

**Hagstrom Parcel Split  
APN: 104-100-67  
Subdivision**

**Wildland Fire Safe Plan**

**Prepared for:**

**Wesley Hagstrom**

**Prepared by:**

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**December 1, 2010**

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## Hagstrom Parcel Split

Approved by:

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Date

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Date

Prepared by:

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William F. Draper  
RPF 898

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Date

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## **I. PURPOSE AND SCOPE**

Communities are increasingly concerned about wildfire safety. Drought years coupled with flammable vegetation and annual periods of severe fire weather insure the potential for periodic wildfires.

The purpose of this plan is to assess the wildfire hazards and risks of the Hagstrom parcel split, to identify measures to reduce these hazards and risks and protect the native vegetation. There are light fuel hazards and gentle topography associated with this proposed project both on and adjacent to the project.

The possibility of large fires occurring when the parcel split is complete will be greatly reduced. However, small wildfires in the open space areas and on the larger lots may occur due to the increase in public uses.

Incorporation of the fire hazard reduction measures into the design and maintenance of the future parcels will reduce the size and intensity of wildfires and help prevent catastrophic fire losses. State and County regulations provide the basic guidelines and requirements for fire safe mitigation measures and defensible space around dwellings. This plan builds on these basic rules and provides additional fire hazard reduction measures customized to the topography and vegetation of the development with special emphases on the interface of homes and wildland fuels.

The scope of the Hagstrom Parcel Split Wildland Fire Safe Plan recognizes the extraordinary natural features of the area and designs wildfire safety measures which are meant to compliment and become part of the community design. The Plan contains measures for providing and maintaining defensible space around future homes. Plan implementation measures must be maintained in order to assure adequate wildfire protection.

Homeowners who live in and adjacent to the wildfire environment must take primary responsibility along with the fire services for ensuring their homes have sufficient low ignitability and surrounding fuel reduction treatment. The fire services should become a community partner providing homeowners with technical assistance as well as fire response. For this to succeed it must be shared and implemented equally by homeowners and the fire services.

## **II. FIRE PLAN LIMITATIONS**

The Wildland Fire Safe Plan for the Hagstrom parcel split does not guarantee that wildfire will not threaten, damage or destroy natural resources, homes or endanger residents. However, the full implementation of the mitigation measures will greatly reduce the exposure of homes to potential loss from wildfire and provide defensible space for firefighters and residents as well as protect the native vegetation. Specific items are listed for homeowner's attention to aid in home wildfire safety.

### **III. THE HAGSTROM PARCEL SPLIT WILDLAND FIRE SAFE PLAN**

#### **1. PROJECT DESCRIPTION**

The Hagstrom parcel split is located on the west side of Rattlesnake Bar Road at Burkett Lane in the Pilot Hill area. The property is .85 miles from Russell Hollow to Burkett Lane. Any new road development will depend on actual building envelopes that will be utilized in the future. At the north end of the project there is an existing driveway serving an off-site parcel. Parcel 2 may have a long driveway which will comply with Fire Safe regulations. A new turn-around will be constructed at the end of the driveway. The driveway and turn-around will conform to fire department standards. All lots shall have their own well and fire hydrant/standpipe. There is not any road work anticipated to Burkett Lane. Any road construction will be to El Dorado County Department of Transportation (DOT) standards. A fuel hazard reduction zone along the entire length of Burkett Lane and any new road will be needed. This project is planning to split parcel APN:104-100-67 totaling 129.9 acres into 4 lots. Each lot will be a minimum of 20 acres in size and the largest lot will be 47.8 acres. All the lots shall have well water provided by the individual owners. The individual wells shall provide for domestic and individual fire protection. A fire department connection/standpipe will be installed near each new residence. Residential fire sprinklers shall be required by the California Residential Building Code. All houses shall have their own water tank for its domestic water and fire sprinklers. These tanks need to be a minimum of 4,250 gallons. The actual size of the tank will be determined by the fire sprinkler system once designed for each specific residence. The existing residence will be required to install a fire protection system consisting of 3,000 gallons of water with a fire department connection.

The El Dorado County Fire Protection District provides all fire and emergency medical services to this project. The California Department of Forestry and Fire Protection (CAL FIRE) has wildland fire responsibility in this state responsibility area (SRA).

#### **2. PROJECT VEGETATION (FUELS)**

For wildfire planning purposes the vegetation is classified as follows:

- (a) ground fuels- annual grasses, scattered coffeeberry, poison oak, and toyon with downed limbs (Brush)
- (b) overstory- scattered live oaks, black oaks, blue oaks, ponderosa pine and California gray pines.

The property is on north to northeast facing slopes up to approximately 30%. Fire hazard reduction of the fuels will be extremely important around the house sites and surrounding areas. Portions of the property are currently being grazed. Ladder fuels will need to be eliminated. Limbing of trees is important to reduce their susceptibility from a ground fire. Tree spacing on the slopes is a critical component to attaining the required fire safe clearances. A separation of the brush fuels and trees are essential for creating the defensible space around the residence. CDF guidelines for the 100 foot clearance requirements are attached.

#### **3. PROBLEM STATEMENTS**

- A. The brush fuels on the slopes will ignite and have a rapid rate of spread.

Fire in the grass and brush fuels on the slopes is the most serious wildfire problem for this project.

**B. Risk of fire starts will increase with development.**

The greatest risk from fire ignition will be along roads and on large lots as human use on these areas increases.

**C. Provisions must be made to maintain all fuel treatments.**

The wildfire protection values of fuel reduction are rapidly lost if not maintained. Continued review of potential ladder fuels to maintain a fire safe environment is very important. Annual maintenance by June 1 of each year is necessary.

**D. Typical home design and siting often does not recognize adequate wildfire mitigation measures.**

A review of many wildfires has conclusively shown that most home losses occur when: (1) there is inadequate clearing of flammable vegetation around a house, (2) roofs are not fire resistant, (3) homes are sited in hazardous locations, (4) firebrand ignition points and heat traps are not adequately protected and (5) there is a lack of water for suppression.

**4. GOALS**

- A. Modify the continuity of high hazard vegetation fuels.
- B. Reduce the size and intensity of wildfires.
- C. Ensure defensible space is provided around all structures.
- D. Design fuel treatments to minimize tree removal.
- E. Ensure fuel treatment measures are maintained.
- F. Identify fire safe structural features.
- G. Help homeowners protect their homes from wildfire.

**5. WILDFIRE MITIGATION MEASURES**

Wildfire mitigation measures are designed to accomplish the Goals by providing and maintaining defensible space and treating high hazard fuel areas. Fire hazard severity is reduced through these mitigation measures. The Wildland Fire Safe Plan places emphasis on defensible space around structures.

The driveway placement, fire hydrant location at each residence and fuel treatments will be extremely important in the development of these new lots. Fuel treatment zones of at least 10 feet in width shall be installed along the road and driveways and around the new fire hydrants.

All residences shall be required to have NFPA 13D fire sprinkler systems. A water storage tank shall be required. The individual water tanks for fire protection must be kept full at all times as they will be incorporated into the domestic water system. A minimum of 4,250 gallons for domestic and fire protection is required (See Table A). Actual tank size will be determined by the square footage of the residence. Consulting with El Dorado County Fire Protection shall be required for water tank sizing. It must have an external sight guage to determine the actual water level in the tank. All external plumbing shall have freeze protection. The fire hydrant on this system needs a minimum of 20psi at the hydrant. A valve with a 2 1/2" NTS male outlet shall be required on the fire hydrant. Annual maintenance should include flushing of the system and testing of the pump to ensure proper pressure.

This parcel split is in a Very High Fire Hazard Severity Zone. Wildland-Urban Interface Fire Areas Building Standards will be required in new construction. These standards address roofing, venting, eave enclosure, windows, exterior doors, siding, and decking.

Clearance along the road and around structures is very important and necessary. Fire Safe specifications state that all trees in the fuel treatment zones shall be thinned so the crowns are not touching. Branches on remaining trees shall be pruned up 10 feet as measured on the uphill side of the tree. Brush shall be removed. Grasses shall be kept mowed to a 2 inch stubble annually by June 1. Any tree crown canopy over the driveways shall be pruned at least 15 feet up from the driveway surface.

The fuel treatment zone shall continue along both sides of the common driveway and be at least 10 feet wide. This zone is in addition to the clearances required by state law. The State required Fire Safe clearances (PRC 4291) shall be implemented around all structures (See CDF Guideline). Clearances may be required at the time of construction.

**More restrictive standards may be applied by approving El Dorado County Authorities. Approval of this plan does not by itself guarantee approval of this project.**

**Mitigation Measures:**

- **Lots 1 acre and larger shall be landscaped to Firescaping Standards Zones I and II. (See Appendix A)**
  - a. **Responsibility- homeowner at the time construction starts and completed after construction**
- **Driveways shall be 12 feet wide. Driveways shall comply with the DOT weight standards. Any driveway over 300' long shall have a turnout at or near the midpoint. Driveways over 400' in length shall have a turn-around at the residence.**
  - a. **Responsibility- homeowner**
- **All private driveway gates shall be inset on the driveway at least 30 feet from the road. Gate opening shall be 2 feet wider than the driveway. Knox lock assess shall be provided to the fire department.**
  - a. **Responsibility- homeowner**
- **All homes shall have Class A listed roof covering.**
  - a. **Responsibility- homeowner**
- **Decks that are cantilevered over the natural slope shall be enclosed.**
  - a. **Responsibility- homeowner (See Appendix C for guidelines)**
- **The houses shall be constructed with exterior wall sheathing that shall be rated noncombustible.**
  - a. **Responsibility-developer**
- **Windows and glass doors on the sides of the structure shall have tempered glass and fire resistant frames.**
  - a. **Responsibility-builder**
- **Rafter tails shall be enclosed with noncombustible material on the sides of the structure.**

- a. Responsibility-builder
- Gutters and downspouts shall be noncombustible.
  - a. Responsibility-builder
- Attic and floor vents shall be covered with ¼ Inch, or less, noncombustible mesh and horizontal to the ground.
  - a. Responsibility-builder
- All lots shall have a 30 foot setback for buildings and accessory buildings and a 30 foot setback from the center of the road.
  - a. Responsibility- builder

**6. OTHER FIRE SAFE REQUIREMENTS**

- A. New driveway turn-arounds shall be constructed after consulting with El Dorado County Fire Protection District for specifications.
- B. Each new property owner prior to construction shall be required to contact El Dorado County Planning Services/Building Department to have the residential fire sprinklers plans approved. All fire sprinkler systems shall be designed and installed by a licensed contractor.
- C. Each residence on a well shall have a minimum of 3,000 gallons of water stored for domestic and fire protection usage. Water storage supply may need to be more than the minimum based on the square footage of the residence. El Dorado County Fire shall be consulted prior to construction to determine actual tank size needed. The domestic well shall be the source of water supply for this system.
- D. The residence on Parcel 3 shall install a 3,000 gallon fire protection system for external fire protection.
- E. The private fire hydrant at each residence shall be located within 150' but not closer than 50' to the residence and have a turn-around for emergency equipment. Each fire hydrant shall a valve with a 2 1/2" NTS male outlet and 20 psi at the hydrant.
- F. 10' fuel treatment zone along both sides of the road and driveways shall be installed and annually maintained by June 1 to the Fire Safe specifications.
- G. Individual lot owners shall be responsible for maintaining the fuel treatment zone along the portion of Burkett Lane involved in this project.
- H. Roads shall be posted "No Parking" on both sides of the road.
- I. A Notice of Restriction shall be filed with the final parcel map which stipulates that a Wildland Fire Safe Plan has been prepared and wildfire mitigation measures must be implemented. The road shall be built, if needed prior to the final map filing.
- J. The project shall meet all the Public Resource Codes 4290 as amended (the 1991 SRA Fire Safe Regulations- Article 2 Access, Article 3 Signing, Article 4 Water, Article 5 Fuels), County and Fire Department ordinances.



**K. The home/property owners are responsible for any future fire safe or building code changes adopted by the State or local authority.**

**L. Only fire rated composite deck material or wood shall be allowed.**

**V. Appendix**

## APPENDIX A

### HAGSTROM PARCEL SPLIT FIRESCAPING STANDARDS

Firescaping is an approach to landscaping to help protect homes from wildland fires. The goal is to create a landscape that will slow the advance of a wildfire and create a Defensible Space that provides the key point for fire fighting agencies to defend the home. This approach has a landscape zone surrounding the home containing a balance of native and exotic plants that are fire and drought resistant, help control erosion, and are visually pleasing. Firescaping is designed not only to protect the home but to reduce damage to oaks and other plants.

#### Zone I

The zone extends to not less than 30 feet from the house **or to the property line which ever is less** in all directions and has a traditional look of irrigated shrubs, flowers gardens, trees and lawns. All dead trees, brush, concentrations of dead ground fuels (tree limbs, logs etc. exceeding 1 inch in diameter) shall be removed. All native oak trees and brush species are pruned up to 10 feet above the ground as measured on the uphill side but no more than 1/3 of the live crown. The plants in this zone are generally less than 18 inches in height, must be slow to ignite from wind blown sparks and flames. Such plants should produce only small amounts of litter and retain high levels of moisture in their foliage year around. Gray pines shall be excluded from this zone. Native and exotic trees are permitted inside the Zone, but foliage may not be within 10 feet of the roof or chimney. Grass and other herbaceous growth within this zone must be irrigated or if left to cure must be mowed to a 2 inch stubble, chemically treated or removed. Such treatment must be accomplished by June 1, annually. This zone has built in firebreaks created by driveways, sidewalks etc.

#### Zone II

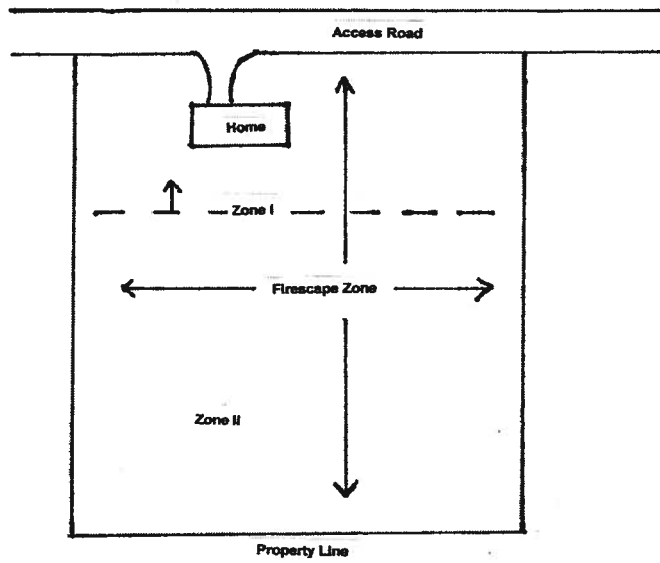
This Zone adds 70 feet to Zone I and extends a minimum of 100 feet from the house in all directions, **or to the property line which ever is less**, and is a transition area to the outlying vegetation. The zone is a band of low growing succulent ground covers designed to reduce the intensity, flame length and rate of spread of an approaching wildfire. Irrigation may be necessary to maintain a quality appearance and retain the retardant ability of the plants. All dead trees, brush, concentration of dead ground fuels (tree limbs, logs etc.) exceeding 2 inches in diameter shall be removed. Annual grasses shall be mowed after they have cured to a 2 inch stubble by June 1, annually. Native trees and brush species may be preserved and pruned of limbs up to 8 feet above the ground as measured on the uphill side.

#### For All Zones With Oaks

Mature, multi stemmed Oaks can present a serious wildfire problem if untreated. Treat the Oaks as to the following specifications: (a) remove all dead limbs and stems and (b) cut off green stems at 10 feet above the ground as measured on the uphill side that arch over and are growing down towards the ground.

**APPENDIX A-1  
FIRESCAPING ZONES  
EXHIBIT**

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**Typical Lot in Oak Woodland**  
(SCHEMATIC, NOT TO SCALE)

## **APPENDIX B**

### **HAGSTROM PARCEL SPLIT FUEL TREATMENT SPECIFICATIONS For OAK WOODLAND Within The Designated Fuel Treatment Areas**

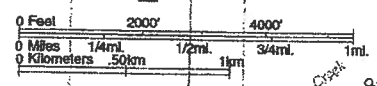
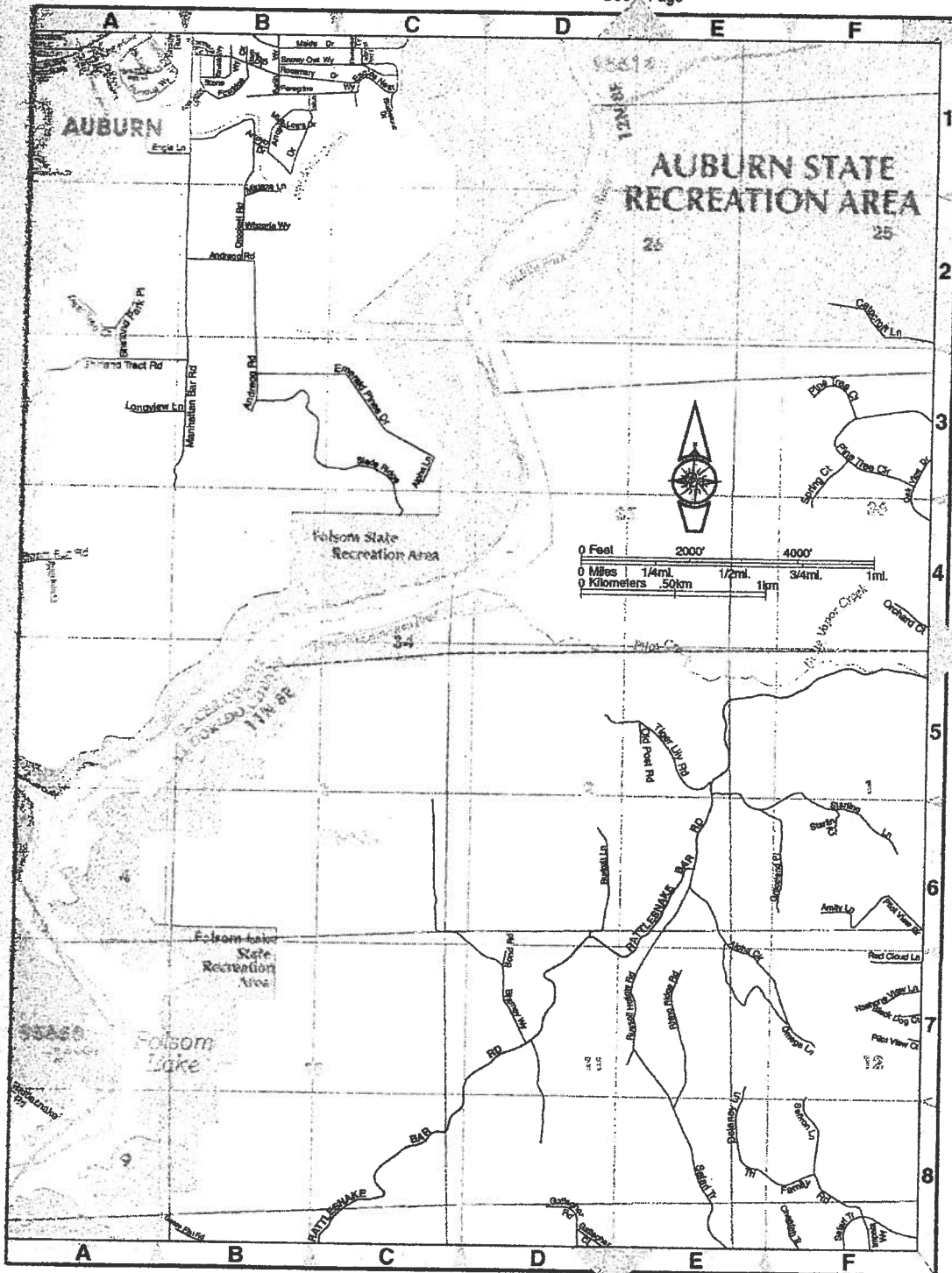
1. Leave all live trees where possible.
2. Remove all dead trees.
3. Remove all brush.
4. Prune all live trees of dead branches and green branches 15 feet from the ground as measured on the uphill side of the tree, except no more than 1/3 of the live crown is removed. All slash created by pruning must be disposed of by chipping or hauling off site.
5. Annually by June 1, reduce the grass or weeds to a 2 inch stubble by mowing, chemical treatment, disking or a combination of treatments.
6. Mature, multi stem Oak trees: remove all dead limbs and stems, cut off green stems at 10 feet above the ground as measured on the uphill side that arch over and are growing down towards the ground.
7. Gray pines within 30 feet of a house shall be removed. Those pines in Zone II shall be isolated with no brush understory within the dripline of the tree.

## **APPENDIX C**

### **HAGSTRO PARCEL SPLIT ENCLOSED DECK GUIDELINES**

The purpose of enclosing the underside of decks that are cantilevered out over the natural slope is to help prevent heat traps and fire brands from a wildfire igniting the deck or fuels under the deck.

1. Does not apply to decks that are constructed using fire resistant materials such as concrete, steel, stucco etc.
2. Any deck shall not use non fire rated composite deck material. Wood is acceptable.
3. This applies to decks one story or less above natural slopes.
4. Combustible material must not be stored under the deck.



See Page

# APN 10410067



Disclaimer: This depiction was compiled from unverified public and private sources and is illustrative only. No representation is made as to accuracy of this information. Parcel boundaries are particularly unreliable. Users make use of this depiction at their own risk.

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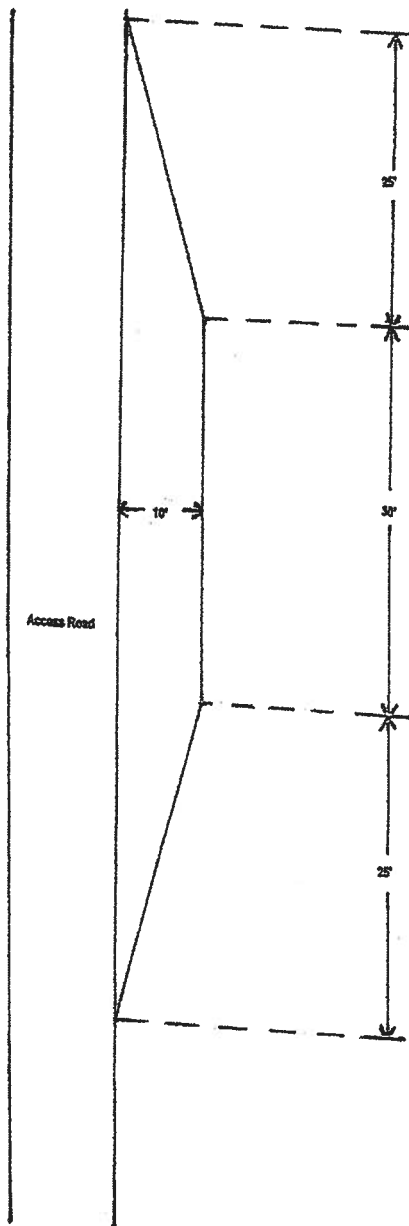


Map displayed in State Plane Coordinate System  
(NAD 1983 California Zone 2, feet)

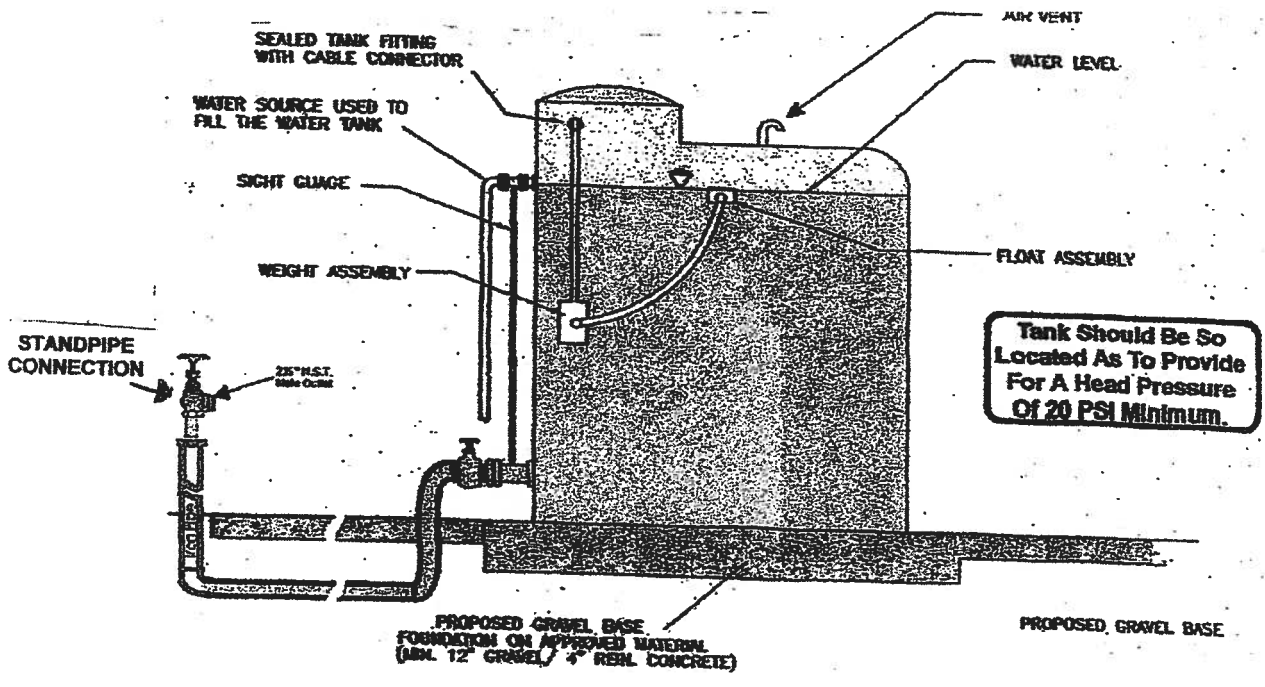
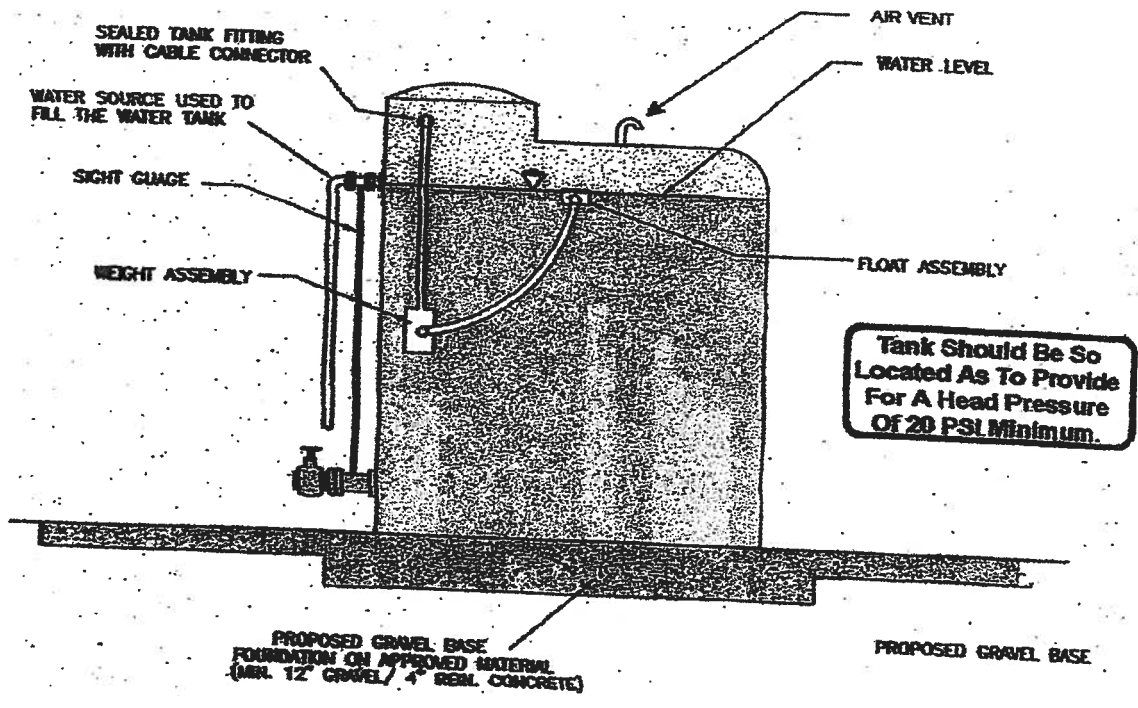


**DIAGRAM B**

**DRIVEWAY TURNOUT**  
DIAGRAM  
(NOT TO SCALE)





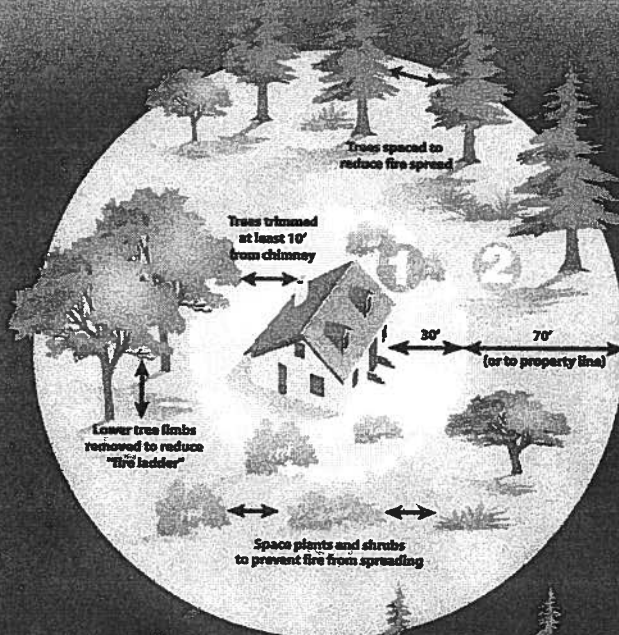


**Table A**

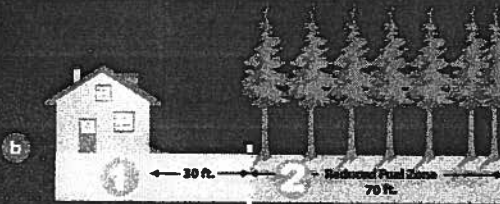
<b>BUILDING SQUARE FOOTAGE</b>	<b>MINIMUM WATER SUPPLY REQUIRED (HOSE STREAM+SPRINKLERS +DOMESTIC) (GALLONS)</b>	<b>RESERVED FOR HOSE (GALLONS)</b>	<b>AUTO FILL LEVEL (GALLONS)*</b>
Up to 2,800	4,250	2,000	3,500
2,800 – 3,500	4,750	2,500	4,000
3,501 – 4,200	5,250	3,000	4,500
4,201 – 4,900	5,750	3,500	5,000
4,901 – 5,600	6,250	4,000	5,500
5,601 – 6,300	6,750	4,500	6,000
6,301 – 7,000	7,250	5,000	6,500
7,001 – 7,700	7,750	5,500	7,000
7,701 – 8,400	8,250	6,000	7,500
8,401 – 9,100	8,750	6,500	8,000
9,101 – 10,000	9,250	7,000	8,500
10,001 – 10,500	9,750	7,500	9,000
10,501 – 11,200	10,250	8,000	9,500
11,201 – 11,900	10,750	8,500	10,000
11,901 – 12,100	11,250	9,000	10,500
12,101 – 12,800	11,750	9,500	11,000
12,801 – 13,500	12,250	10,000	11,500
13,501 – 14,200	12,750	10,500	12,000
14,201 – 14,900	13,250	11,000	12,500
14,901 – 15,600	13,750	11,500	13,000
15,601 – 16,300	14,250	12,000	13,500
16,301 – 17,000	14,750	12,500	14,000
17,001 – 17,700	15,250	13,000	14,500
17,701 – 18,400	15,750	13,500	15,000
18,401 – 19,100	16,250	14,000	15,500
19,101 – 19,800	16,750	14,500	16,000

CAL FIRE GUIDELINE

# 100' DEFENSIBLE SPACE MAKE YOUR HOME FIRE-SAFE



or



Contact your local CDF office, fire department,  
or Fire Safe Council for tips and assistance.  
[www.fire.ca.gov](http://www.fire.ca.gov)

## Why 100 Feet?

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

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

### Learn, Clean and Green

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

### Reduced Fuel Zone

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

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

- ① Create horizontal and vertical spacing between plants. The amount of space will depend on how steep the slope is and the size of the plants.
- ② Large trees do not have to be cut and removed as long as all of the plants beneath them are removed. This eliminates a vertical "fire ladder."

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

Remove all build-up of needles and leaves from your roof and gutters. Keep tree limbs trimmed at least 10 feet from any chimneys and remove dead limbs that hang over your home or garage. The law also requires a screen over your chimney outlet of not more than 1/2 inch mesh.

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



April 2010