Section 10 Consultation
- Regional Water Quality Control Board: Clean Water Act Section 401 or Porter Cologne Act 401 Certification or Water Discharge Requirement
- California Department of Fish and Game: Section 1600 Streambed Alteration Agreement; Fish and Game Code and California Endangered Species Act Streambed Alteration Agreement, CESA 2081 or CESA 2080.1 Permit

Other activities may not require specific agency permits, but may require additional review or specific mitigation measures to comply with:

- Migratory Bird Treaty Act
- National Historic Preservation Act (Advisory Council on Historic Preservation Section 106 review; State Historic Preservation Office)
- Bay Area Air Quality Management District Regulation 5. Open Burning.
- County Agricultural Commission, CAL EPA and Federal EPA on use of herbicides
- Local tree ordinances
- Local stream protection regulations
- Local noise ordinances
- City or county road encroachment

2017 Geographically Based Priority Hazardous Fuel Reduction Projects and Prevention Strategies

Agency or Group	Project or Strategy	Status
CAL FIRE Santa Clara Ranger Unit	Technical support and personnel to allied agencies who are conducting projects in the SRA and LRA of Contra Costa County. See Unit Plan Santa Clara County.	Ongoing Funded
	Coordination of Fire Crews for project work	Ongoing Funded (limited availability)
	Grant programs for SRA area (part of Kensington)	2016-2017 funding
City of El Cerrito- Public Works Department	Continue to implement vegetation management programs in City owned Hillside Natural Area, parks and rights-of-way	Funding Needed
	Continue to coordinate vegetation management programs with volunteers	Ongoing Funded
Diablo Fire Safe Council (DFSC)	Defensible Space Program - seed fund for community projects + chipping	Ongoing Funded
	Partner with homeowners, HOAs and other groups to fund and manage hazardous fuel reduction activities	Ongoing Funded
	Right of Entry with East Bay Regional Park District (Kensington Fuel Reduction Group)	2016-2017 funding
East Bay Regional Park District	Project implementation in East Bay Hills. See Wildfire Hazard Reduction and Resource Management Plan.	Ongoing Funded
	Right of Entry with Diablo Fire Safe Council (Kensington Fuel Reduction Group)	Ongoing Funded
	High fire danger information - use restrictions	
	Integrated Pest Management Program (some treatments also include fuel reduction)	Ongoing Funded
El Cerrito Fire Department/ Kensington Fire Protection District	Continue to implement vegetation management programs. Visually inspect every property (public and private) within El Cerrito and Kensington.	Ongoing Funded
	Notify property owners when vegetation management standards are not being met, and achieve compliance, with 100% voluntary compliance as a goal	Ongoing Funded
	Hire private contractors and CDC crews to maintain and enhance defensible space areas on public land and between natural areas and neighborhoods as funding allows	Additional funding needed
	Continue to dialog and collaborate with East Bay Regional Parks to enhance area fire safety	Ongoing Funded
El Cerrito Trail Trekkers	Continue to implement vegetation management programs with volunteers in Hillside Natural Area and other public owned right of ways (paths)	Volunteer
El Cerrito Tree Committee and Green Team	Continue to implement vegetation management programs with volunteers	Volunteer
Friends of Five Creeks	Continue to implement vegetation management programs with volunteers in Hillside Natural Area and Cerrito Creek	Volunteer

Agency or Group	Project or Strategy	Status
Kensington Community Center Volunteers	Continue to implement fuel reduction projects around Kensington Community Center	Volunteer
Kensington Fuel Reduction Groups	Continue to implement fuel reduction projects under Right of Entry with EBRPD and DFSC	Volunteer
Kensington Public Safety Committee	Continue to implement vegetation management programs with volunteers in Kensington	Volunteer
Pacific Gas and Electric	High voltage and distribution lines vegetation maintenance	Ongoing Funded
	Implement right tree right place	Ongoing Funded

Prioritizing Treatment of Structure Ignitability

5.1 Structure Ignitability

The presence of structures within the WUI exposes both the natural and developed environments to increased risk of destruction by wildfire. In areas where the accumulation of flammable vegetation coexists with residential development, an ignition can lead to catastrophic fire. Mitigation of hazards that contribute to ignitability can reduce the potential of fire loss.

Adoption and enforcement of fire and building codes is an essential part of managing the risk in the WUI. The California State Fire Marshal's Office developed state of the art building standards known as "Chapter 7A" effective January 1, 2008 for use on new building construction within Very High Hazard Severity Zones. Other pertinent codes are included in California Code of Regulations (CCR) Title 24, such as the California Building Code (CBC) Part 2, California Residential Code (CRC) Part 2.5, California Fire Code (CFC) Part 9, California Reference Standards Code (CRSC) Part 12. More detail about these codes, code compliance policies and accepted products can be found at <http://osfm.fire.ca.gov/codedevelopment/wildfireprotectionbuildingconstruction>.

The El Cerrito and Contra Costa County (Kensington) Building Codes meet the Chapter 7A standard for the high fire hazard areas. However these codes apply for new construction but not for remodeling of existing homes.

For communities such as El Cerrito and Kensington that have limited room for new development, it is critical to incorporate fire safety in the general plan safety elements for the City of El Cerrito and for Contra Costa County. In 2012, Senate Bill 1241 was signed into law creating new wildfire safety requirements related to land use planning and updates to the Housing and Safety Elements. The Board of Forestry and CAL FIRE will now sign off on these plans for compliance.

No fire department can be expected to prevent all home losses in a WUI setting. The potential for a wildfire to outpace suppression efforts means that all homeowners in WUI areas must accept a high degree of risk, as well as responsibility.

5.2 Key Ignition Resistance Factors

The key to ignition resistance is the design of the structure, the materials used in its construction and the presence of defensible space. Research points to basic factors that affect the risk of a structure burning in a wildfire. A weakness in any of these areas can lead to a similar result – a destroyed or severely damaged home or building. The following information is adapted from several sources including the Insurance Institute for Building and Home Safety. Additional information can be found at their website <https://disastersafety.org/ibhs-risks-wildfire/>

Flammability of the Roof

Research shows that homes with a non-combustible roof and defensible space of at least 30 to 60 feet around the structure have an 85-95% chance of survival in a wildfire.¹ At a minimum, a home structure should have a Class A-rated, fire-resistant roof cover or assembly, and preferably one that is self-extinguishing once a falling ember burns out. Self-extinguishing means that the firebrand will not burn through to the roof deck and flames will not spread to other parts of the roof. Without a fire-resistant roof, other approaches toward mitigation will fall short of protecting the home.

Roof shape also plays an important role. If the roof has a lot of ridges and valleys or roof segments that intersect with vertical walls your house is more vulnerable to wildfire. Even a Class-A roof is more vulnerable because vegetative debris and wind-blown embers readily accumulate at these intersections and can expose combustible siding, vents or windows as well as the roof to fire.

Wind-blown debris and overhanging trees can lead to gutters full of leaves and needles on your roof and gutter. Research has shown that a home with a gutter full of leaves has enough fuel to ignite a roof, especially if there is a path for the fire to reach any exposed flammable surfaces such as the edges of roof structure or through vents. Keeping gutters clean of debris is especially important if you have a multi-story building or dormer windows where exterior siding would be exposed to flames from debris in gutters.

Structure Openings – Vents, Doors and Windows

Many post-fire surveys of damaged buildings have shown that the attic/roof and foundation vents are key entry points for embers and flames. Areas where there are direct pathways to the attic, house or crawl space provide an easy entry point. This can include vents, soffits or windows prone to breaking when exposed to wildfire conditions (usually unprotected, single pane windows). Window fans, pet doors, and fireplaces chimneys can allow firebrands to enter if left open or unscreened.

Recent fires have shown that screened vents alone may fail to keep embers out of attics or other spaces. Pre-cut fire resistive covers are one solution. New technology combines several features that increase the effectiveness of preventing embers from entering these flammable spaces; however, maintenance issues need to be evaluated when these products are considered.

Testing has shown that single pane windows are highly vulnerable to breaking when exposed to wildfire conditions. Larger windows are more vulnerable to breaking than smaller windows. Some glass will break after only 1 to 3 minutes exposure to intense heat allowing flames and embers to get inside and further ignite furnishings. Double pane windows with tempered glass for the outside pane can effectively increase the ability to survive a wildfire as well as a long-term solution for energy conservation within the home.

Siding

Siding can be vulnerable for several reasons. If ignited, combustible siding can provide a path for flames to reach other vulnerable components such as windows or eaves. Second, a horizontal or vertical joint in the siding (or at the top or bottom of the material) can provide access for embers or flames into the house. Some materials, such as vinyl siding, will deform and fall off the wall at relatively low heat or flame exposure. If this happens, protection of the structure will depend on the underlying sheathing in the wall assembly.

¹ Foote, Ethan. "Wildland-Urban Interface Ignition Resistant Building Construction Recommendations." Community Wildfire Protection Plan Workshops, California Fire Alliance and California Fire Safe Council. August 2004.

Walls need to resist heat and flames, as well as embers. Non-combustible materials like three-coat stucco, fiber cement, brick and tile resist flames, but don't always resist heat and embers. Therefore, incorporating sheet-rock or other non-combustible sheathing material into the wall assembly underneath the exterior material will improve performance. Regardless of wall material choice, all gaps at the top or bottom edges, or at lap joints must be sealed or caulked to reduce the potential for ember intrusion. Embers can also accumulate at the foundation if the lower edges of the siding material is left unsealed. The more complicated the lap joint, such as tongue-and-groove or shiplap, the better the resistance from flame or embers. Attention to construction detail, such as use of metal flashing where fences or decks attached to walls can prevent accumulation of debris and slow ignition.

Overhanging Structures

Eaves, alcoves, entry ways, patio covers, decks, porches, and exterior stairways all have the potential to "trap" heat under them or create areas where burning embers can accumulate. Openings or gaps in blocking also result in areas where wind-blown embers can become lodged and ignite debris or wood.

Decking

Decks, patios and porches can become a pathway for fire into a home. Most are attached to a home and adjacent to doors, windows, sliding glass doors or other openings and combustible siding. Materials used to build the deck, the furniture or other items on top of the deck, as well as the items stored beneath them, all can increase the ease of structure ignition. Decks and porches can be particularly vulnerable when the home is sited on a slope or surrounded by vegetation where flame lengths can reach more than 30 feet, exposing even elevated decks.

The combustibility of wood deck boards is common knowledge; however, the performance of plastic composite decking products is less well known. Some manufacturers are incorporating fire retardant chemicals into these products. Information can be found at the California State Fire Marshal Wildfire Protection Building Construction website osfm.fire.ca.gov/codedevelopment/wildfireprotectionbuildingconstruction. Specific products can be searched at the building materials listing at osfm.fire.ca.gov/licensinglistings/licenselisting_bml_searchcotest. In general, large structural members will resist ignition better than small wood boards.

Fuel Hazards

Any fuel source that will bring flames close the structure can be a hazard. Examples of fuel hazards include:

- Flammable plants close to a wall
- Dead foliage that builds up underneath succulents or other normally fire-resistant plants
- Certain types of mulch and
- A combustible fence located close enough to allow flames to contact the overhanging roof above.

Fuel sources within the "defensible space" area that support a high intensity spot fire are especially problematic. These include: any trees that can quickly become a fire torch (such as an untrimmed palm tree) a wooden trellis made of small lumber sizes, playground equipment made with wood pieces, or a pile of firewood on the ground or in a wheelbarrow.

Access to the property

If firefighters and their equipment cannot gain access to the property and a water source, there is little chance they can protect the home. Access also affects the ability of the homeowner to evacuate the site should the need arise. In some areas these narrow roads can become constricted with on-street parking, temporary lane closures, encroachment into the road right of way by construction or by overgrown roadside vegetation. The communities served by only one road are at increased risk.

Surrounding topography and location of structures

Adjacent steep slopes and topographic features, such as natural chimneys or chutes, can intensify fire behavior. Structures located mid-slope or at the top of a steep slope are more likely to be damaged. A steeper slope will result in a faster moving fire, with longer flame lengths. A home with little setback from the slope will need to be more aggressive with vegetation treatment and maintenance.

Weather and “Red Flag” Conditions

Strong winds blowing a fire toward a house will have the same effect as being located on a slope. The fire will move faster and burn more intensely with taller flame lengths, blowing embers in front of the fire during periods of high winds. These high winds are often accompanied with an increase in temperature and decrease in relative humidity creating “Red Flag” conditions that further dry vegetation and wood building materials. Local topography often funnels wind and multiplies regional weather patterns.

5.3 Improving Structure Survivability within the WUI

Protecting structures exposed to wildfires is not a simple matter. Structures can ignite due to direct exposure to flames, from radiated heat or from embers. All three sources must be addressed in order to improve the survivability of structures within the WUI. It is recommended that the following measures be taken:

1. Reduce the amount of heat the structure will be exposed to through managing vegetation, creating defensible space and construction design.
2. Limit the time the structure is exposed to heat through vegetation management. Establishing a low fuel “home ignition zone” immediately adjacent to structures and creating “defensible space” in the first 30 - 100 feet from the house is critical.
3. Use fire resistant building materials and construction methods.
4. Remove combustible materials stored near structures.

Creating an effective defensible space around the structure and maintaining a fire safe landscape are critical to minimizing the threat of ignition. The homes in El Cerrito and Kensington are subject to regulations that require compliance with defensible space standards.

The selection of a building’s site and materials has direct relationship to its survivability. New structures need to be located to reduce their exposure to the most intense part of a wildfire that might sweep across the site. There also are many noncombustible and fire resistive materials and treatments available to better protect structures and inhibit fire spread. However, these have limited application to El Cerrito and Kensington since there is little new construction in these communities.

5.4 Retrofitting an Existing Structure for Survivability

The areas at highest risk from wildfire in El Cerrito and Kensington are largely built out. In these communities new construction will occur as infill between existing homes, so the new building codes offer limited opportunities to increase structure survivability. In these areas, identifying opportunities to retrofit existing homes and businesses is key to reducing losses due to wildfire. Outreach and education were again identified as priorities, as the new building codes for ignition resistant construction are not required for remodeling of existing structures. Funding assistance for retrofit of existing structures has been non-existent in the past. In 2011, FEMA provided two grants to assist with wood shake roof replacement (Lake Tahoe Basin FEMA shake roof program and San Bernardino Mountains FEMA wood shake roof replacement assistance).

Priority Action: **Education on Home Ignitions and Training on Structure Retrofit**

Recommendation: Education on home ignitions and training related to retrofit of existing homes and structures to improve their survivability. Identify what can be done without major remodel. Evaluate new technologies, materials and products that are available for retrofit and the pros and cons.

Implementation Actions:

- Find funding for education and training program on ignition resistance
- Develop an educational booklet of simple things homeowners can do to make their home ignition resistant
- Explore dissemination and delivery methods, including building permit counters.

Lead and Partners: No lead identified. Institute for Building and Home Safety has information and research. State Fire Marshal's Office has materials and product information related to Code 7A.

Time frame: On-going

Estimated Funding Need: \$\$ for training and materials.

The Insurance Institute for Building and Home Safety (IBHS) continues to sponsor building safety research that leads to real-world solutions. They have identified key areas at risk and offer retrofit ideas. The following table has been adapted from IBHS Wildfire Home Assessment and Checklist: see disastersafety.org/wp-content/uploads/wildfire-checklist_IBHS.pdf for additional detailed information. The information has been generalized for planning purposes. Consult building professionals and local building departments for more detail related to your structure.

Retrofitting Existing Structures to Increase Wildfire Survivability

<i>Survivability Threat</i>	<i>Retrofit</i>	<i>Relative Cost/ Ease</i>
Roof – the most vulnerable part of your home		
Combustible roof.	Professional roof inspection to determine if covering and assembly are not “Class A.” Need to remove old roofs.	\$\$\$\$ Contractor
Gaps at edges or ridges or other openings in tile (clay) or metal roof	Install bird stops in gaps at edges or ridges. Plug any roof openings that are not functioning as vents	\$\$-\$ Contractor or Experienced DIY
Combustible siding where lower level roof (first floor) meets upper wall or upper level roof (second floor)	Replace siding with more fire resistant material and underlayment	\$\$-\$\$\$\$ Contractor or Experienced DIY
Vegetative debris accumulated on roof and gutters	Routinely remove from roof. For complex steep, roofs may consider hiring professional.	Free - \$ Agile homeowner
Vents – vulnerable to wind-blown embers and flames		
Unscreened or unprotected vents (in foundations, crawl spaces, wall, dryer vents or gable end vents)	Attach screens (1/8” opening) or prepare solid covers to install when a wildfire is approaching. Use caution when installing or removing covers on upper story vents.	\$ Agile homeowner
Planning to replace vents	Several types of new vent covers on market designed to reduce risk of wind-blown embers. See http://osfm.fire.ca.gov/codedevelopment/wildfireprotectionbuildingconstruction	\$\$ Experienced DIY
Gutters – fuel for falling embers could lead to fire in attic		
Vegetative debris accumulated in gutters	Clean gutters on regular gutters. For complex steep, roofs may consider hiring professional.	Free - \$ Agile homeowner
Tired of cleaning gutters	Gutter covers help manage debris build up. Can result in accumulation of debris on roof behind gutter – so some maintenance may still be required.	\$\$
Open Eaves or Projections – vulnerable to flame or embers could lead to fire in attic		
Open eave construction or visible gaps between blocking and rafter tails.	Plug openings with durable caulk or install non-combustible covering over blocking to eliminate openings. Alternatively box in eaves. This method may require vents to remove excess moisture.	\$\$-\$\$\$ Contractor or Experienced DIY
Combustible soffit material or materials used to box in eaves (such as wood boards, untreated plywood).	Replace with non-combustible material such as fiber cement product or exterior fire retardant treated plywood. Vinyl soffit material not recommended as it will deform and sag causing gaps.	\$\$-\$\$\$ Contractor or Experienced DIY

Retrofitting Existing Structures to Increase Wildfire Survivability

<i>Survivability Threat</i>	<i>Retrofit</i>	<i>Relative Cost/ Ease</i>
Windows – open windows are most vulnerable. The vulnerable part of a closed window is the glass.		
Single pane windows	Install dual pane windows. Preferred are multi- pane, insulated glass with added benefit of greater energy conservation Multi-pane (double or triple), tempered glass is 4 times more resistant to breaking in wildfire. Cost increases are relative to the opening size.	\$\$\$ - \$\$\$\$ Contractor
No window coverings to protect from glass breakage	Screens, shutters or pre-made covers will protect window from embers, debris and radiant heat exposure. Covers would be installed prior to evacuation. Least expensive alternative is ½ plywood but need to clear area of combustible material that could ignite plywood.	\$-\$\$ Contractor or Experienced DIY
Dome type skylights vulnerable to breakage	Replace with flat, tempered glass skylight. Remove vegetation and accumulated debris next to and around skylight	\$-\$\$ Contractor or Experienced DIY
Siding – fire from ignited siding can spread into stud cavity and up wall into eave, soffit or attic as well as expose window to flames		
Combustible siding	Re-siding is expensive but can be worthwhile if building is 15 feet or closer to adjacent properties or if inadequate defensible space. Replace with non-combustible siding so vertical flame spread will not be a problem unless you have other combustible materials of highly flammable plants adjacent to wall. Siding products and assemblies that are better able to resist penetration of flames into stub cavity can be found at http://osfm.fire.ca.gov/codedevelopment/wildfireprotectionbuildingconstruction	\$\$\$\$ Contractor
Gaps in joints of siding panels or simple laps joint or plain bevel joint	Panel products have fewer lap joints and can be considered less vulnerable. Wood siding shingles and plain bevel lap joints are most vulnerable.	\$\$\$\$ Contractor
Foundations – post and beam style foundation can result in vulnerable crawl spaces		
Open crawl space and post and beam style foundations	Enclose foundation area with non-combustible skirting material. Be sure to address moisture management issues through drainage and ventilation. Remove combustible materials stored in the crawl space or under the building.	\$-\$\$\$ Contractor or Experienced DIY

Retrofitting Existing Structures to Increase Wildfire Survivability

<i>Survivability Threat</i>	<i>Retrofit</i>	<i>Relative Cost/ Ease</i>
Decks can lead a wildfire directly into you home		
Deck boards of combustible material	Replace deck boards with fire or ignition resistant material. Learn more about choosing wildfire-resistant decking at http://osfm.fire.ca.gov/codevelopment/wildfireprotectionbuildingconstruction	\$\$\$-\$\$\$\$ Contractor or Experienced DIY
Combustible materials stored under or on top of deck	Move material to an enclosed area away from structure. If you choose to enclose underside of deck be sure to address moisture management issues through drainage and ventilation	Free-\$\$ Experienced DIY
Enclose area below deck to reduce accumulation of wind blown debris or embers	Use solid non-flammable material (fiber cement product or exterior fire retardant treated plywood; not lattice to enclose area below decks. Be sure to address moisture management issues through drainage and ventilation	\$\$-\$\$ Experienced DIY
Garages can lead a wildfire directly to combustible materials that can threaten you home		
Garage doors can provide embers access to combustible materials	Install weather seal at the perimeter of garage doors to reduce ember penetration.	\$\$-\$\$ Experienced DIY
Fencing can lead a wildfire directly into you home		
Combustible fencing that attaches directly to the home	Replace combustible fencing with a non-combustible section that is at least 5 feet long. Consider chin link gate, wood frame with metal mesh infill or other non-combustible material. Do not allow climbing vegetation to grown on fence.	\$\$-\$\$ Experienced DIY

Sustaining the Plan

6.1 Updates of the Wildfire Action Plan

To ensure long-term success, the El Cerrito - Kensington Wildfire Action Plan needs to include a method for changing, updating and revising the plan. As partners learn from successes and challenges, they may identify new actions or propose a shift in how decisions are made or actions accomplished.

It is important to recognize that many communities may lack resources to engage in a complex planning, monitoring and adaptive management process. The collaborative planning effort for the El Cerrito Kensington Action Plan was funded through a generous grant; however, similar funding is unlikely to be available for update efforts. Regardless, streamlined communications can leverage the initial planning effort to maintain a functioning collaboration and provide updates.

Project partners have agreed to the following roles in sustaining the Plan:

- Diablo Fire Safe Council: Communicate electronically with stakeholders and other partner agencies collecting information for annual status of the plan. Annual information will include an update of the status of geographically based fuel reduction projects and prevention strategies listed in Section 4 Prioritizing Fuel Reduction Treatments and of the priority action projects identified in Sections 3, 4 and 5. Updated information will be posted on the DFSC website and sent electronically to Fire Action Plan planning participants and other interested stakeholders.
- Contra Costa County Association of Fire Chiefs: The Contra Costa County Association of Fire Chiefs provides a forum for interagency information sharing across the many fire jurisdictions. They are in the unique position to continue to foster inter-jurisdictional cooperation on WUI issues and emergency response.
- East Bay Regional Park District: As part of the annual budget development process EBRPD reports the prior year's fuels management accomplishments and present the proposed program of work for the next year. EBRPD works with cooperators to plan and conduct work in a way that improves fire protection and program efficiencies for both EBRPD and the cooperator. Information will be shared with DFSC, which will incorporate the information into the Fire Action Plan updates.
- CAL FIRE: The Santa Clara Unit Strategic Plan updates provide opportunity to view wildfire protection for Contra Costa County in context with neighboring Alameda, Santa Clara and San Joaquin Counties. Contra Costa County is Battalion 6 of seven geographically based battalions in CAL FIRE's Santa Clara Unit. The Santa Clara Unit collects information from the various stakeholders to update their unit plan. The most recent plan was completed in May 2016. Each update of the unit plan will be shared with DFSC, which will incorporate the information into the Fire Action Plan updates.
- Kensington Fire Protection District: The Fire Chief provides an annual report to the Kensington Fire Protection Board that can identify upcoming issues as well as progress. KFPD maintains updated information on the water delivery system in

Kensington. KPFD also matches community fundraising for Kensington Fuel Reduction Group's projects. Information will be shared with DFSC, who will incorporate the information into the Fire Action Plan updates.

- El Cerrito Fire Department: The Fire Chief provides an annual report to the City Council that can identify upcoming issues as well as progress. Information will be shared with DFSC, which will incorporate the information into the Fire Action Plan updates.
- Other Partners: **Note: This section to be further developed as the plan is implemented.**

6.2 Monitoring, Evaluating and Adapting Strategies

The following framework offers strategies to monitor, evaluate and adapt the elements of the Fire Action Plan¹. Strategies might include:

- Only monitor what matters. Partners should identify key goals and objectives and make decisions to monitor what is most important to the long-term sustainability of their Fire Action Plan.
- Tracking accomplishments and identifying the extent to which Plan goals have been met. This might include development of "success stories." (Examples can be found at www.diablofiresafe.org/current.html)
- Examining collaborative relationships and their contributions to Fire Action Plan implementation, including existing participants and potential new partners.
- Identifying actions and priority fuels reduction projects that have not been implemented and determining why.
- Setting a course for future actions and updating the plan.
- Evaluating the resources necessary for successful Plan implementation. Identifying needed community and homeowner outreach and education programs.

In conducting an evaluation, it is important to think critically about the kind of information that is accessible, what is most important to evaluate and how it might influence future priority activities. For example, the number of homes in a community with an evacuation plan provides insight into the level of preparedness among the general public, but may be difficult to obtain. Each action team should adapt the evaluation process; how information and results are documented with an eye toward refinements of the Fire Action Plan to meet their own needs. The following ideas for monitoring and evaluation are provided as suggestions.

6.2.1 Evaluating Information, Education and Collaborative Planning

Understanding the extent to which information, education and collaborative planning have been maintained, grown or diminished through implementation of the Fire Action Plan will

¹ Evaluation framework adapted from: Community Wildfire Protection Plan Evaluation Guide. Prepared by Resource Innovations, Institute for a Sustainable Environment. August 2008. University of Oregon. http://static.colostate.edu/client-files/csfs/pdfs/eval_9-8-08_web.pdf Accessed 2/28/2017.

help identify strategies to strengthen future efforts. Monitoring and evaluation might address any of the following:

Programs: What kind of information, education and public involvement has the Plan or its implementation fostered? Public meetings, trainings, field trips, demonstration projects, household visits, youth engagement, community events, clean up days.

Public Awareness: What kind of change in public awareness about wildfire has resulted from the plan or implementation actions? Knowledge of fire policies and regulations; change in number and type of human caused wildfires; awareness of local efforts to increase emergency preparedness; outreach efforts or techniques.

Activities: What kinds of activities have citizens taken to reduce wildfire risks as a result of the plan? Defensible space, fuel reduction, household emergency plans, woody debris disposal.

New information: Are there new or updated data sources that might change the risk assessment and influence priorities? Changes to process used to identify fuels treatments priorities? New wildfire related policies or ordinances? Index to access specific information?

Involvement: Who has been involved with the Fire Action Plan development and implementation? How have relationships changed or grown? What expertise or resources did partners bring? Numbers and types of partners (local, regional, state)? Accomplishments or challenges?

Implementation Capacity: How has the collaborative process assisted in implementing the Fire Action Plan and building capacity for the community to reduce wildfire risk? More partnerships, increased financial resources, increases in programs or activities.

Engagement: Have the partners involved in the planning process remained engaged in the implementation? Have new partners become involved?

6.2.2 Evaluating Suppression Capability and Emergency Preparedness

Comprehensive emergency management plays a key role in reducing a community's risk from wildfire and other hazards. Integrating federal requirements for multi-hazard mitigation within the Fire Action Plan efforts can help access federal funds through FEMA and Department of Homeland Security.

Alignment: Is the Plan aligned with emergency operations plans and other hazard mitigation plans? Addressing National Incident Management System (NIMS), State Emergency Management Plan (SEMS) and Incident Command Training (ICS).

Evacuation Planning: Does the Plan include an evacuation plan? Has the plan been tested? Are there local neighborhood evacuation plans, information about special population needs, animal and livestock preparedness, communication systems, resources list?

6.2.3 Evaluating Fuel Reduction

Monitoring hazardous fuels reduction projects on private and public lands will assist stakeholders in understanding the extent to which risk reduction goals and native habitat preservation goals are being accomplished. Monitoring these projects allows stakeholders to better understand the extent of resources needed to accomplish and maintain goals, as well as to help in identifying future priorities.

Fuel Reduction on Public Lands: How many acres have been treated on public land that had been identified as high priority projects? Total number of acres treated; number and percentage in WUI, number and percentage within Fire Action Plan priority area; treatment types.

Fuel Reduction on Private Lands: How many acres have been treated on private land that had been identified as high priority projects? Total number of acres treated; treatment types; number of homes with defensible space; number and percentage treated in low income communities/ vulnerable populations.

Compliance: How many homes are in compliance with local fuel reduction requirements?

Joint Projects: How many projects have spanned ownership boundaries including public and private lands?

Jobs: Economic development and local jobs resulting from fuels reduction or restoration activities. Number of green tons/ volume of woody fuel utilized. Number of part-time/ full time jobs. Percentage of local labor.

Environmental Protection: Ecological monitoring to assess environmental outcomes and maintenance requirements. Community surveys using photo points. Vegetation/ invasive weed surveys.

6.2.4 Evaluating Reducing Structure Ignitability

Monitoring structure survivability of existing structures and new developments span a wide range of actions including retrofit, codes, public knowledge and emergency response capability.

Fire Statistics: Wildfire loss in year reporting on. Number of fire starts within high hazard areas. Number of human caused fires. Number of homes damaged/ lost to wildfire.

Codes and Regulations: Current codes and regulations for wildfire hazards. Building codes (Chapter 7A or better). How is new development increasing in high hazard areas. Requirements for new developments. Mechanism for long term open space fuel management. Infill requirements. Infrastructure design requirements (roads, sprinklers, utilities = NFPA standards).

Public Education: Public knowledge and understanding about structure ignitability. Homeowner education on how to reduce ignitability. How many homes have been retrofitted. Number and percentage of homes in high hazard area included in fire district.

Response Capabilities: Changes of local fire agency response capability. Increase in certified fire fighters/ wildfire training. Upgraded or new fire suppression equipment. Changes in response time, infrastructure, access routes.

Signature Page

**El Cerrito Kensington
Fire Action Plan
An Appendix to the Contra Costa Countywide
Community Wildfire Protection Plan**

Mutual Agreement

This Fire Action Plan developed for El Cerrito and Kensington as an Appendix to the Contra Costa Countywide Community Wildfire Protection Plan:

- Was collaboratively developed. Interested parties and agencies managing land in the El Cerrito and Kensington area have been consulted.
- Identifies and prioritizes areas for hazardous fuels reduction treatments and recommends types and methods of treatments that will protect community members and values at risk.
- Recommends measures to reduce ignitability of structures throughout the area addressed by the plan.

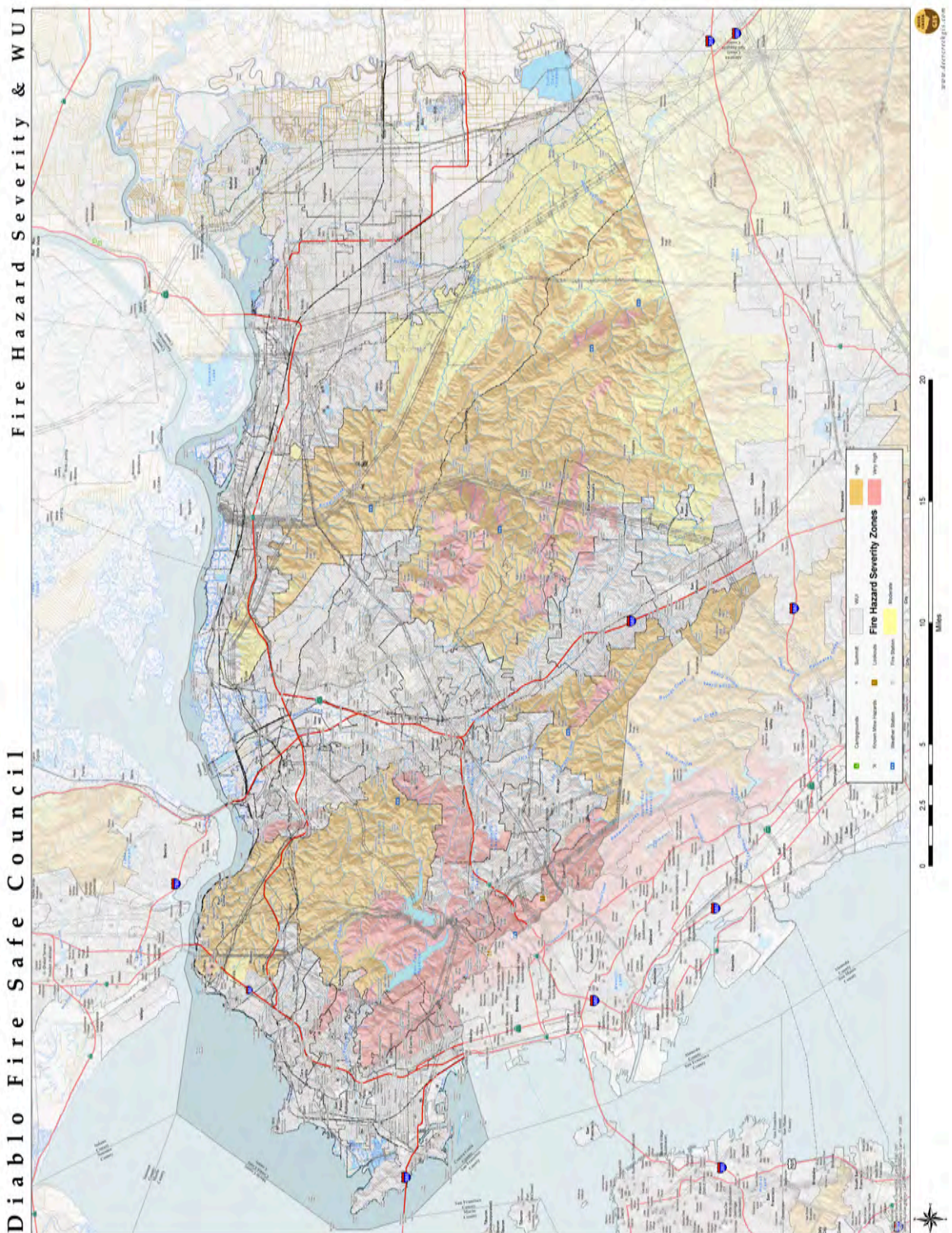
The following letters are from the entities that mutually agree with the contents of this Fire Action Plan.

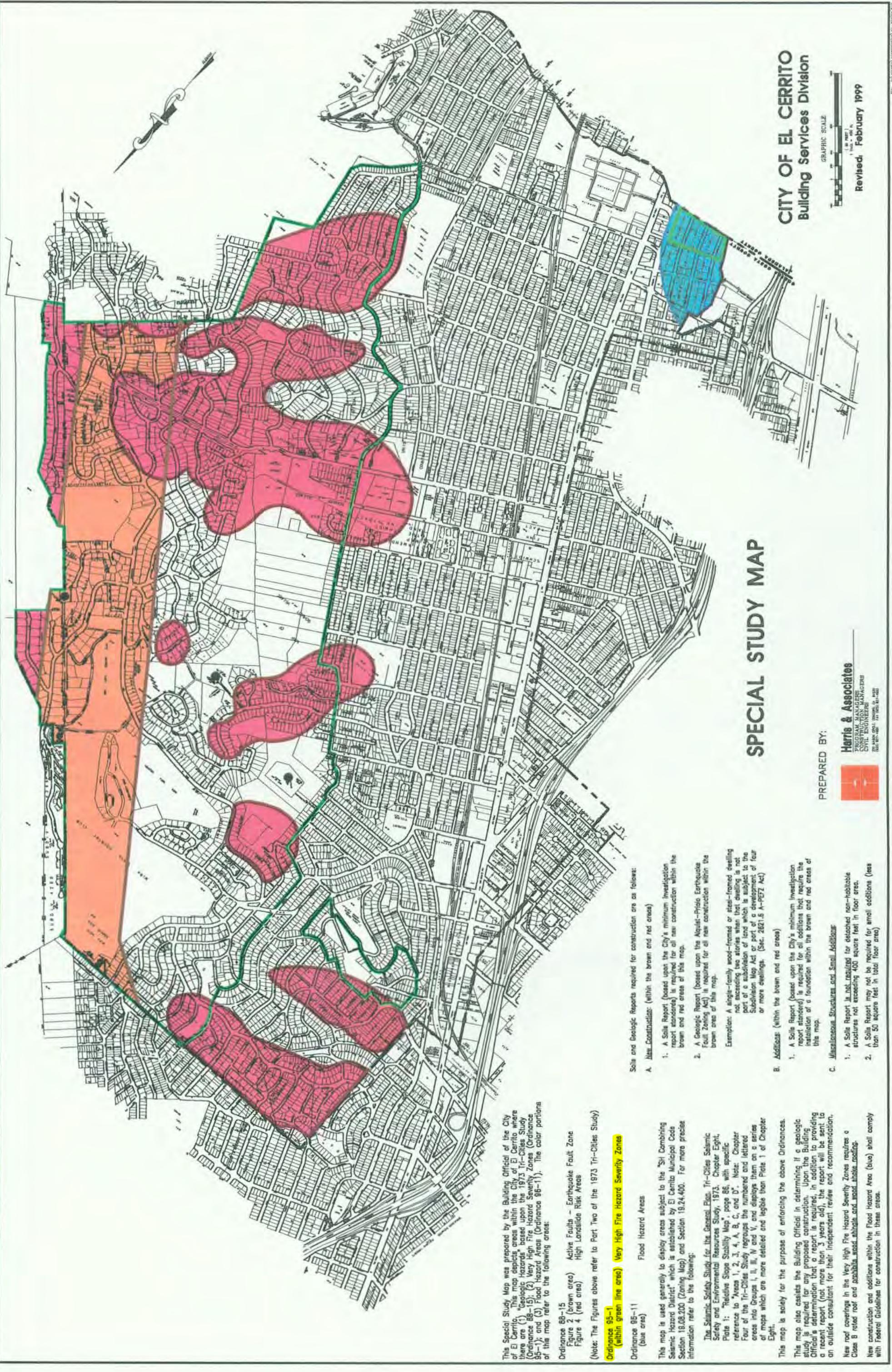
Approved by Resolution
Contra Costa County Board of Supervisors

City of El Cerrito, City Council

Appendix A

Fire Hazard Severity and WUI Area Maps





This Special Study Map was prepared by the Building Official of the City of El Cerrito. This map depicts areas within the City of El Cerrito where there are (1) "Geologic Hazards" based upon the 1973 Tri-Cities Study (Ordinance 88-15); (2) Very High Fire Hazard Severity Zones (Ordinance 95-1); and (3) Flood Hazard Areas (Ordinance 96-11). The color portions of this map refer to the following areas:

- Ordinance 88-15 Active Faults - Earthquake Fault Zone
- Figure 2 (brown area)
- Figure 4 (red area) High Landslide Risk Areas
- (Note: The Figures above refer to Part Two of the 1973 Tri-Cities Study)
- Ordinance 95-1 (within green line area) Very High Fire Hazard Severity Zones
- Ordinance 96-11 (blue area) Flood Hazard Areas

This map is used generally to display areas subject to the "SH Combining Seismic Hazard District" which is established by El Cerrito Municipal Code Section 18.08.200 (Zoning Map) and Section 18.24.400. For more precise information refer to the following:

The Seismic Safety Study for the General Plan, Tri-Cities Seismic Safety and Environmental Resources Study, 1973, Chapter Eight, Plate 1: "Relative Slope Stability Map," page 86, with specific reference to "Areas 1, 2, 3, 4, A, B, C, and D". Note: Chapter Four of the Tri-Cities Study regroups the numbered and lettered areas into Groups I, II, III, IV and V, and displays them on a series of maps which are more detailed and legible than Plate 1 of Chapter Eight.

This map is solely for the purpose of enforcing the above Ordinances. This map also assists the Building Official in determining if a geologic study is required for any proposed construction. Upon the Building Official's determination that a report is required, in addition to providing a recent report (not more than 3 years old), the report will be sent to an outside consultant for their independent review and recommendation. New roof coverings in the Very High Fire Hazard Severity Zones requires a Class B rated roof and probably wood shingle and wood shake roofing. New construction and additions within the Flood Hazard Area (blue) shall comply with Federal Guidelines for construction in these areas.

Soils and Geologic Reports required for construction are as follows:

- A. **New Construction:** (within the brown and red areas)
 1. A Soils Report (based upon the City's minimum investigation report standards) is required for all new construction within the brown and red areas of this map.
 2. A Geologic Report (based upon the Aquatic-Piedmont Earthquake Fault Zoning Act) is required for all new construction within the brown area of this map.

Exemption: A single-family wood-framed or steel-framed dwelling not exceeding two stories when that dwelling is not part of a subdivision of land which is subject to the Subdivision Map Act or part of a development of four or more dwellings. (Sec. 2621.6 A-PEZ Act)
- B. **Additions:** (within the brown and red areas)
 1. A Soils Report (based upon the City's minimum investigation report standard) is required for all additions that require the installation of a foundation within the brown and red areas of this map.
- C. **Miscellaneous Structures and Small Additions:**
 1. A Soils Report is not required for detached non-habitable structures not exceeding 400 square feet in floor area.
 2. A Soils Report may not be required for small additions (less than 50 square feet in total floor area)

SPECIAL STUDY MAP

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CITY OF EL CERRITO
 Building Services Division
 GRAPHIC SCALE
 1" = 100' N
 Revised, February 1999