

Living with **WILDLAND FIRE** A Guide for Homeowners



Brought to you by your local fire departments



Living with **FIRE**

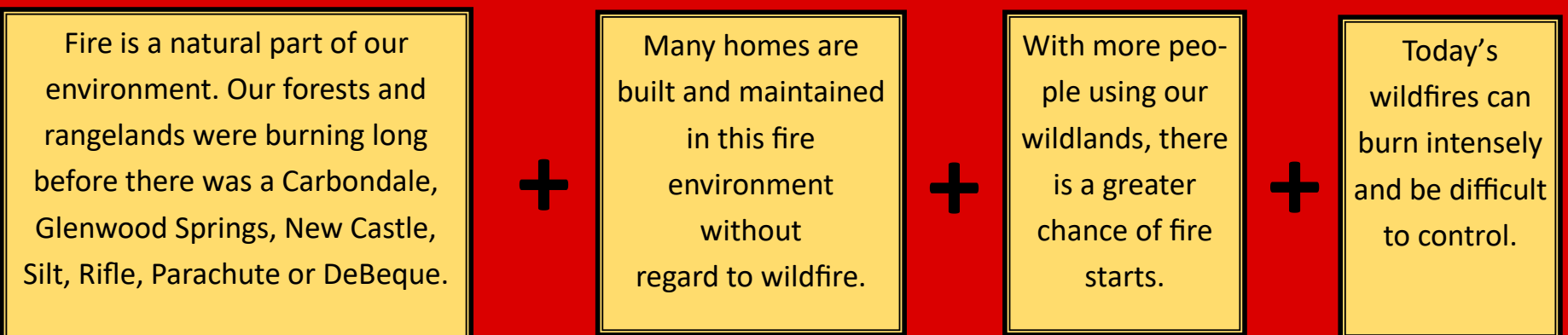
Much of Colorado’s Western Slope and the Roaring Fork and Crystal River Valley areas are considered a high hazard fire environment. Based on past experiences, including the devastating South Canyon Fire in 1994 that killed 14 firefighters on Storm King Mountain, the 2002 Coal Seam Fire that burned two dozen homes and required the evacuation of West Glenwood Springs, along with more recent fires such as the 2018 Lake Christine Fire that threatened the Towns of Basalt and El Jebel in the Roaring Fork Valley, and most recently, the 2020 Grizzly Creek Fire that has had serious, lasting effects on water quality and the I-70 transportation corridor near Glenwood Springs, this area possesses all the ingredients necessary to support large, intense, and uncontrollable fires.

Within these hazardous environments, there are individual houses, subdivisions, and entire communities. This growth of subdivisions in and around communities of this area have made conditions ripe for Suburban Firestorm incidents to occur. Many homeowners however, are ill prepared to survive an intense wildfire. Since it is not a question of “if” but “when”, the likelihood of more human life and property loss is substantial and growing.

There is increasing recognition that our ability to live more safely in this fire environment depends upon “pre-fire activities”. Pre-fire activities are actions taken before a wildfire occurs which improve the survivability of people and homes. They include proper vegetation management around the home (known as *defensible space*), use of fire resistant building materials, appropriate subdivision design, and other measures. Research clearly demonstrates that pre-fire activities save lives and property. An effective defensible space is not bare ground, it is merely breaking up the continuity of fuels, both across the ground and from the ground into the crown of the trees. You can keep that important tree next to your house or those that screen you from neighbors but don’t allow paths of continuous fuels leading up to your house. More trees and shrubs are not better either for plant health or from a fire perspective. Make the vegetation patchy and reduce root competition for our meager moisture in the arid West.

Fire experts are available to present programs and answer questions related to wildfire mitigation. If your homeowners association or organization is interested in scheduling a presentation, please contact the fire agency in your area. A list of local fire departments and their contact information are listed on page 5.

THE “WHY WE’RE WORRIED ABOUT WILDFIRE” EQUATION



Potential for:

- Greater loss of life
- = • Increased property losses
- More damage to natural resources
- More money needed for firefighting

SIGN UP FOR EMERGENCY ALERTS

How will you find out about emergencies or disasters?

Scan these codes to sign up

You can decide how you want to receive notifications—on your VoIP phone, cell phone, text message, and/or email. Having your most current contact information is the only way to ensure we can contact you in the event of an emergency.

If you are already registered, log in and make sure your information is current. It is free, easy, and only takes a few minutes.



THE FIRE ENVIRONMENT

Firefighters recognize three components of the fire environment: weather, topography and fuel. These components affect the likelihood of a fire starting, the speed and direction at which a wildfire will travel, the intensity at which a wildfire burns and the ability to control and extinguish a wildfire. Although weather and topography cannot be changed, the fuels (or vegetation) can be modified. Consequently, many of our opportunities to reduce the wildfire threat lie in proper management and manipulation of wildland vegetation.

WEATHER: Dry, hot and windy weather increases the likelihood of a major wildfire. These conditions make ignition easier, allow fuels to burn more rapidly and increase fire intensity. High wind speeds, in particular, can transform a small, easily controllable fire into a catastrophic event in a matter of minutes.

TOPOGRAPHY: Of topographic features, steepness of slope most influences fire behavior. As the steepness of slope increases, the fire spreads more quickly. Other important topographic features include aspect (south and southwest slopes usually have more fires) and steep, narrow drainages (chimneys), which can significantly increase the rate of firespread.

FUEL: Fuel is required for any fire to burn. In regard to wildfire, fuels almost always consist of living vegetation (trees, shrubs, grass, and wildflowers) and dead plant material (dead trees, dried grass, fallen branches, pine needles, etc.). Houses, when involved in a wildfire, become a source of fuel. The amount, size, moisture content, arrangement and other fuel characteristics influence ease of ignition, rate of fire spread, length of flames produced and other fire behaviors.

THE HUMAN ENVIRONMENT: When people are living in high-hazard fire environments, the human-built environment becomes an important factor in predicting the loss of life and property. Untreated wood shake and shingle roofs, narrow roads, limited access, lack of fire-wise landscaping, inadequate water supplies and poorly planned subdivisions are examples of increased risk to people living with the threat of wildfire.

LEAN, CLEAN, & GREEN CHECKLIST

- ✓ Emphasize the use of low growing herbaceous (non-woody) plants that are kept green during fire season through irrigation as needed. Herbaceous plants include lawn, clover, a variety of groundcovers, bedding plants, bulbs, perennial flowers and native perennial grasses.
- ✓ Emphasize use of mulches, rock, and non-combustible hard surfaces (concrete sidewalks, brick patios, and asphalt driveways).
- ✓ Deciduous ornamental trees and shrubs are acceptable if they are kept green, free of dead plant material, ladder fuels are removed, and individual plants or groups of plants are arranged in a manner in which adjacent wildland vegetation cannot convey a fire to structure through them. Shorter deciduous shrubs are preferred.
- ✓ Minimize the use of ornamental coniferous shrubs and trees and tall exotic grasses (such as pampas grass).
- ✓ Where permitted, most wildland native shrubs and trees should be removed from this zone and replaced with fire resistant plant varieties. Individual specimens or small groups of wildland shrubs and trees can be retained, provided ladder fuels are first removed and they are kept healthy, free of dead wood and pruned.
- ✓ For some areas, substantial removal of wildland vegetation may not be allowed. In these instances, wildland vegetation should conform to the recommended separation distances, be kept free of dead plant material, pruned to remove ladder fuels and fuel load, and arranged so it cannot readily convey a fire from the wildlands to a structure. Please become familiar with local requirements before removal of wildland vegetation.
- ✓ Tree limbs within 10 feet of a chimney, encroaching on powerlines, or touching structure should be removed.

CREATING AN EFFECTIVE DEFENSIBLE SPACE

...A Step-by-Step Guide

Are you worried about the wildfire threat to your home, but aren't sure how to get started in making your home defensible? Follow these six steps to an effective defensible space...

STEP ONE: How big is an effective defensible space? The size of the defensible space area is usually expressed as a distance extending outward from the sides of the house. This distance varies by the type of wildland vegetation growing near the house and the steepness of the terrain,

On the "Recommended Defensible Space Distance" chart presented on the next page, find the vegetation type and percent slope (see "Homeowners Guide to Calculating Percent Slope") which best describes the area where your house is located. Then find the recommended defensible space distance for your situation.

For example, if your property is surrounded by wildland grasses such as cheatgrass, and is located on flat land, your recommended defensible space distance would extend 30 feet from the sides of the house. If your house is on a 25% slope and the adjacent wildland vegetation is dense tall brush, your recommended defensible space distance would be 200 feet.

If the recommended distance goes beyond your property boundaries, contact the adjacent property owner and work cooperatively on creating a defensible space. The effectiveness of defensible space increases when multiple property owners work together. The local assessor's office can provide assistance if the owners of adjacent properties are unknown. **Do not work on someone else's property without their permission.**

Homeowner's Guide to Calculating Percent Slope

Hold this line parallel to the ground

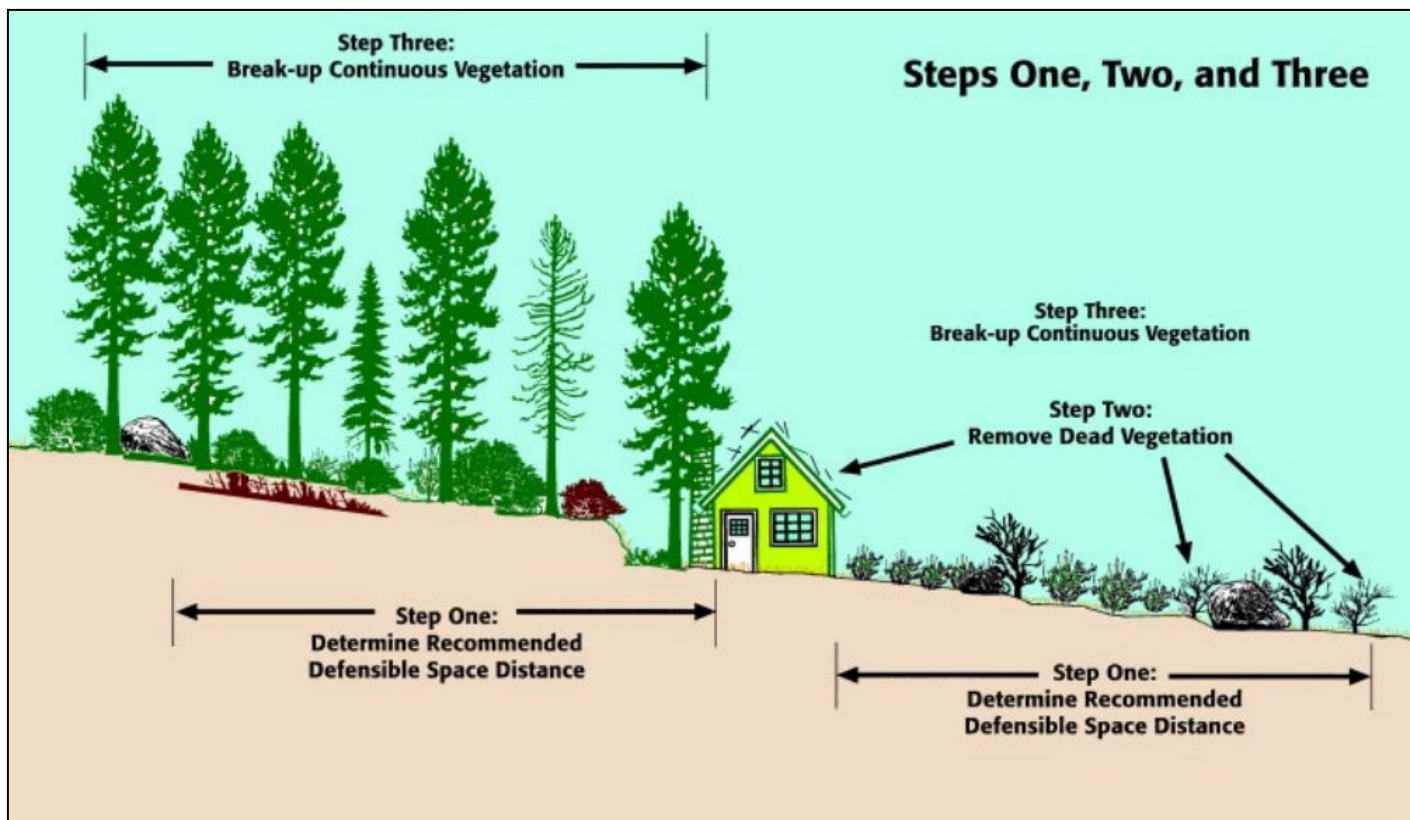
INSTRUCTIONS:

1. Enlarge this diagram using a photocopying machine.
2. Mount photocopy on a piece of cardboard.
3. Punch a hole through photocopy and cardboard at the designated spot.
4. Thread a 12 inch piece of string through the hole and tie a knot in the end of the string on the backside of the cardboard.
5. Tie a one inch or larger washer to weight the other end of the string.
6. Hold the designated line parallel to the ground, sighting up slope along the edge of the cardboard.
7. The weighted string will indicate the percent of slope steepness. For convenience, steepness of slope in degrees is presented in parenthesis.

Temporarily mark the recommended distance with flagging or strips of cloth tied to shrubs, tree, or stakes around your home. This will make your defensible space area.

STEP TWO: IS THERE ANY DEAD VEGETATION WITHIN THE RECOMMENDED DEFENSIBLE SPACE AREA?

Dead vegetation includes dead trees and shrubs, dead branches lying on the ground or still attached to living plants, dried grass, flowers and weeds, dropped leaves and needles, and firewood stacks. In most instances, dead vegetation should be removed from the recommended defensible space area. A description of the types of dead vegetation you're likely to encounter and the recommended actions are presented on the next page (see "Defensible Space Recommended Distance—Steepness of Slope").



HOW DO I CHANGE THE VEGETATION ON MY PROPERTY TO REDUCE THE WILDFIRE THREAT?

The objective of defensible space is to reduce the wildfire threat to a home by changing the characteristics of the adjacent vegetation. Defensible space practices include:

- increasing the moisture content of vegetation.
- decreasing the amount of flammable vegetation.
- shortening plant height.
- altering the arrangement of plants.

This is accomplished through the "Three R's of Defensible Space." The article above (Creating An Effective Defensible Space) provides detailed information about changing vegetation characteristics for defensible space.

THE THREE R's OF DEFENSIBLE SPACE	
Removal	This technique involves the elimination of entire plants, particularly trees and shrubs, from the site. Examples of removal are cutting down a dead tree or cutting out a flammable shrub.
Reduction	This removal of plant parts, such as branches or leaves, constitute reduction. Examples of reduction are pruning dead wood from a shrub, removing low tree branches, and mowing dried grass.
Replacement	Replacement is substituting less flammable plants for more hazardous vegetation. Removal of a dense stand of flammable shrubs and planting an irrigated, well maintained flower bed is an example of replacement.

Steps Four, Five, and Six



DEFENSIBLE SPACE			
RECOMMENDED DISTANCES—STEEPNESS OF SLOPE			
	 Flat to Gently Sloping 0 to 20%	 Moderately Steep 21% to 40%	 Very Steep +40%
Grass	30 feet	100 feet	100 feet
Wildland grasses (such as cheatgrass), weeds, and widely scattered shrubs with grass understory.			
Shrubs	100 feet	200 feet	200 feet
Includes shrub dominant areas.			
Trees	30 feet	100 feet	200 feet
Includes forested areas. If substantial grass or shrub understory is present, use those values shown above.			

- 1) Find the percent slope which best describes your property.
- 2) Find the type of vegetation which best describes the wildland plants growing on or near your property.
- 3) Locate the number in feet corresponding to your slope and vegetation. This is your recommended defensible space distance.

*Please note the recommendations presented in this article are suggestions made by local firefighters experienced in protecting homes from wildfire. They are not requirements nor do they take precedence over local ordinances.

Carbondale & Rural Fire Protection District

970-963-2491
www.carbondalefire.org



Glenwood Springs Fire Department

970-384-6480
www.glenwoodfire.com



Colorado River Fire Rescue

970-625-1243
www.crrfr.us



Grand Valley Fire Protection District

970-285-9119
www.gvfpd.org



De Beque Fire Protection District

970-283-8632
www.debequefire.org



Gypsum Fire Protection District

970-524-7101
www.gypsumfd.com



STEP THREE: IS THERE A CONTINUOUS DENSE COVER OF SHRUBS OR TREES PRESENT WITHIN THE RECOMMENDED DEFENSIBLE SPACE AREA?

Sometimes wildland plants can occur as an uninterrupted layer of vegetation as opposed to being patchy or widely spaced individual plants. The more continuous and dense the vegetation, the greater the wildfire threat. If this situation is present within your defensible space area, you should “break-it-up” by providing a separation between plants or small groups of plants.

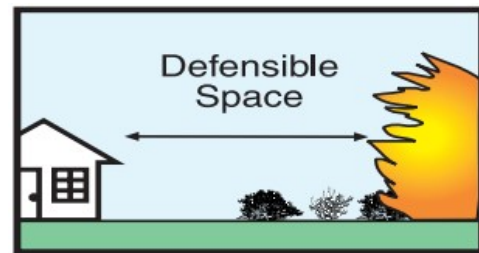
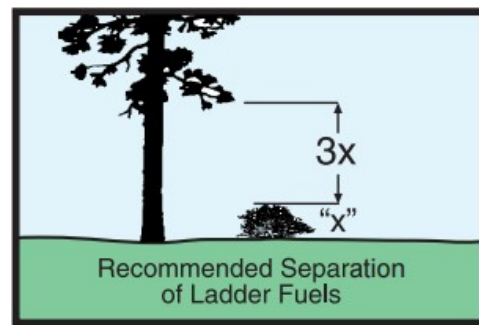
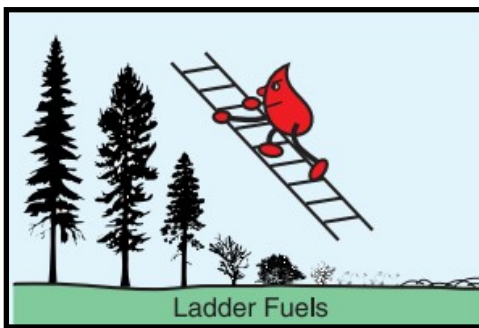
Not only are steep slopes often considered high wildfire areas, they are also highly erodible. When removing shrubs and trees from steep slopes, keep soil disturbance to a minimum. Also, it may be necessary to replace flammable vegetation with other plant materials to prevent excessive soil erosion.

STEP FOUR: ARE THERE LADDER FUELS PRESENT WITHIN THE RECOMMENDED DEFENSIBLE SPACE AREA?

Vegetation is often present at varying heights, similar to the rungs of a ladder. Under these conditions, flames from fuels burning at ground level, such as a thick layer of pine needles, can be carried to shrubs which can ignite still high fuels like tree branches. Vegetation that allows a fire to move from lower growing plants to taller ones is referred to as “ladder fuel”. The ladder fuel problem can be corrected by providing a separation between the vegetation layers,

Within the defensible space area, a vertical separation of three times the height of the lower fuel layer is recommended.

For example, if a shrub growing adjacent to a large pine tree is three feet tall, the recommended separation distance would be nine feet. This could be accomplished by removing the lower tree branches, reducing the height of the shrub, or both. The shrub could also be removed.



STEP FIVE: IS THERE AN AREA AT LEAST 30 FEET WIDE SURROUNDING YOUR HOUSE THAT IS “LEAN, CLEAN, AND GREEN”?

The area immediately adjacent to your house is particularly important in terms of an effective defensible space. It is also the area that is usually landscaped. Within an area extending at least 30 feet from the house, the vegetation should be kept...

- Lean—small amounts of flammable vegetation,
- Clean—no accumulation of dead vegetation or other flammable debris, and
- Green—plants are healthy and green during fire season.

The “Lean, Clean, and Green Zone Checklist” (page 3) will help you evaluate the area immediately adjacent to your house.

STEP SIX: IS THE VEGETATION WITHIN THE RECOMMENDED DEFENSIBLE SPACE AREA MAINTAINED ON A REGULAR BASIS?

Keeping your defensible space effective is a continual process. At least annually, review these defensible space steps and take action accordingly. An effective defensible space can be quickly diminished through neglect.

FIRE BRANDS AND THE WOOD SHAKE ROOF HAZARD

A house can be threatened by a wildfire in three ways: direct exposure from flames, radiated heat, and airborne firebrands. Of those, firebrands account for the majority of homes burned by wildfire. The roof of the house is the most vulnerable to firebrands.

Because of its angle, the roof can catch and trap firebrands. If the roof is constructed of combustible materials such as untreated wood shakes and shingles, the house is in jeopardy of igniting and burning.

Not only are combustible roofing materials a hazard to the structure on which they are installed, but they also pose a threat to other houses in the vicinity. Burning wood shakes can become firebrands, be lifted from the burning roof, and carried blocks away, and land in receptive fuel beds such as other combustible roofs.

Unfortunately for homeowners with existing combustible roofs, there are no long-term reliable measures available to reduce roof vulnerability to wildfire other than re-roofing with fire resistant materials.

FREQUENTLY ASKED QUESTIONS ABOUT DEFENSIBLE SPACE



In the 1980's the term “defensible space” was coined to describe vegetation management practices aimed at reducing the wildfire threat to homes. This section responds to some of the commonly asked questions about defensible space.

WHAT IS DEFENSIBLE SPACE?

Defensible space is the area between a house and an oncoming wildfire where the vegetation has been modified to reduce the wildfire threat and to provide an opportunity for firefighters to effectively defend the house. Sometimes, a defensible space is simply a homeowner's properly maintained backyard.

WHAT IS THE RELATIONSHIP BETWEEN VEGETATION AND WILDFIRE THREAT?

Many people do not view the plants growing on their property as a threat. But in terms of wildfire, the vegetation adjacent to their home can have considerable influence upon the survivability of their houses. All vegetation, including plants native to the area as well as ornamental plants, is potential for wildfire fuel. If vegetation is properly modified and maintained, a wildfire can be slowed, the length of flames shortened, and the amount of heat reduced, all of which assist firefighters to defend the home against an oncoming wildfire.

THE FIRE DEPARTMENT IS SUPPOSED TO PROTECT MY HOUSE, SO WHY BOTHER WITH DEFENSIBLE SPACE?

Some individuals incorrectly assume that a fire engine will be parked in their driveway and firefighters will be actively defending their homes if a wildfire approaches. During a major wildfire, it is unlikely there will be enough firefighting resources available to defend every home. In these instances, firefighters will likely select homes they can most safely and effectively protect. Even with adequate resources, some wildfires may be so intense that there may be little firefighters can do to prevent a house from burning. The key is to reduce fire intensity as a wildfire nears the house. This can be accomplished by reducing the amount of flammable vegetation surrounding a home. Consequently, the most important person in protecting a house from wildfire is not a firefighter, but the property owner. And it is the action taken by the owner before the wildfire occurs (such as proper landscaping) that is most critical.

DOES DEFENSIBLE SPACE REQUIRE A LOT OF BARE GROUND IN MY LANDSCAPE?

No. Unfortunately, many people have this misconception. While bare ground is certainly effective in reducing wildfire threat, it is unnecessary and unacceptable due to appearance, soil erosion, and other reasons. Many homes have attractive, well vegetated landscapes that also serve as effective defensible space.

DOES CREATING A DEFENSIBLE SPACE REQUIRE ANY SPECIAL SKILLS OR EQUIPMENT?

No. For the most part, creating a defensible space employs routine gardening and landscape maintenance practices such as pruning, mowing, weeding, plant removal, appropriate plant selection and irrigation. Equipment needed includes common tools like chain saw, pruning saw, loppers, weed-eater, shovel, and a rake. A chipper, compost bin, or large rental trash dumpster may be useful in disposing of

unwanted plant material.

HOW BIG IS AN EFFECTIVE DEFENSIBLE SPACE?

Defensible space size is not the same for everyone, but varies by slope and type of wildland vegetation growing near the house. See the article entitled “Creating an Effective Defensible Space” (page 4) for specific information.

DOES DEFENSIBLE SPACE MAKE A DIFFERENCE?

Yes. Investigations of homes threatened by wildfires indicate that houses with an effective defensible space are much more likely to survive a wildfire. Furthermore, homes with both an effective defensible space and a nonflammable roof (composition shingles, tiles, metal) are many times more likely to survive a wildfire than those without defensible space and flammable roofs (wood shake or shingles). These conditions give firefighters the opportunity to effectively and safely defend the home.

DOES HAVING DEFENSIBLE SPACE GUARANTEE MY HOUSE WILL SURVIVE A WILDFIRE?

No. Under extreme conditions almost any house can burn. But having a defensible space will significantly improve the odds of your home surviving a wildfire.

WHY DOESN'T EVERYONE LIVING IN A HIGH WILDFIRE HAZARD AREA CREATE DEFENSIBLE SPACE?

The specific reasons for not creating a defensible space are varied. Some individuals believe “it won't happen to me”. Others think the costs (time, money, effort, loss of privacy) outweigh the benefits. Some fail to implement defensible space practice simply because of lack of knowledge or misconceptions.

OTHER CONSIDERATIONS IN MAKING YOUR HOME DEFENSIBLE

How a home is designed, where it is built, materials used in its construction and landscape, and access to the home all influence survivability during a wildfire. Presented below are recommendations and an illustration modified from California Department of Forestry and Fire Protection's publication "How to Make Your Home Fire Safe". These recommendations will make a home much easier to defend and will improve its chances of surviving a wildfire.

1. Roof

- Remove dead branches hanging over your roof
- Remove any dead branches within 15 feet of your chimney
- Clean all dead leaves and needles from your roof and gutters. Install a roof that meets the fire resistance classification of "Class C" or better. Local jurisdictions may require a higher fire resistance rating. Check with your local fire department
- Cover your chimney outlet and stovepipe with a nonflammable screen of one-half inch or smaller mesh

2. Construction

- Build your home away from ridge tops, canyons, and areas between high points on a ridge
- Build your home at least 30 feet from your property line
- Use fire resistant building materials
- Enclose the underside of balconies and above ground decks with fire resistant materials
- Limit the size and number of windows in your home that face large areas of vegetation
- Install only dual-paned or triple-paned windows
- Consider sprinkler systems within the house. They may protect your home while you're away or prevent a house fire from spreading into the wildlands

3. Landscape

- See "Creating An Effective Defensible Space" (page 4)

4. Yard

- Stack woodpiles at least 30 feet from all structures and clear away flammable vegetation within 10 feet of wood piles
- Locate LPG tanks (butane and propane) at least 30 feet from any structure and surround them with 10 feet of clearance
- Remove all stacks of construction materials, pine needles, leaves, and other debris from your yard.
- Contact your local fire department to see if open burning is allowed in your area; if so, talk to them about what you must report before burning debris.

5. Emergency Water Supply

- Maintain an emergency water supply that meets fire department standards through one of the following:
 - * a community water/hydrant system
 - * a cooperative emergency storage tank with neighbors
 - * A minimum storage supply of 2,500 gallons on your property
- Clearly mark all emergency water sources and notify your local fire department of their existence
- Create easy firefighter access to your closest emergency water
- If your water comes from a well, consider an emergency generator to operate the pump during a power failure

6. Access

- Identify at least two exit routes from your neighborhood
- Construct roads that allow two way traffic
- Design road width, grade, and curves to allow access for large emergency vehicles
- Construct driveways to allow large emergency equipment to reach your house
- Design bridges to carry heavy emergency vehicles, including bulldozers carried on large trucks
- Post clear road signs to show traffic restrictions such as weight and height limitations and dead-end roads
- Make sure dead-end roads and long driveways have turnaround areas wide enough for emergency vehicles. Construct turnouts along one-way roads.
- Clear flammable vegetation at least 10 feet from roads and five feet from driveways
- Cut back overhanging tree branches above roads
- Construct fire barriers such as greenbelts, parks, golf courses, and athletic fields
- Make sure your street is named or numbered, and a sign is visibility posted at each street intersection.
- Make sure that your street name and house number are not duplicated elsewhere in the county
- Post your house address at the beginning of your driveway, or on your house if it is easily visible from the road

7. Outside

- Designate an emergency meeting place outside your home
 - Practice emergency exit drills regularly
 - Make sure that electric service lines, fuse boxes, and circuit breaker panel are installed and maintained as prescribed by code
 - Contract qualified individuals to perform electrical maintenance and repairs



WHEN WILDFIRE APPROACHES

Should homes be threatened by wildfire, occupants may be advised to evacuate to protect them from life-threatening situations. Homeowners, however, do have the right to stay on their properties if they so desire and so long as their activities do not hinder firefighting efforts. If occupants are not contacted in time to evacuate or if owners decided to stay with their homes, these suggestions will help them protect their properties and families. **It is best to evacuate when asked to do so.**

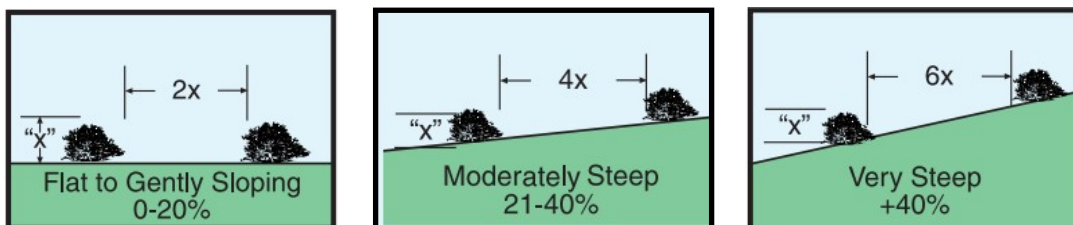
- ⇒ Evacuate, if possible, all family members not essential to protecting the house. Evacuate pets as well.
- ⇒ Contact a friend or relative and relay your plans
- ⇒ Make sure family members are aware of a prearranged meeting place
- ⇒ Tune into a local radio station and listen for instructions
- ⇒ Place vehicles in the garage, have them pointing out, and roll up windows
- ⇒ Place valuable papers and mementos in the car
- ⇒ Close the garage door, but leave it unlocked. If applicable, disconnect the electric garage door opener so that the door can be opened manually
- ⇒ Place combustible patio furniture in the house or garage
- ⇒ Shut off propane at the tank or natural gas at the meter
- ⇒ Wear only cotton or wool clothes. Proper attire includes long pants, long sleeved shirt or jacket, and boots. Carry gloves, a handkerchief to cover your face, water to drink, and goggles.
- ⇒ Close all exterior vents
- ⇒ Prop a ladder against the house so firefighters have easy access to the roof
- ⇒ Make sure all garden hoses are connected to faucets and attach a nozzle set on "spray"
- ⇒ Soak rags, towels, or small rugs with water to use in beating out embers or small fires
- ⇒ Inside, fill bathtubs, sinks, and other containers with water, Outside, do the same with garbage cans and buckets. Remember that the water heater and toilet are available sources of water
- ⇒ Close all exterior doors and windows
- ⇒ Close all interior doors
- ⇒ Open the fireplace damper, but place the screen over the hearth to prevent sparks and embers from entering the house
- ⇒ Leave a light on in each room
- ⇒ Remove lightweight and/or non-fire resistant curtains and other combustible materials from around windows
- ⇒ If available, close fire resistant drapes, shutters, or venetian blinds. Attach pre-cut plywood panels to the exterior of windows and glass doors
- ⇒ Turn off all pilot lights
- ⇒ Move overstuffed furniture (e.g. couches, easy chairs, etc) to the center of the room
- ⇒ Keep wood shake or shingle roofs moist by spraying water. Do not waste water. Consider placing a lawn sprinkler on the roof if water pressure is adequate. Do not turn on until burning embers begin to fall on the roof
- ⇒ Continually check the roof and attic for embers, smoke, or fire

If a fire should occur within your house, call 9-1-1 immediately. Continue to inspect your house and property for embers and smoke

Most importantly, STAY CALM!

Recommended Separation Distances for Shrubs, Pinyon, and Juniper

For areas with dense brush or thick pinyon and juniper trees, the recommended separation distance is dependent upon shrub height and steepness of slope. Specific recommendations are presented below.



Note: Separation distance are measured between canopies (outmost branches) and not between trunks.

For example, if your home is located on a 10% slope and the brush is four feet tall, the separation distance would be two times the shrub height or eight feet. The recommended separation distance can be accomplished by removing plants or through pruning that reduces the diameter or height of the shrubs (shorter height means less separation is needed). Removal works best for sagebrush. For shrubs which readily resprout, treat stumps with an herbicide to inhibit the regrowth of woody plants.

SOME COMMON WILDLAND PLANTS



CHEATGRASS

Short, annual grass; may dominate disturbed areas; extremely flammable when dried



BIG SAGEBRUSH

Very common gray-green shrub; does not resprout; considered a flammable plant



BITTERBRUSH

Often growing with big sagebrush; dark green three-tipper leaves, growth form and size variable; tall and dense stands burn very intensely



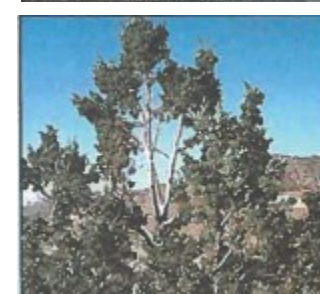
GAMBLE OAK

Scrubby oak; gray-green leaves; flexible branches that are gray in color; re-sprouts; very flammable



PINYON PINE

Small pine tree; one needle per bundle; can form thick stands



UTAH JUNIPER

Shrubby juniper tree; may grow in association with pinyon pine

Your Local Fire Departments:

Carbondale & Rural Fire Protection District

970-963-2491

www.carbondalefire.org



Colorado River Fire Rescue

970-625-1243

www.crfir.us



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