

Preparing for Wildfire: *a guide for homeowners*



Photo courtesy of the Alaska Fire Service

The following advice was adapted from information at <http://www.firewise.org>, the Firewise Alaska publication of the Alaska Wildfire Coordinating Group, the *Homeowner's Firewise Guide*, Anchorage Fire Dept. Wildfire Mitigation Office (<http://www.muni.org/fire1/wildfire.cfm>); the California Dept. of Forestry and Fire Protection, and the *FireSmart Home Owners Manual* published by the British Columbia Forest Service Protection Program. These tips will variously apply, depending on whether your home is in an urban or wilderness setting, or within the wilderness-urban interface. The *Firewise Alaska* publication covers fire-wise landscaping, construction, emergency water supply, access and signs, home planning, and what to do when wildfire threatens.

Control vegetation and fuel load before wildfire threatens

Create a defensible space around your home. For homes on a slope of greater than 30 percent, on the downhill side increase the distances for these defensible space guidelines.

- From 30 to 100 feet of the structure thin conifers to 15 feet between extending branches; prune limbs of remaining conifers to at least 8 feet above the ground; remove shrubs underneath trees; if possible, water trees at dripline; thin regenerating conifers and prune lower branches; remove all downed woody fuels greater than 3 inches in diameter.
- From 10 to 30 feet of the structure thin conifers to 15 feet between extending branches; prune limbs of mature conifers to at least 8 feet above the ground, remove shrubs underneath trees; water trees at drip line; thin regenerating conifers and prune lower branches; maintain lawn at 3 inches high or less and keep well watered; remove all dry, downed woody fuels.
- Prune tree limbs so the lowest is between 6 to 10 feet from the ground (15 feet on large trees with understory ladder fuels).

- Within 10 feet of structure remove all trees and dry, downed woody fuels; maintain lawn at 3 inches high or less and keep well watered.
- Immediately adjacent to the house, create three-foot-wide break of noncombustible or low-combustible materials: fire resistant plants, gravel or mineral soil, etc. Use no bark or wood-chip mulch in this area.
- Create fuel breaks: driveways, gravel walkways, or lawns.
- When planting trees, space them carefully and choose fire-resistant species.
- Eliminate small trees and plants growing under trees. These "ladder fuels" allow ground fires to jump into tree crowns.
- Stack firewood at least 15 feet away from your house and other buildings; provide clearance around wood piles.
- Remove leaf clutter from your roof and yard; keep rain gutters clear of debris at all times; keep roof surfaces clear of pine needles, leaves, and debris at all times.
- Mow regularly and dispose of cuttings and debris promptly, according to local regulations.
- Keep trees adjacent to buildings free of dead, dying, or overhanging branches; Keep all trees and shrub limbs trimmed to prevent them from contacting electrical wires or overhanging your chimney. Hire a professional to trim around live power lines.
- Vegetation should be cleared well back from power lines, propane tanks and other fuel supplies.
- Make trellises of nonflammable metal.

Follow building & maintenance guidelines

- Adhere to all local fire and building codes and weed abatement ordinances. Observe local regulations regarding vegetative clearances and fire safety equipment requirements.

- Wherever possible, use approved fire-resistant or non-combustible materials when building, renovating, or retrofitting structures (this is **extremely important for roofing** materials).
- Have at least two ground-level doors as safety exits.
- Maintain at least two means of escape (doors/egress-size windows) in each room.
- Prevent sparks from entering your house by covering vents with wire mesh no larger than 1/8 inch.
- Install spark arresters for each chimney. Clean chimneys and check and maintain spark arresters twice a year.
- Remove any combustible materials that are stored under decks or other elevated structures.
- Store combustible or flammable materials in approved containers and use flammable liquids properly.
- Label and locate liquefied petroleum gas (LPG) or propane tanks or any fuel storage containers at least 30 feet from a structure. Use stone or iron instead of wood for cribs under tanks. If you store gasoline, label it.
- Clear flammable vegetation at least 10 feet around all such tanks.
- Park all-terrain vehicles, snowmobiles, and other machinery away from the house.
- Locate burn barrels on mineral soil well away from buildings and other combustible items. The barrel should have proper ventilation, screens and should never be left burning unattended. For safer disposal, bring your debris to a landfill or dumpster site.
- Regularly maintain your irrigation system. In rural areas, a homemade water tank can be made and kept filled during the fire season.
- Keep vegetation well-watered, especially during periods of high fire danger.
- Regularly maintain garden equipment and refuel it carefully.
- Check your generator and hose, as applicable and keep in good repair.
- Make evacuation plans with family members that include several options, an outside meeting place, and a contact person. Practice regularly.
- Keep battery-operated radios, flashlights, and extra fresh batteries on hand.

- Store all important papers in a fireproof container or keep copies at another location.

When wildfire threatens:

- Listen to the radio for the latest emergency information.
- If you have a ladder, prop it against the house so you and firefighters have access to roof.
- If hoses and adequate water are available, set them up. Fill buckets with water.
- Remove combustible materials from the area surrounding your house (lawn chairs, tables, etc.)
- Turn a light on in each room for visibility in case of smoke.
- Close all doors and windows; do **not** lock them.
- Open or take down flammable drapes and curtains.
- Close all blinds and nonflammable window coverings.
- Move upholstered furniture away from windows and sliding glass doors.
- Be ready to evacuate all family members and pets when requested to do so. Secure other animals if possible.
- Turn off air conditioning and air circulation systems.
- If you have electrical garage doors, open and deactivate or detach them, back your car in, and leave the keys in the ignition.

After a fire:

- Check with fire officials before attempting to return to your home.
- Use caution when re-entering a burned area; flare-ups can occur.
- Check grounds for hot spots (smoldering stumps and vegetation). Use your buckets of water.
- Check the roof and exterior areas for sparks and embers.
- Check the attic and throughout the house for hidden burning sparks and embers.
- Continue to check for problem areas for several days and contact 911 if any danger is perceived.
- If the burn was extensive, watch for soil erosion around your home. Consult local experts ways to restore and replant your land with fire-wise landscaping.

Fire-resistant landscaping

Along with building and maintenance care, thoughtful plantings will help you reduce the fuel available to any fire approaching your property to reduce fire risk and provide a safety zone should firefighters need to protect it. The type of landscape vegetation near your home is important, as are the arrangement, spacing, and maintenance of vegetation. Plant to avoid fuel buildup near structures, and water plantings during dry periods.

Landscape with low volumes of vegetation: sparse, deciduous trees rather than dense forest or shrubs. In heavily wooded areas, remove some of the trees to decrease the fire hazard and improve growing conditions. Remove dead, weak, or diseased trees. Neighbors can work together to clear common areas between houses and prune areas of heavy vegetation that are a threat to homes and other structures.

Although any type of vegetation is combustible under the right circumstances, some plants are more fire resistant than others. Of plants that grow naturally on Alaska property, many are highly flammable during the summer and can actually fuel a wildland fire, causing it to spread rapidly through a neighborhood. One of the easiest and most effective ways to create a defensible space is get rid of the more flammable vegetation within 30 feet of your home. Replace it with low-growing, fire-resistant plants. Base plant selection on fire resistance and ease of maintenance as well as looks. In general, fire-resistant plants grow close to the ground, have a low sap or resin content, grow without accumulating dead branches, needles, or leaves; are easily maintained and pruned; and may be drought tolerant. The condition of the plants around your home (growth form) and water status is also important. Plants with open growth forms, no dead wood, and well watered are much less likely to burn.

Plants that ignite readily and burn intensely include: resinous plants such as spruce, pine, juniper,



Viola tricolor
or *Johnny-jump-up*.
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Red amur maple.

COURTESY USDA-NRCS PLANTS DATABASE / HERMAN, D.E. ET AL. 1996. NORTH DAKOTA TREE HANDBOOK. USDA NRCS ND STATE SOIL CONSERVATION COMMITTEE; NDSU EXTENSION AND WESTERN AREA POWER ADMIN., BISMARCK, ND.



Green amur maple (Siberian maple).

COURTESY USDA-NRCS PLANTS DATABASE / HERMAN, D.E. ET AL. 1996. NORTH DAKOTA TREE HANDBOOK. USDA NRCS ND STATE SOIL CONSERVATION COMMITTEE; NDSU EXTENSION AND WESTERN AREA POWER ADMIN., BISMARCK, ND.



Athyrium filix-femina (L.) Roth ssp. *cyclosorum* (Rupr.) C. Christens / *subarctic ladyfern*.
COURTESY J.S. PETERSON @ USDA-NRCS PLANTS DATABASE



Cornus canadensis L. or *Siberian dogwood* or *bunchberry dogwood*.
COURTESY GARY A. MONROE @ USDA-NRCS PLANTS DATABASE



Siberian crabapple, Malus baccata (L.) Borkh, a recommended variety for firewise landscaping.

Courtesy USDA-NRCS PLANTS Database; Herman, D.E. et al. 1996. North Dakota Tree Handbook. USDA NRCS ND State Soil Conservation Committee; NDSU Extension and Western Area Power Admin., Bismarck, ND.

and fir; plants that contain waxes, terpenes, or oils; blade-leaved or needle-leaved evergreens; plants with stiff and leathery or fine and lacy leaves; plants with leaves that are aromatic when crushed; plants with gummy, resinous sap with a strong odor.

Properly placed and maintained, the plants listed below will contribute a fire-wise landscape. Note that these plants may not be appropriate for all locations; check horticultural references and your local Cooperative Extension Service (CES) for information on growing requirements. Plants marked with an asterisk are native to Alaska. Contact the Alaska Division of Forestry's Alaska Community Forestry Program or CES Service for more information on plant selection for your area and plant maintenance. The list below was adapted by professor Patricia Holloway for interior Alaska from the publication **Firewise Alaska**.

Shrubs

- Currant (*Ribes alpinum*, *R. triste**, *R. nigrum**)
- Flowering almond (*Prunus triloba*)
- Peking cotoneaster (*Cotoneaster acutifolius*)
- Lilac (*Syringa villosa*, 'Preston' and other hybrids)
- Honeysuckle (*Lonicera tatarica*)
- Potentilla (*Potentilla fruticosa**)
- Rose (*Rosa rugosa*, *R. acicularis**, and hybrids)
- Serviceberry (*Amelanchier alnifolia**)
- Silverberry (*Eleagnus comutata**)
- Spirea (*Spirea x vanhouttei*, *S. billiardi*, *S. chamaedryfolia*, *S. douglasii*, *S. stevenii**)
- Viburnum (*Viburnum edule**, *V. trilobum*)
- Amur maple (*Acer tatarica* spp. Ginnala)
- Mountain ash (*Sorbus scopulina**, *S. aucuparia*)

Trees

- Amur chokecherry (*Prunus maackii*)
- Apple and crabapple (*Malus* spp.)
- Siberian crabapple (*Malus baccata*)
- Birch (*Betula papyrifera**)

- Chokecherry (*Prunus virginiana*)
- Siberian elm (*Ulmus sibirica*)
- Larch (*Larix sibirica*, *L. laricina**)
- Mayday tree, European birdcherry (*Prunus padus*)
- Quaking aspen (*Populus tremuloides**)

Ground covers and perennials

- Bearberry, Kinnikinnick (*Arctostaphylos uva-ursi**)
- Bergenia (*Bergenia cordifolia*)
- Bleeding heart (*Dicentra spectabilis*)
- Chocolate lily (*Fritillaria camschatcensis**)
- Bunchberry (*Cornus canadensis**, *C. suecica**)
- Ferns, native and non-native
- Goutweed (*Aegopodium podagraria*)
- Iris (*Iris setosa**)
- Jacob's ladder (*Polemonium acutiflorum**)
- Beautiful jacob's ladder (*Polemonium pulcherrimum**)
- Johnny-jump-up (*Viola tricolor*)
- Lily of the valley (*Convallaria majalis*)
- Nagoonberry (*Rubus arcticus**, 'Kenai Carpet')
- Rhubarb (*Rheum rhabarbarum*)
- Spike Speedwell (*Veronica spicata*)
- Yarrow (*Achillea millefolium*, *Achillea ptarmica* 'The Pearl')
- Tulip (*Tulipa tarda*)
- Wild strawberry (*Fragaria virginiana**)
- Arnica (*Arnica frigida**, *A. alpina**)
- Siberian aster (*Aster sibiricus**)
- Bluebell (*Campanula lasiocarpa**, *C. rotundifolia**)
- Asiatic hybrid lilies (*Lilium* spp.)
- Peony (*Paeonia* spp.)
- Columbine (*Aquilegia* sp. hybrids)
- Eastern daylily (*Hemerocallis fulva*)
- Maltese cross (*Lychnis chalcedonica*)
- Globeflower (*Trollius europaeus*, *T. chinensis*)

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