

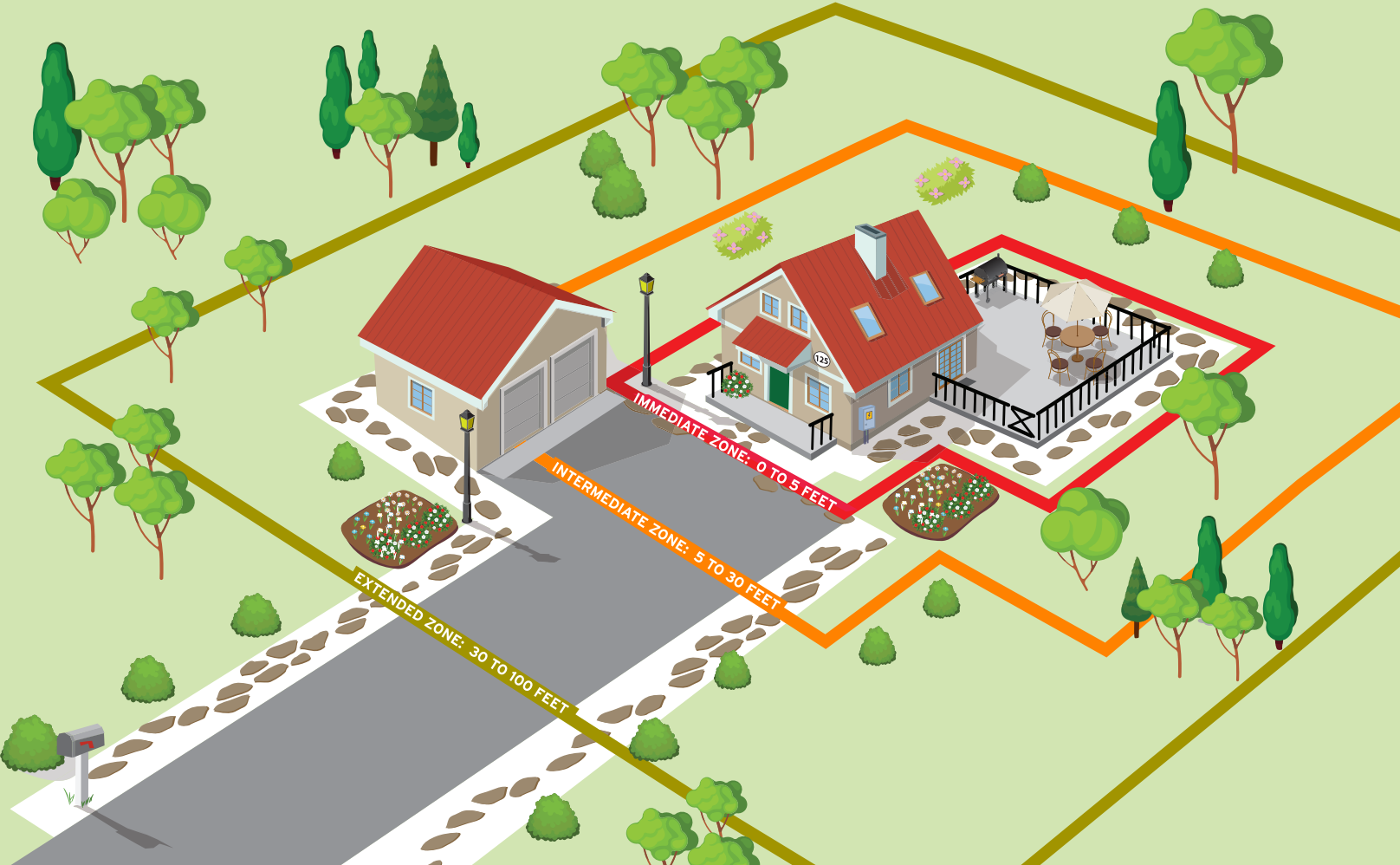
Crook County:

ARE YOU

FIRE

READY?

A guide to protecting homes and businesses against wildfire damage.



***“Fire does not behave capriciously;
it either meets the requirements for
combustion or not.” — Jack Cohen, USFS***



View of the Laughlin Fire outside of Prineville in 2018. Photo ©Central Oregonian.

ARE YOU FIRE READY?

Anyone who has lived through a fire season in Crook County has experienced the impacts of wildfire. From air pollution to property damage, wildfire is a major threat to our homes, health, livelihoods, and natural resources. National trends show that wildfires are happening more frequently and growing in size and severity. You don't have to be a victim. Understanding how fire behaves and what you can do to reduce the risk in your community helps firefighters protect all of us more effectively.

Fire needs three fundamental elements to occur: oxygen, heat, and fuel. This is known as the "fire triangle". Remove any one of these elements and a fire will go out. You can't control the amount of oxygen in the atmosphere and you have limited control over natural sources of heat (like lightning), but you do have control over the final element of the triangle: fuel. Once a fire has started, the way it moves is also controlled by three factors: weather, topography, and available fuel. In most cases, you can't change the weather or flatten mountains but you can control the amount of fuel available to burn. The common denominator in both the fire triangle and fire behavior is fuel. In the following pages, we'll give you a range of helpful suggestions to reduce the amount of fuel on your property and in your neighborhood.

Wildfires do not have to burn everything in their path! By following the standards outlined in this guide, you can help protect your home and property against wildfire damage. Consider working with your neighbors to develop an action plan that guides wildfire risk reduction activities to make an even bigger impact. Thank you for being an active participant in building a safer Crook County.

THE HOME IGNITION ZONE

It's time to evaluate your property! The home ignition zone was developed by retired USDA Forest Service fire scientist Jack Cohen. His research demonstrated how fuel reduction work can significantly increase the chance of your home surviving a wildfire. Here's what to look for:

Gutters

Finding and eliminating rooftop fuels is a big step toward protecting a home against wildfire damage. Check your gutters for dry leaves or needles, especially in the downwind direction.

Roof

Not all roofs are created equal. Metal, tile, and slate roofs are nonflammable. Asphalt shingles are fire-resistant. Cedar shakes are highly flammable.

Chimneys

Clear all brush away from your chimney or stovepipe exits and cover with metal spark arrester screens.

Attic and Eave Vents

Cover all attic and eave vents with metal screen to keep out hot ash and airborne embers. This will also prevent leaves, needles or other potential fuels from accumulating in hidden places.

Access

Firefighters can't defend your home against a wildfire if they can't get to it! Learn how to create a driveway and roadside fuel break on page 7.

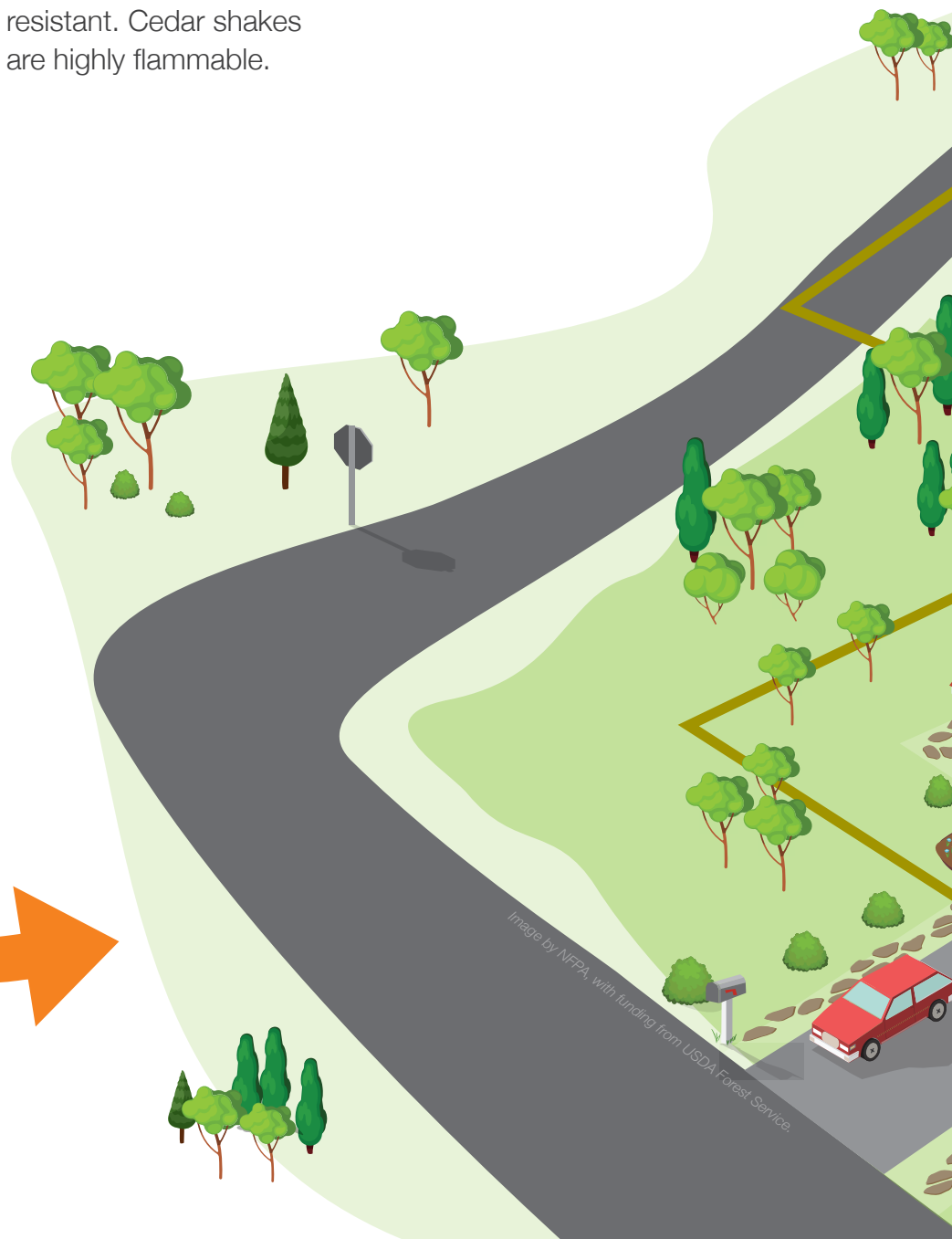


Image by NFPA, with funding from USDA Forest Service.

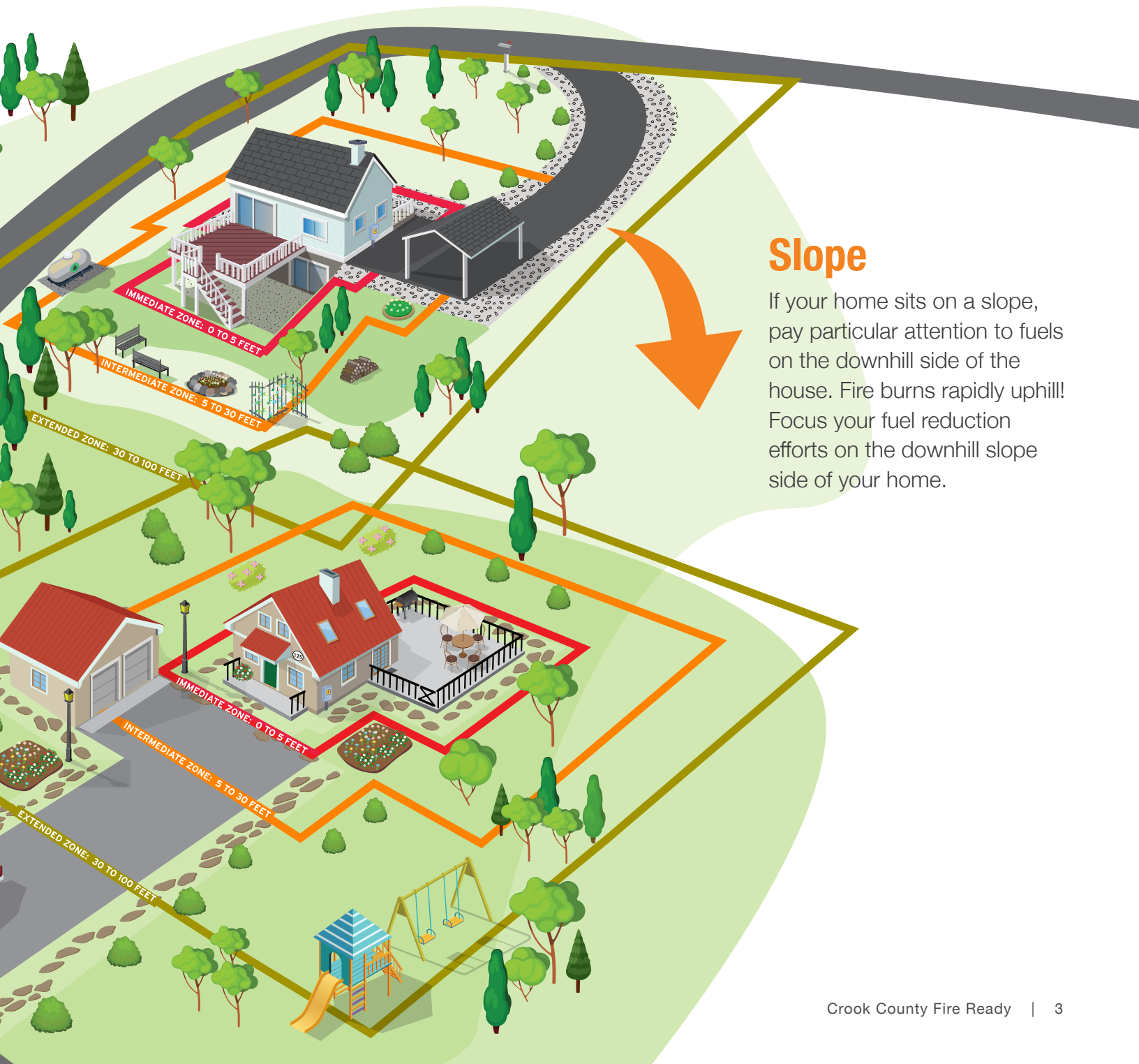
Wind

Do you know the prevailing wind direction during the hot summer months? If a hot summer wind could push a fire toward your home: focus fuel reduction on the upwind side of your home.



Water

How quickly can you respond to a spot fire on your property? Be sure to keep hoses and sprinklers where you can easily find them. If possible, develop a water source that isn't dependent on municipal power for flow and pressure.



Slope

If your home sits on a slope, pay particular attention to fuels on the downhill side of the house. Fire burns rapidly uphill! Focus your fuel reduction efforts on the downhill slope side of your home.

FUEL BREAK FUNDAMENTALS

Step 1

Immediate Zone

The first 0-5 feet around your home is the most important place to take immediate action, because it is the most vulnerable zone to embers from a wildfire. Start with your home itself, and then turn your attention to creating fire-resistant landscaping.

The immediate zone includes your house, and the first 5 feet from the outside edge of a structure's farthest attached extension. This may be the edge of the roof eave or the outside edge of a deck attached to the structure.

To create a fire-resistant home:

- Replace or repair any loose or missing shingles or other roofing materials to prevent embers from penetrating.
- Cover all attic vents, roof eaves, chimneys and stovepipes with 1/8 inch metal mesh screening to keep flammable debris from accumulating in hidden spaces and to prevent embers blowing into your home.
- Repair or replace damaged or loose window screens and any broken windows. Screen or box-in areas below patios and decks with wire mesh to prevent debris and other combustible materials from accumulating.
- Consider installing double-paned windows to increase heat resistance.
- Move any flammable material, including firewood piles, away from wall exteriors.
- Ensure grills, outdoor fireplaces, and similar devices are in good condition and have spark arresters with 1/8 inch metal screens over all openings.
- Ensure all exterior doors and windows close tightly and have good weather stripping.

Your landscaping in this zone should be non-flammable or very fire-resistant. Examples of this include: asphalt, concrete, rock, bare soil, clover, green grass, ivy, or succulent ground cover.

To create fire-resistant landscaping in the immediate zone:

- No dry grass or weeds.
- Trees and shrubs should be maintained in a green condition and be free of dead material.
- Replace fire-vulnerable plant varieties with fire-resistant species. *See page 7 for suggestions.*
- Arrange trees and shrubs so that fire cannot spread or jump from plant to plant. *See page 8.*

What is

Fuel Reduction?

The arrangement of trees, shrubs, and other fuel sources in a way that makes it difficult for fire to transfer from fuel source to fuel source. This also includes the selection of fire-resistant plants and trees around or near structures.



Avoid Invasion!

Keep noxious weeds off your property. Learn to identify them and remove them whenever you find them. Treat bare soil areas with weed-free seed to deprive noxious weeds of growing space. For more information, contact your County Extension Service office.

Step 2

Intermediate Zone

The intermediate zone begins where the immediate zone ends and extends out to 30 feet from the farthest exterior point of your home. The focus in this zone is creating fire-resistant landscaping and fuel breaks that can help slow the rate of spread and intensity of an advancing wildfire, and create an area in which firefighting activities can take place more safely. Consider the direction of the wind, steepness of slope, access to water sources, and location of debris in this zone.

To establish an effective fuel break:

- Clear vegetation from under large stationary propane tanks.
- Use walkways or paths to create fuel breaks.
- Keep lawns and native grasses mowed to a height of no more than 4 inches.
- Remove ladder fuels (vegetation under trees) so a surface fire can't reach the crowns of your trees. *See page 8-9.*
- Prune tree limbs and branches up off the ground. Never exceed 1/3 of the overall tree height when trimming. *See page 8-9.*
- Create enough space between the crowns of your trees to prevent fire from “jumping” from fuel source to fuel source. Trees in the intermediate zone should have at least 18 feet between crowns, more if your property is on a steep slope.
- Tree placement should be planned to ensure the mature canopy is no closer than 10 feet to the edge of your home or other structures.
- Trees and shrubs should be limited to small clusters of a few each to break up the continuity of the vegetation across the landscape.

What should you look for around home?

How healthy are the trees and shrubs around my home? How big are they? What species are they?

Will thinning trees around my home keep fire from transferring to other trees?

Will thinning shrubs from under trees keep fire from climbing into the crown?



Tree Spacing by the Zone

IMMEDIATE ZONE: 5 to 30 feet

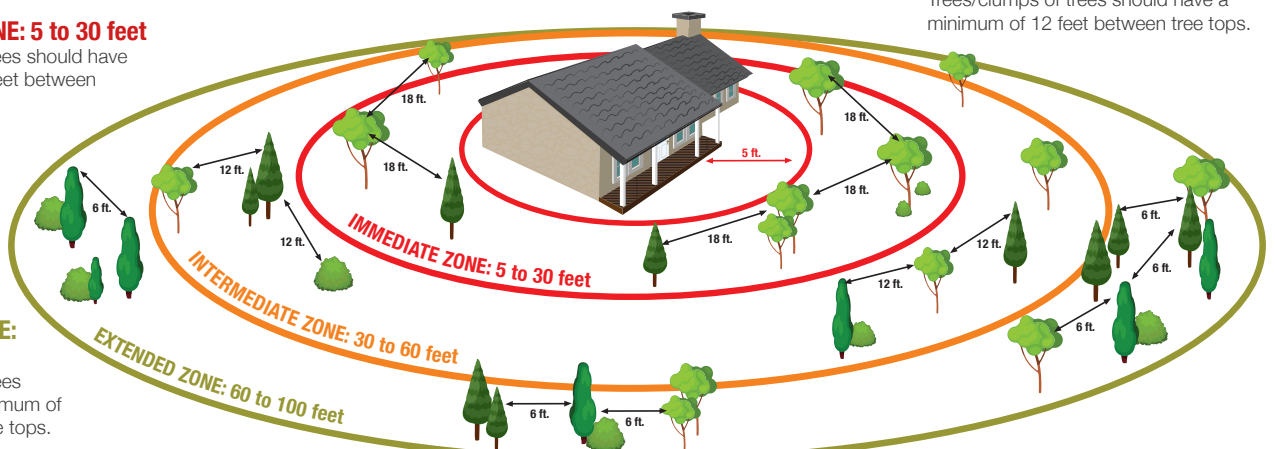
Trees/clumps of trees should have a minimum of 18 feet between tree tops.

INTERMEDIATE ZONE: 30 to 60 feet

Trees/clumps of trees should have a minimum of 12 feet between tree tops.

EXTENDED ZONE: 60 to 100 feet

Trees/clumps of trees should have a minimum of 6 feet between tree tops.



Step 3

Extended Zone

The extended zone includes the area 30-100 feet from your home's farthest point, or all the way to your property line. The goal in this zone is not to eliminate fire but to interrupt its path and keep flames smaller and on the ground. You also need to consider access for fire personnel and equipment in this zone. If firefighters can't easily and safely access your property, they won't stop to try to defend it! Consider a variety of potential access issues. Private gates should have a designated access code for emergency personnel. Private bridges must be able to bear the weight of fire equipment. Private driveways need enough horizontal and vertical clearance to accommodate fire equipment. For more information about potential access issues and recommendations for your property, call CCF&R at 541.447.5011.

In the extended zone:

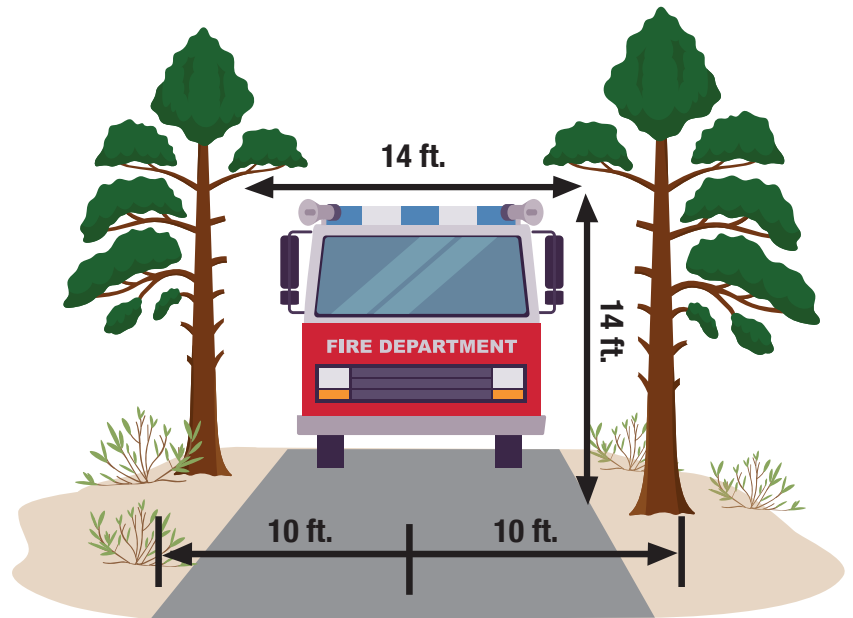
- Dispose of any large accumulations of ground litter or debris, including dead plant and tree material.
- Remove small conifers growing between mature trees.
- Remove vegetation adjacent to storage sheds or other outbuildings.
- Trees 30 to 60 feet from your home should have at least 12 feet between canopy tops, or more on a steep slope.
- Trees 60 to 100 feet from your home should have at least 6 feet between canopy tops, or more on a steep slope.

DRIVEWAY FUEL BREAK

The driveway fuel break is intended to create clearance for a fire truck, as well as to slow the rate of spread and intensity of a wildfire. It's also a "safe zone" where fire suppression can more safely occur. These recommended standards for driveways apply to driveways longer than 150 feet.

The fuel break should have these characteristics:

- The horizontal clearance must be at least 14 feet
- The vertical clearance must be at least 14 feet
- The fuel break must extend 10 feet from each side of the driveway's centerline, creating an area that is at least 20 feet wide, including the driving surface.
- The ground cover must be substantially nonflammable. Healthy trees and shrubs must be thinned and pruned. See guidelines for primary fuel breaks.
- Plants must be substantially free of dead material. See secondary fuel break, thinning, and pruning guidelines.



Fuel Reduction

Don't

Cut down all the trees and shrubs around a structure, or create a bare-earth ring around a home, also known as “moonscaping”.

Do

Choose fire-resistant trees and shrubs, and arrange them with other fuel sources in a way that makes it difficult for fire to transfer from fuel source to fuel source.

Fire-Resistant Trees & Shrubs

- ✓ Ponderosa Pine
- ✓ Douglas Fir
- ✓ Quaking Aspen
- ✓ Pacific Rhododendron
- ✓ Oregon Boxwood
- ✓ Mock Orange

Fire-Vulnerable Trees & Shrubs

- ✗ Bitterbrush
- ✗ Manzanita
- ✗ Ceanothus
- ✗ Juniper
- ✗ Arborvitae

ROADSIDE AND PROPERTY LINE FUEL BREAKS

Property line and roadside fuel breaks reduce the potential of a wildfire crossing from a neighboring property onto your property, and vice versa. These fuel breaks will also act as safety zones for firefighters working to defend homes against wildfire damage.

A roadside fuel break:

- Begins at the edge of any road that is adjacent to or runs through the property
- Extends for a distance of at least 20 feet from the roadside, or to the property line, whichever is shortest.

Natural features, such as rock fields and water bodies, may be incorporated into the fuel breaks. In general, the fuel breaks should have these characteristics:

- Ground cover should be covered with nonflammable material, such as asphalt or concrete, or with fire-resistant plants, such as green grass, ivy or wildflowers
- Dry grass should be mowed to a height of four inches or lower
- Areas of continuous cut dry grass, leaves, needles and other fine, dry natural fuel should be broken up or separated with fuel breaks to prevent the transfer of fire
- Trees and shrubs should be green and healthy, and free of dead vegetative material
- Potential ladder fuels should be removed
- Trees and shrubs should be thinned to an extent that the potential transfer of fire from one plant to another is disrupted

Step 4

Pruning and Trimming Vegetation

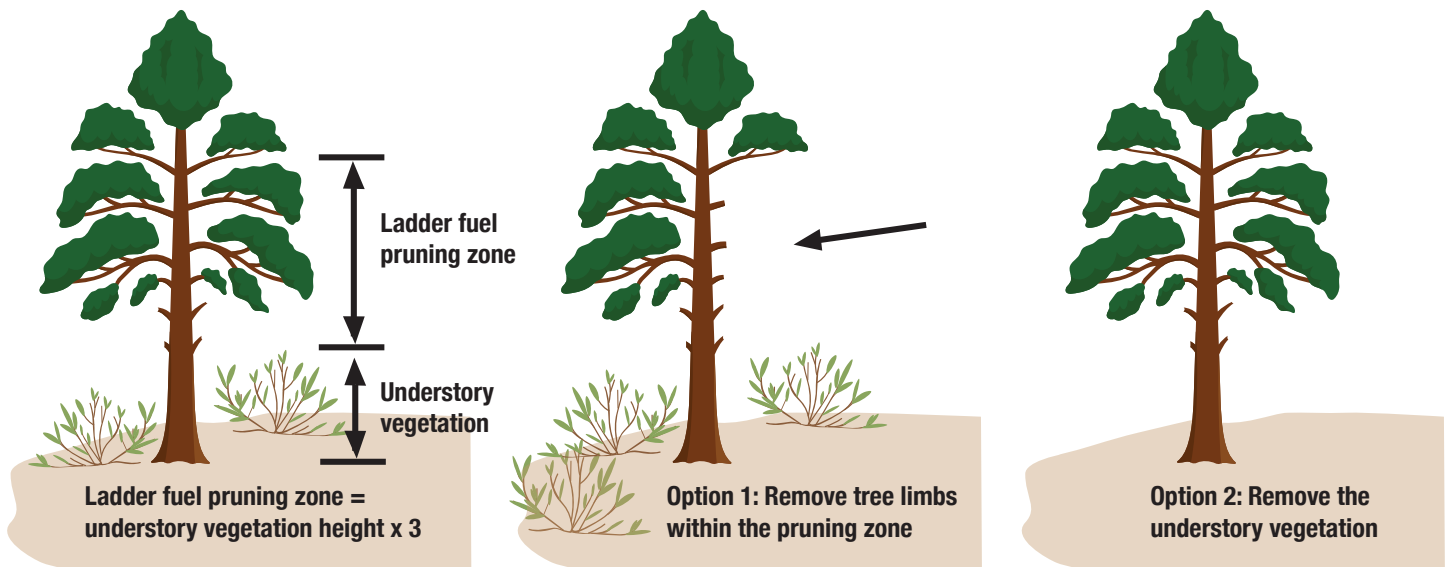
In any zone, knowing how to correctly prune and trim your trees and shrubs is vital to successfully creating a fire-resistant property. Follow the tips below for a basic guideline. If you have more specific questions, call **Crook County Fire and Rescue** at (541) 447-5011 or **Oregon Department of Forestry** at (541) 447-5658 to schedule a site visit with a professional forester or fire professional.

LADDER FUELS

To keep fire out of tree crowns, it's necessary to disrupt a fire's pathway to branches, needles and leaves. The strategic removal of lower tree limbs, which act like rungs of a ladder that a fire can climb, can make the difference between a scorched trunk and a tree stripped of all foliage.

Most wildfires start on the ground in the smallest fuels —needles, leaves and dry grass. Fire will continue to spread upward — up a hill or a tree — unless pathways to fresh fuel are interrupted. Removing ladder fuels helps to keep fire on the ground, where it is manageable, rather than in the tree crowns, where fire is difficult to control.

Ladder Fuels Pruning Zone



How high can flames fly?

About three times taller than the height of the understory plant that is burning!

Understory Vegetation Height	1 ft.	2 ft.	3 ft.	4 ft.	5 ft.	6 ft.	7 ft.	8 ft.	9 ft.
Ladder Fuel Pruning Zone Distance	3 ft.	6 ft.	9 ft.	12 ft.	15 ft.	18 ft.	21 ft.	24 ft.	27 ft.

PRUNING VEGETATION

Do:

- Remove live branches from hardwood trees during late winter or early spring, when the tree is dormant.
- Limb Conifer trees any time of year, except during early summer.
- When deciding which live branches to remove, first choose those with poor health or little green foliage. Next, choose branches that are damaged, diseased, or interfering with other branches.
- Remove dead branches any time of the year.
- Use sharp tools and make clean cuts.

Don't:

- Paint wound dressing on pruning cuts. It's unnecessary and can actually hurt the tree by causing the pruning cut to seal slower
- Cut branches flush with the trunk. This will rob the tree of natural chemicals used to close the wound, and lead to decay in the tree.
- Remove more than one-third of a tree's live crown.

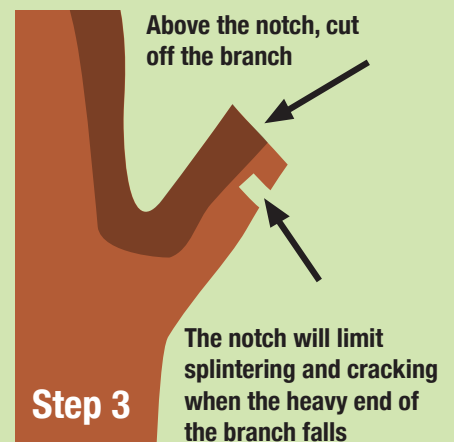
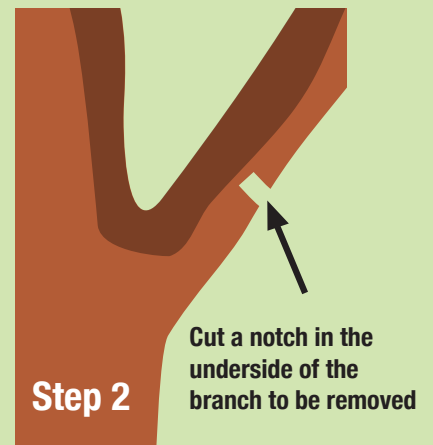
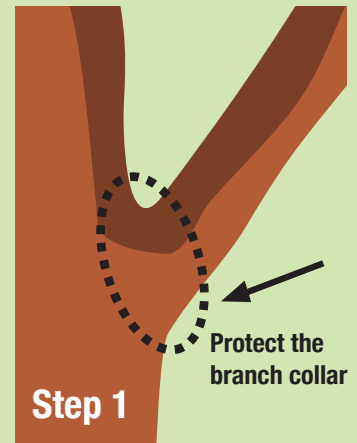
THINNING BASICS

The purpose of thinning trees and shrubs is to reduce the likelihood that fire will jump from plant to plant. Once a fire's ability to transfer to other plants is reduced, it will quickly and dramatically lose intensity.

When choosing which trees or shrubs to remove, choose the ones that have the poorest vigor. Signs of poor vigor include numerous bare or spindly branches, poor color in the leaves or needles, and evidence of parasites, such as insects or fungus.

No moonscaping. Thinning is good but don't overdo it! Healthy trees can shield a home from airborne firebrands. If you aren't sure what to cut, consult a forester or tree care professional before using the saw.

Pruning Tips



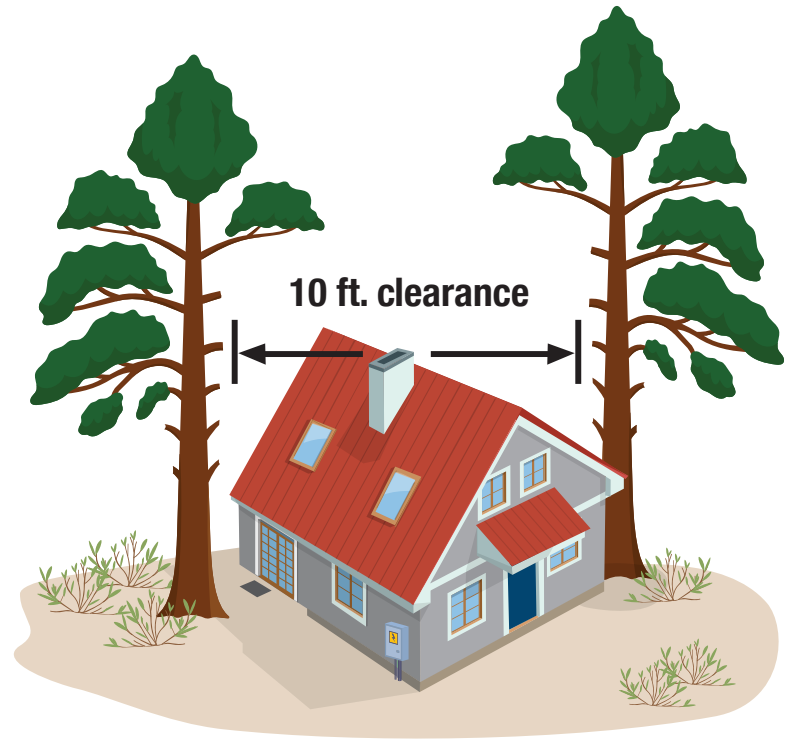
Step 5

Roof and Chimney Clearance

Sparks from a chimney connected to a fireplace or wood-burning stove could catch tree branches on fire. To reduce the chance of this happening, trim all branches 10 feet away from a chimney that vents a wood-burning fireplace or stove.

All dead branches overhanging any portion of the roof must be removed. Dead wood catches fire easier than live, green wood. Airborne embers could cause dead branches to ignite, starting a crown fire in the trees above your home's roof, or dropping burning debris onto your roof's surface.

Trimming limbs hanging over the roof can be dangerous. Consider hiring a certified arborist or tree care professional for this job.



Step 6

Under-Deck Flammables

A burning wooden deck or stairway may catch the rest of the house on fire. The best way to keep that from happening is to clean flammable material out from beneath exterior wooden decks and stairways.

Firewood and lumber must be removed. Dry needles, leaves and other litter needs to be raked out and removed. Keeping the space under wooden decks and stairways clean and enclosed is one of the best ways to keep a house safe during fire season.

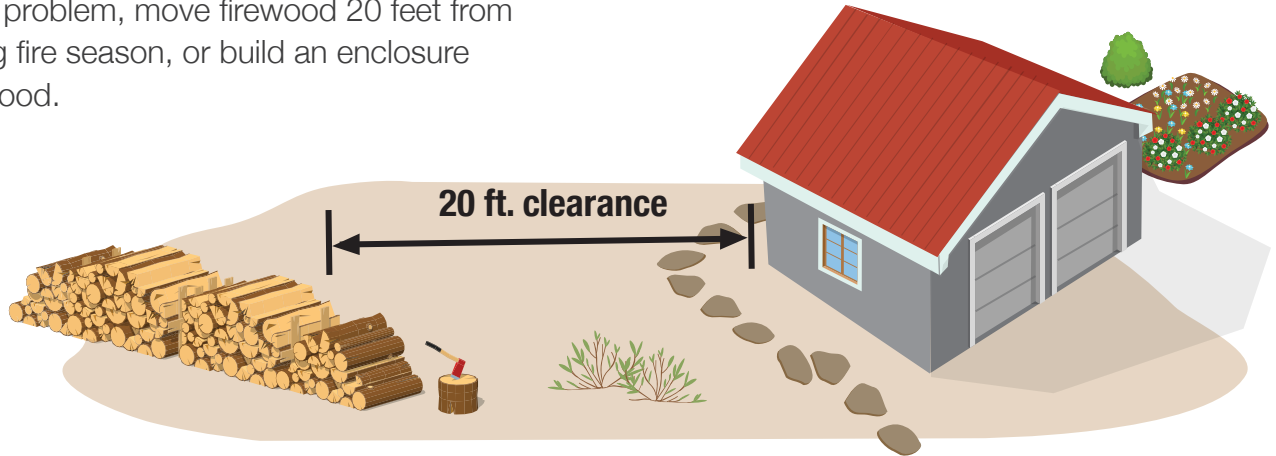


Step 7

Firewood Pile Location

Firewood stacked next to a house is a ready source of ignition and can become a source of intense, sustained heat if it should catch fire. This could ignite the house's siding or eaves, and cause the windows to break, allowing fire to enter the home's interior.

To eliminate this problem, move firewood 20 feet from the house during fire season, or build an enclosure around the firewood.



Step 8

Responsibly Manage Debris

Following steps 1-7 will generate yard debris. How can you safely and responsibly dispose of this material? In Crook County, you have several options:

- Mulching. Chipping your woody debris to create mulch is a safe, environmentally friendly option for disposal. For more information, call the Crook County Landfill at 541.447.2398.
- FireFree Program. A free yard debris recycling program that is open to all residents of Central Oregon. Call CCF&R at 541.447.5011 for more information, and to find current dates and locations.
- Burning. Open burning is risky; please use caution and careful preparation to prevent the chance of a wildfire starting on your property. Any open burning in Crook County requires a permit. Always make sure you have all applicable burning permits, and call the Crook County Burn Line to check the daily burn designation before starting an open burn on your property. Call CCF&R at 541.447.5011 or ODF at 541.447.5658 before you burn to get current information about permits and regulations that apply to your property.



Before you burn:

Call the Crook County burn line to check the daily burn designation at 541-447-BURN before starting an open burn on your property.

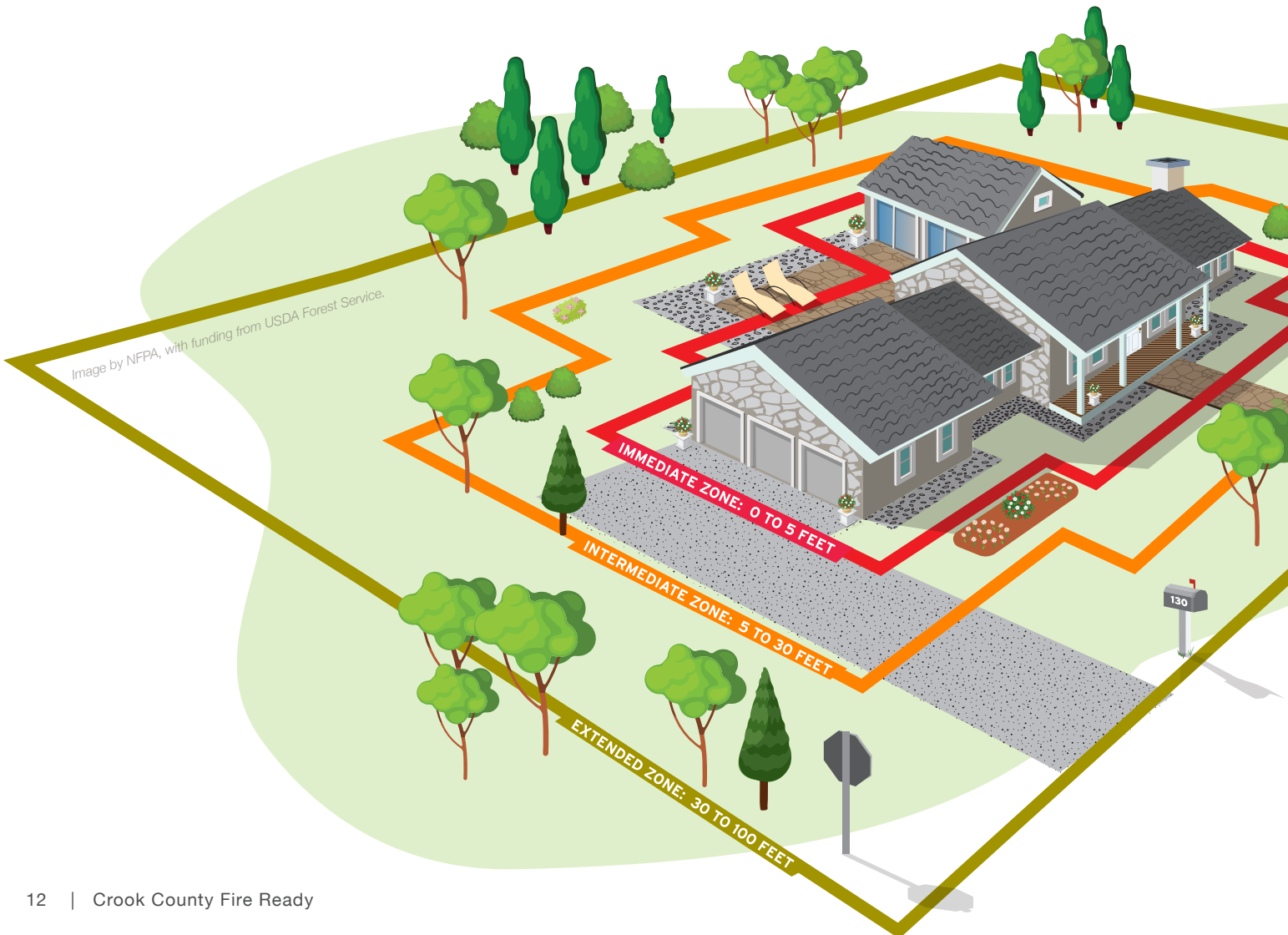
BECOMING A NATIONALLY RECOGNIZED FIREWISE USA® SITE

The Firewise USA® program provides a collaborative framework for neighbors to reduce wildfire risks at the local level. The national recognition program's annual criteria is designed to empower and engage residents living in wildfire prone areas with a plan and actions that can increase their home's chances of surviving a wildfire; while also making it safer for firefighters.



FIREWISE USA™

RESIDENTS REDUCING WILDFIRE RISKS



STEPS TO ACHIEVING NATIONAL RECOGNITION:

Wildfire Risk Assessment

Completing a written wildfire risk assessment is the first step in becoming a nationally recognized Firewise USA® site. Contact your Firewise liaison for the state's requirements on developing a risk assessment.

Board/Committee

Form a board/committee comprised of residents and other applicable wildfire stakeholders. This group will collaborate on developing the site's risk reduction priorities and they will develop a multi-year action plan based on the assessment, along with overseeing the completion of the annual renewal requirements.

Action Plan

Action plans are a prioritized list of risk reduction projects developed by the participant's board/committee for their site. Plans include recommended home ignition zone projects, educational activities and other stakeholder outreach efforts that the site will strive to complete annually or over multiple years.

Educational Outreach

Each participating site is required to have a minimum of one wildfire risk reduction educational outreach event, or related activity annually.

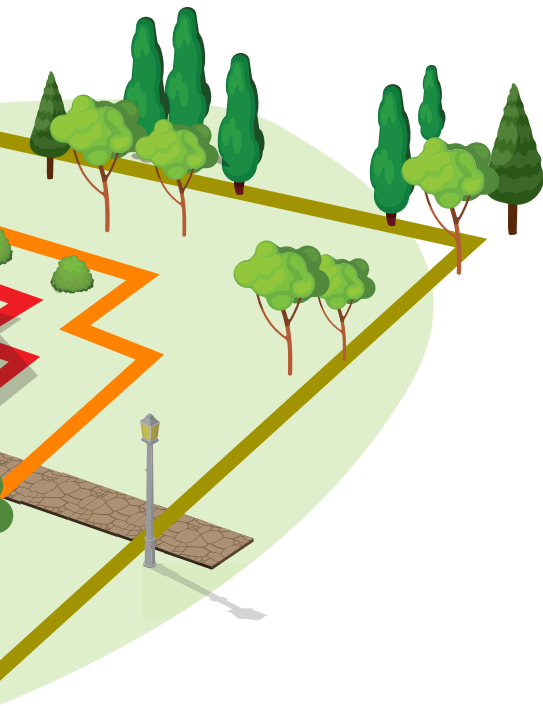
Wildfire Risk Reduction Investment

At a minimum, each site is required to invest the equivalent value of one volunteer hour per dwelling unit in risk reduction actions annually. A wide range of qualifying actions and expenditures (contractor costs, rental equipment, resident activities, grants, etc.) comprise the overall investment totals.

Application

Applicants begin the overall process by creating a site profile at: [Portal.firewise.org](https://portal.firewise.org). The application is eligible for submission when the overall criteria is completed.

State liaisons approve applications with final processing completed by the National Fire Protection Association (NFPA). Please note: Individual states may require additional application requirements beyond those of the national program.



CASE STUDY: DRY CREEK AIRPARK

A certified Firewise USA® neighborhood, 10 miles south of Prineville

Bob Bronson grew up in Baker County, and moved to Crook County in 2005. After living in Prineville for a few years, he and his wife built their home in the Dry Creek Airpark. A retired Electrical Engineer, Bob was one of the first in his neighborhood to promote fire preparedness efforts.

Your community decided to work together to do fuels reduction work, not only on individual homes but also common areas. What can communities gain by working together?

When we first started the program in Dry Creek, we began with just a few individuals going out and trimming up their trees. Before long, neighbors started trimming up their trees. Neighbors that had previously said “none of this will make a difference”, as soon as they saw this could be done without making “lollipop trees” they started participating. That’s an example of how this spreads when the community starts working together. That led to more people volunteering time to trim trees and remove brush in the common areas. What people began to see is that you don’t have to do it all at once. It’s not that overwhelming. Just get out and do a little at a time, just a little every week and pretty soon it’s amazing how much you’ve accomplished!

How did you get your neighbors on board?

We proposed to take a small, defined area of the airpark that’s not near very many homes and use that area as a test. We trimmed up the trees and cleared the brush in that small area, to let people see for themselves. We did it over three weeks and people could immediately see the benefit of it.



Photo © Tyler Phillips



FIREWISE USA™

RESIDENTS REDUCING WILDFIRE RISKS

Dick Rohaly moved to Crook County in 2014, building his home in the Dry Creek Airpark “from scratch”. He and his wife moved into their new home in 2015 and he quickly got involved in the fuels reduction work already happening in the community.

What first got you interested in fire preparedness?

Living here in the Airpark! There are quite a few neighbors who have lived here longer than me, I call them “early settlers”, and they started telling me about fuels reduction, saying “You might want to limb your trees up in case of brush fire”. I went to board meetings and learned fire hazards are taken very seriously here. Now, I find myself passing on this information to new members to the community.

How did you determine the highest risk areas in your neighborhood?

It was mostly common sense. Our work crews would pick up trash along Davis Loop and we noticed all of these cigarette butts right along the road. We realized if any of them caught brush on fire, and we didn’t have the area cleared, if the wind blew it would start a huge brush fire and threaten our homes.

Why did your neighborhood decide to apply for Firewise USA® certification?

We placed a big importance on being part of a certified program that would encourage neighbors in our community to follow something tangible and not just be a one shot deal. We thought it was important to be part of a certified program that could give us a break on insurance rates, and in turn we will be prioritized by fire services.

Join the growing network of more than 1,500 recognized Firewise USA® sites from across the nation taking action in preparing and protecting their homes against the threat of wildfire. For more information on how to certify your neighborhood, visit firewise.org.



QUICK REFERENCE GUIDE

Step 1

Immediate Zone

This zone is the most vulnerable to embers as it includes your home and the area 0-5 feet from the furthest attached exterior point. Clear your roof and gutters, install 1/8" mesh screening on all attic vents, eaves, chimneys and stovepipes.

Step 2

Intermediate Zone

The intermediate zone begins 5 feet from the furthest attached point of your home and extends out to 30 feet. Choose fire-resistant trees and shrubs for your landscaping and create fuel breaks to reduce the chance of embers reaching your home.

Step 3

Extended Zone

Create an extended fuel break 30-100 feet from your home, or all the way to your property line. Consider potential access issues for fire personnel and equipment. A roadside fuel break can reduce the potential of a wildfire crossing onto your property from neighboring land.

Step 4

Pruning and Trimming Vegetation

Remove any brush or tall grasses from under your trees, and trim the branches up off the ground and away from potential fuel sources. Arrange vegetation in a way that makes it difficult for fire to transfer from fuel source to fuel source, or travel from the ground to tree canopy.

Step 5

Roof and Chimney Clearance

Remove any portion of a tree that is within 10 feet of a chimney, and remove all plant material overhanging the roof. This can be dangerous work, consider hiring a professional for this step!

Step 6

Under-Deck Flammables

Clear all flammable material out from beneath decks and porches. This includes dry leaves or needles, firewood, or any potentially flammable personal items. Move flammable material a minimum of 20 feet from all structures.

Step 7

Firewood Pile Location

Move firewood and lumber piles at least 20 feet from structures. This is only strictly necessary during the months of fire season, but is a good idea year-round and could help limit damage in the case of a house fire.

Step 8

Responsibly Manage Debris

Responsibly Manage Debris. To reduce the chance of a wildfire starting on your property, consider all disposal options. If you choose to burn debris, know the current burn restrictions and permits for your property. Always call **CCF&R (541) 447-5011** or **ODF (541) 447-5658** before you burn

ADDITIONAL RESOURCES

This guide was developed by Crook County fire officials, with the partnership and support of ten regional organizations. The information outlined in this guide is based on National Fire Protection Association (www.nfpa.org) and Oregon Statewide Fire Prevention standards (OAR 629-044-1000 to 1110).

This coordinated message gives you the most up-to-date information about fire prevention standards in Crook County. However, some areas within the county are protected by multiple fire agencies. To verify which jurisdiction your home is in, call the Crook County Fire Department at (541) 447-5011.



Crook County Fire & Rescue
500 NE Belknap St, Prineville
crookcountyfireandrescue.com
(541) 447-5011



Crook County Emergency Management
alertcrookcounty.org
(541) 447-6398



Crook County Community Development Department
co.crook.or.us
(541) 447-3211



Oregon Department of Forestry
oregon.gov/odf
(541) 447-5658



Central Oregon Intergovernmental Council
coic2.org
(541) 548-8163



Crook County Circuit Court
300 NE 3rd St #21, Prineville
co.crook.or.us
(541) 447-6541



Bureau of Land Management
3050 NE 3rd St, Prineville
blm.gov
(541) 416-6700



Ochoco National Forest
3160 NE Third Street, Prineville
fs.usda.gov/ochoco
(541) 416-6500



Central Oregon Fire Prevention Cooperative

Central Oregon Fire Prevention Cooperative
centraloregonfireservices.org
facebook.com/CentralORCOOP



FIREFREE

FireFree program in Central Oregon
firefree.org
(541) 322-7129



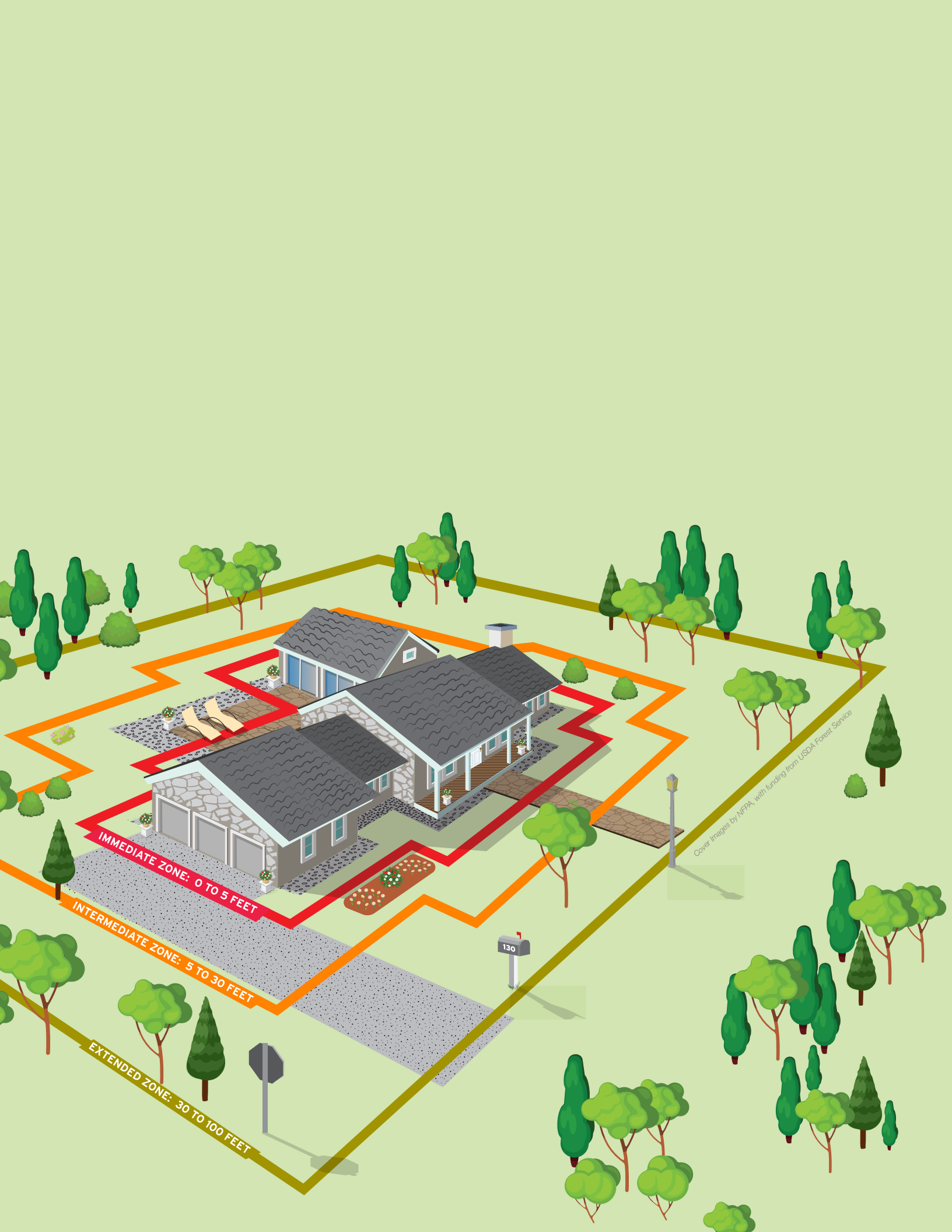
Oregon State University Extension Service Crook County

OSU Extension Service
498 SE Lynn Blvd, Prineville
extension.oregonstate.edu/crook
(541) 447-6228



FIREWISE USA™
Residents reducing wildfire risks

Firewise USA®
Learn about becoming a recognized Firewise USA® site at firewise.org



Cover Images by NIFPA, with funding from USDA Forest Service

IMMEDIATE ZONE: 0 TO 5 FEET

INTERMEDIATE ZONE: 5 TO 30 FEET

EXTENDED ZONE: 30 TO 100 FEET