WILDFIRE MITIGATION PLAN

For Mark Hansen 44310 Peak to Peak Highway Docket: SPR - 07 - 073 Inspection date: 7/9/2007

Prepared for: Mark Hansen 44310 Peak to Peak Highway Ward, CO Phone: 303-459-3224 Prepared by: Matthew Jedra Forester - Boulder District Phone: (303) 823-5774 E-mail: mjedra@lamar.colostate.edu

PURPOSE OF A WILDFIRE MITIGATION PLAN

The purpose of a Wildfire Mitigation Plan is to give guidelines for reducing wildfire hazards around a home or other structures through fuels reduction. It is a document to inform urban interface home owners of the dangers and responsibilities of living in the interface. This plan will help outline the initial and ongoing fuels reduction needed to create and maintain an effective wildfire defensible space. However, having a wildfire mitigation plan, implementation of a defensible space thinning, and following all the recommendations as outlined in this plan <u>does not guarantee that your home will survive a wildland fire; however, in combination they will give your home the best potential probability to survive a wildland fire.</u>

SITE LOCATION AND PROPERTY DESCRIPTION

The property is located in Section 6, Township 1N, and Range 72W, Humbolt Lode Survey No. 298-A, E 1/2 less easterly 150 ft. The fire protection district is the Indian Peaks Fire Protection District (303-459-3452). There is a 1,154 sq.ft. existing structure on site. A new a detached garage and studio of 1,980 sq.ft is proposed for the existing residence, creating a total of 3,134 sq.ft. The lot is 1.58 acres in size and has a modest ~2-20 percent slope with an east aspect. The site is at 9,240 feet in elevation and located on a midslope which is relatively dry. Highway 72 to the west and County road 100 to the north create a small natural barrier that may help stop or slow the spread of a surface/crown fire on the site.

CONSTRUCTION DESIGN AND MATERIALS

The proposed house will have a 4-level complex design with a complex roofline and will be oriented with an east aspect. The overall design of the structure greatly influences how it will withstand a wildfire. Complex building forms create heat traps, areas where the walls and roof members intersect on another where eddies form and hot air and embers from a fire can collect. It is important to keep these areas clear of combustibles such as needles and brush.

The roofing material will consist of metal. Falling embers and fire brands from a wildfire can land on a roof and ignite the roof, either by directly heating the roofing material, or by igniting light fuels (pine needles) that have collected on the roof. It is recommended to place screening over gutters and/or make a yearly check to keep them clear of leaves and needles.

The exterior wall material is to be 2x8 pine log siding. Soffits and fascia are to be 3/4" thick plywood.

The structure will have 18 medium to large sized windows with the primary viewing direction being toward the east side of the structure. Windows will be double glazed with Low-E coating and tempered glass where required. Frames are to be made of wood and aluminum clad. Exterior doors are to be 1-3/4", fire-rated, and made of wood and steel. All operable windows must be provided with screening that is constructed of either aluminum, galvanized steel, copper or of an approved material that when exposed to flame for 15 seconds, will not burn through or melt, and remains intact. Windows are one of the weakest parts of a structure with regards to wildfire. They often crack and fail before the structure itself ignites, providing a direct path for embers and radiant heat to reach the interior. It is best to minimize the number of windows, especially on the downhill side of the structure. Fire typically burns up hill faster and will create a great deal of radiant heat.

A deck will be constructed of wood and composite materials and supported by timber psots. The deck will be located on the second story and open overhead and underneath and isolated from the surrounding landscape. The deck will have brick overlaying a weed barrier. This brick material should be underneath the entire deck surface and to 2' past the drip-line of the deck.

UTLITIES

The propane tank is to be set on a pad of crushed rock overlaying a weedbarrier ~30 feet to the east of the residence. Utilities for the property are from a pole which is located to the east of the residence. The septic field is located ~70 feet to the east-souteast of the residence. A well is located ~20 feet north of the residence.



DRIVEWAY ACCESS FOR EMERGENCY VEHICLES

Access the property from Boulder by heading west on Boulder Canyon Drive to Nederland, head north 11 miles on the Peak to Peak past Ward, house is on the right before the Millstone Café.

The existing driveway will create minimal site distrubance and soil compaction and will require the removal of few trees. The driveway will be 12 feet wide with a vertical clearance of 13'6" and a grade that is less than 12 percent. The driveway is approximately 77 feet long therefore no turn around or pullouts will be required will be required.

EMERGENCY WATER SUPPLY FOR FIRE FIGHTING

The water source will be from a 1,000 gallon domestic cistern ~20ft to the north. The cistern will have a dry hydrant connection with a 6 inch NH threaded connection and cap (note that a 2-1/2" adaptor may be needed, depending upon the requirements of your fire protection district). Alternatively, a contribution may be made to the fire protection district community cistern fund (if available). Contact the Indian Peaks Fire Protection District (303-459-3452) for more information and specific details.

FUELS REDUCTION

All trees to be removed are marked with blue spray paint. All trees that are to remain within zones 1 and 2 will be unmarked. Harvested wood that remains on site will be stacked at least 30 feet from the house and at the same elevation when possible. Slash from the harvest will be hauled or burned for fire wood. Note that if you decide to burn piles, you must obtain a valid Open Burning Permit from the Boulder County Environmental Health Department (303-441-1180) and notify your local fire protection district (Indian Peaks Fire Protection District 303-459-3452).

FOREST COMPONENT AND HEALTH

The site has a dominant overstory consisting of lodgepole pine (*Pinus contorta*) with a lodgepole pine, ponderosa pine (*Pinus pondersoa*), Douglas-fir (*Pseudotsuga menziesii*), limber pine (*Pinus flexilus*), and quaking aspen (*Populus tremuloides*) component. The understory consists of a dense/sparse cover of native grasses, forbs and shrubs. The forested area is best represented by Fuel Model 9. Fuel Model 9 is represented by closed canopy stands of ponderosa pine and mixed conifer. Understory may consist of small trees and shrubs, grasses and moderate concentrations of down, dead woody litter. High amounts of needle litter may be present. This model can exist from foothills to subalpine.

Dwarf mistletoe was found in Limber pine on the property. Contact the Colorado State Forest Service for information on management and treatment of dwarf mistletoe.

DEFENSIBLE SPACE MANAGEMENT

There are three defensible space zones to be created around the structure(s) on the site. Please note that it is possible that one or more of these zones will cross over the subject property onto adjacent properties. Property boundaries must be respected; mitigation work is not required beyond immediate boundaries. However, landowners are encouraged to contact and work with neighbors if property lines limit the ability to mitigate within the prescribed area. **Defensible space** is a benefit, not only to the individual but also to the community as a whole.

Zone 1 - Starts at the foundation and extends out 15 feet in all directions from the outside edge of the structure(s). Zone 1 is broken down into three segments:

Zone 1A - Consists of the structure(s) themselves and the area immediately adjacent to and surrounding the structure(s) on all sides. A five-foot wide, non-flammable strip should be created using crushed gravel over a no weed barrier material. This strip will also extend back under, and out to, two feet past the drip line of any decks.

Zone 1B - Extends out from Zone 1A. In this zone, all highly flammable vegetation should be removed. Any large dead woody material on the ground should also be removed. Firewise plants should be used for landscaping and re-vegetation. Grasses should be irrigated when possible and mowed to a maximum height of 6 to 8 inches twice per growing season to a distance of 30 feet from the structure.

Zone 1C - This zone extends out from Zone 1B to 15 feet from the house. All understory trees (ladder fuels) should be removed as marked. These are small seedling and sapling size trees that can be ladders for fire to get in the crowns of the larger trees. A few of the larger, healthy trees can to be retained for screening. All remaining trees in this zone should be pruned to a height of 10 feet. They must be well spaced so that the crowns are not touching (10 foot minimum crown spacing). No trees should overhang the house or decks, unless approved by Boulder County or CSFS as "part of the structure" with additional fuels reduction around those trees

to insure the defensible space integrity. Trees should be at least 15 feet away from the house on all sides, and a minimum of 10 feet from chimneys.

Zone 2 - This zone extends out from Zone 1C, and acts as a transition zone between the heavily thinned areas near the house to the existing forest setting. It extends down slope between 100-170 feet depending upon slope steepness. Zone 2 also extends on either side of the structure a minimum of 100 feet and behind the house between 70-100 feet assuming no boundary restrictions. Tree spacing begins as in Zone 1C and gradually decreases as you approach the outer edge of the zone. Thinning and crown spacing becomes greater in areas of steep slopes. Ladder fuels and poor quality, suppressed and/or diseased trees, 6 to 8 inches in diameter, make up the majority of the removals. The remaining mature trees should be pruned to a height of 10 feet at the intersection of Zones 1 and 2 with limbing reduced in height to 6 feet as you approach Zone 3. If there are any questions pertaining to slope and the changes in thinning spacing and distance regulations please refer to <u>www.colostate.edu/Depts/CSFS/</u> and find the *Quick Facts 6.302* <u>Creating Wildfire Defensible Space.</u>

Zone 3 - This zone extends out from Zone 2 to the edge of the property. It may extend out to areas that are not part of the immediate mitigation efforts. In this zone, a few thicker clumps of trees are acceptable, as well as some unpruned trees near the outer edge. Thinning in this zone adds some protection, but is aimed more at forest health. Trees that are of poor quality or form, or have insect or disease infestations, should be removed. Slash in this zone can be lopped and scattered and/or piled for wildlife use.

- Thin suppressed trees and trees with disease and insect infestations and retain the larger, healthier trees.
- Snags can be retained for wildlife.
- Some slash in this zone can be lopped and scattered and/or piled for wildlife enhancement and shelter.
- Large amounts of slash should be disposed of by chipping, hauling to an approved site, or burning.
- For burning permits, check with your local fire protection district.

MAINTENANCE AND RECOMMENDATIONS

As detailed in fact sheet 6.302, <u>Creating Wildfire Defensible Zones</u>, an important factor that determines a structure's ability to survive wildfire is defensible space. Defensible space is a maintained area around a structure where fuels (flammable materials) are modified to slow the possible spread of wildfire to the structure, as well as from the structure to the surrounding areas. Defensible space provides a place where structure protection and fire suppression operations may occur. Wildfire hazard mitigation work breaks up fuel continuity, potentially decreasing a wildfire's intensity, and for more effectiveness should be completed beyond a home's defensible space, zone 1 and 2, area into zone 3.

In addition to the above recommendations, several other measures can be taken to make your home more fire safe and add an additional measure of safety for your family. While not required through site plan review, the following measures should be undertaken to maintain the home and defensible space in the future.

- Maintain your defensible space yearly; contact your local forester for a 5-year maintenance inspection
- Establish an escape route and safety zone with the aid of your local fire protection district
- Keep firewood at least 30 feet away from buildings; clear weeds and grass from around pile
- Do not stack fresh cut wood against live trees this could invite unwanted insects
- When possible, maintain an irrigated green space; mow grasses 6" to 8" high
- Connect, and have available, a minimum of 50 feet of garden hose with an adjustable nozzle
- Have an emergency evacuation plan in place (included in wildfire mitigation plan)
- Be aware of fire danger; check the Boulder Fire Weather website at <u>www.crh.noaa.gov/bou/awebphp/fireindx.php.html</u>
- Keep driveways and property address marked with reflective easy to see signs
- Maintain screens on foundations, soffit vents, roof vents, and attic openings
- · Get rid of unnecessary accumulations of debris and trash from yards
- · Keep tools such as shovels, rakes, ladders, and axes available and ready for use
- Clean debris from the roof and gutters at least two times annually
- · Check screens and maintain spark arresters on chimneys annually
- Avoid storing combustibles under decks such as wood piles, scrap lumber, and fuels

DEFINITIONS

Aspect – Exposure. The direction a slope faces.

Canopy - The cover of branches and foliage formed collectively by crowns of adjacent trees.

Crown - Branches and foliage of a tree.

Dominant fuel type - Matter that would carry a fire, found on the ground.

Duff - a layer of accumulated dead organic matter (pine needles).

Eddies - Small wind occurrences that are separate from normal wind flows.

Fuel Model – A number system that identifies the types of fuels found on the property that will directly influence fire behavior.

<u>Fire danger</u> - An assessment of both fixed and variable factors of the fire environment, which determine the ease of ignition, rate of spread, difficulty of control, and the fire impact.

<u>Fire hazard</u> - The potential fire behavior for a fuel type, regardless of the fuel type's weather-influenced fuel moisture content or its resistance to fireguard construction. Assessment is based on physical fuel characteristics, such as fuel arrangement, fuel load, condition of herbaceous vegetation, and presence of elevated fuels.

<u>Fire management</u> - The activities concerned with the protection of people, property and forest areas from wildfire and the use of prescribed burning for the attainment of forest management and other land use objectives, all conducted in a manner that considers environmental, social and economic criteria.

Fire risk - The probability or chance of fire starting determined by the presence and activities of causative agents.

Fuel continuity - The proximity of fuels to each other. Helps determine if a fire can sustain itself.

Forest health - A forest condition that is naturally resilient to damage; characterized by biodiversity, it contains sustained habitat for timber, fish, wildlife, and humans, and meets present and future resource management objectives.

Ladder fuels - Fuels that provide vertical continuity between the surface fuels and crown fuels in a forest stand, thus contributing to the ease of torching and crowning.

Limb (verb) -To remove the branches from a tree.

Noxious weeds - Any weed so designated by the Weed Control Regulations and identified on a regional district noxious weed control list.

Overstory – The tree species that forms the uppermost forest layer (dominant and co-dominant).

<u>Slash</u> – The residue left on the ground as a result of forest and other vegetation being altered by forest practices or other land use activities.

Snag - Standing dead tree, often used by wildlife such as woodpeckers, owls, and other various mammals.

Understory - Plants that grow underneath the overstory species.

Wildland urban interface – a popular term used to describe an area where various structures (most notably private homes) and human developments meet or are intermingled with forest and other vegetative fuel types.





Annual fire safety checklist

- Thin trees and brush properly within defensible space.
- Remove trash and debris from defensible space.
- Remove needles and pine cones from window wells.
- Remove trees growing through a porch or other portions of a structure.
- Clear leaves and debris from the roof and gutters of structures.
- Remove branches that overhang a chimney or roof.
- Stack firewood uphill from a home or on a contour away from the home.
- Use noncombustible roof materials.
- Place shutters, fire curtains or heavy drapes on windows.
- · Place screens on foundation and eave vents.
- Enclose sides of stilt foundations and decks.
- · Remove any combustibles from under decks, porches or entrances ways.
- Use a chimney screen or spark arrester in fireplaces.
- Clear vegetation from around fire hydrants, cisterns, propane tanks, etc.
- Place placards on garages if storing flammable materials inside.
- Make sure that an outdoor water supply is available with a hose, nozzle and pump.
- Post address signs that are clearly visible from the street or road.
- Make sure that driveways are wide enough for fire trucks and equipment.
- Check with appropriate highway agencies to make sure load limits are posted on bridges and for the appropriate protocol for posting load limits for bridges on private property.
- Install and test smoke detectors.
- Practice a family fire drill and evacuation plan.

Evacuation tips

- If a wildfire is threatening your area, listen to the radio for updated reports and evacuation information.
- Confine pets to one room and make plans to take care of them in the event of evacuation.
- Arrange for temporary housing with a friend or relative whose home is outside the threatened area. Leave a note in a prominent place in your home that says where and how you can be contacted.
- If your home is threatened by wildfire, you will be contacted and advised by law
 enforcement officers to evacuate. If you are not contacted or you decide to stay and help
 defend your home, evacuate pets and family members who are not needed to protect
 your home.
- Remove important documents, mementos, etc. from the possible fire area.
- Choose an evacuation route away from the fire if possible. Watch for changes in the speed and direction of the fire and smoke.

Take a disaster supply kit containing:

- Drinking water.
- A change of clothing and footwear for each family member.
- Blanket or sleeping bag for each person.
- First-aid kit and prescription medications.
- Emergency tools including a battery-powered radio, flashlight and extra batteries.

- Extra set of car keys and credit cards, cash or traveler's checks.
- Extra pairs of eyeglasses or other special items for infants, elderly or disabled family members.

Defending your home

Whether you choose to stay to defend your home or to evacuate, complete as many of the following preparations as possible.

- DO NOT JEOPARDIZE YOUR LIFE. NO MATERIAL ITEM IS WORTH A LIFE.
- Wear fire-resistant clothing and protective gear.
- Remove combustible materials from around structures.
- Close or cover outside vents and shutters.
- Position garden hoses to reach the entire house, but do not turn the water on until it is needed. Hoses should have an adjustable nozzle.
- Place large, full water containers around the house. Soak burlap sacks, small rugs or large rags in the containers.
- Place a ladder against the roof of the house on the opposite side of the approaching wildfire. Place a garden hose near the ladder, prepared as described previously.
- Place portable pumps near available water supplies, such as pools, hot tubs, creeks, etc.
- Close all windows and doors. Do not lock them.
- Close all inside doors.
- Turn on a light in each room and all outside lights. Leave them on even during daylight hours.
- Fill tubs, sinks and similar containers with water.
- Shut off gas supplies to structures at outside meters. Shut of propane supplies at the outside meter of the tank.
- Remove curtains made of lace, nylon or other light materials. Close blinds, heavy drapes and fire resistant window covers.
- Move overstuffed furniture into the center of the house, away from windows and sliding doors.
- Cars should be parked in the garage, facing out. Close the windows of the vehicle but do not lock the doors. Leave the keys in the ignition.
- Close the garage door but leave it unlocked. Disconnect automatic garage door openers.

For additional copies of these checklists, visit <u>www.colostate.edu</u> and search for wildfire, view the Colorado State Cooperative Extension fact sheet on <u>Forest Home Fire Safety</u>, or contact the local Cooperative Extension office usually listed under the county government section of your local phone book.

(Information provided by Colorado State University Cooperative Extension and the Colorado State Forest Service.)

Safety Zone Guidelines

A Safety Zone is an area that in the event of a wildland fire you could survive the passing fire without the aid of a fire shelter. A natural safety zone could be an area already burned clean by the fire (in the black), rock areas where flashy fuels are absent, or large bodies of water. A manmade safety zones could be pre-constructed sites such as clear cuts. It should be close enough to your home to consider escape time to reach the safety zone. They should not be located upslope or downwind of the fire or in heavy fuels.

- 1. Avoid locations that are downwind from the fire.
- 2. Avoid locations that are in chimneys, saddles, or narrow canyons.
- 3. Avoid locations that require a steep uphill escape route.

- 4. Take advantage of heat barriers such as lee side of ridges, large rocks, or solid structures.
- 5. Burn out safety zones prior to flame front approach.
- 6. For <u>radiant heat only</u>, the distance separation between you and the flames must be at least four times the maximum flame height. This distance must be maintained on all sides, if the fire has ability to burn completely around the safety zone. Convective heat from wind and/or terrain influences will increase this distance requirement.

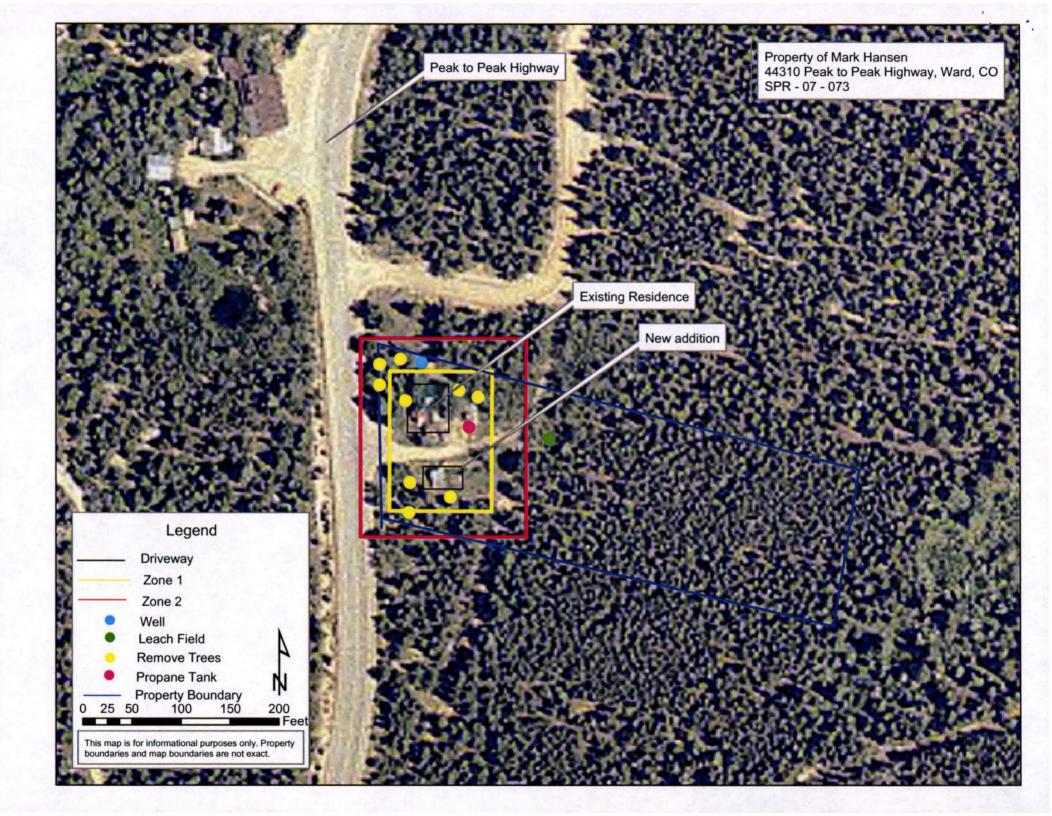
Flame Heights	Distance separation	Area in Acres
10 feet	40 feet	1/10 acre
20 feet	80 feet	1/2 acre
50 feet	200 feet	3 acres
75 feet	300 feet	7 acres
100 feet	400 feet	12 acres
200 feet	800 feet	50 acres

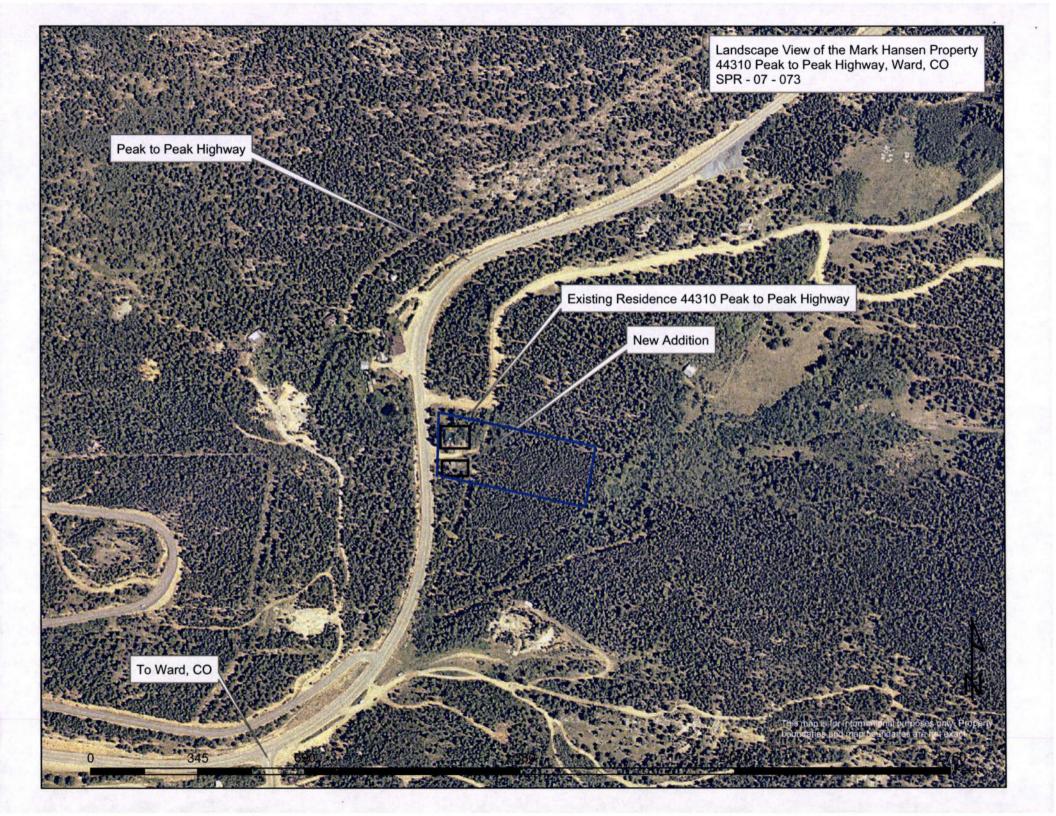
Calculations Assuming No Slope and No Wind

<u>Note</u>: Distance separation is the radius from the center of the safety zone to the nearest fuels. When fuels are present that will allow the fire to burn on all sides of the safety zone this distance must be doubled in order to maintain effective separation in front, to the sides, and behind the person.

Area in Acres is calculated to allow for distance separation on all sides for a <u>three person family</u> <u>and a vehicle</u>. One acre is approximately the size of a football field or exactly 208 feet x 208 feet.

Example: Given a fire with 10 foot flame heights (no wind or slope). You would need a minimum of 40 feet between you and the flames. So your total safety zone should be 80 feet x 80 feet. If you are settled into the middle of the safety zone you will have a minimum distance of 40 feet to each edge of the zone.





DIRECTIONS FOR FILLING OUT FORM:

Please fill out the data form as completely as possible. You may email it to Matthew Jedra at <u>mjedra@lamar.colostate.edu</u> or fax it to 303-823-5768, or bring it to the scheduled appointment.

Any **Bolded** categories will be filled in by the Colorado State Forest Service (CSFS) representative at the time of initial site visit. If you have any questions about this form please contact Matthew Jedra at 303-823-5774.

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	Wildfire Mitigation Plan FIELD DATA FORM
Inspection Date:	-7/9/07
Landowner name:	MARK HANSEN
Mailing address:	44310 PEAK to PEAK HWY
City, State, Zip:	WARD, CO. 80481
Site address:	SAME
Phone number:	303-459-3224
Road access: road)	on thury 72 (2.9.54) (Directions from main access
Docket Number:	SPR -07-073 (SPR, LU, Etc.)
Section:	6
Township:	<u>- T1N</u>
Range:	<u>R72</u>
Legal Description:	Hum BOLDT LODG 298 E1/2 LESS FLY 150 FT

Elevation:	9240	(feet)
Lot size:	(Acres)	
Driveway length: 77 home)	to proposed GARAGE	(Actual length in feet from road to
Driveway trees remov	ved: (few/many/none)
House design:	4-LEVEL (simple/comp	blex
Home buffer material stone)	:	(Stone/crushed gravel/decorative
Roof Design:	METAL (simple/comp	blex)) making simpler
Roof material: tiles/metal)	METAL	_ (Asphalt shingles/concrete
Soffits type:		Plywood/hardboard/cement board)
Siding material: (Cement/hard)	LOG SIDINC (2'88') Pinz
Windows (#):	(approximate	number of windows) 20 with windows
Windows Size: 36	×18' to 48"+6(On average:	small/medium/large)
Windows Frames:	WOOD Alum CLAD	(Wood/aluminum/aluminum clad)
Windows Aspect:	EAST	_ (Dominant viewing direction)
Sliding Glass Doors:	ມາວພ <u>ະ</u> (I	Location and Number) Z French (5') BETWEEN
Window Construction	THERMO / HIGH ALT .	_(Tempered glass/e-coating/etc.)
Window wells:	JONE	(Number and location if present)
Door Material:	wood & STREL	_ (Wood/steel/fiberglass/composite)
Deck material:	785	_ (Wood/composite materials)
Deck Description: overhead)	200 LEVEL	_ (Enclosed/open underneath or

Deck support type: posts/logs/steel/concr	ete/stone)	(Timber
Deck buffer material:	Brock	(Crushed rock/gravel)
Deck weed barrier:	NA	(Fiberglass/polyester)
Number of Structures	: <u>2</u> (All structures	s to be present
Existing Structures: (House/barn/garage/e	HOUSE MUD BAR.	<u>∼</u>
New Structure: addition/etc)	peno so wind & ca	GARAGE (House/Barn/new
Structure SQR. FT.:	1154 Erisburg	(Total square feet of structure)
Utility Location: structure)	HOVE INDER GRAND! Front (West)	(Total square feet of structure) (Total square feet of structure) ST (BACK OF HOME/GARAGE) (Pole/buried: Direction from
Structure aspect:	East	(Dominant facing direction/view)
Garage if detached:	1980	(Total square feet)
Out buildings: sheds, cabins, ect)	44	(Total square feet of
Leach field:	70' ESE	(Distance from house, and direction)
Cistern size:	1000	(gallons) Domestic
Cistern:	20' N	(Distance from house, and direction)
Cistern Type:	Domestie (concrette)	(Domestic Cistern or Fire Cistern)
Making a donation to	community cistern :	(Yes or No)
	e local fire department :	(Yesor No) IPFPD
Are you required to h	ave a sprinkler system :	(Yes or Ng)
Water supply:	well	_(Well or main line)
Well (if applicable):	20' NORTH OF HOW	(Distance from house, and direction)
Propane or natural ga	S: PROPANE	

Propane Tank location:	ENT OF HOUSE (Distance from house and direction	n)
Slash disposal:	(Chipped/hauled/burned/lop-scatter)	
Can you provide a copy of a r	ap with locations : $\frac{\sqrt{25}}{\sqrt{25}}$ (Yes or No)	

This part will be filled out by the CSFS inspecting forester

FPD:	IPFPD		
Dominant fuel type:	Mixed Control	6.FS	(Grass/forbs/shrubs/slash/etc)
Dominant overstory:	tópá DF	N. C. M. W.	
Co-dominant oversto	pry: Asp	1111	
Fuel model type:	9		
Aspect:		5 1 1 1 m	(Direction of slope)
Slope:	2-15		
Building site: slope)	Mil	(Chim	ney/saddle/valley/ridge/mid-
Site moisture:	Marst/Dra		
Natural fire barrier:	H72		
Insect & Disease Dia	gnosis: Mitlefor	april a	

0	THE DEED Materia 16th
8	THIS DEED, Mrde this 16th day of September. 1970, between
0000	JOSEPH H. WALTEF. and MARGARET T. WALTER
CCOR	
E.	of the County of Boulder and State of
- and	THIS DEED, Mrde this 16th day of September . JOSEPH H. WALTEF. and MARGARET T. WALTER of the County of Boulder and State of Colorado, of the first part, and GARY BRODMERKEL and DEBORAH BRODMERKEL of the County of Boulder and State of Colorado, of the second part:
81	CART MODELINES and DEDURAN DRUMANAL
00000	of the County of Boulder and State of Colorado, of the second part: WITNESSETH, that the said part of the first part, for and in consideration of the sum of Six Thousand Two Hundred Fifty and 00/100DOLLARS,
XXXXX	to the said part ies of the first part in hand paid by the said parties of the second part, the receipt whereof is
0000	hereby confessed and acknowledged, ha Vegranted, bargained, sold and conveyed, and by these presents do grant, bargain, sell, convey and confirm unto the said parties of the second part, their heirs and assigns forever, not in tenancy in common but in joint tenancy, all the following described lot or parcel of land, situate, lying and
0000	being in the County of Boulder and State of Colorado, to-wit:
20000	All of the Humboldt Lode Survey No. 298-A lying East of the Easterly line of that portion of said Humboldt Lode conveyed to the Department of Highwayz,
0000	State of Colorado, by deed recorded April 11, 1959 in Book 1071 at Page 455, Boulder County Records: EXCEPT however, the Factoria 160 fact of and Harbert
2000	Lode Mining Claim.
00	8
000	8
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CXXX	TOGETHER with all and singular the hereditament. and appurtenances thereunto belonging, or in anywise
000000000000000000000000000000000000000	ppertaining, the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and all the state, right, title, interest, claim and demand whatsoever of the said part iesof the first part, either in law or equity,
0000	of, in and to the above bargained premises, with the hereditaments and appurtenances. TO HAVE AND TO HOLD the said premises above bargained and described, with the appurtenances, unto the said
8 8+b	arties of the second part, their heirs and assigns forever. And the said partles of the first part, for them sel ves .
×.	of the second part, their heirs and assigns, that at the time of the ensealing and delivery of these presents
8	vell seized of the premises above conveyed, as of good, sure, perfect, absolute and indefeasible estate of inheritance, in a we good right, full power and lawful authority to grant, bargain, sell and convey the same in Q
× 1	nanner and form aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, it are an and encumbrances of whatever kind or nature source except managements and
× 1	nanner and form aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, area, assessments and encumbrances of whatever kind or nature scever, except reservations, restrictions and easements of record, if any, and the Ganaval Proparty Terras
000000000	nanner and form aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, axes, assessments and encumbrances of whatever kind or nature soever. except reservations, restrictions and easements of record, if any, and the General Property Taxes for 1970 due and payable in 1971 and subsequent thereto which Parties of the Second Part assume and agree to nay
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	nanner and form aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, axes, assessments and encumbrances of whatever kind or nature soever. except reservations, restrictions and easements of record, if any, and the General Property Taxes for 1970 due and payable in 1971 and subsequent thereto which Parties of the Second Part assume and agree to pay. and the above bargained premises in the quiet and peaceable possession of the said parties of the second part, their heirs and assigns, against all and every person or persons lawfully claiming or to claim the whole or any part thereof, the said part ¹⁰⁵ of the first part shall and will WARRANT AND FOREVER DEFEND. IN WITNESS WHEREOF the said part 165 of the first part ha Ve hereunto set their thand 3 and the day and year first above written.
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	namer and form aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, restrictions and enumbrances of whatever kind or nature soever. except reservations, restrictions and easements of record, if any, and the General Property Taxes for 1970 due and payable in 1971 and subsequent thereto which Parties of the Second Part assume and agree to pay. and the above bargained premises in the quiet and peaceable possession of the said parties of the second part, their heirs are tables of the first part shall and will WARRANT AND FOREVER DEFEND. IN WIRNESS WHEREOF the said part ies of the first part ha Ve hereunto set their hand 3 and eal the day and year first above written. Signed, Sealed and Delivered in the Presence of [SEAL]
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	namer and form aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, restrictions and encumbrances of whatever kind or nature soever. except reservations, restrictions and easements of record, if any, and the General Property Taxes for 1970 due and payable in 1971 and subsequent thereto which Parties of the Second Part assume and agree to pay. and the above bargained premises in the quiet and peaceable possession of the said parties of the second part, their heirs and assigns, against all and every person or persons lawfully claiming or to claim the whole or any part thereof, the said part ¹⁰⁵ of the first part shall and will WARRANT AND FOREVER DEFEND. IN WITNESS WHEREOF the said part 165 of the first part ha Ve hereunto set their Fhand 8 and eal the day and year first above written. Signed, Sealed and Delivered in the Presence of STATE OF COLORADO, County of Boulder }s. The foregring instrument was achnewledged before me this 16th day of September
	namer and form aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, axes, assessments and encumbrances of whatever kind or nature soever. except reservations, restrictions and encumbrances of record, if any, and the General Property Taxes for 1970 due and payable in 1971 and subsequent thereto which Parties of the Second Part assume and agree to pay. and the above bargained premises in the quiet and peaceable possession of the said parties of the second part, their heirs and assigns, against all and every person or persons lawfully claiming or to claim the whole or any part thereof, the said art 105 of the first part shall and will WARRANT AND FOREVER DEFEND. IN WITNESS WHEREOF the said part 105 of the first part ha Ve hereunto set their hand S and eal the day and year first above written. Signed, Sealed and Delivered in the Presence of STATE OF COLORADO, County of Boulder and part is and the second part. Trictering interment manalement and have and the second part. The formation of Boulder and the second part. If the second part she and agree to pay. If the second part she and will ware and the second part. The formation of the second part she and the second part thereof. The formation of Boulder and the second part th
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	namer and form aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, axes, assessments and encumbrances of whatever kind or nature sorver. except reservations, restrictions and easements of record, if ary, and the General Property Taxes for 1970 due and payable in 1971 and subsequent thereto which Parties of the Second Part assume and agree to pay. and the above bargained premises in the quiet and peaceable possession of the said parties of the second part, their heirs are assigns, against all and every person or persons lawfully claiming or to claim the whole or any part thereof, the said art ¹⁰⁵ of the first part shall and will WARRANT AND FOREVER DEFEND. IN WINNESS WHEREOF the said part 165 of the first part ha Ve hereunto set their frand 3 and eal the day and year first above written. STATE OF COLORADO, County of Boulder The forenting instrument was acknowledged before me this 105th day of September 307. Joseph H. Walter and Margaret T. Walter 307. Witness my hand and official seal.
	namer and form aforesaid, and that the same are free and clear from all former aud other grants, bargains, sales, liens, exec, assessments and encumbrances of whatever kind or nature soever. except reservations, restrictions and easements of record, if any, and the General Property Taxes for 1970 due and payable in 1971 and subsequent thereto which Parties of the Second Part assume and agree to pay. and the above bargained premises in the quiet and peaceable possession of the said parties of the second part, their heirs and assigns, against all and every person or persons lawfully claiming or to claim the whole or any part thereof, the said and assigns, against all and every person or persons lawfully claiming or to claim the whole or any part thereof, the said art ¹⁰⁵ of the first part shall and will WARRANT AND FOREVER DEFEND. IN WITNESS WHEREOF the said part 105 of the first part ha Ve hereunto set their Fhand 3 and eal the day and year first above written. Signed, Sealed and Delivered in the Presence of County of Boulder [SEAL] STATE OF COLORADO, County of Boulder [st. The breaking instrument was acknewledged before me this loth day of September My Commission expires

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