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# WILDLAND FIRE PREVENTION

Develop Defensible Space, Help firefighters help you

# DEVELOP AND MAINTAIN A FIRE SAFE LANDSCAPE AROUND YOUR HOME

Your first defense against wildland fire is to create a Fire Safe landscape around your home. This can be achieved by removing flammable vegetation and replacing it with fire resistant plants; spacing the plants in your yard; and clearing away dead leaves on your roof and dry brush around your home.

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#### **Defensible Space**

If you are able to create a Fire Safe landscape for at least 30 feet around your house (and out to 100 feet or more in some areas), you will reduce the chance of a wildland fire spreading onto your property and burning through to your home. This is the basis for creating a "defensible space" – an area that will help protect your home and provide a safety zone for firefighters who are battling the flames.

Clearing all flammable vegetation a minimum of 30 feet around your home and other structures will not only provide you with the greatest chance for survival, it provides firefighters an area to work in to defend your home.

But this does not mean you have to live with a ring of bare dirt around your home. You can create a defensible space and also beautify your property.

#### Fire Safe Landscaping



# Other Fire Safe Precautions

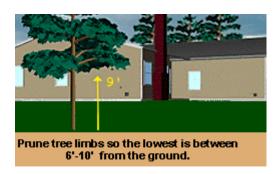
After you have removed and/or replaced flammable native vegetation around your home for a minimum of 30 feet, there are other Fire Safe precautions that you should follow:

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You can start with the native vegetation around your home. Removing flammable vegetation and replacing it with low growing, fire resistive plants is one of the easiest and most effective ways to create defensible space. You should select landscape vegetation based on fire resistance and ease of spacing. The taller your plants are, maintenance, as well as visual enhancement of your property.



Contact the Montana Department of Natural Resources and Conservation, your local fire department or nursery to find out which fire resistive plants are adapted to the climate in your area Stay away from unsafe ornamental landscaping plants which may actually increase the fire risk your home faces.



### **MOBILE HOME FIRE SAFETY**

Fire generally spreads faster in a mobile home. Be prepared!!!

SKIRT YOUR MOBILE HOME

*Vary the height of your landscape* plants and give them adequate the wider apart they should be spaced.

For trees over 18 feet tall, prune limbs within six feet of the ground to prevent ground fires from spreading into trees.

Remove dead limbs overhanging your roof and any limb within 10 feet of your chimney.

Work with your neighbors to clear common areas between houses and prune areas of heavy vegetation that are a threat to both.

Avoid planting trees under or near electrical lines, where they may grow into or contact the lines under windy conditions, causing a fire.

If you have a heavily wooded area on your property, remove some of the trees to decrease the fire hazard and improve growing conditions.

Properly dispose of all cut vegetation by an approved method. Open burning may require a burning permit. Contact your fire department for local requirements.

It is recommended that you locate

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Debris burning fires or forest fires have less chance of setting the home on fire if they are prevented liquefied petroleum gas (LPG) tanks from getting under the home. Skirting materials prevent debris from blowing under your home, and and any fuel storage containers at can stop a grass fire. They also keep children and pets from wiring or gas lines.

#### **MAINTENANCE**

Maintain your heating system. Do not use the heater room for storage.

Make sure hallways are clear to allow for an easy escape route. Install smoke detectors and fire extinguishers.

# **HOW TO MAKE YOUR HOME**

# FIRE SAFE CHECKLIST: EXTERIOR

#### **ROOF**

Remove dead branches overhanging your roof

Remove any branches within 10 feet from 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.

Cover your chimney with a screen mesh that has openings of 1/2inch or smaller.

#### CONSTRUCTION

Build your home at least 30 feet from your property line.

Use fire resistant building materials.

Enclose the underside of balconies and aboveground decks with fire resistive materials.

least 30 feet from any structure. Clear flammable vegetation at least 10 feet around all such tanks.

Clear pine needles, leaves, or other debris from the roof of your house and any other buildings on your property. Check and clean your roof and gutters several times during the spring, summer, and fall to remove this debris that can easily ignite from a spark.

Remember that after you have established your Fire Safe landscape, you should maintain it regularly. If you have any questions about creating or maintaining a defensible space around your home, contact your local Montana DNRC office. Phone numbers are found in your phone book.

### FIRE SAFETY INSIDE **YOUR HOME**

#### **Smoke Detectors**

Smoke detectors have saved many lives and may save yours. More than 50 percent of fatal residential fires take place at night when people are sleeping. If a fire starts while your family is asleep, smoke detectors will Landscaping Page 5 of 13

Limit the size and number of windows in your home that face large areas of vegetation.

Install only dual-paned or triple-paned windows.

#### **LANDSCAPE**

Create a "defensible space" by removing all flammable vegetation at least 30 feet from all structures and replacing it with fire resistive plants.

Space native trees and shrubs at least 10 feet apart.

For trees taller than 18 feet, prune lower branches within six feet of the ground.

Choose ornamental landscaping plants that are fire resistant.

Reduce the number of trees in heavily wooded areas.

Maintain all plants by regularly removing dead branches, leaves, and needles.

#### **YARD**

Stack woodpiles at least 30 feet from all structures and clear away flammable vegetation within 10 feet of woodpiles.

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 Montana DNRC, or your local fire department to learn more about burning regulations in your area.

Where burn barrels are allowed, clear flammable materials at least 10 feet around the barrel; cover the open top with a nonflammable screen or mesh, with holes no larger than 1/4inch.

wake you up. They can make the difference between life and death in a fire emergency.

Position smoke detectors on the ceiling just outside each bedroom. If you have a multilevel home, install a detector on every level. If you sleep with your bedroom door closed, place an additional detector inside your bedroom.

Before you buy a smoke detector, make sure it is listed and approved by an independent testing laboratory. Read the instructions enclosed with your smoke detector carefully to find out exactly how and where to install it. Be sure to test your smoke detector each month and change its batteries at least twice a year. A good habit to follow is to change the batteries in your smoke detectors in the spring and fall when you change your clocks.

#### **Portable Fire Extinguishers**

Portable fire extinguishers can save lives and property by helping you put out or contain small fires until the fire department arrives. But they must be used properly and under the right conditions.

Be sure the fire extinguisher is listed and approved by an independent Landscaping Page 6 of 13

#### **EMERGENCY WATER SUPPLY**

Maintain an emergency water supply, one that meets fire department standards, through one of the following:

- a community water/hydrant system.
- a cooperative emergency storage with neighbors.
- a minimum storage supply of 2,500 gallons on your property.

Clearly mark all emergency water sources.

Create easy freighter access to your closest emergency water source.

If your water comes from a well consider an emergency generator to operate the pump during a power failure.

#### **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 dead-end roads and weight and height limitations.

Make sure dead-end roads and long driveways have turnaround areas wide enough for emergency vehicles.

testing laboratory. Extinguishers are identified by the type of fire on which they can be used:

A - wood or cloth fires

B - flammable liquid fires

C - electrical fires

#### D -flammable metal fires

Make sure that each adult member of your family can hold and operate the fire extinguisher and knows where it is located. Mount extinguishers in easy-to-get-to places. Remember that fire extinguishers need annual maintenance and must be recharged after every use.

#### **Home Sprinkler Systems**

Home sprinkler systems are one of the most reliable and effective forms of protection from fire because they provide an immediate response to extinguish a fire inside you home. They also can extinguish a fire when you are asleep or when you are away. Contact your local fire department for information on selecting an approved sprinkler system for your home.

#### Plan Your Escape!

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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 that your street is named or numbered and a sign is visibly posted at each street intersection. The sign should be of non flammable material.

Make sure that your street name and house number are not duplicated 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.

#### **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 panels are installed and maintained as prescribed by code.

Contact qualified individuals to perform electrical maintenance and repairs.

Consider installing residential sprinkler and sprinkling portions of your roof as well.

# FIRE SAFE CHECKLIST: INTERIOR

#### **KITCHEN**

Keep a fire extinguisher in the kitchen.

It is important that all family members know what to do in an emergency. Even with an early warning from a smoke detector, escaping a fire can be difficult or impossible. Fire can spread very rapidly, But creating dangerous, smoky conditions.

Smoke is your enemy! Even a few breaths of smoke and toxic gases can choke and kill you. If you become trapped in smoke, crawl low and keep your head down. Smoke and heat rise, so cleaner air is near the floor.

#### **Community Alert System**

Contact your neighbors and local authorities to pre-plan community emergency procedures, such as standard escape routes and common meeting places. Also, it is helpful to develop a community alert system that can be used during a fire or other emergency. With an alert system, anyone who spots an emergency will know how to react so that everyone in your neighborhood will be notified in time to respond.

#### Plan your escape

Here are the steps you should take to plan your escape:

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Maintain electric and gas stoves in good operating condition.

Keep baking soda on hand to extinguish stovetop grease fires.

Move the handles of pots and pans containing hot liquids away from the front of the stove.

Place flammable curtains and towels away from burners on the stove.

Store matches and lighters out of the reach of children.

Properly store flammable liquids in approved containers and away from ignition sources such as pilot lights, halogen lights and welding equipment.

#### **HALLWAY**

Install smoke detectors between living and sleeping areas.

Test smoke detectors monthly and replace batteries twice a year when clocks are changed in the spring and fall.

Make sure that electrical outlets are designed to handle appliance loads.

Install child safety plugs (caps) on electrical outlets.

Replace electrical cords that do not work properly, have loose connections, or are frayed.

#### **BEDROOM**

If you sleep with the door closed, install a smoke detector in the bedroom.

Do not smoke in bed.

#### **BATHROOM**

Draw a floor plan of your home and mark all possible escape routes. Make sure you know two safe ways out of every room, especially the bedrooms.

Prepare a list of valuables to take with you in an emergency. If you can store these valuables together to save time later.

Remember that young, elderly, and disabled persons may need assistance. Their rooms should be located as close to an exit as possible. Train the rest of your family to help them get out in an emergency.

Remind everyone to close doors behind them as they evacuate the house to slow down the spread of fire, smoke, and heat.

#### Meeting place

Decide on an outside meeting place to assemble your family and to make sure everyone is out.

#### Home escape drills

Practice your escape! Conduct home fire drills often, varying the drill to prepare for different fire situations. You may be blinded by smoke, so try practicing your escape plan with

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Disconnect hot appliances such as curling irons and electric irons when done; store in a safe location until cool.

Keep flammable items, such as towels, away from wall and floor heaters.

#### **GARAGE**

Mount a fire extinguisher in the garage.

Have tools such as a shovel, hoe, rake, and bucket available for use in a wildland fire emergency.

Install a solid door with self-closing hinges between living areas and the garage.

Dispose of oily rags in metal containers.

Store all combustibles away from ignition sources, such as water heaters.

Disconnect electrical tools and appliances when not in use.

Allow hot tools such as glue guns and smoldering irons to cool before storing.

#### **DISASTER PREPAREDNESS**

Store at least a three-day supply of food that does not require refrigeration and generally does not need cooking.

Store at least a three-day supply of drinking water.

Store a portable radio, flashlight, emergency cooking equipment, portable lanterns, and batteries.

Maintain first aid supplies to treat the injured until help arrives.

Keep a list of valuables to take with you in an emergency; if possible, store these valuables together to save time later.

your eyes closed.

*In the event of a fire, remember the following:* 

Before you exit your room, feel the door. If it is hot, don't open it. Use your second way out.

If smoke, heat, or flames block both of your escape routes, stay in the room with the door closed.

Stuff sheets, blankets, or towels in cracks around the door and around heating and air conditioning vents to keep smoke and fumes out.

Open a window as long as no smoke is entering the room. Hang a bright sheet or cloth out the window to signal for help.

#### **Dial 911**

If there is a phone in the room, dial "911" and tell the emergency dispatcher where you are.

If your clothes catch fire:

STOP, DROP AND ROLL.

# BUILDING A NEW OR REMODELING YOUR

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Consider a portable generator to supply power to lights and cooking appliances.

Have a contingency plan to enable family members to contact each other.

Make sure that all family members are ready to protect themselves with Stop, Drop and Roll.

## WHAT TO DO WHEN YOU ARE

#### THREATENED BY WILDFIRE

If you have followed the advance preparation steps outlined on this page, you have created a Fire Safe house that has a better chance of surviving. But when a wildland fire is immediately threatening your area, there are additional steps you can take to help protect your home.

First, if you see a fire approaching your home, report it immediately by dialing 9- 1 - 1. Remember to stay on the phone to answer additional questions the emergency dispatcher may ask.

Next, dress properly to prevent burns and lifelong scars. Wear long pants and cotton or wool long-sleeve shirts or jackets. Gloves, and a bandana over your mouth and nose, provide added protection. Do not wear short sleeve shirts or clothing made of synthetic fabrics.

If there is time before the fire arrives, take the following actions:

#### **Emergency Wildfire Survival Checklist**

#### **Preparing to Evacuate**

Park your car in the garage, heading out with windows closed and keys in the ignition.

Close the garage door but leave it unlocked; disconnect the automatic garage door opener in case of power failure.

Place valuable documents, family mementos and pets inside the car in the garage for quick departure, if necessary.

#### **FIRE SAFE HOME**

Your house could be vulnerable to a fire because of its design, construction, and location. If you are preparing to build, buy, or remodel a house, you should know what to look for in a Fire Safe house. A few modifications to your construction plans can reduce the chance of your house catching fire, or resist further damage if it does catch fire. Don't let your house become more fuel for a wildland fire.

If you are building a new house, locate it at least 30 feet from the boundary of your lot. This will allow you to design your landscape with at least 30 feet of defensible space around the house.

#### **Building Materials**

Exterior construction materials, such as brick and stucco, resist fire much better than wood. If you have a wood exterior, it is especially important that you follow the Fire Safe practices outlined on this page. Generally, thicker siding materials are more fire resistant.

Enclose the underside of balconies and decks on slopes with fire resistive materials. If not enclosed, these areas can trap flames and Landscaping Page 11 of 13

If you do evacuate, use your pre-planned route, away from the approaching fire front.

Keep a flashlight and portable radio with you at all times. Don't forget extra batteries.

If you are trapped by fire while evacuating in your car, park in an area clear of vegetation that could *your roof is the most vulnerable part* burn, close all vehicle windows and vents, cover yourself with a blanket or jacket and lie on the floor.

If you are trapped by fire while evacuating on foot, select an area clear of vegetation along a road, or lie in the road ditch. Cover any exposed skin with a jacket or blanket.

#### **Outside Your Home**

Move combustible yard furniture away from the house or store it in the garage; if it catches fire while outside, the added heat could ignite your house.

Cover windows, attic openings, eave vents, and subfloor vents with fire resistant material such as? *minimum level required by law.*-inch or thicker plywood. This will eliminate the possibility of sparks blowing into hidden areas within the house. Close window shutters if they are fire resistant.

\*\*Contact your local fire departm\* for specific roofing guidelines in

Attach garden hoses to spigots and place them so they can reach any area of your house.

Fill trashcans and buckets with water and locate them where firefighters can find them.

If you have an emergency generator or a portable gasoline-powered pump that will supply water from a swimming pool, pond, well, or tank, clearly mark its location and make sure it is ready to operate.

Place a ladder against the house on the side opposite the approaching fire to help firefighters in rapidly getting onto your roof.

Place a lawn sprinkler on flammable roofs, but don't turn it on unless the fire is an immediate threat. *nonflammable 1/4-inch mesh screen*. You do not want to reduce the supply of water for the firefighters.

#### **Inside Your Home**

burning embers that can ignite your home.

#### **Your Roof**

Your roof is the most vulnerable part of your house because it can easily catch fire from the windblown sparks of a wildland fire. Therefore, the single most important step you can take to create a Fire Safe house is to build or re-roof with fire resistive or noncombustible materials.

There are three classifications of fire resistive roofs: Class A offers the best protection; Class C is the minimum level required by law. Contact your local fire department for specific roofing guidelines in your area.

#### **Other Building Concerns**

Roof eaves extending beyond exterior walls are also susceptible to flame exposure and should be limited in length and boxed or enclosed with fire resistive materials. Openings such as attic or ridge vents can allow easy entry of flaming embers and sparks. Cover all vents with a nonflammable 1/4-inch mesh screen.

Every chimney and stovepipe must be covered by a nonflammable screen with mesh no larger than 1/2Landscaping Page 12 of 13

Close all windows and doors to prevent sparks from blowing inside.

Close all doors inside the house to slow down the spread of fire from room to room.

Turn on a light in each room of your house, on the porch, and in the yard. This will make the house a distance of 30 feet away, the heat more visible in heavy smoke or darkness.

from a wildland fire may be enough

Fill sinks, bathtubs, and buckets with water. These can be important extra water reservoirs.

Shut off liquefied petroleum gas (LPG) or natural gas valves.

Move furniture away from windows and sliding glass doors to keep it from igniting from the heat of the amount of heat transmitted from fire radiating through windows.

the fire to the interior of your home.

Remove your curtains and drapes. If you have metal blinds or special fire resistant window coverings, close them to block heat radiation.

#### If You Stay In Your Home

#### When A Fire Approaches

Stay inside your hose, away from outside walls.

Close all doors, but leave them unlocked.

Keep your entire family together and remain calm. Remember:

If it gets hot in the house, it is many times hotter and more dangerous outside.

#### **After The Fire Passes**

Check the roof immediately, extinguishing all sparks and embers. If you must climb on to the roof, use caution, especially if it is wet.

Check your yard for burning woodpiles, trees, fence posts or other materials.

#### inch.

Limit the size and number of windows in your home that face large areas of vegetation. Even from a distance of 30 feet away, the heat from a wildland fire may be enough to ignite the furnishings inside your house. Installing dual- paned windows and sliding glass doors can reduce the potential of breakage from windblown debris and reduce of the amount of heat transmitted from the fire to the interior of your home.

<u>Contact Keep Montana Green,</u> <u>or,Montana DNRC for more</u> <u>information</u>

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Keep the doors and windows closed.

Continue rechecking your home and yard for burning embers for at least 12 hours.

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# **NATIONAL WILDLAND FIRE PREVENTION TEAM, 1998**



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