

FIREWISE

Alaska

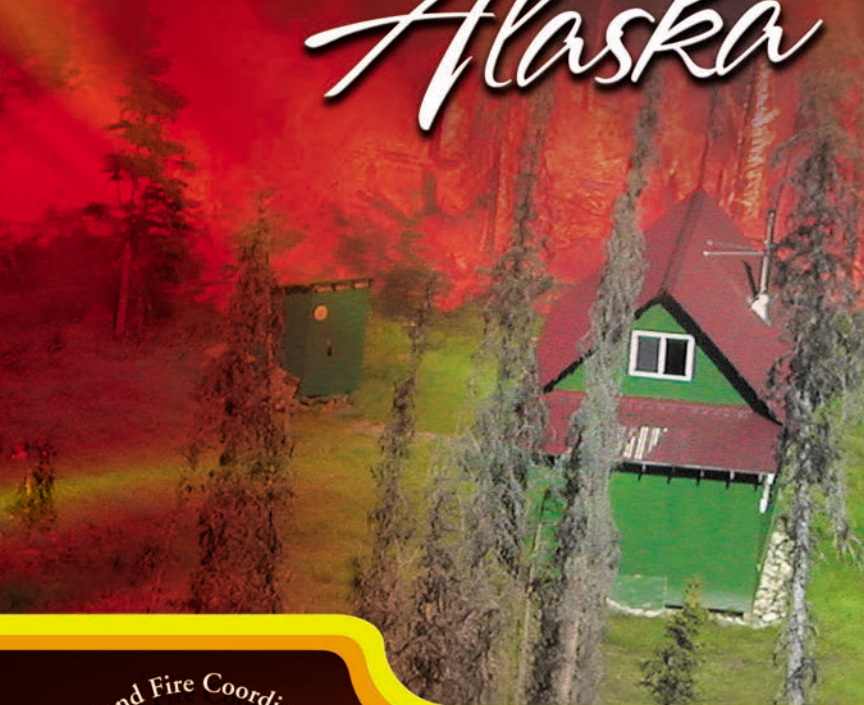






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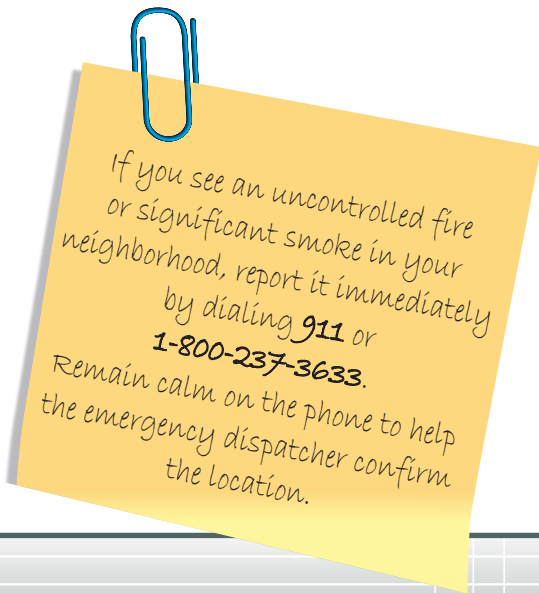
Notice! The Firewise USA® recommendations found in this booklet are based on the National Fire Protection Association guidelines. Homeowners' individual insurance policies requirements may vary.



Acknowledgments

Firewise Alaska is a reference guide developed by the Alaska Wildfire Coordinating Group. The 2020 pocket guide was coordinated by National Park Service, Alaska Regional Fire Communication and Education Specialist Deborah Coble and Alaska Department of Fish and Game Program Coordinator Sue Rodman. Special thanks to AWFCG Wildland Fire Education and Prevention Committee for their review and edits.

Graphic Designers, Carolina Pacheco Vargas and John Ray.



WILDLAND FIRES: PART OF ALASKA LIVING



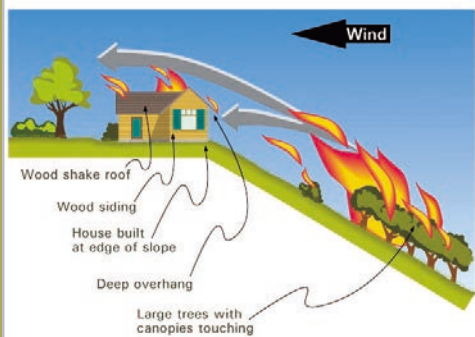
Wildland fires happen, be ready.

Fire plays an essential role in Alaska's wildlands. Fire plays an equally important social role in communities and rural lifestyles throughout the state, and helps to shape the wild and expansive habitats that Alaskans call home.

Your Firewise home has a good chance of surviving a wildland fire without firefighter assistance. It's important to remember that burning embers collecting on or near your home before and after the main fire passes can still lead

Homeowners can take effective measures to protect their homes and property. Adopting Firewise principles can reduce your risk of damage or loss to your property and community. This Firewise Alaska pocket guide provides some of the ways for you to protect your Alaska home from burning and how to create your family's safety plan. A firewise home is more likely to survive a fire.

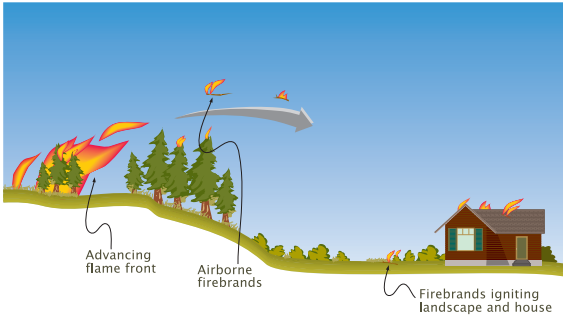
DANGEROUS MATERIALS AND CONDITIONS FOR SLOPED SITES



Utah State University Forestry Extension, Firewise Landscaping for Utah: <http://extension.usu.edu/forestry>



FIRES ADVANCE BY DIRECT FLAME CONTACT AND BY AIRBORNE FIREBRANDS



Utah State University Forestry Extension, Firewise Landscaping for Utah:
<http://extension.usu.edu/forestry>

to home loss if no one is there to put out these fires.

When wildland fire strikes, firefighters must prioritize their efforts and may not reach every home. A Firewise home is more likely to survive a fire.

Fires advance by direct flame contact and by burning embers. Homes ignite in the same way:

1. direct flame contact with combustible materials on or adjacent to the home, and
2. burning embers landing on or near the home.

How Fast Can Your House Run?

Oregon State University Extension Service
3893 SW Airport Way Redmond, OR 97756





30 FT

How Fast Can Your House Run?

From Your Doorsteps Outward

- Remove all conifers and dry or dead vegetation.
- Edge the building with small plants, flowers or gravel.
- Keep your roof and gutters clean. Remove needles, leaves, lichens, branches and debris.
- Remove organic debris that collects in cracks.
- Remove debris and combustible items from deck surfaces and underneath decks and stairs.

From 15-30 feet of structure

- Thin or clump conifer trees to ~15 feet between extending branches.
- Prune limbs of mature conifers to 6-8 feet.
- Remove shrubs beneath trees.
- Remove all dry or dead vegetation.

From 30 - 100 feet of structure

(increase distance if slope is >30%)

- Thin conifers to 10 -15 feet between extending branches.
- Thin black spruce in clusters <10 feet in diameter with 15 feet between clusters.
- Prune limbs of remaining conifers to 6-8 feet.
- Remove shrubs beneath trees.
- Remove all dry or dead vegetation.

General Landscaping

- Maintain lawn at 3" or less and keep well watered.
- Keep trees healthy with frequent watering.
- Dispose of flammable debris from your property.
- Keep areas under stairs and decks free of debris; enclose with non-combustible screens.
- Clean the roof and gutters of needles, leaves, and branches.
- Provide a 15-foot clearance between your chimney and nearest tree branches.
- Prune trees in fall for best health - spruce bark beetle reference guide at <https://www.fs.usda.gov/detailfull/r10/forest-grassland-health/?cid=FSEPRD536861&width=full>.

Building Materials

Firewise Self Assessment Checklist

- Cap chimney with spark arrester.
- Roof should be fire resistant; if not, keep clear of leaves, mosses and lichens.
- Screen all exterior vents, such as attic openings.

Access and Signs

- Address marked with reflective numbers at least 4" high on house and driveway.
- Clear vegetation alongside driveway and road edge.
- Driveway should be 12 feet wide with a turnaround for emergency vehicle access.

General

- Keep garden hoses and fire tools (shovels, rakes, or Pulaskis) readily available.
- If you have a well, consider installing a pump and generator.
- Keep storage areas clean; do not accumulate combustibles such as oily rags and newspapers.
- Check spark arresters on all motorized equipment; store 30 feet away from structures or inside garage.

Hazardous Material

- Use non-combustible cribbing for fuel tanks with a 10-foot area cleared around the tank.
- Stack firewood at least 30 feet from house and clear 10 feet around pile.
- Do not stack firewood under trees or on downhill side of property.

Fire Plan Inside

- Locate nearest fire station and post emergency numbers by several home telephones.
- Test smoke and CO alarms monthly and change batteries twice a year; keep fire extinguisher current.
- Clean chimney and stovepipe regularly.
- Identify emergency action plan for entire family & pets.
- Identify Safety Zone where family meets in an emergency.
- Prepare emergency supplies for transport (food, water, valuables and important documents).

ELEMENT 1: FIREWISE HOMES

A non-combustible roof protects your home from burning embers.

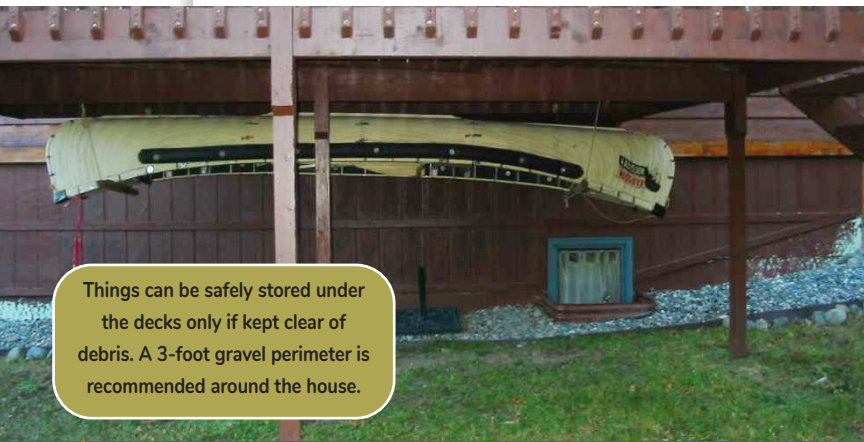
- Install a sprinkler system on the roof ridge during spring and summer if roof replacement to non-combustible material is not feasible.
- Prepare vent covers from plywood or other solid material to install when a wildfire approaches.
- Install gutter guards or covers.
- Ensure that chimney spark arrestor is securely attached and is made of wire mesh screen ($\leq 5/8$ inch).
- Cover attic and ridge vents with wire mesh screen (1/8 inch).

Windows will crack if wildfire is close.

- Screen all windows that open to prevent easy entry of burning embers.

Decks and stairs trap embers.

- Maintain a non-combustible surface beneath the deck (i.e. mineral soil or gravel).



Things can be safely stored under the decks only if kept clear of debris. A 3-foot gravel perimeter is recommended around the house.



This cedar shake roof can be cleaned to remove lichens and moss that have accumulated.

Additionally, a soaker hose can be installed on the roof's peak during the summer months to keep the roof moist during high fire danger or a fire event.

- Store firewood and tires at least 30 feet from the home.
- Remove debris and combustible items from deck surface and underneath deck and stairs.

A fire resistant perimeter around the home protects siding and decking from fire.

- Maintain a 3-foot gravel or other non-combustible perimeter around the home.
- Remove dense woody shrubs and needle-bearing trees.

Embers collect in open garages and carports.

- Remove combustible fluids and debris from open carports.
- Seal gaps on garage doors with weather stripping.

ELEMENT 1: FIREWISE HOMES

Wood Storage Tips

Store wood piles at least 30 feet from any structure and clear 10 feet around pile.

Many homes have survived as a fire moved past, only to burn later from a woodpile that ignited after the firefighters moved on to protect other homes.

Do not stack firewood under trees or on the downhill side of home.

More Tips

Properly dispose of all cut vegetation by an approved method. Open burning may require a permit. Contact your nearest fire agency or village public safety officer for local requirements.

Locate a brush pile at least 30 feet from the house for fall burning.

Care for piles of wood chips by turning them regularly to avoid combustion.

Storing firewood on or under your deck can lead to a home ignition. Store firewood at least 30 feet away from your home.



Locate burn barrels and open fires at least 30 feet from any structure and clear the ground around the site for a minimum of 10 feet. A burn barrel must be in good condition and should be covered with a woven metal screen. Always stay with your fire, never leave it unattended.

Keep garden hoses and fire tools readily available: axe, shovel, rake or Pulaski.

Keep storage areas clean. Discard oily rags and newspapers. Sheds, carports and under decks are vulnerable storage areas that often serve as fire starters or fuel.

Check spark arresters on all motorized equipment (any vehicle or machinery with a gas engine.) Store 30 feet away from structures or put the equipment inside garage.

Locate and label liquefied petroleum gas (LPG), propane tanks and any fuel storage containers at least 30 feet from a structure and clear 10 feet

around tank. Use stone or iron instead of wood for cribs under tanks. If you store gasoline, label it.

Junk piles are fire hazards. Move discarded items outside of the home's 30-foot perimeter.

Additional Resources

Firewise® Public Education Information:

<https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA>

Alaska Burn Permits, Is it safe to burn today?:

<https://dnr.alaska.gov/burn>

Alaska Fire Information:

<https://akfireinfo.com>

Alaska Interagency Coordination Center:

<https://fire.ak.blm.gov>

Easy action items: Rake under decking & exterior stairs. Sweep leaves & needles off of the deck.

In one hour: Trim & water plants around the house.

Weekend project: Move the firewood off of the deck, store >30 feet from the house.

ELEMENT 2: FIREWISE LANDSCAPING



For more Firewise Tips
and Easy Action Items,
please visit:
<https://fire.ak.blm.gov/administration/awfcg.php>

Islands of vegetation provide pleasing greenery that also slows fire spread through your yard.



Rock gardens and small perennials are an attractive Firewise solution. Remove needle-bearing trees within 15 feet of the home.

Landscaping Objectives

A lean, clean and green landscape will slow fire's spread. Make the most of your efforts by starting at the house and working outward. Thin and prune trees one section at a time. Separate islands of vegetation.

Prune trees in fall months.

Prune spruce trees in fall to limit bark beetle activity.

All pruning should be done in late fall or cold months to maintain good tree health.

No pruning in the spring when trees are budding.

Easy action items:

Prune a tree & water plants

In one hour:

Rake around the wood pile

Rake under trees

Rake under the deck & exterior stairs

Weekend project:

Pile tree limbs & brush >30 feet from the house for fall burning or composting.



Beyond 30 feet from your home, a healthy forest comprised of both birch and spruce can be maintained through regular pruning of branches, trimming shrubs and mowing grass beneath trees.

Emergency Water Supplies

Maintain an alternative water supply at your home. An on-site water source gives firefighters and homeowners a much better chance of protecting a threatened house or extinguishing one that is burning. In the event of a wildland fire, power will likely be disconnected and refilling fire engines takes precious time. Storing water with a pump and hose can be the key to saving your home.

Create an alternative water supply with a pump

1. Designate a water container. The bigger, the better!
2. Use a strainer end in the water container that connects to a gas powered pump via durable hose.
3. Connect the pump to a hose.
4. Protect your water supply. Clear vegetation around the site, maintain easy access for vehicles, and refill as needed.

Important considerations

- A gravity-fed water supply is an inexpensive option.
- Pumps: at least 5HP, portable, easy to start, self-priming, housed in their own shelter, fitted with a screen on the suction, have at least two hours of fuel.
- Raised tank stands must be protected from fire and radiant heat and should be metal.
- Use brass nozzles to withstand fire's heat.

Water supply tips

- Check your system to make sure it works.
- Use a rain-water catchment basin, outdoor pond, stream, hot

tub or even a canoe for an emergency water source to reach around your home.

- Expand your range using a 2-way hose connector.
- Smaller hose is easier to handle than larger diameter hose.

Make your water supply accessible

- If your water comes from a well, you should have a gasoline-powered generator to operate your well pump during a power failure. The generator **MUST** be installed with a safety transfer switch to prevent feedback into power lines!
- If you don't have a well with a submersible pump, you should have a gasoline-powered, portable pump to transfer water from your alternative water source.
- Clearly mark your water supply for firefighters to use if you are not present.

Use a soaker hose to protect roofing and decks

- In spring, install a perforated hose (soaker hose) on your roof and decks to use when fire approaches.
- When you learn of an approaching fire, use your regular hose system to wet down the roof and decks.
- Turn on the soaker hose to maintain water flow on exposed surfaces.
- Before freeze up, disassemble all flexible hose systems.



You must have a gasoline-powered pump to transfer water from an alternative source.

To Report a
Fire dial 911 or
1-800-237-3633



Before a wildland fire threatens your home, make an emergency plan to provide for your family's safety.

Before a wildfire threatens

If you have followed the advance preparation steps outlined in the complete Alaska Firewise booklet (link on bottom of page), you have created a Firewise home that has a better chance of surviving a wildland fire without firefighter assistance. However, you still need to prepare your personal response to a fire before it approaches your home. Make your plan and decide your response before fire season even begins. You can leave the area long before fire threatens your neighborhood, or stay and defend your home while a wildland fire burns past it.

Plan ahead for emergencies

- Create and maintain defensible space around your home.
- Learn the evacuation plan for your children's school or day-care facilities. Also, know the plan for family members in assisted-living facilities.
- Designate a relative or friend as an out-of-area contact through whom family members can relay information.
- Identify and learn alternate ways out of your neighborhood in case the usual route becomes blocked.
- Place important documents in a fireproof box and keep in an accessible location.
- Prepare an emergency kit for each household member.
- Keep your vehicle's fuel tank at least half full during wildland fire season.
- Plan how you will transport your pets. Do not leave them behind.
- Make arrangements in advance for people and/or pets that will be home when you are not.

Ready, Set, Go!

<https://www.wildlandfirersg.org/>



When authorities tell you to evacuate, leave immediately and get to a safe location.

Prepare to evacuate

Stay informed about wildland fires in your area. Authorities may not have time for formal evacuation notification if conditions change quickly.

- Park your car heading out (so you don't have to back out), with the windows closed and the keys in the ignition.
- Close the garage door, but leave it unlocked; disconnect the automatic garage door opener in case of power failure.
- Park your ATV, heading out, with the key in the ignition.
- Place emergency kit, valuable documents, family mementos inside the car in the garage for quick departure, if necessary.
- Keep a flashlight, portable radio, and fresh batteries with you at all times.
- Use your pre-planned route, away from the approaching fire front.
- If you are trapped by a fire while in your car, park in an area clear of vegetation, 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 on foot, select an area clear of vegetation along a road, or lie in the road ditch. Do not lie in the middle of the road! Cover any exposed skin with a jacket or blanket. Avoid canyons that can concentrate and channel fire.

- Put on protective clothing: long pants, long-sleeved shirt, boots, hat and leather gloves. Eye protection is essential!
- Keep pets leashed and in or near the house.
- Prepare large animals for transport.

Emergency Supply Kit for each person!

- Four (4) quarts of drinking water
- First aid kit (include eye drops)
- Battery-operated radio
- Safety goggles and hat
- Smoke filtering mask or a handkerchief
- Thick canvas or leather gloves
- Long pants and long-sleeved shirt, heavy denim or wool
- Wool blanket, large enough to cover a person completely when lying down

Ready, Set, Go!

<https://www.wildlandfirersg.org/>

Inside your home

- Close all exterior windows and doors to prevent sparks from blowing inside.
- Close all doors inside the house to slow the spread of fire from room to room.
- Turn on a light in each room of your house and outside. This will make the house more visible in heavy smoke.
- Fill sinks, bathtubs, and buckets with water.
- Move furniture away from windows and glass doors to prevent ignition from heat radiating through glass.
- Remove curtains and drapes. If you have metal blinds or special fire-resistant window coverings, close them to block radiant heat.

Outside your home

- Move combustible yard furniture away from the house or store it in the garage.
- Cover windows, attic openings, eaves, vents, and subfloor vents with 1/2-inch or thicker plywood.
- Close window shutters.
- Attach garden hoses to spigots and place them so they can reach every part of your house.
- Fill trash cans and buckets with water and place them around the exterior of the house.
- Shut off liquefied petroleum gas (LPG), propane, or natural gas valves.
- If you have an emergency generator or a portable gasoline-powered pump that will supply water from a hot tub, pond,

well, tank, or river, clearly mark its location and make sure it is ready to operate.

- Place a ladder against the house to help access your roof.
- Place a lawn sprinkler on flammable roofs, but don't turn it on unless the fire is an immediate threat. You do not want to reduce the supply of water.
- If you choose to evacuate using your private aircraft, do so before the fire's arrival. Check for any Temporary Flight Restrictions. The airspace surrounding the fire will be filled with suppression aircraft and a collision could occur. Once you are evacuated, do not re-enter the airspace until all flight restrictions are lifted.

Returning home

- Stay informed and listen to fire officials. They will determine when it is safe for you to return home.
- When you do return home, be alert for downed power lines and other hazards.
- Check propane tanks, regulators, and lines before turning gas on. Only a qualified technician can turn on your natural gas.
- Check your residence carefully for hidden embers or smoldering fires.



If you do not evacuate

- Every member of your family must have an emergency supply kit with a wool blanket.
- Follow the Pattern of Protection:
 - ◇ Outside - defending from falling embers before the front arrives.
 - ◇ Inside - sheltering during an intense fire-front arrival.
 - ◇ Outside - dousing ignitions and mopping up.
- Connect all hoses to outdoor faucets. Attach pumps to reserve water.
- Assemble shovels and rakes to put out spot fires in the yard.
- Place water-filled buckets outside with dippers, mops and wet canvas bags.
- Put a ladder beside the roof.
- Put a ladder inside to access the roof crawl space or attic.
- Close all doors, but leave them unlocked.
- Wear long-sleeved shirts and pants made of wool or heavy cotton, gloves and shoes.
- When the fire approaches the house, stay inside, away from outside walls and cover yourself with a heavy wool blanket.
- 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

While you may have made Firewise preparations, past fire case studies have shown that many home ignitions actually occur after the flaming front has passed and accumulations of burning embers ignite material on or near your home. This is the time to go outside with your shovel and water to put out these small spot fires.

- Check the roof and perimeter of the home immediately, extinguishing all sparks and embers. Use caution!
- Check inside the attic for hidden, burning embers.
- Check your yard for burning woodpiles, trees, fence posts, or other materials.
- Keep doors and windows closed.
- Continue rechecking your home and yard for burning embers.

Leave Early Checklist

- **People:** all family members accounted for
- **Pets:** animals, crates, food, & water
- **Pills:** prescriptions & medications
- **Phones:** stay connected with family & keep up-to-date
- **Photos:** family mementos & home inventory
- **Papers:** deed for home, vehicle titles, birth certificates



Zones of Defense

Effective defensible space includes three zones of protection. Below are important concepts for each of these zones.

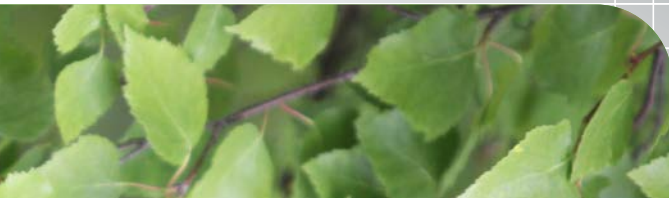
Zone 1: Within 30 Feet of Structure

Maintain deciduous trees and shrubs so that crowns are at least 10 feet apart to avoid the spread of fire from one to the other. Within this zone, remove tree limbs within eight feet of the ground to prevent a ground fire from climbing into the canopy. Remove trees that are within 10 feet of your house and keep branches from the roof, chimney, or deck. All shrubs and groundcovers near buildings should be kept less than 18 inches tall. Remove all dead or broken branches and all dead or dying trees. Remove highly flammable plant material from this zone.

Zone 2: 30-100 Feet from Structure

In Zone 2, maintain spacing of at least 10 feet between crowns. Limb trees up to eight feet to help prevent a ground fire from turning into a crown fire. Keep grasses short and space shrubs two to three times their mature height apart to break up continuity of the fuels. They may cause a fire to burn at a lower intensity. Remove dead, dying or unhealthy trees. Prune trees. Limit the number of dead trees left as habitat snags in this area, as wildlife only need one or two per acre. Stack firewood away from trees and shrubs, and at least 30 feet from any structure.

Zone 3: Beyond 100 Feet from Home



This is a transition zone between your defensible space and the surrounding area and extends to your property line. Pruning may not be necessary within this zone, but you may wish to thin dense stands of trees, especially evergreens, and remove lower branches that are dead or could act as ladder fuels.

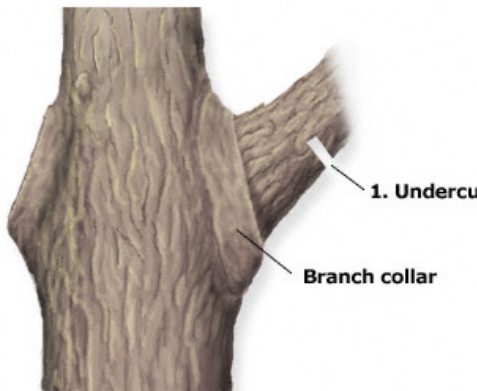
It is important that your access road and driveway be maintained to provide safe access for firefighters and their equipment. Clear vegetation from around street signs so that they are visible. Thin the number of trees along the driveway to maintain 10 feet between crowns. Remove dead or dying trees. Prune trees along the driveway and remove or shorten lower branches that could prevent firefighting equipment from entering your property. Remember that they will need more room than average sized vehicles.

For More Information

For more information about how to be Firewise visit the Division of Forestry's website at www.forestry.alaska.gov/community/publications or www.nfpa.org or see www.treesaregood.org

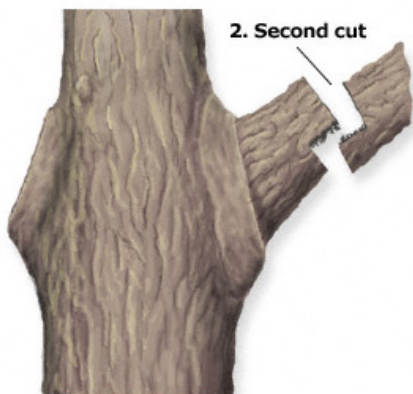
Pruning a Large Branch

- 1** Undercut 8-10 inches from the branch collar. This stops the bark from tearing and damaging the branch collar and trunk tissue.



Large Limb

- 2** Make the second cut from the top all the way through the branch 2-3 inches above cut 1.



- 3** The final cut should be just beyond the branch collar. Support the stub so it does not tear the bark.

3. Final cut

Illustration Copyright © Robert O'Brien

APPENDIX: FIREWISE PLANTS

Planting and maintaining Firewise vegetation is an important

GROUND COVER & SHRUBS



Alder



Blueberry



Columbine



Dogwood/B...



High Bush Cranberry



Lupine



Potentilla

TREES



Alaska Paper Birch



Black Cottonwood



Mountain Ash



Quaking Aspen



tant step when protecting your home from wildland fires.



Bunchberry



Ferns



Fireweed



Forget-Me-Not



Prickly Rose



Red Currant



Red Raspberry

Firewise plants

All plants will burn under hot, dry conditions. Some are more resistant to fire due to their moisture content, chemical composition and total volume. While using fire resistant plants instead of highly flammable plants is important, the spacing and arrangement of plants in your yard is even more critical. Islands of vegetation with 10 feet or more of separation provides for an attractive Firewise yard.

Fire resistant plants

Firewise plant choices have supple, moist leaves. They tend to retain their branches and stay green throughout the summer season. There are many decorative flowers, herbs and shrubs that fit this description.

Take care in your plant choices

Examples of highly flammable plants include: juniper, Mugo pine and ornamental spruce.

Move plants with the following characteristics outside of your home's 30-foot perimeter:

- ◇ Needles or leaves that have volatile waxes, terpenes or oils.
- ◇ Plants that accumulate fine, dry twigs, needles and leaves.
- ◇ Needles or leaves that emit a strong odor when crushed.
- ◇ Sap is gummy, resinous, and has a strong odor.
- ◇ Bark is loose or stringy.

Conifer trees

Coniferous trees, such as white spruce or hemlock, can contribute to a Firewise landscape when properly maintained.

- Conifers should be more than 15 feet from structures.
- Remove lower limbs on mature trees 6-8 feet from the ground.
- Trees should be spaced 15 feet between branches.
- Trim grass around trees.



Areas with good, defensible space are capable of surviving a wildland fire.

For more Firewise tips please visit www.nfpa.org.

Firewise plants are fire resistant, not fire proof.

Many firewise plants have:

- High water content and supple, moist leaves.
- Little or no accumulation of dead vegetation, either on the ground or on the plant.
- Sap that is water-like such as that found in birch trees.



Becoming a Firewise Community/USA®

While it is true that a Firewise home is more likely to survive a wildfire, it is also true that if your neighbors' homes are not Firewise, as well as yours, you are still at a greater risk for losing your home to a wildfire.

Firewise is a cooperative effort among local, state, federal and private agencies and organizations to promote fire safety in the wildland/urban interface. Firefighters do not have the resources to defend every home during a wildfire. When adequately prepared, a house can withstand a wildland fire without the intervention of the fire service. In fact, a house and its surrounding community can be both Firewise and compatible with the area's ecosystem. The Firewise Communities/USA® program enables communities in all parts of the United States to achieve a high level of protection against wildland/urban interface fire as well as sustainable ecosystem balance. Firewise Communities/USA® program provides residents of the wildland/urban interface with the knowledge and skill necessary to make it happen.

Firewise Communities/USA® is a unique opportunity available to America's fire-prone communities. Its goal is to encourage and acknowledge action that minimizes home loss due to wildfire. It teaches you to prepare for a fire before it occurs. The program adapts especially well to small communities, developments and residential home associations of all types.

Firewise Communities/USA® is sponsored by the National Wildfire Coordinating Group.

For information on how to become an Alaskan Firewise Community please visit <http://forestry.alaska.gov/fire/firewise>.



Alaska Wildland Fire Coordinating Group

