Before Wildfire Strikes!
A Handbook for Homeowners and Communities in Southwest Oregon
Do you know what it takes to survive wildfire?

Southwest Oregon at Risk

In the fire-adapted ecosystems of southwest Oregon, it is not a matter of “if” wildfire is going to occur, but “when.” Unfortunately, many residents living in Josephine and Jackson counties and beyond are not prepared for wildfire. Neither are their homes. Faced with the growing potential for loss of human life and property due to wildfire, southwest Oregon’s firefighting agencies and Oregon State University’s Cooperative Extension have come together to promote an integrated approach, melding Firewise Community concepts of on-the-ground fuels management with the larger community interaction and landscape-wide fire resilience in a Fire-Adapted Community concept. They believe this is the best opportunity to decrease the wildfire threat. When a wildfire is threatening your community, the time to prepare has passed. However, there are steps that homeowners can take to improve personal safety and home survival before a wildfire occurs. The purpose of this publication is to promote and teach these steps. Once implemented at the neighborhood level, these recommendations will assist communities in becoming fire-adapted.

Who wins, who loses

Why do some houses survive a wildfire, while others are destroyed? Research shows that house survival during wildfire is not random, miraculous, or dumb luck. Rather, it is the features of the house, the characteristics of the adjacent vegetation and other fuels, and routine maintenance that often determine which houses burn and which survive. These types of actions are called “prefire activities.” Prefire activities improve the survivability of people and the home. The winners will be the people who implement prefire activities. When everyone in the neighborhood completes their prefire activities, they start becoming a Fire-Adapted Community.

What are Firewise and Fire-Adapted Communities?

Living in fire-prone southwest Oregon means your home is at risk of being caught in a wildfire. Firewise and Fire-Adapted Communities offer effective preparedness steps to help every level of the community survive a fire; from homes and neighborhoods to the larger landscape. Read more below and take action.

Firewise Communities/USA Program

This program provides a flexible template for residents of neighborhoods and homeowners associations to improve their wildfire readiness. Firewise communities develop action plans that guide their residential risk reduction while engaging and encouraging neighbors to become active participants in making their homes and properties more resistant to fire. The five steps to becoming a Firewise Community are:

- Obtain a wildfire risk assessment as a written document from your state forestry agency or fire department
- Form a board or committee, and create an action plan based on the assessment
- Conduct a “Firewise Day” outreach and educational event
- Invest a minimum of $2 per capita in local Firewise actions for the year
- Submit an application to your state Firewise liaison

Fire-Adapted Communities

A fire-adapted community is a living concept, not a program. A fire-adapted community accepts the risk of wildfire and works towards being more resilient when an event occurs. A fire-adapted community takes a larger look at the landscape and what it means to be prepared for fire within and beyond its own neighborhood. This means that all players in the community are responsible, including homeowners, fire departments, businesses, local government, and schools. Fire-adapted communities may:

- Develop a Community Wildfire Protection Plan
- Become a nationally recognized Firewise community
- Be prepared for an evacuation and understand the Ready, Be Set, GO! program (see page 24)
- Adopt building codes that address fire-resistant building materials and landscape vegetation
- Create healthy forests and watershed resiliency

“Homes properly prepared are exponentially better protected when neighbors pro-actively develop and maintain defensive strategies as a community. These efforts increase the effectiveness and efficiency of limited fire resources.”

Lang Johnson
Deputy Chief
Grants Pass Fire/Rescue

“Fire starts in Josephine and Jackson counties for 2015.”

Contact your local fire department to get involved or visit [www.firewise.org](http://www.firewise.org) and [www.fireadapted.org](http://www.fireadapted.org)
The Elements of a Fire-Adapted Community

Healthy Forests/Land Management
- Landscapes are managed to reduce the threat of wildland fires and their spread into communities.
- Landowners and land managers (public and private) understand wildfire risk and implement management practices to reduce risks in all forests and wildland areas.

Internal Safety Zones
- Firewise Communities/USA Program—Where neighbors work with neighbors to reduce ignition risks around their homes and communities.
- Commitment to maintain defensible space and cleared home ignition zones.

Home Preparedness
- Developers and builders design homes using fire-resistant building materials and landscaping.
- Families develop an evacuation plan including contingencies for animals and people with access and functional needs.
- Be Ready, Be Set, GO! program—Talk with your local fire district about emergency preparedness.

Collaborative Partnerships
- Community members, organizations, and agencies all work together to identify wildfire risks and assume the responsibility for risk mitigation.
- Partners work jointly to reduce community wildfire risks, promote public outreach and education programs, and utilize the limited available funding sources.

Government Participation
- Local government officials are engaged in wildfire issues, providing leadership, supporting community preparedness, and participating in preparation of local Community Wildfire Protection Plans.
- Fire-resistant building codes are adopted and enforced.
- Ordinances on vegetation management, community protection zones and land development are adopted and enforced.

Fire Department Planning
- Fire departments and all first responders are well prepared for wildland fire scenarios through training and community risk assessments.
- Fire departments participate in emergency preparations, including Community Wildfire Protection Plans.

2014 Interim Josephine-Jackson Fire Plan: 
www.co.josephine.or.us/jcifp
Fire has been a natural part of southwest Oregon’s environment for thousands of years. Prior to the late 1800s fires occurred very frequently in the region’s mixed conifer and hardwood forests, ignited both by dry lightning storms and by Native Americans who used fire as a landscape management tool.

Researchers have determined that fire visited some low-elevation forests and woodlands as often as every 5 to 10 years. Even many remote, higher-elevation sites evidently experienced fire once every decade or two. This abundance of fire resulted in forests that were not only adapted to frequent fire, but dependent on it.

Most of these historic fires were of low or “mixed” severity. Low-severity fires tended to meander across the ground, burning grass, shrubs, and small trees while scorching the bases of but not killing larger trees, especially thick-barked species such as ponderosa pine and Douglas-fir that are well adapted to fire. These fires thinned out the woods while reducing the buildup of deep layers of needles, leaves, and twigs. Mixed-severity fires burned at a range of intensity and severity, from low to high, where patches of trees were killed.

The forests that resulted from these frequent low- and mixed-severity fires were diverse and patchy. For example, relatively open forests on south slopes and ridges were interspersed with denser forest patches on north slopes and streamside areas. However, on average, tree densities were much lower compared to today, and there were many more openings in the forest canopy. Forests were dominated by large, drought- and fire-resistant species and contained a mix of tree ages and sizes. These forests were very resilient to fire. They supported a rich assemblage of plant and animal species.

Unfortunately, southwest Oregon’s forests are now at risk.
Southwest Oregon’s forests today...

Decades of fire exclusion, harvest of many large, fire-resistant trees, and development of homes in wildland areas have resulted in forests that are extremely fire-prone and less healthy. Important changes that have been documented over the past century include:

- A dramatic increase in tree densities. For example, forests in the Ashland watershed that contained 50 trees per acre a century ago now have 150 or more trees per acre, mostly small to medium-sized trees that are crowding out large legacy trees.
- Species composition has shifted away from fire-resistant species like ponderosa pine to less fire-tolerant trees such as white fir. Forest openings have closed in; forests as a whole have become less patchy and more uniform.
- Trees in overly dense forests have become stressed and more susceptible to insect damage, especially during drought periods. In southwest Oregon, as throughout the western United States, there is a trend toward larger fires, burning at higher intensities, with more severe effects compared to past fires.
- The climate is trending towards hotter, drier summers and a longer fire season overall.
- The presence of many homes in forests of the wildland-urban interface complicates firefighting efforts and increases suppression costs.

While a certain amount of high-intensity fire could be considered natural and even beneficial from a strictly ecological standpoint, the increase in fire size and severity poses risks to homes, properties, and lives. High-intensity wildfire kills large trees and damages or even destroys wildlife habitat, including old-growth forests. And when fire burns hot, it can destroy the protective layers in the soil, resulting in widespread erosion and runoff, which damages streams, fisheries, and water supplies.

Complicating the issue are the numerous and diverse forestland ownerships throughout southwest Oregon, particularly in Jackson and Josephine counties. Public and private forests across the region are in a checkerboard pattern, making forest management on a landscape scale difficult to accomplish. Two-thirds of homes in fire-prone areas are within 1/2 mile of public lands. In southwest Oregon, the risk of wildfire spread from public lands is the highest in the western U.S. Individual landowners may manage their land well, but the danger of catastrophic fire is still high if neighboring forests are not also managed.

The risks are high, but much can be done to make southern Oregon’s forests less fire prone and more resilient. Thinning, focusing on removal of smaller diameter trees and followed by slash disposal, can increase resistance to wildfire and dramatically improve tree vigor and health.

Controlled burning, especially following thinning and fuels-reduction activities, is a very cost-effective way of reducing fuel loads and maintaining forests in a fire-resistant condition.

A wall of vegetation

Southwest Oregon’s current forest is typically thick with trees, brush, and dead vegetation. In many areas, fire has been absent for over a hundred years. As a result, there has been a great buildup of live and dead woody material, and the risk of high-intensity wildfire has increased dramatically. In addition, many homes have been built in wildland areas, resulting in increased costs and challenges for firefighters.
Community Protection

**Shaded Fuelbreak:** A shaded fuelbreak is created on forested lands when trees are thinned, tree canopies are raised by removing lower branches, and the understory vegetation is managed to reduce the fire threat. Community fuelbreaks are particularly effective when integrated with the defensible space of adjacent homes. They can be manmade or naturally occurring (rock outcrops, rivers, and meadows).

**Safe Area or Safety Zone:** A safe area is a designated location within a community where people can go to wait out the wildfire. Often, ballparks, golf courses, parks, and parking lots can serve as safe areas.

**Fuelbreak:** A fuelbreak is a strip of land where highly flammable vegetation is modified to reduce the wildfire threat. Fuelbreaks change fire behavior by slowing it down, reducing the length of flames, and preventing the fire from reaching tree canopies. Fuelbreaks can improve the success of fire retardant dropped from the air, provide a safer area for firefighters to operate, and allow for easier creation of firelines (a strip of bare ground established during a wildfire). A **shaded fuelbreak** is created on forested lands when trees are thinned, tree canopies are raised by removing lower branches, and the undergrowth vegetation is managed to reduce the fire threat. Community fuelbreaks are particularly effective when integrated with the defensible space of adjacent homes. They can be manmade or naturally occurring (rock outcrops, rivers, and meadows).

**Prescribed Fire:** In some areas of southwest Oregon, typically on public lands, prescribed fire is used by agencies to reduce wildfire fuels near homes. Prescribed fire is the intentional use of fire to manage vegetation. A prescribed fire project is well planned and carefully orchestrated—and involves the disciplines of fire ecology, fire suppression, forestry, and public safety. The important parts of a prescribed fire project are:

- **Training:** Personnel have received extensive training and have been certified in prescribed fire management and implementation.
- **Preburn activities:** Each winter a multidisciplinary team develops the “Burn Plan” for the upcoming fall burn season. During the summer months, work crews start preparing the burn sites by creating firebreaks, clearing around high-value trees, and thinning dense pockets of brush.
- **Burn day:** The specific date of a proposed fire cannot be determined very far in advance. A “Go/No-go Checklist” is used to decide if a prescribed fire can be safely and effectively conducted. If the necessary conditions are not optimal, the fire will be postponed until conditions “come into prescription.” The illustration presented at left portrays a typical prescribed fire.
- **Tending the burn:** Prescribed fires are managed to minimize smoke production and maximize fuel consumption. Personnel closely monitor the site until the project is completed.
Address: The home address should be readily visible from the street. The address sign should be made of reflective, noncombustible material with characters at least 4 inches high. With multiple homes, use reflective directional arrows to ensure that responders can quickly find your home.

Gated Driveways: Electronically operated driveway gates require key access for local fire departments and districts. They may require a permit and have additional requirements. Contact your local fire agency prior to installing a gated driveway. Rural wire gates should have multiple locks for access by fire and medical responders and landowners.

Turnarounds: Homes located at the end of long driveways or dead-end roads should have turnaround areas suitable for large fire equipment. Turnarounds can be a cul-de-sac with at least a 45-foot radius or a location suitable for a 3-point turn. Contact your local fire agency for specific turnaround requirements.

Road Width and Grade: Roads should be at least 20 feet wide and long driveways should be at least 12 feet wide with a steepness grade of less than 12 percent.

Bridges and Culverts: Inadequately built bridges (not capable of safely allowing a loaded fire engine or other heavy machinery) and culverts may prevent firefighting equipment from reaching your home. Do not use plastic culverts. Ask your local fire marshal about proper bridge and culvert design for your area.

Emergency Access Contact your local fire district to learn about district-specific fire preparedness plans. Fire district contact information is listed on page 25.
Over 90 percent of homes that burn do so because of flying embers, not from the main front of a wildfire. Embers can travel up to a mile ahead of an advancing wildfire. If they land in leaves in a roof gutter or on a patio chair pad, they can quickly ignite and spread to the rest of the home. The photo on the right shows a house from Colorado's 2002 Missionary Ridge Fire. Fine fuels on the ground ignited from flying embers and spread to the deck and then the house, although the forest is not burning.

Like the forests and plants around it, your home is fuel for a wildfire. Studies by the U.S. Forest Service and the Insurance Institute for Business and Home Safety have shown that a clean Home Ignition Zone can be just as important as a defensible space in regard to a home's survival.

The Home Ignition Zone, or HIZ, is defined as the home and its immediate surroundings, out to a distance of 100 to 200 feet. A careful analysis of your home and property will consider its ignitability based on fuels identified and their adjacency to each other.

How your home is constructed, including site location, design, and building materials, helps determine whether your home will survive a wildfire. In addition, what is located near the home, periodic maintenance, annual clean-up and vegetation thinning done around the homesite also affect the ignitability. Because radiant heat is a big factor in the spread of a fire, potential fuels need to be separated by at least 30 feet. This all ultimately defines your HIZ.

Fire requires three ingredients—fuel, heat, and oxygen. Without any one of these elements, fire will not occur. While it is difficult to remove heat or oxygen to stop the progress of a wildfire, we can remove continuous lines of fuel. This can reduce your home’s ignition potential from embers and increase your home’s likelihood of survival.

The Home Ignition Zone is comprised of five simple zones. Within each zone there are several checklist items that homeowners can and should address before fire season to help protect their home from wildfire.

Your house, deck, and outbuildings are fuels that can ignite, even if the forest hasn’t burned yet.
The Home Ignition Zone
Overall Landscape

Evaluate:
- Your home’s surroundings and proximity to other homes or buildings
- Topography: slope, aspect, elevation, weather
- Vegetation types and proximity, fuel breaks

Be aware of your surroundings. Southern exposures and prevailing winds cause vegetation to dry out more quickly.

Is flammable vegetation thinned the first 30 feet from the home?

Fire spreads quickly going up a slope. Recognize where your home sits on the slope to get an idea of how a wildfire might travel.

Be aware of the proximity of other houses. They should be considered as fuel.

Outbuildings including woodsheds within 30 feet of your house become a part of your Home Ignition Zone. Consider them another fuel.

A water source near to your home and accessible by firefighters can be invaluable during a wildfire.

Create fuel breaks by thinning surrounding forest areas to help slow down the spread of wildfire and give firefighters a defendable area.
The Home Ignition Zone
Chimney to Eaves

Evaluate:
- Roofing materials and assembly
- Condition of roofing
- Roof litter and gutters
- Skylights, chimneys, and stovepipes

Check your roof line annually for overhanging tree branches.

Check chimneys for flue caps and screening over the opening. Check roof turbine vents for screens.

Litter in gutters or roof valleys, and bird or rodent nests under tiles on the roof are common causes of embers igniting a house.

Check your roof annually to make sure the tiles or shingles are in good condition—flat, no tears, and no gaps under tiles.

Keep roof skylights free of debris. If your roof is steeply pitched, consider using flat, double-paned glass instead of a domed skylight.

Are the roof and gutters non-combustible? Keep them clean all year long.
The Home Ignition Zone
Eaves to Foundation

Evaluate:
- Type of construction
- Siding materials
- Attic, eaves, soffit vents, and crawl spaces
- Windows and screens
- Walls and attachments

Wood-product exterior siding is combustible; make sure it is in good condition. Stucco, brick, steel or cement board siding is a safer choice.

Embers can accumulate under open eaves! Cover the underside with a soffit, box them in, or fill gaps with caulk.

Are any wall attachments such as patios, decks, porches, balconies, and fencing flammable? If so, keep in good condition! Routinely remove debris such as leaves, pine needles, or weeds. Keep spaces under decks clean, or consider enclosing with ¼-inch or smaller wire mesh. Keep porches or decks free of flammables, such as baskets, dried flowers, and cushion patio furniture.

Windows are one of the weakest parts of a home in a fire, usually breaking before the house ignites. Double-paned windows with tempered glass are less likely to break. Closable, solid exterior shutters can provide extra window protection.

All attic, eaves, and foundation vents or crawl spaces should be covered with ¼-inch or smaller wire mesh to keep embers from being blown inside. (Do not permanently cover vents!)
The Home Ignition Zone
Foundation to Landscaped Areas

Evaluate:
- Defensible space
- Landscaped (managed) vegetation
- Firewise landscaping zones
- Materials next to the home (including wood fencing)
- Propane tanks
- Vehicles and neighboring buildings

Create a noncombustible area at least 5 feet wide around the base of your home: rock mulch, irrigated ground cover, or hard surfaces. Keep it clear of flammable brooms, door mats, or cushions. Watch for combustible “paths” (such as a line of wood mulch or a wooden fence line) leading from the home. They are easily overlooked, but can lead fire right to your doorstep!

Vehicles and neighboring buildings should be a minimum of 30 feet from the home.

Keep vehicles on a clean (nonflammable) surface.

The first 30 feet is critical; keep it lean, clean, and green! Use fire-resistant plants here to create defensible space.

Propane tanks should be maintained and up to National Fire Protection Association code. Small tanks should be kept at least 30 feet from the home.
The Home Ignition Zone
Immediate Landscaped Area out to Extent of Home Ignition Zone

Evaluate:
- Define the extent of your HIZ
- Vegetation management from 100-200 feet

Reassess the extent of your “home ignition zone.” Consider whether outbuildings or adjacent homes will increase your HIZ to include them (such as in a trailer court or maybe a cul-de-sac).

Finally, reassess the vegetation in your HIZ—if the boundary has moved out, you will need to thin natural vegetation even further for better protection from a wildfire, sometimes as far as 200 feet. Any work needed for windy or dry aspects? Do ladder fuels need to be thinned to make outbuildings safer? Are access routes properly cleared to be a safe evacuation route? Do you need to thin trees to open the crowns so that fire doesn’t spread as easily?
Creating an Effective Defensible Space

As a critical part of the Home Ignition Zone, defensible space plays an important role in reducing the risk of losing your home to wildfire. The Home Ignition Zone includes both the home and its immediate surroundings. The term ‘defensible space’ refers to the area between a home and an oncoming wildfire where the vegetation has been managed to reduce the wildfire threat and allow firefighters to safely defend the home. During large wildfire events, with the likelihood of only a limited number of resources being available for home protection in many neighborhoods, defensible space can increase an individual home’s chances of surviving without firefighter intervention. Throughout southwest Oregon, resources are available for advising rural and urban homeowners on how to create defensible space around their homes. Local fire districts or departments and Oregon Department of Forestry fire professionals provide free home assessments to all homeowners in southwest Oregon. They offer information on how to protect homes and properties from wildfires. See pages 19 and 25 for contact information.

Know your distance

The size of the defensible space is usually expressed as a distance extending outward from the house in all directions. The recommended distance is not the same for every home. It varies depending on the dominant vegetation surrounding the home and the steepness of slope. Use the Recommended Defensible Space Distance table to determine the right space for your home.

<table>
<thead>
<tr>
<th>RECOMMENDED DEFENSIBLE SPACE DISTANCE</th>
<th>Flat to gently sloping 0-20%</th>
<th>Moderately steep 21-40%</th>
<th>Very steep +40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grass - Dry grass and weeds</td>
<td>100 feet</td>
<td>100 feet</td>
<td>100 feet</td>
</tr>
<tr>
<td>Shrubs and Woodland - Sagebrush, manzanita, and mountain mahogany</td>
<td>100 feet</td>
<td>200 feet</td>
<td>200 feet</td>
</tr>
<tr>
<td>Forest Trees - Fir and pine. If there’s a substantial shrub understory, use the values stated above.</td>
<td>100 feet</td>
<td>100 feet</td>
<td>200 feet</td>
</tr>
</tbody>
</table>

- Note: If the defensible space needed around your home exceeds your property boundaries, work with your neighbors to reduce the fuel hazards on their property adjacent to your home. Wildfires do not recognize property boundaries. Implementing defensible space practices around every home improves the survivability of entire neighborhoods and works towards creating a fire-adapted community.

Remove the dead

Within the recommended defensible space zone, remove:
- Dead, dying, and suppressed trees
- Dead native and ornamental shrubs
- Dead weeds, grasses, and groundcover
- Dead branches on trees, plants, and on the ground
- Debris from the roof and gutters of all structures
- Needles, leaf litter, and other debris within defensible space zone:
- 0 to 5 Feet—Create a fuel-free zone around the perimeter of your home and remove all debris routinely before and during fire season
- 5 to 30 Feet—Remove debris each spring and keep it from accumulating (maintain < 1 inch) during fire season
- 30 feet and beyond—Keep debris from accumulating to more than 3 inches in depth

- Remove routinely
- Remove every spring
- Maintain at less than 3 inches
Make it lean, clean, and green

One common misconception many people have is that homes and forested areas are only ignited by flame contact from wildfires. More commonly, multiple small ignitions occur from airborne burning embers emitted by nearby fires, causing new fire starts. These “firebrands” can create spot fires on your home, within the landscaping around your home, and within forested or wildland areas near your home. To protect your home and surrounding landscapes from all facets of wildfires, keep your vegetation lean, clean, and green. First, remove easily ignitable fuels or kindling around your home. Second, manage the fuels near your home to keep a fire’s intensity low.

Treating vegetation within defensible space zones and forested areas

Tree and plant spacing, arrangement, fuel type, and vertical connectivity with the surface fuels greatly influences the survivability of a home and its forested surroundings during a wildfire. The principles for creating and maintaining a fire-resistant landscape are:

• Reduce understory and surface fuels.
• Prune limbs to increase the height from the surface to the base of tree crowns.
• Thin to reduce density and increase the spacing between tree crowns.
• Keep larger trees and understory plants of more fire-resistant species.
• Promote more fire-resistant forests at a landscape level (i.e., your surrounding private and public neighbors) by reducing fuels both vertically and horizontally.
• More information is available from Reducing Fire Risk on Your Forest Property (PNW 618) at https://catalog.extension.oregonstate.edu/pnw618.

Avoid highly flammable plants within 30 feet of your home!

Ornamental conifers such as Arborvitae, juniper varieties, cypress varieties, and a few others are extremely flammable trees and shrubs.

They contain volatile oils and waxes in their foliage, and accumulate dead materials within the plant. Many firefighters refer to these plants as “little green gas cans” that can be easily ignited from burning embers or direct flame contact.

When they burn, they generate enough heat to ignite nearby vegetation and your home. Native southwest Oregon plants such as manzanita, wedge leaf ceanothus, buckbrush and a few others, also fall into this highly flammable plant category. There are many landscaping alternatives to these little green gas cans to use near your home. Combinations of low-growing deciduous shrubs, herbaceous flowers, and groundcover plants are far less likely to generate enough heat to ignite your home or surrounding vegetation.

For more information on what to plant, consult PNW 590, Fire-Resistant Plants for Home Landscaping at https://catalog.extension.oregonstate.edu/pnw590.

Lean, clean, and green tips

• Create a fuel-free area of at least 5 feet around the perimeter of your home and its attachments (garage, porches, decks, etc.).
• Keep gutters, the roof, and roof valleys clear of all needles and leaf litter.
• Clear all flammable vegetation within 10 feet of propane or fuel tanks.
• Keep firewood stacks at least 30 feet from structures and keep firewood stacks covered when possible.
• Remove all dead and dying vegetation within your defensible space.
• Remove all flammable vegetation (native or ornamental) within 30 feet of homes.
• Use low-growing herbaceous vegetation near homes and keep them cultivated and watered. Any dead or dried out materials should be removed.
• When retaining native shrubs, reduce their numbers to individual plants or small groups, and break up their continuity across the landscape. Always keep them pruned so they are healthy, vigorous, and free of dead materials.
• Avoid planting underneath windows, soffit vents, eaves, or in front of foundation vents.
• Keep tree limbs pruned at least 10 feet away from chimneys and stove pipes and away from touching your roof. Prune limbs encroaching on power lines.
• Prune trees and plants to reduce ladder fuels.
• Keep grasses mowed to 4 inches or less.
• When mulches are used, keep them moist and try breaking up their continuity with patches of hardscapes, such as landscape rocks, gravel, and areas of irrigated grass.

Little green gas cans

Firefighters often refer to ornamental junipers as little green gas cans. During a wildfire involving homes, embers can smolder undetected under ornamental junipers. The junipers can then ignite and burn intensely after firefighters have left the area. Planting ornamental junipers next to your house is never a good idea. Keep these little green gas cans at least 30 feet from the house or replace them with low-growing, deciduous shrubs, herbaceous flowers, rock mulches, and hard surfaces.

No ladder fuels

Vegetation that can carry a fire from the surface or low-growing plants to taller plants are known as ladder fuels. The goal of ladder-fuel reduction or pruning is to create separation that disconnects the tree or plant crowns from the surface vegetation beneath them. Remember, keep a tree’s foliage in the crown and off the ground.
Thinning native shrubs

In southwest Oregon, many native shrubs occur as individual plants and in clumps of shrubs. Within 30 feet of your home, all flammable shrubs such as manzanita, buckbrush, wedge leaf ceanothus, and other shrubs should be removed. More than 30 feet from your home but still within your defensible space zone, shrubs should be separated from each other by at least twice the height of the average shrub. For example, if the average shrub height is 2 feet, there should be 4 feet of separation between branches or crowns. This separation should be greater with homes on steeper slopes (more than 30 percent). To create separation, remove or prune shrubs to reduce their height, diameter, or both. Always remove all dead material from the plants and only retain those plants with the best form, vigor, and chance of survival.

Thinning forested areas

Many native conifer and hardwood tree species grow in southwest Oregon. Conifer species such as ponderosa pine, Jeffery pine, Douglas-fir, white fir, and incense cedar can naturally occur in dense patches in the forest understory or in openings after a disturbance. Many native hardwood species follow the same growth patterns. Densely stocked forested areas not only pose a wildfire threat; overcrowded conditions can lead to declining stand health from the stress of competing for the limited resources during the dry seasons.

Native hardwoods in this region, including oak and madrone, are prolific stump-sprouters. Once the main stem has been cut, their root system remains alive and can have multiple resprouts later. The best treatment for thinning stump-clumps of multiple hardwood stems is to remove all but one or two of the most dominant stems, and treat each clump as an individual tree. This will reduce fuel loading and ladder fuels, and promote healthier, larger stems.

The concept of thinning from below the canopy is useful when treating forested areas outside of your defensible space. In this practice, suppressed, dying, and many of the dead, small-diameter (usually 8-inch diameter or less) conifers and hardwoods are targeted for removal. Those trees with less than 30 percent live-crown ratios (the percentage of live foliage within the tree’s crown) are removed to help release the healthier understory and overstory trees. Removing the suppressed understory reduces the competition between trees while removing forest fuels and ladder fuels from the stand. This helps to promote a healthier, more fire-resistant forest.

Defensible space must be regularly maintained. Fresh-cut madrone and oak trees resprout rapidly after cutting, and shrubs like manzanita and poison oak often shoot up in cleared areas along with invasive weeds, such as blackberries and Scotch broom. Without ongoing attention to regrowth of brush and accumulating dead materials, the home protection benefits of defensible space will be diminished or lost.

Create separation

Within your home’s defensible space zone, native trees and shrubs should not occur in dense stands. Dense stands of trees and shrubs pose a significant wildfire threat and contribute to declining tree or plant health and vigor. Thinning to create more space between plants and tree crowns is the best management tool for reducing the wildfire threat around homes and forested properties.

Thinning also helps increase the overall health of forested areas by reducing competition between plants.

Spacing around your home

Within 30 feet of the home, the canopies or drip lines of individual or small groups of several trees, both hardwoods and conifers, should be separated by between 10 to 30 feet, depending on the tree size and species. More than 30 feet from the home, but still within the Defensible Space Zone, on flat or gently sloping terrain, individual trees or small groups should have about 10 feet of separation between tree canopies or drip lines. This distance should be increased on steeper slopes of 30 percent or more. Remember, wildfires burn quicker uphill, and steeper terrain can cause crown fires to spread upslope much more easily.

- Prune the lower branches of mature trees up at least 10 feet above the surface.
- Remove excessive plants and shrubs growing beneath the drip lines of overstory trees. Only retain those plants within irrigated, well-maintained lawns, flower beds, or groundcover plants.
- Prune up the lower third of younger trees and small saplings. The goal is to create separation from surface fuels while retaining sufficient crown to insure a healthy tree. Keeping grasses mowed and other plants removed under and near young saplings will also help disconnect the fuels ladder.
- For tips on proper pruning techniques, contact your local OSU Extension Service office.
Fire managers promote defensible space

Defensible space is supported by the environmental goals and ordinances of both Jackson and Josephine counties. A healthy forest and a fire-resistant forest go hand in hand. A few defensible space recommendations may call for consultation or a permit from local fire-management agencies, Oregon Department of Forestry (ODF) districts, or your local OSU Extension office to reduce other potential impacts to the ecosystem.

Managing trees: Some local fire agencies may require a permit for the cutting of live trees greater than 6 inches in diameter.

Plant selection: Plants being used in areas other than borders, entryways, flower beds, and similar locations need to be selected from the OSU Extension Recommended Plant List, which includes information on the fire resistance of different plants. For this plant list, as well as a list of accent plants suitable for southwest Oregon's conditions, consult Fire-Resistant Plants for Home Landscapes (PNW 590) at https://catalog.extension.oregonstate.edu/pnw590 and Fire Resistant Shrubs and Trees for Privacy in Southwestern Oregon at http://extension.oregonstate.edu/sorec/sites/default/files/fireproof_shrubs_and_trees_book_7-2012.pdf.

Noncombustible area: In the 5-foot noncombustible area around structures, using gravel, rock, pervious concrete, pervious pavers, or appropriate vegetation will be beneficial.

Enclosing decks: Enclosing the underside of a deck may increase the amount of land coverage on a property.

Sensitive areas: If the defensible space zone includes sensitive areas, including lakeshores, a beach, stream-environment zones, scenic resource areas, or conservation or recreation areas, additional considerations may apply. Adequate defensible space can still be achieved with professional advice.

Working with your neighbors

When the area needed to create an effective defensible space exceeds your property boundaries, you'll need to contact the adjacent property owner to discuss opportunities to work cooperatively. Due to the private/public checkerboard landownership of southwest Oregon, your neighbor could be a government agency. An important first step is to check with your local fire department or fire district before proceeding. Contact information for some of the common government landowners in southwest Oregon neighborhoods is presented below.

- Oregon Department of Forestry (Grants Pass) 541-474-3152
- Oregon Department of Forestry (Central Point) 541-664-3328
- OSU Extension (SOREC) 541-776-7371
- U.S. Forest Service (Grants Pass) 541-471-6500
- U.S. Forest Service (Medford) 541-618-2200
- Bureau of Land Management (Grants Pass) 541-471-6500
- Bureau of Land Management (Medford) 541-618-2200

If you are interested in getting other homeowners in your neighborhood organized to reduce wildfire hazards, contact your local fire district or department.

The area within 5 feet of your house is important to both water quality and defensible space. When constructing, refer to erosion-control measures (such as the installation of an infiltration trench shown at left) or city planning department where appropriate. Contact your local fire professional, ODF district or OSU Extension office for advice on defensible space.

“Collaborative partnerships are essential for opening up dialog between partners and stakeholders, on both public and private lands. Collaboration allows us to integrate our abilities and maximize our effectiveness as we work towards preparing, and protecting communities from wildfires.”

John O’Connor
Cohesive Wildfire Strategy Coordinator
ODF Southwest Oregon District

Conservation landscaping concepts

When creating defensible space, be aware of water quality concerns on the Rogue River and its tributaries. If misapplied, defensible space practices could encourage accelerated erosion, a major contributor to the declining clarity of moving water. Consider using the following conservation landscaping concepts when creating defensible space:

- Do not remove all vegetation from the defensible space zone.
- Low-fire-hazard vegetation is the preferred alternative to incorporate the objectives of both Best Management Practices (BMPs) and defensible space.
- Do not dig out plant roots. Leave them in place.
- When breaking up dense brush fields on steep slopes, leave islands of lean and green shrubs staggered horizontally across the slope.
- Implement BMPs on your property. BMPs are measures that help slow water runoff and control soil erosion. For a free BMP inspection of your property, contact the ODF district in Grants Pass at 541-474-3152 for Josephine County or 541-664-3328 in Medford for Jackson County.
- For educational materials and programs about defensible space, erosion control, and general landscape management, call OSU Extension at 541-776-7371.
A key component of the Fire-Adapted Communities concept is that residents know how to safely and effectively evacuate. Successful community evacuation requires preparation. The following checklists provide recommendations concerning proper evacuation preparation. Evacuations are conducted to save lives and to allow responding personnel to focus on the emergency at hand. Please evacuate promptly when requested!

**Evacuation orders**

*It is important that you follow ALL evacuation instructions immediately, for your safety.*

**The evacuation process**

Officials will determine the areas to be evacuated and the routes to use, depending upon the safest option for the specific incident. If an evacuation order is given, follow directions promptly!

You will be advised of potential evacuations as early as possible.

Listen to your radio or TV for announcements from law enforcement and emergency personnel.

**If evacuation is a possibility**

Below is a suggested list of items that you should take with you in the event you must evacuate. Gather enough for several days. Be sure to add or subtract from this list as it applies to your personal situation. Place these items in your vehicle (make sure each family member has also gathered their items):

- Several changes of clothing and sturdy shoes for each family member
- Toiletries
- Hearing aids, glasses, etc.
- Special dietary items
- Baby supplies, toys, books, etc.
- Water or snacks (don’t forget water for your pets)
- Medications, copies of prescriptions, vaccination records
- Pet food, supplies and pet vaccination records
- Important papers (insurance policies, health information, etc.) and identification
- Important phone numbers, cell phone and charger, change for a pay phone
- Make an evacuation plan for your family, including where you will go, how you will get there, where your pets will go if they can’t go to a shelter with you, and how you will let others know where you will be.
- Park your vehicle facing outward in your driveway and carry your car keys with you.
- Locate your pets and keep them nearby; prepare livestock/horses for transport.
- Leave windows closed and air conditioning off.

**Returning Home**

Emergency officials will determine when it is safe for you to return to your home. This will be done as soon as possible, considering safety and accessibility. Be alert for downed power lines and other hazards.

Disaster Supply Kit

Prepare for at least three days, but preferably seven days. The best time to assemble a disaster supply kit is well before you need it. Most of these items are already in your home. Stocking up on emergency supplies right now can add to your family’s safety and comfort during and after a disaster.

Essentials for a Disaster Supply Kit

If you anticipate an extended evacuation at an emergency shelter or your family is returning to a home without functioning electricity and water, these items will prove to be helpful:

- 1 gallon of water per person, per day, stored in unbreakable containers and labeled with the storage date. Replace every six months.
- Supply of nonperishable packaged or canned foods with a hand-operated can opener
- Antibacterial hand wipes or gel
- First-aid kit, including a first-aid book
- At least one blanket or sleeping bag per person
- ABC-type fire extinguisher
- Special items for infants, elderly, or disabled family members
- Large plastic trash bags, tarps, and rain ponchos
- A large trash can
- Bar soap, liquid detergent, and household bleach
- Rubber gloves and duct tape

Preparedness for people with access and functional needs

Anyone with a disability or who lives with, works with, or assists a person with a disability or special need should create a disaster plan. For some individuals, being notified of or responding to a disaster may be more difficult because of a disability. Disabilities may be physical, mental, emotional, socioeconomic, cultural, or language based. Addressing special needs ahead of time will reduce the physical and emotional trauma caused by the emergency.

1. Be informed of what might happen by learning about community hazards, disaster planning, and local warning systems.

2. Make a plan for what you will do in an emergency. Assess what you will be able to do during a disaster and what you will need help with. Consider creating a personal support network to help you plan and respond to a disaster. Be sure to plan for your pets.

3. Make a disaster supply kit. Include items for you and your pets.

Preparing pets and livestock for evacuation

Plan to take your animals with you and never turn them loose. Animals may not be allowed inside human emergency shelters, so be sure you have alternate plans for their sheltering.

- Make sure dogs and cats wear properly fitted collars with identification, vaccination, microchip, and license tags.
- Your pet evacuation plan should include routes, transportation needs, and host sites. Share this plan with trusted neighbors in your absence.
- Exchange veterinary information with neighbors and file a permission slip with the veterinarian authorizing emergency care for your animals if you cannot be located.
- Make sure all vehicles, trailers, and pet carriers needed for evacuation are serviced and ready to be used.
- Assemble a disaster supply kit for each animal with a supply of food (for two to three days), nonspill food and water bowls, leash or lead rope, pet carrier (if possible), vaccination records, medications/first aid kit, toys and treats, sanitation supplies, and a current picture of the animal.

How many kits do you need?

Your Disaster Supply Kit is essential to your response to an emergency! Think about where you spend most of your time, and prepare a kit for each location (such as your car, workplace or school). If you aren’t able to make multiple kits right away, begin by making one for your car so that it is generally with you.

Preparedness for people with access and functional needs

Anyone with a disability or who lives with, works with, or assists a person with a disability or special need should create a disaster plan. For some individuals, being notified of or responding to a disaster may be more difficult because of a disability. Disabilities may be physical, mental, emotional, socioeconomic, cultural, or language based. Addressing special needs ahead of time will reduce the physical and emotional trauma caused by the emergency.

1. Be informed of what might happen by learning about community hazards, disaster planning, and local warning systems.

2. Make a plan for what you will do in an emergency. Assess what you will be able to do during a disaster and what you will need help with. Consider creating a personal support network to help you plan and respond to a disaster. Be sure to plan for your pets.

3. Make a disaster supply kit. Include items for you and your pets.

Sign up for the disaster registry

Would you or a loved one need special help during an emergency?

You should sign up for the disaster registry if you would:

- Need outside help to safely leave your home during a disaster.
- Be in jeopardy if you stayed in your home, without assistance, for three days.
- Need special notification about the need for evacuation, due to impairment.

The Disaster Registry is a database of names, locations, and needs of people who need special assistance during an emergency. This database is available to fire, police, and rescue workers.

Being on the Disaster Registry does not guarantee that you’ll get help first in a disaster. There are so many needs during a disaster that firefighters and police can’t help everyone at once. But if your name is in the Disaster Registry, they will know of your need for special assistance.

You should call 911 if you find yourself in a life-threatening situation, even if you are on the Disaster Registry.

Visit www.rvccg.org to download an application or apply online.

For more information, contact the Rogue Valley Council of Governments at 541-664-6674. Once an application has been received, it may take three months or more for the information to be available to rescue workers.
You have prepared your family for an emergency evacuation when you have:

- Made a family emergency plan and everyone in your family knows how to implement it;
- Registered with Citizen Alert, the local emergency notification system;
- Registered with your phone-tree caretaker, if a phone tree has been established in your community;
- Practiced your family’s emergency plan by conducting your own evacuation drill;
- Arranged for transportation out of the affected area if you do not drive;
- Designated a safe meeting place and contact person for you and your family members;
- Assembled disaster supply kits for your family and pets;
- Inventoried home contents, videotaped or photographed property, and placed photos and videos in your disaster supply kit; and
- Prepared “WATER SOURCE HERE” signage.

Notification

Effectively communicating emergency information requires a partnership between local government, emergency responders, the media, and the public. Although emergency information is made available, YOU must make a conscious effort to seek out that information. No single method of communication is fail-safe during an emergency, so regional public safety officials use a combination of methods to keep the public informed during an emergency.

Wildfire conditions may change rapidly, and communication may be obstructed when fire destroys power lines or phone lines, or closes roads. Be aware of current fire conditions and weather, and consider evacuation based your local conditions, even if you have not been notified to do so.

- Social Media—Jackson and Josephine County Emergency Management departments use Facebook to communicate emergency information during disasters. Visit www.RVEM.org for links to each Facebook page as well as news and other information.
- Emergency Notification System—Sign up in Citizen Alert to receive alerts about emergencies near your home, workplace, children’s schools, or other important places.
- Local Media outlets—The local media provides timely information to the public during emergencies. Most television stations and newspapers have breaking news on their websites, as well as on their Facebook pages and Twitter feeds. Some radio stations also have websites.

There is no guarantee that every citizen will be contacted, but these methods allow officials to quickly notify large sections of the local population. As another option, consider establishing an emergency phone tree in your neighborhood in conjunction with your local fire department or fire district.

Citizen Alert Emergency Notification System

Jackson and Josephine County residents can now receive alerts about emergencies happening in their area through the Citizen Alert Emergency Notification System. Citizen Alert can be used to send emergency information to people who may be in danger, or who need to be provided critical, time-sensitive information. This type of information may be related to any type of emergency event, such as wildfire evacuations, hazardous materials accidents, or even a fugitive in the area. All land-line telephone numbers in Jackson and Josephine Counties are automatically subscribed to receive alerts. Citizen Alert also has the option for citizens to self-register, and thereby set their contact preferences, add additional information, and subscribe to important nonemergency alerts. By “opting-in,” citizens will enhance their ability to receive emergency information by entering additional contact preferences, such as email or cell-phone numbers. Citizens can also get emergency and important information about up to five locations of their choice, such as their child’s school or a loved one’s residence. Please note that if you live in a household without a land line, you will not receive emergency notifications unless you opt in. The information you provide is kept confidential. Jackson and Josephine counties do not share your information with anyone. Visit www.RVEM.org and click on the Citizen Alert button, like the one above, to register.

Decide how you plan to stay informed during an emergency.
When a fire threatens

During a wildfire, it will likely be dark, smoky, windy, dry, and hot. There may be burning embers being blown about, no power, no phone service, and poor water pressure. Remember, there is nothing you own worth your life!

Please evacuate immediately when asked by fire or law enforcement officials—don’t be caught in traffic or by the fire itself!

If you are concerned, don’t wait to be asked to leave! Early evacuation, especially if you have pets and livestock, is a good course of action. Drive slowly, turn on your vehicle headlights, and stay as far to the right side of the road as possible.

Put your family’s emergency plan into action:

Prepare to evacuate:

- Be aware of your surroundings, including current fire conditions and the weather. Recognize that local infrastructure such as power lines and roads may be offline due to wildfires.
- Close all interior doors.
- Dress to prevent burns by wearing long pants, a long-sleeved shirt or jacket made of cotton or wool, a hat, gloves, and boots.
- Park your vehicle in the garage or driveway facing out with the garage door open and the vehicle windows closed (to prevent embers from getting in).
- Confine pets to one room in your home, or secure pets in their own carrier or cage.
- Place your family’s and pet disaster supply kits and personal mementos in your vehicle.

Inside your home:

- Keep your radio or television turned on for instructions.
- Close all interior doors.
- Leave a light on in each room.
- Remove combustible curtains and other materials from around windows.
- Close windows, skylights, and exterior doors (house, garage, shop, and barn).
- Close fire-resistant drapes, shutters, and blinds.
- Turn off all pilot lights.
- Move overstuffed furniture (couches and easy chairs) to the center of the room.
- Close fireplace damper.
- Turn off air conditioning.

Outside your home and out buildings:

- Place combustible patio furniture and accessories inside or toss them away from the house.
- Remove barbecue propane tanks and place them away from the house where they can safely vent.
- Shut off propane at the tank or natural gas at the meter.
- Close or cover foundation, attic, and eave vents with precut plywood covers or several layers of aluminum foil.
- Cover windows with plywood panels at least ½-inch thick.
- Prop a noncombustible ladder against the house.
- Connect garden hoses to faucets and attach nozzles set on spray.
- Remove excelsior pads from swamp coolers and toss them away from the house.
- Leave doors and gates unlocked.
- Turn on outside lights.

- Fill trash cans and buckets with water and place where firefighters can find them.
- If you have an emergency water source, post WATER SOURCE HERE sign in the predetermined spot clearly visible from the street.

Evacuating

- Lock your home, load pets and family members into your vehicle, and close the garage door.
- Drive cautiously with your headlights on.
- Follow practiced evacuation routes to the designated safe meeting place unless instructed to do otherwise by emergency responders.
- Let authorities know of any neighbors needing assistance. NOTE: If you are trapped by fire while evacuating in your car, park in an area clear of vegetation; close the windows and vents and cover yourself with a blanket or jacket.
- When you arrive at a safe place, relay your plans to the designated contact person.
- Be sure to register on the Red Cross Safe and Well List.

If you cannot leave:

- If you are unable to evacuate, stay in your home during the fire. It will be much hotter and more dangerous outside.
- Call 911 for assistance.
- Turn on all exterior lights.
- Stay away from windows and move to an interior room or hallway.
- Do not attempt to leave until after the fire has passed and you can safely leave.
- Check for small fires inside the house and extinguish them.
- Drink plenty of water.
- Be familiar with the escape routes from your home in case it catches fire.
- Fill sinks and tubs with water.
- Place wet rags under doors and other openings to prevent entry of embers and smoke.
- Once the fire front has passed, check your flower beds, roof, rain gutters, attic, and crawl space for fires or burning embers, and extinguish them.
Every year, homes in southwest Oregon are threatened by wildfires. The state of Oregon adopted a three-level evacuation process to help families prepare.

| Level 1 Evacuation (Be Ready) | A Level 1 evacuation means “BE READY” for potential evacuation. Residents should be aware of the danger that exists in their area and monitor emergency services websites and local media outlets for information. This is the time for preparation and precautionary movement of persons with special needs, mobile property, and (under certain circumstances) pets and livestock. If conditions worsen, emergency services personnel may contact you via an emergency notification system.

All residents should be at this level of readiness at all times! |
| Level 2 Evacuation (Be Set) | A LEVEL 2 evacuation means “BE SET” to evacuate. This level indicates there is significant danger to your area, and residents should either voluntarily relocate to a shelter or with family or friends outside of the affected area, or, if choosing to remain, to be ready to evacuate at a moment’s notice. Residents MAY have time to gather necessary items, but doing so is at their own risk. THIS MAY BE THE ONLY NOTICE THAT YOU RECEIVE. Emergency services cannot guarantee that they will be able to notify you if conditions rapidly deteriorate. Area media services will be asked to broadcast periodic updates. |
| Level 3 Evacuation (GO!) | A Level 3 evacuation means that you need to LEAVE IMMEDIATELY! Danger to your area is current or imminent, and you should evacuate immediately. If you choose to ignore this advisement, you must understand that emergency services may not be available to assist you further. DO NOT delay leaving to gather any belongings or make efforts to protect your home. Access to evacuated areas may be denied until conditions are safe for citizens to return. DO NOT plan to return to check on your house or animals. If it’s not safe for you, it’s not safe for them! |

Sign up to receive EMERGENCY ALERTS about emergencies near your home, workplace, children’s schools, or other important places!
Visit [www.RVEM.org](http://www.RVEM.org)

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**Jackson County Emergency Management**
5179 Crater Lake Hwy.
Central Point, OR 97502
541-774-6790

**Josephine County Emergency Management**
500 NW 6th St. Dept. 6
Grants Pass, OR 97526
541-474-5300
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- Dedicated community members

For more information visit: http://extension.oregonstate.edu/sorec/

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Firewise Communities Program

Creating Safer Neighborhoods
By reducing wildfire risk
www.GrantsPassFirewise.org

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