PROTECT YOUR HOME FROM WILDFIRE

A GUIDE FOR HOME-OWNERS, HOME-BUYERS, AND HOME-BUILDERS

FIREWISE WYOMING
the Natrona County Project

This has been prepared as a cooperative effort of the Firewise Wyoming Wildfire Mitigation Project, Wyoming State Forestry Division, Casper Mountain Fire Department, Casper Mountain Forest Stewardship Association, Natrona County Fire Department, Casper Fire Department, U.S. Bureau of Land Management, a Wyoming Community Foundation Grant, and a National Fire Plan Grant.

INTRODUCTION

This brochure has been prepared for homeowners and landowners who live in Wyoming. It is not intended ***only*** for forested areas, hillsides, or mountain subdivisions. The guidelines offered in this brochure apply to **all** residential and urban areas, farm land, ranches, open fields, hillsides, and mountain areas alike. ***Wildfire does not discriminate.***

Please consider carefully the guidelines, tips and recommendations discussed here. They are designed to help prevent your home and property from being lost to a devastating wildland fire. The guidelines have been developed as a result of many years of actual experience by agencies, firefighters and others, who have carefully identified the factors that have been successful in minimizing the risk to property from wildland fires.

The information contained inside will not make you an expert on wildland firefighting. But, by implementing these guidelines you will make your home and property safer, and you will create the space that firefighters will need to protect your home in the event it is ever threatened by fire.

There are two other elements that are critical to the success of this voluntary wildfire mitigation and prevention program:

1. **Neighborhood involvement** - so that all homes and property are safer, and *one* will not jeopardize the safety of *others*.

2. **Maintenance of the guidelines**, once they have been implemented.

Be sure to check for any covenants which apply to your home before making any major modifications. Work with your homeowners association to help make your entire neighborhood more fire safe. Please join us and your neighbors in creating and maintaining a **FIREWISE** and fire safe environment.

Thank you,

FIREWISE WYOMING

FIREWISE WYOMING

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FIRE BEHAVIOR

Wildfire does not discriminate !

Research shows that a prepared house with a surrounding **FIREWISE** zone is **85%** more likely to survive a wildfire than one that is not prepared.

Understanding fire behavior, especially how hot a fire will be, and how long it will be at the building site, will help homeowners and builders decide how *defensible* a house needs to be, and what actions need to be taken to make the building site more fire-resistive.

Three primary factors always affect wildland fire behavior:

1. FUEL

The type and density of the surrounding vegetation provides the fuel to keep the fire burning. Not all plants and trees burn the same way. Some almost never burn, some burn at different times of the year, and others can burn almost anytime.

2. TOPOGRAPHY

The fire is affected by the steepness of slopes, valleys, saddles, ridges, and other land features in and around the building site. Vegetation varies widely between the extremes of south facing and north facing slopes.

3. WEATHER

Wind, temperature and humidity conditions affect each fire, and is highly variable in terms of time and location. Extended periods of low moisture increase the possibility of wildfire. Low humidity and high winds increase and intensify fire behavior, and wildland fires will often create their own internal weather conditions.

We have never been able to control the *weather* factor. But we *can* modify or accommodate *topographical features*, and we certainly *can* control the existing *vegetation (fuel)* on and around the property.

The information inside will help you to better understand the factors affecting fire behavior, and provide some cost effective strategies on how to minimize the risk that these factors present to your property.

These actions and strategies apply to urban homes, mountain homes or cabins, ranch or farm homes, or any other property or structures. They are all designed to help make your property **FIREWISE.**

WHAT TO DO WHEN A FIRE OCCURS

Wildfires ***WILL*** occur in urban, rural and mountain areas. Every year families lose their homes and possessions to the ravages of wildfire. These losses can be minimized if homeowners take the time to become aware of safety measures to help protect their families, homes and property.

DON'T WAIT UNTIL THERE IS A FIRE!
Make an EMERGENCY EVACUATION PLAN NOW!

***Also, use the* EMERGENCY PLAN CHECKLIST**
on the next page for your own home.

WHEN A WILDFIRE DOES THREATEN . . .

- Report the fire to emergency dispatch 911, your local fire department, or your local police department. *Put these important phone numbers on your checklist.*

- Back your car into the garage, or park it in an open space facing the direction of escape. Shut doors and roll up windows. Leave keys in the ignition. Close garage doors and windows, but leave them unlocked. Disconnect automatic garage door openers, so in the event of a power failure they can be opened manually.

- Confine your pets to *one* room in your house. ***Make plans to care for your pets in case you must evacuate.***

- Close windows and doors to the house and close all inside doors. Take down drapes and curtains or move them away from windows.

- If time permits, move any remaining flammable materials 30 feet away from the house outside.

- Turn off gas or propane/butane supply at the meter or tank. Turn off pilot lights inside the house.

- Open fireplace damper(s). Close fireplace screens

- Turn on a light in each room of the house.

- Place a ladder against the front of the house so firefighters have easy access to your roof. Connect a garden hose to outside faucets.

- If you have a combustible roof, wet it down or turn on roof sprinklers.

- Tune into a local radio station and listen for instructions.

DON'T PANIC!  ***Prepare* to evacuate in the event you must.**

USE YOUR EMERGENCY PLAN CHECKLIST.

★ ★ ★ REMEMBER ★ ★ ★

SAFETY FIRST! **THINGS CAN BE REPLACED . . . YOU CAN'T !**

EMERGENCY PLAN CHECKLIST

Wildfires and other types of disasters - flood, tornado, earthquake, hazardous material spill, winter storm - can strike quickly and without warning. You can cope with disaster by preparing in advance. Use this CHECKLIST to help you get started with your plan.

- ❒ Contact your local Emergency Management Office and local fire department - find out about the hazards in your community. Ask how you would be warned. Ask for their tips on how to prepare for each type of disaster in your community.

- ❒ Post emergency telephone numbers by every phone in your home, and program them on your cell phones:
  - ❖ 911, fire department, police department, sheriff's office, highway patrol, etc.

- ❒ Hold a Family Meeting:
  - ❖ Discuss the types of disasters. Explain how to prepare and respond to each.
  - ❖ Discuss where to go and what to bring if you are advised to evacuate.
  - ❖ Pick two meeting places:
    - ✧ a place a safe distance from home in case of fire.
    - ✧ a place outside your neighborhood in case you can't return home.
  - ❖ Chose a friend or family member as a "check-in contact" for all family members to call.

- ❒ Show responsible family members how to shut off water, gas and electricity at their main switches or connections.

- ❒ Contact a friend or relative and let them know about your emergency plans.

- ❒ Plan at least two escape routes from your home - two by car and two by foot.

- ❒ Make plans to take care of children who may be on their own, if parents can't get home.

- ❒ Make plans to care for your pets in case you have to evacuate.

- ❒ Review your prized possessions - consider storing them in safety deposit boxes.

- ❒ Make a list of ***valuable items*** you would take if you have to evacuate:
  - ❖ important personal documents, insurance papers, property titles, valuables, photo albums, passports, money, checkbooks, phone numbers, etc.

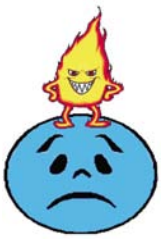
- ❒ Prepare an easily accessible cache of fire tools (ladder, shovel, rake, bucket, garden hose).

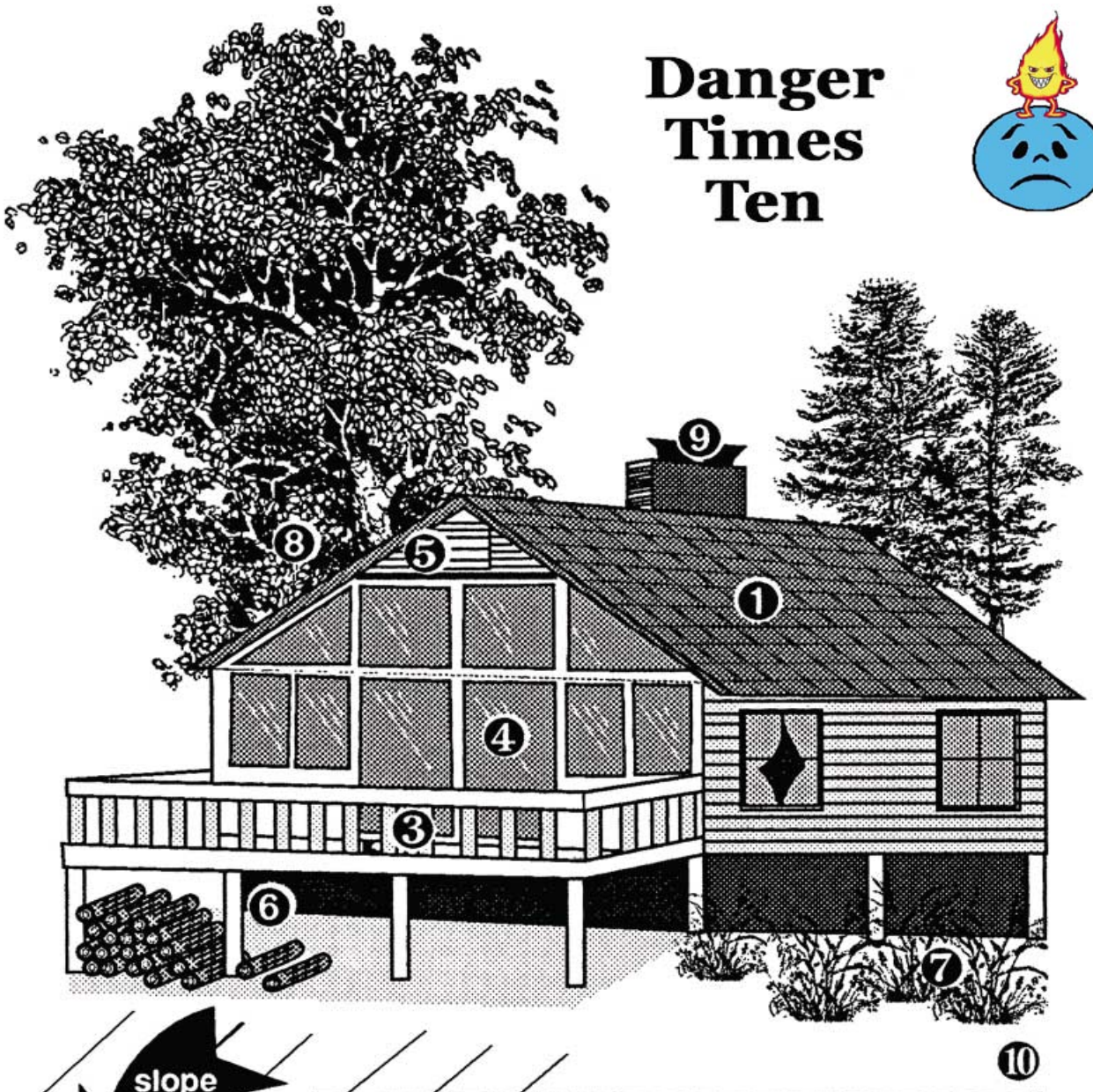
- ❒ Store a three day supply of drinking water, and food that does not require refrigeration or cooking.

- ❒ Store an easily accessible cache of first aid supplies, portable radio (with extra batteries), emergency cooking equipment, portable lanterns.

- ❒ Review this **CHECKLIST** and the **WHAT TO DO . . .** (Page 2), with family members and keep them in an easily accessible place known by all family members.

Danger Times Ten





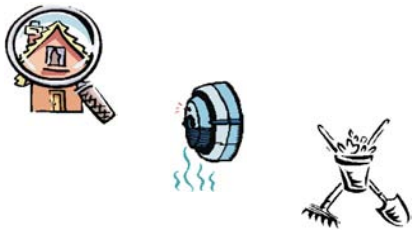
Watch Out: Trouble in Paradise

1. Untreated wood shake roof
2. Home located on a slope
3. Wood deck facing slope
4. Large glass windows facing slope
5. Unprotected louvres in front
6. Firewood stored too close to home
7. Inadequate weed clearance
8. Tree limbs overhanging roof
9. Chimney spark arrestor missing
10. No access for emergency vehicles

MAINTENANCE & CLEANUP

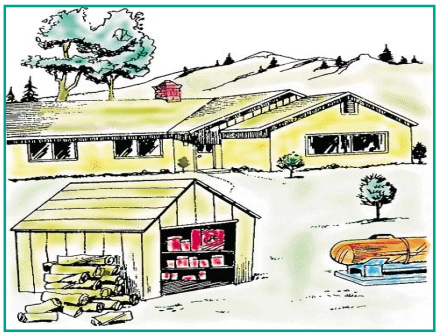
Here are some things that you can do to improve your home's chances of surviving a wildland fire.

<u>Survey your property this weekend</u>, and complete these easy tasks.



- Inspect your property now, and again at least once each year.
- Install smoke detectors. Change the batteries every year.
- Have fire tools handy, such as shovel, rake and bucket for water.

- Clean pine needles, twigs and leaves regularly from your roof and gutters. Don't burn them around your property. Dispose of them with your trash.
- Remove tree branches overhanging roofs or decks. Remove trees or branches extending within 10 feet of flue opening of any chimney or stovepipe.
- Remove diseased or insect-infected trees and shrubs.
- Clean chimneys and stovepipes regularly. Equip each one with a wire mesh spark arrester.



- Clear all trash and debris, or any other combustible materials, from under raised decks, porches or foundations. Store firewood at least thirty feet from your house.
- Clear a 10 foot area around LPG tanks and gas barbecue grills. Locate propane tanks 50 feet from structures, and on the same level with, or down-hill from structures.
- Keep a garden hose connected to outlet/faucet, especially during fire season.
- Enclose the opening under wood decks with fire resistant material, such as non-flamable siding, stone or brick. (See **DECKS**)

- Remove all dead tree limbs, dry grass and brush within 30 feet of the house. Remove any vines from the walls of the house.
- Provide at least one 10 pound fire extinguisher in the home. Be sure it is easily accessable.
- Mow grass to 2 inches and keep watered: fire moves quickly through dry grass and weeds.

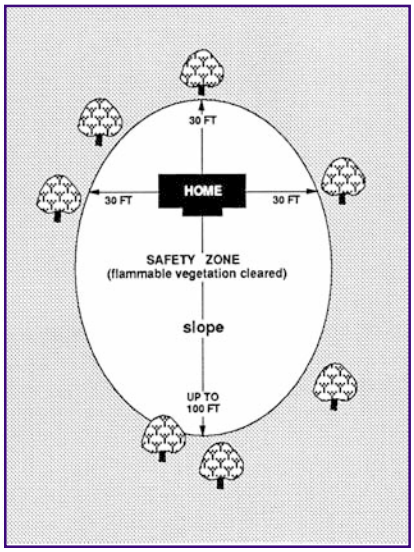
1 2 3 4

- Post your house number in reflective numerals so it is clearly visible from the road.

- Inspect power lines that cross your property. Ask the utility company to remove any tree limbs that are within 15 feet of the lines.

CREATING DEFENSIBLE SPACE

The most important person in protecting your home from wildfire is **not** the firefighter, ***it is the property owner and the action the property owner takes before there is a fire.*** One of the key elements a fire needs is **fuel**. On your property, that fuel is the vegetation around your home.



DEFENSIBLE SPACE is the area between a house and an oncoming wildfire, where the vegetation has been modified to reduce the threat, slow down and cool the approaching fire, and provide an opportunity and space for firefighters to effectively defend the house.

Defensible Space is usually defined as a **30 foot** area around the house. Depending on the ***slope*** of the property, that area could increase up to 100 feet, because wildfires will travel much faster upslope.

Effective Defensible Space doesn't mean *bare ground.* The following tips can create an attractive, well vegetated, yet *defensible* area around your home. This space should be designed taking into consideration the slope, the kinds of fuel, and the density of the fuels. Consider landscaping with grass, flower gardens or ornamental shrubbery.

- Clean the area of dead trees, fallen branches, twigs, leaves, dead shrubs and trash.
- Replace native plants with ornamental landscaping plants or shrubs that are fire resistant. Space shrubs 15 feet apart and no higher than 18 inches. See **FIREWISE LANDSCAPING**.
- Prune tree branches to provide a 10 foot clearance from the roof and 15 feet from any chimney.
- For trees taller than 20 feet, prune the lower branches within ten feet of the ground.
- For trees less than 20 feet, prune no more than 1/2 the total height of the tree.
- Stack firewood and scrap woodpiles 30 feet from, and uphill from any structure.
- Space trees so their crowns are at least 10 feet apart.
- Cut grass to 2 inches tall, and keep well watered.
- Driveways and access roads should be 12-14 feet wide. Keep clear, and trim overhanging branches up at least 14 feet.

- Consider providing an emergency water supply of 1,500 to 10,000 gallons, with a gasoline powered pump in case electrical power is lost.
- If your water supply is a well, consider a gasoline powered electrical generator for the well pump in the event of power failure.

CREATING DEFENSIBLE SPACE

Zone 1: "Defensible Space"

This is the most important 30' space around your home. It is your yard and should be landscaped for leisure and fun, but at the same time as a potential barrier to the spread of fire.

- A good place for grass lawn and stone or concrete patios.
- Ornamental shrubs should be fire resistant and no taller than 18".
- Use fire resistant broadleaf trees for shade. Isolate trees.
- Prune lower limbs up to 10' above ground level.
- Eliminate foundation conifers such as junipers.
- Avoid using bark or wood chips for landscaping in this area.
- Cut grass to a maximum of 2".
- Crown spacing between trees should be 10'.

Zone 2: The Mid Zone

The next 30'-70' space around your home. This is an area for landscape trees and shrubs, orchards and gardens, but not for wild, dense woodland vegetation.

- Maintain space between ornamental or wild shrubs at least twice as wide as their diameter.
- Prune lower limbs of trees up to 10' above ground level.
- Ideally, use only fire resistant trees and shrubs in this zone.
- Tree crown spacing should not be less than eight feet.
- Clean-up dead limbs and remove ladder fuels.
- Cut or mow grass to a maximum of 8" high.
- Crown spacing between trees should be 8'.

Zone 3: The Outermost Zone

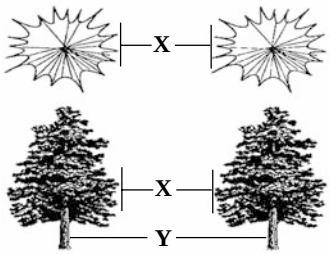
The next 70'-100' space around your home. This is the wild forest area, but precautions are still in order.

- Thin forest trees so that crowns are separated by at least 6'.
- Prune lower limbs of trees up to at least 6'-10' above ground level.
- Prevent ladder fuel from developing.
- Occasionally dead trees for wildlife are important, but accumulations of dead woody material on the ground, high or dense slash, or patches of dead trees should be kept to a minimum or eliminated.
- Clean-up dead limbs and remove ladder fuels.
- Crown spacing between trees should be 6-8'.

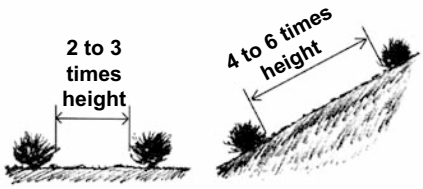
PRUNING AND LADDER FUELS

Firewise thinning and pruning can help your home survive a wildfire.

Managing the *crown spacing* between trees, *pruning* up limbs, and eliminating *ladder fuels* will keep a wildland fire on the ground. A fire on the ground is easier to control than one in the tree crowns, and will cause less damage to your trees.



X = Crown Spacing
Y = Stem Spacing
Do not measure between stems for crown spacing. Measure between the edges of the tree crowns.

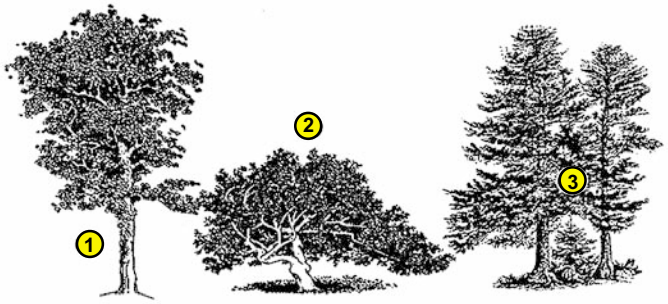


Maintain adequate cleared space between ornamental or wild shrubs.

Ladder fuels are created when vegetation of different heights is close enough to allow a ground fire to climb up into tree tops.

PRUNING

- In Zone 1, prune lower limbs up to 10’ above ground level, with crown spacing of 10’.
- In Zone 2, prune lower limbs of trees up to 10’ above ground level, with crown spacing of 8’.
- In Zone 3, prune lower limbs of trees up to at least 6’-10’ above ground level, with crown spacing of 6-8’.
- Never prune up more than 1/2 the total height of the tree.
- Never cut into the collar around the branch at the trunk of the tree.
- Do not cover wounds on branches.
- If you are unsure about pruning on your property, ask your local Forester or Master Gardener.
- If your property is in a Homeowner Association, be sure to check any covenants which might apply before modifying existing vegetation.



1. This tree has been trimmed so that no branches are close to the ground.
2. This small tree is close to the ground and can be more easily ignited from burning grasses.
3. Small trees growing underneath larger trees provide “ladder fuels” which allow grass fires to jump to the branches of the larger trees and spread even more rapidly.

LADDER FUELS

- Thin trees to prevent interlocking crowns.
- Remove or modify ground fuels so they cannot produce flame lengths more than six feet.
- Remove “ladder fuels” - shrubs, brush, tall grass, dead vegetation, trash, and small trees underneath or close to large trees, .
- Shrubs and brush (fine) fuels have similar characteristics - all burn rapidly with high intensity.
- Stack firewood and scrap woodpiles at least 10 feet from any structure.

FIREWISE LANDSCAPING

A well designed landscape around your home is the first step toward reducing risk from wildfire. Maintaining it is the second step.

All vegetation is potential fuel for fire. There are no truly "fire proof" plants. All will burn if the conditions are right. There are, however, plants that are FIRE-PRONE, and those that are FIRE-RESISTANT.

FIRE-PRONE PLANTS

Traits include:

- needle-like or other fine leaves.
- resinous, oily or waxy foliage or wood.
- loose or papery bark.

Examples:
Most conifers
Common Juniper
Rocky Mountain Juniper

FIRE-RESISTANT PLANTS

Traits include:

- little or no seasonal accumulation of dead leaves.
- non-resinous wood and leaves.
- high moisture content of leaves.

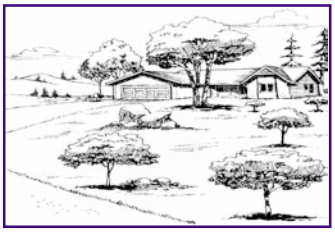
Examples:

Cottonwood	Aspens
Roses	Red-osier dogwood
Ashes	Littleleaf sumac
Lilacs	Chokecherry

Plants for a FIREWISE LANDSCAPE have one or more of the following characteristics:

	EXAMPLES:
• They grow without accumulating large amounts of combustible dead branches, leaves or needles.	• Aspen.
• They have open loose branches with a low volume of total vegetation.	• Currant, mahogany, mountain maple.
• They have low sap or resin content.	• Many deciduous species: Aspen, Cottonwood, Mountain Ash.
• They have high moisture content.	• Succulents, some herbaceous species.
• They grow slowly and need little maintenance or frequent pruning.	• Ash, Cottonwood.
• They are short and grow close to the ground.	• Wildflowers and groundcovers.

Design your landscaping to include a combination of fire-resistant plants/trees and noncombustible *hardscape* materials, such as decorative stone/brick walls, patios, decorative stone borders around the foundation, stone or brick fences, or a stone or brick pillar in the fence separating the fence from the house.



Look at existing natural fire-breaks on your property and incorporate them into your design. Examples include utility rights-of-way, roads, trails, meadows, rocky areas and streams.

Use the lists on Pages 19 & 20 to select FIREWISE plants & trees for your home.

CONSTRUCTION MATERIALS

Homes are usually lost in wildland fires in one of three ways:

- ✘ The most common is burning embers falling on flammable roofs (usually wood shakes or shingles). See **ROOFS**
- ✘ The second is through direct flame contact, or the concentration of heat under structures, decks and eaves. See **DECKS**
- ✘ The third way is by ignition through radiant heat from burning vegetation. See **DEFENSIBLE SPACE**

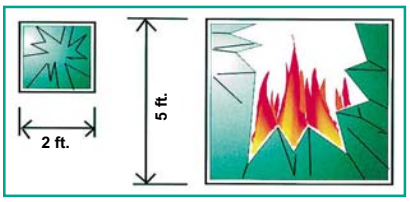
The real keys to home survivability then, lie in examining the features of your home that could *reduce* the exposure to these dangers.

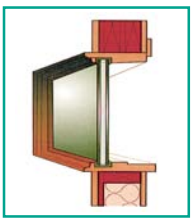
Remember . . . Most houses are just trees in another form.

Our ultimate fireproof home would look like a stone castle. But careful selection of construction materials can create an attractive home, and still be **FIREWISE.**

DOORS

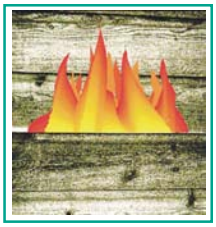
- ✘ Doors are how *you* get in and out of your house. They can also be how *a fire* gets inside.
- ✘ Hollow core doors made with wood veneer and large windows don't provide much protection.
- ✘ Solid core wood doors provide an effective fire barrier. They should be not less than 1" thick with a fire rating not less than 20 minutes. Steel jacketed, insulated doors are even better.
- ✘ Pet doors left open or unlatched during wildfires allow burning embers to be blown inside the house.





WINDOWS

- ✘ Windows are another way fire can enter your house.
- ✘ Large, single pane picture windows (more than 2') are the usual culprits because they cannot hold the glass in place.
- ✘ Smaller windows (2' or less), will keep fractured glass in place. Even if the glass fractures, as long as it stays in place, the hot gasses from the fire, and the fire itself, cannot enter the building.
- ✘ Even more protection can be provided by double glazed windows (two panes of glass), and a *reflective coating* between the panes which will reflect radiant heat. *Exterior screens also* prevent firebrands from entering if the window is left open.
- ✘ Wood window frames will not readily ignite, but will burn freely. Vinyl frames seldom ignite, but will melt allowing the glass to fall out. Aluminum clad wood frames are better, but all-aluminum frames are the best choice.



SIDING

- ✘ The most common siding materials are wood, which are *relatively* fire resistant except when exposed to radiant heat or direct fire contact, *if there is not enough defensible space provided around the house.*
- ✘ A one hour rating can be achieved by adding gypsum sheathing behind the siding.
- ✘ Stone, masonry, stucco, log construction, aluminum or galvanized siding, or fiber cement panel boards are fire resistant materials, but most should still have a gypsum sheathing backing.

ROOFS

Your **roof** is one of the most *vulnerable* areas of your home to a wildland fire. But, it can also be one of your *most important defenses* against wildfire. The National Fire Protection Association has stated that the number one cause of home losses in wildland fires is from untreated wood shake shingle roofs!

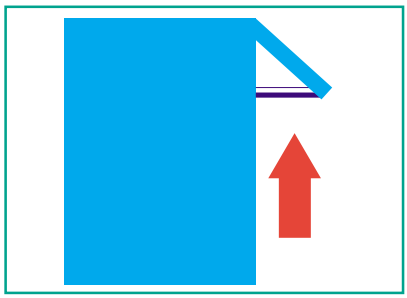
These guidelines can help make the **ROOF** of your home **FIREWISE**.

The wind can carry burning embers for over a mile during a wildland fire.

If the embers land on your roof, the fire can be quickly transmitted to your house.

- ✘ Use ignition resistant roofing materials such as steel, ceramic or cement tile, or composition.
- ✘ Avoid wood shingles since they are very susceptible to ignition and burn intensely.
- ✘ Fire retardant treatment on wood shingles is not effective long term. The best roofs have a “Class A” or “Class B” fire rating
- ✘ Steep steel roofs don’t collect leaves and needles.

- ✘ Clean your roof surface and gutters regularly to avoid accumulation of pine needles, leaves and other flammable materials.
- ✘ Inspect chimneys twice a year. Clean once a year. Check dampers. Install a spark arrester.
- ✘ Cover chimney outlet and stovepipes with non-flammable screen of 1/2 inch or smaller mesh.



- ✘ Open eaves trap hot air and embers. Design them with minimum overhang, and box them in.
- ✘ Cover soffits with fire retardant board.
- ✘ Locate under-eave vents near the roof line, rather than near the wall to prevent heat or flames from becoming entrapped and entering the house through the vent.
- ✘ All ventilation openings in the roof and soffits should be covered with 1/8 inch metal screen.

DECKS

Decks on posts or cantilevered out over slopes create a special problem because they are the ultimate heat trap, and are especially vulnerable to wildfire spreading up the slope.

Combustible materials, trash and debris can accumulate under decks, and transmit a fire into the home's structure. Clean trash and debris from under your deck. Screen off the area below the deck to prevent flammable materials from blowing under it.

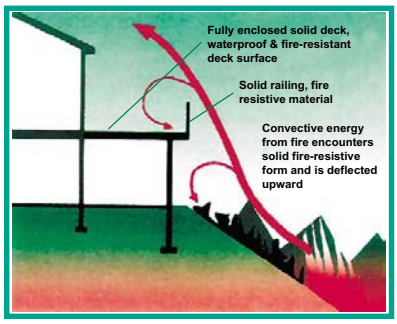
- ✘ Treat the deck as part of the house perimeter. In an area within 3 to 5 feet around the deck, remove plants and other flammable materials.
- ✘ This area is a critical part of **Zone 1** of your **Defensible Space**. Don't store firewood, lumber or other flammables under the deck.

BEFORE

- ✘ Decks are built perfectly to burn, almost the same way you would stack wood in a fireplace.
- ✘ Decks on posts or cantilevered out over steep slopes should be built of ignition resistant or fireproof materials, to at least 1-hour fire resistive standards.
- ✘ Steel posts, girders and joists, and heavy timber decking should be used.

AFTER

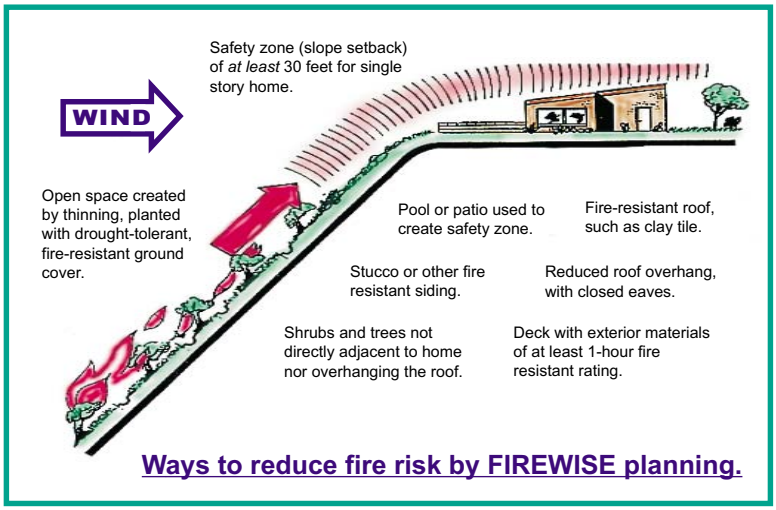
- ✘ *Hardscape* and fire resistive materials can be used to define and landscape the area around the deck.
- ✘ Decks should be skirted (enclosed) with metal or other ignition resistant materials to keep heat and burning debris from blowing under them.



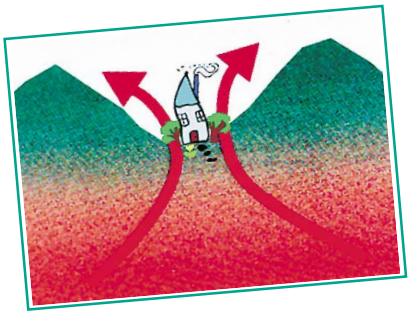
- ✘ A higher fire rating can also be provided by using gypsum sheathing to underlay the decking and wrap support posts.
- ✘ If you are building or replacing a deck, consider some alternatives, such as a patio of stone or brick pavers.

LOCATION AND HOME SITES

FIREWISE site selection and preparation can play an important part in improving the chances of your home surviving a wild land fire. Following the guidelines below will reduce the risk of a fire igniting the house, and allow firefighters to safely defend your home.



Ways to reduce fire risk by FIREWISE planning.

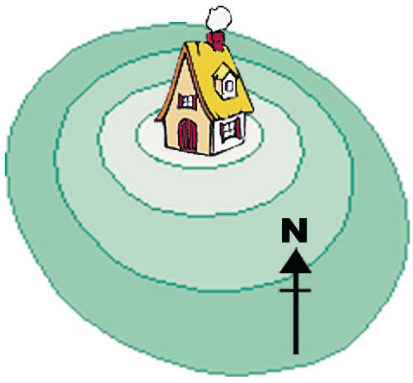


Steep slopes, canyons and draws will channel a fire and increase its intensity and rate of speed. A level site is safer than a sloped site.

A new home should be built (set-back) more than 150 feet from the edge of a ridge or top of a slope to prevent the house from being hit directly by flames and heat traveling up the hill.

Existing houses should increase their **DEFENSIBLE SPACE** to compensate for nearby ridges, canyons, slopes and saddles.

The building site should have at least two routes of entry and egress. Roads should be accessible for fire trucks or emergency equipment.



North slopes typically have the densest vegetation and higher moisture content. Fires occur there less frequently, but when they do they burn with more intensity because there is so much more fuel.

East and West slopes generally have more vegetation than south slopes. They are more prone to drying out in the summer, so the fire potential increases during summer months.

South facing slopes have the least vegetation because they dry out fast and have less available moisture. Because of their dryness and temperature, south slopes are most likely to ignite and burn.

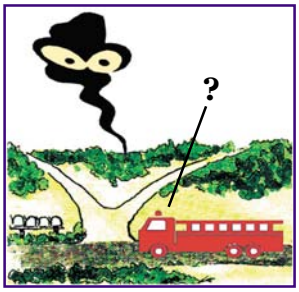
DRIVEWAYS, ROADS AND ACCESS

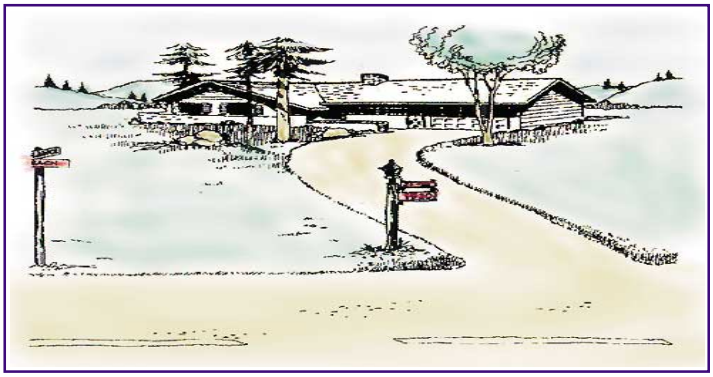
Wyoming offers many opportunities for beautiful, secluded and private home locations. But in the event of a wildland fire, we need to ensure that firefighters can find our home, have access to defend it, and that we can safely evacuate if we need to.

Follow these guidelines to make your home FIREWISE:

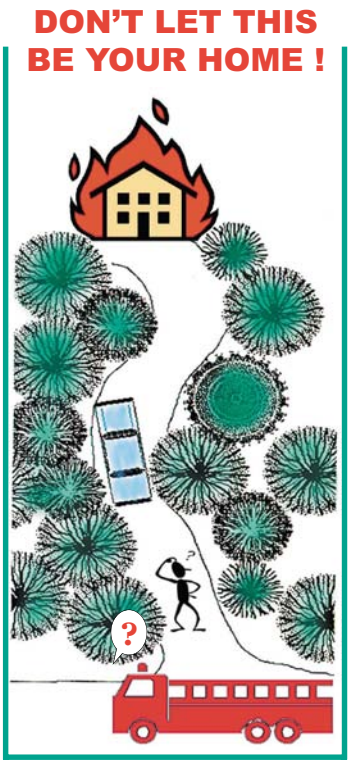
- Keep your driveways as short as possible.
- Make sure any road leading to your house allows two-way traffic, is not too steep and does not have curves that are too sharp to accommodate fire trucks.
- Access roads should be a minimum of 20 feet wide.
- Your driveway should be a minimum of 12-14 feet wide.
- Driveways and access roads should have a minimum of 14 feet vertical clearance, and a slope of less than 12%.
- If your driveway is 150 long or longer, provide a 45 foot turnaround or loop road, and a turn-out somewhere near the middle.

- Address numbers should be 4” tall, in reflective numerals, visible and legible from a moving vehicle on the roadway, day or night.
- If the house cannot be seen from the road, the address should be at the driveway entrance or on the mailbox.
- The home itself should have the address prominently displayed in large numbers which contrast with the house color.





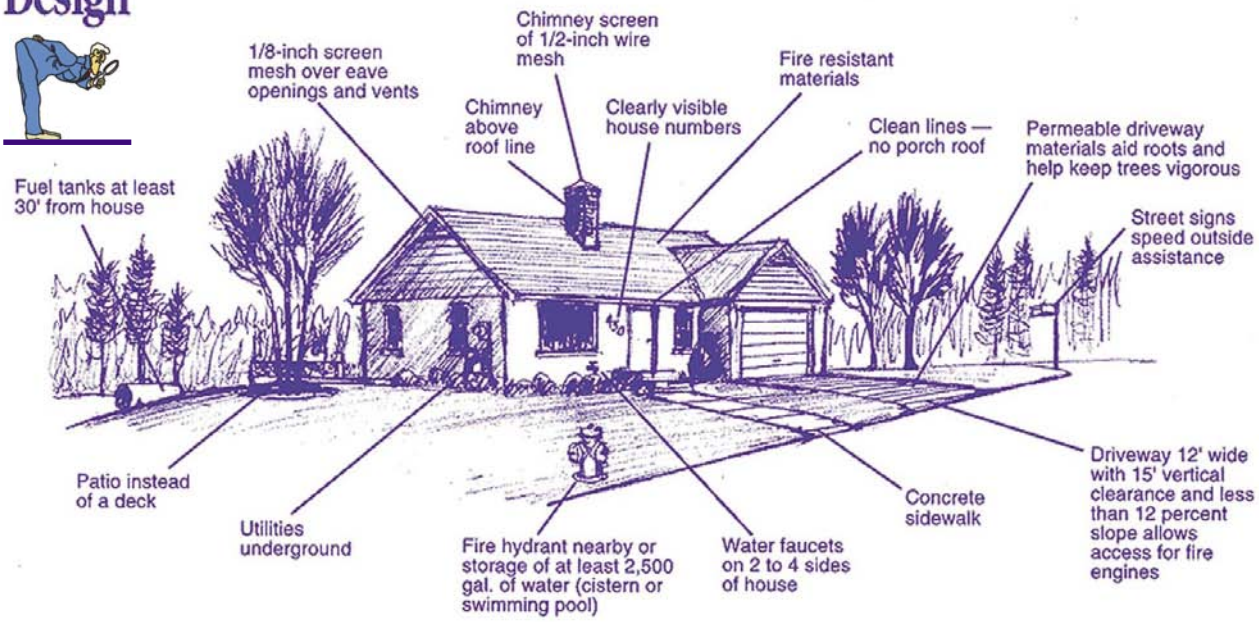
- Clear vegetation back from the road at least fifteen feet.
- Branches that overhang the road or driveway should be pruned-up to 14 feet.
- Check power or telephone lines that run near or over driveways or lanes, ensure there is enough clearance to drive fire equipment underneath (15 feet minimum). If not, contact your utility company.
- Bridges should be strong enough to support a fire truck weighing about 18 tons. If not, post the weight limit on both sides of the bridge.
- If you lock your entrance gate, leave a key with your local fire department.
- Ideally, your home site will have two routes of entrance and exit, for your safety and the safety of Firefighters.



SUMMARY

Here's a quick review of most of the topics covered in this publication. By following these guidelines, you can create a home that can either resist a fire on its own, or at least make it easier for firefighters to protect it. Consider these simple and cost effective **FIREWISE** strategies that will increase the probability your home will survive a wildland fire.

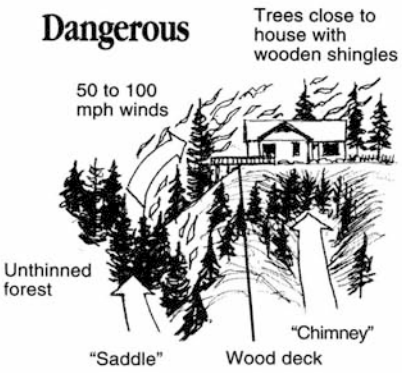
Design



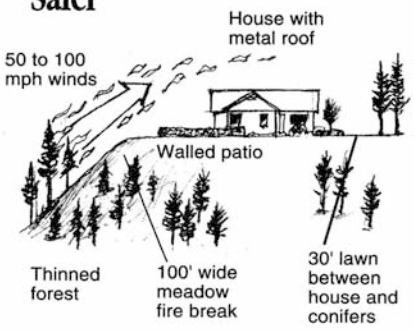
Also review **DEFENSIBLE SPACE** and **ACCESS**, pages 6 & 7, and 14.

Landscaping and grounds maintenance can do a lot to keep wildfire away from dwellings, but where a building is located and how it is built can also help ward off disaster. This is especially important because of "spot fires" started ahead of the main fire by embers blowing in the wind or the fire's convection currents.

Dangerous



Safer



Location

The edges of cliffs or hillsides provide a great view, but they are also prone to sliding and even more prone to being caught in the path of flames sweeping up slopes. When possible, select a home site in level terrain or back at least 30' from a drop-off. Topographic saddles and canyons in wildland areas are also dangerous because of the pre-heating that can occur as fires move uphill.

Building Materials

It should go without saying that fire resistant building materials should be used in fire-prone areas. However, every year houses go up in flames because this was ignored during the planning stage of building a home. When building or remodeling, insist on:

- noncombustible roof materials such as Class-A asphalt shingles, slate or clay tile, metal, concrete products or terra-cotta tiles — and not wood shingles
- a fire resistant sub-roof
- fire resistant siding (such as stucco or masonry, *not* vinyl) and trim
- double pane and tempered glass for windows and skylights, and smaller vs. larger windows
- non-flammable screening shutters for windows and skylights

IMPORTANT LINKS

Check these websites for even more information:

Firewise Wyoming
http://www.firewisewyoming.com

FIREWISE (has many other links)
http://www.firewise.org

Bureau of Land Management
http://www.blm.gov

Colorado State Forest Service
http://ww.colostate.edu/Dept/CSFS/index.html

FEMA
http://www.fema.gov/reg-viii

Fire Safe Council
http://firesafecouncil.org

Firewise Communities
http://www.firewise.org/communities/

Fremont County
http://www.fremontcountyfirewise.com

National Interagency Fire Center
http://nifc.gov

Smokey Bear
http://www.smokeybear.com

USDA Forest Service
http://www.fs.fed.us/

USFS Rocky Mountain Region
http://www.fs.fed.us/r2/fire/rmacc.html

The most common cause of wildfires is LIGHTENING!

EMERGENCY PHONE NUMBERS

Listed below are **Emergency** and Non-Emergency reference *Phone Numbers*

911 - To report a *FIRE* or other *EMERGENCY*

Wyoming Life Flight Air Ambulance	***1-800-442-2222***
Wyoming Medical Center	***577-2222***
Natrona County	***235-9200***
Agriculture Extension Office	235-9400
Building Department	235-9248
Casper Mountain Fire Department	265-0134
County Clerk	235-9206
County Commissioners	235-9202
Emergency Management	235-9205
Fire (Non-Emergency)	265-8656
Health Department	235-9340
Motor Vehicle	235-9370
Park-Road & Bridge	235-9325, 235-9311
Planning Department	235-9435
Sheriff (Non-Emergency)	235-9282
Weed Control District	472-5559
City of Casper	***235-8400***
Building Inspection	235-8264
City Manager	235-8224
Code Enforcement	235-8254
Fire (Non-Emergency)	235-8278
Metro Animal Control	235-8398
Police (Non-Emergency)	235-8278
Public Services (Trash, Water, Sewer, etc.)	235-8341
Water - Emergency	235-8360
Sewer - Emergency	235-8481
Town of Mills	***234-6679***
Fire	234-8481
Police	266-4796, 235-9282
Water Department	234-6679
Town of Midwest	***437-6450***
Fire (Non-Emergency)	437-6450
Police (Non-Emergency)	437-6509
Town of Bar Nunn	***237-7269***
Town of Evansville	***234-6530***
Police (Non-Emergency)	234-1306
Police - Emergency	234-0897
State of Wyoming	***777-7011 - Cheyenne***
Department of Transportation (WyDOT)	473-3200
Environmental Quality - Solid/Hazardous Waste	473-3450
Environmental Quality - Water	473-3465
Forestry Division	234-6116
Game & Fish	473-3400
Wyoming Highway Patrol	1-800-442-9090
U.S. Government	
Bureau of Land Management	261-7600
To report a Fire on Public Lands	261-7691
Bureau of Reclamation	261-5628
Emergency Planning & Community Right to Know	1-800-535-0202
Environmental Protection Agency - Region 8	1-800-227-8917 - Denver
NOAA - Weather Service - Forecast Office	857-3898 - Riverton
Poison Control Center	1-800-955-9119
State Emergency Response Commission	777-7566 - Cheyenne

STATE CONTACTS

Listed below are **Wyoming State Forestry Division District contacts**

DISTRICT #1 - NEWCASTLE
Office - 746-4261 Fax - 746-3411
Bill Kohlbrand - District Forester
Wyoming State Forestry Division
P.O. Box 639
431 Deleware Avenue
Newcastle, WY 82701

DISTRICT #2 - CHEYENNE
Office - 777-7586 Fax - 777-5986
Ike Muniz - District Forester
Wyoming State Forestry Division
1100 West 22nd Street
Cheyenne, WY 82002

DISTRICT #2 - CASPER
Office - 234-6116 Fax - 234-6966
Bryan Anderson - District Forester
Wyoming State Forestry Division
All Mail:
P.O. Box 879, Mills, WY 82644-0879
Street Address:
2020 Fairgrounds Road, Suite 203
Casper, WY 82604

DISTRICT #2 - DOUGLAS
Office - 358-4001 Fax - 856-2648
John Crisp / Jim Wilson
Wyoming State Fair Office
Drawer 10
400 West Center
Douglas, WY 82633

DISTRICT #3 - RIVERTON
Office - 856-8655 Fax - 856-2648
Paul T. Morency - District Forester
Wyoming State Forestry Division
305 South Smith Road
Riverton, WY 82501

DISTRICT #4 - LYMAN
Office - 787-6148 Fax - 787-6996
Dana A. Stone - District Forester
Wyoming State Forestry Division
P.O. Box 1497
100 Sage Street - Lyman Town Hall
Lyman, WY 82937

DISTRICT #4 - PINEDALE
Office - 367-2119 Fax - 367-2129
Chris Fallbeck
P.O. Box 1678
Pinedale, WY 82941-1678

DISTRICT #5 - BUFFALO
Office - 684-2752 Fax - 684-7636
Michael K. Hostetler - District Forester
Wyoming State Forestry Division
600 Veterans Lane - Room #2
Buffalo, WY 82834

PLANTS FOR A FIREWISE LANDSCAPE *

FLOWERS & GROUNDCOVERS

Scientific Name	Common Name
Achillea lanulosa	Native yarrow
Aconitum columbianum	Columbian monkshood
Allium cernum	Nodding onion
Allium geyeri	Geyer onion
Anaphalis margaritacea	Pearly everlasting
Antennaria parvifolia	Small-leaf pussytoes
Antennaria rosea	Rosy pussytoes
Aquilegia spp.	Columbine
Aquilegia coerulea	Colorado blue columbine
Arabis sp.	Rockcress
Artemesia frigida	Fringed sage
Artemesia ludoviciana	Prairie sage
Aster leavis	Smoot aster
Aster porteri	Porter aster
Calochortus gunnisonii	Mariposa lily
Campanula rotundifolia	Common harebell
Claytonia lanceolata	Spring beauty
Delphinium spp.	Delphinium
Dianthus spp.	Pinks
Epilobium angustifolium	Fireweed
Erigeron flagellarius	Whiplash dairy, trailing fleabane
Eriogonum umbellatum	Sulphur flower
Erysimum asperum	Western wallflower
Gaillardia aristata	Blanket flower
Galium boreale	Northern bedstraw
Geranium spp.	Hardy geraniums
Geum triflorum	Prairie smoke
Helianthella quinquenervis	Aspen sunflower
Helianthus pumilus	Small sunflower
Heuchera spp.	Coral bells
Ipomopsis aggregata	Scarlet gilia
Iris missouriensis	Native iris
Leucocrinum montanum	Sand lily
Liatris punctata	Dotted gayfeather
Linum lewisii	Wild blue flax
Lupinus argenteus	Silver lupine
Martensia lanceolata	Narrow-leaved chiming bells
Mimulus guttatus	Yellow monkey-flower
Monarda fistulosa	Native beebalm
Oenothera caespitosa	White stemless evening primrose
Penstemon caespitosus	Mat penstemon
Penstemon seqndiflorus	Sidebells
Penstemon virens	Blue mist penstemon
Polemonium	Jacobs ladder
Potentilla fissa	Leafy potentilla
Ratibida columnifera	Prairie coneflower
Rudbeckia hirta	Black-eyed Susan
Scutellaria brittonii	Skullcap
Sedum spp.	Stonecrop
Sedum lanceolatum	Yellow stonecrop
Senecio spartioides	Broom groundsel
Solidago missouriensis	Smooth goldenrod
Thalictrum fendleri	Fendler meadowrue
Thermopsis divaricarpa	Spring golden banner
Tradescantia occidentalis	Western spiderwort

PLANTS FOR A FIREWISE LANDSCAPE *

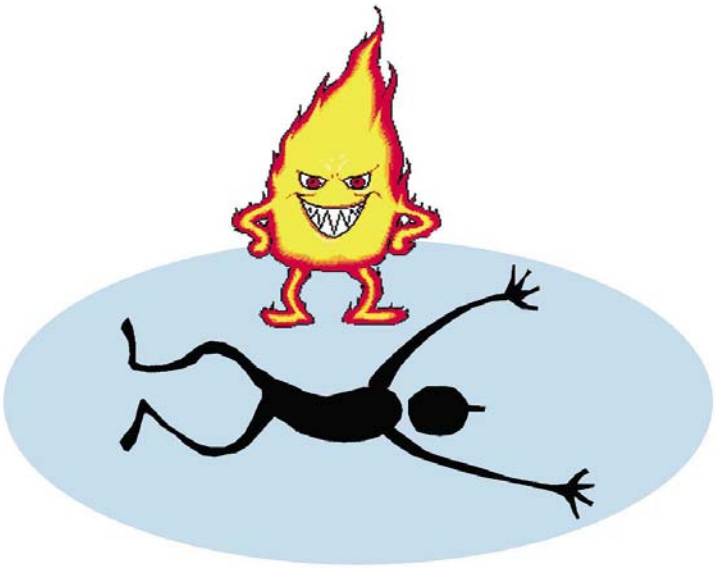
SHRUBS

Scientific Name	Common Name
Arctostaphylos uva-ursi	Kinnikinnick, bearberry
Betula ganulosa	Bog birch
Ceanothus fendleri	Buckbrush, mountain lilac
Cercocarpus intricatus	Little-leaf mountain mahogany
Cercocarpus montanus	True mountain mahogany
Chrysothamnus spp.	Rabbitbrush
Cornus stolonifera	Redwig dogwood
Holodiscus dumosus	Ocean spray, cliff/rock spirea
Jamesia americana	Wax flower
Mahonia repens	Creeping grape holly
Philadelphus microphyllus	Little-leaf mockorange
Psysocarpus monogynus	Mountain ninebark
Prunus besseyi	Western sand cherry
Purshia tridentata	Antelope bitterbrush
Ribes aureum	Golden currant
Rhus sp.	Sumac
Rosa woodsii	Woods or native wild rose
Shepardia canadensis	Russet buffaloberry
Symphoricarpos spp.	Snowberry, coralberry
Viburnum edule	Highbush cranberry
Yucca glauca	Spanish bayonet, small soapweek, Great plains yucca

LARGE SHRUBS AND TREES

Scientific Name	Common Name
Acer ginnala	Amur maple, Ginnala maple
Acer glabrum	Rocky Mountain maple
Acer grandidentatum	Wasatch maple, Canyon maple
Acer tataricum	Tatarian maple
Alnus tenuifolia	Thinleaf alder
Amelanchier alnifolia	Saskatoon alder-leaf serviceberry
Amelanchier utahensis	Utah serviceberry
Betula nigra	River birch
Betula occidentalis	Western water birch
Cercocarpus ledifolius	Mountain mahogany
Corylus cornuta	Filbert, beaked hazelnut
Crataegus spp.	Hawthorn (several native)
Fraxinus pennsylvanica	Green ash
Gleditsia triacanthos	Honeylocust
Malus ssp.	Crabapple
Populus angustifolia	Narrowleaf cottonwood
Populus tremuloides	Aspen
Prunus americana	American wild plum
Prunus pennsylvanica	Pine/fire/wild red cherry
Prunus virviniana melanocarpa	Western chokecherry
Rubus delisiosus	Boulder raspberry, thimbleberry
Salix amygdaloides	Peachleaf willow
Shepherdia argentea	Silver buffaloberry
Sorbus scopulina	Western mountain ash

*** Some plants, shrubs and trees will not grow at higher elevations.**
Check with your State Forestry Office or Master Gardener before planting.



Who's in control of your survival ?