















Fire Adapted Ashland presents this class in collaboration with Rogue Valley Association of Realtors, Ashland Fire & Rescue and the Wildfire Safety Commission.

Thank you for attending!



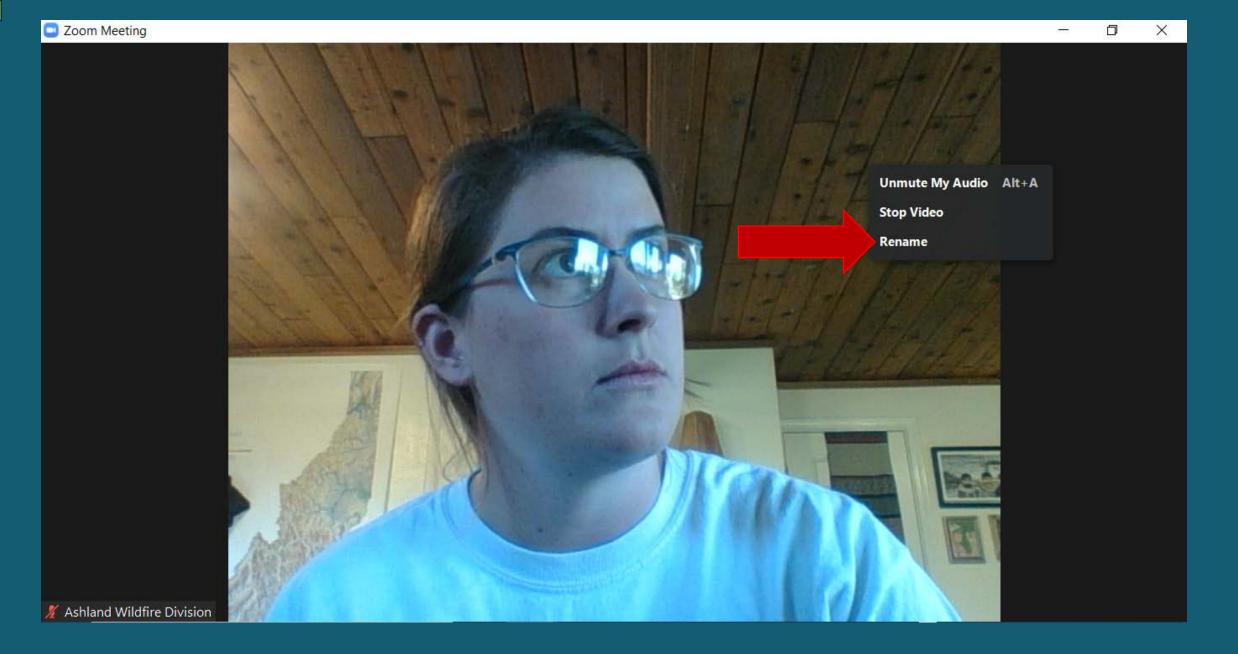
Zoom Etiquette

- Please mute yourself when not speaking.
- 'Rename' yourself so we all know how to address you.
- Enter questions in the chat box. I will respond to questions at appropriate times throughout the class, or at the end.
- If I prompt the audience for an opportunity to speak, please raise a hand (your own, or by using a 'Reaction' icon).
- Please turn on your camera if you are comfortable (it's easier to speak to faces than dark screens)

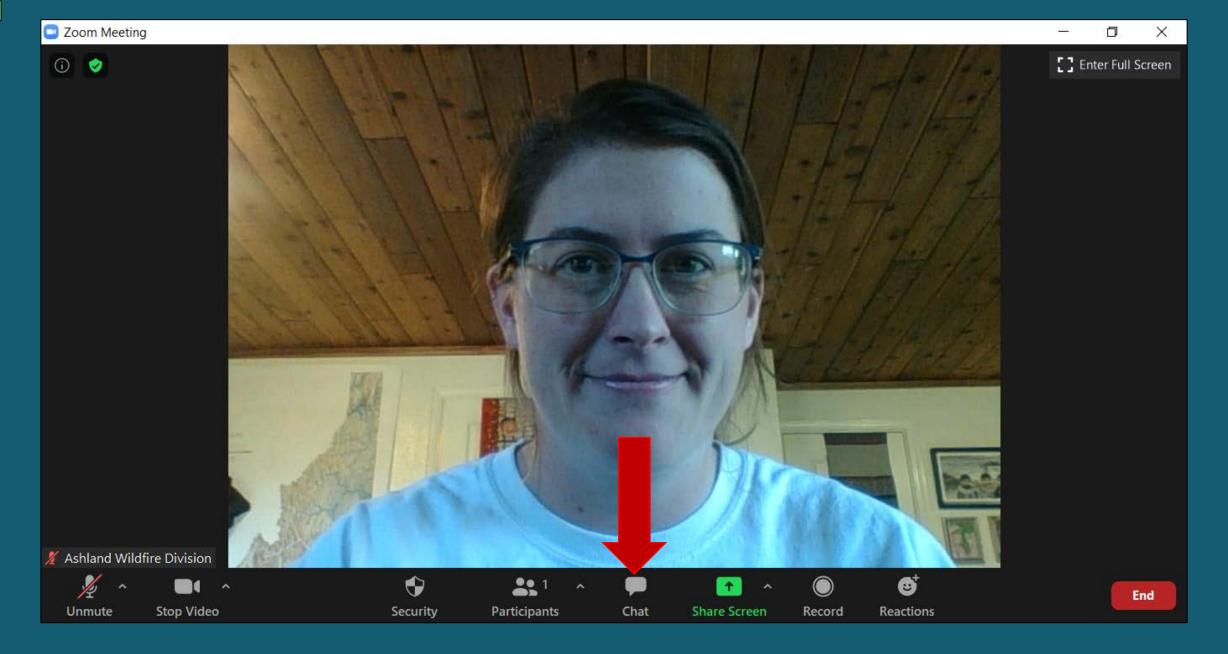




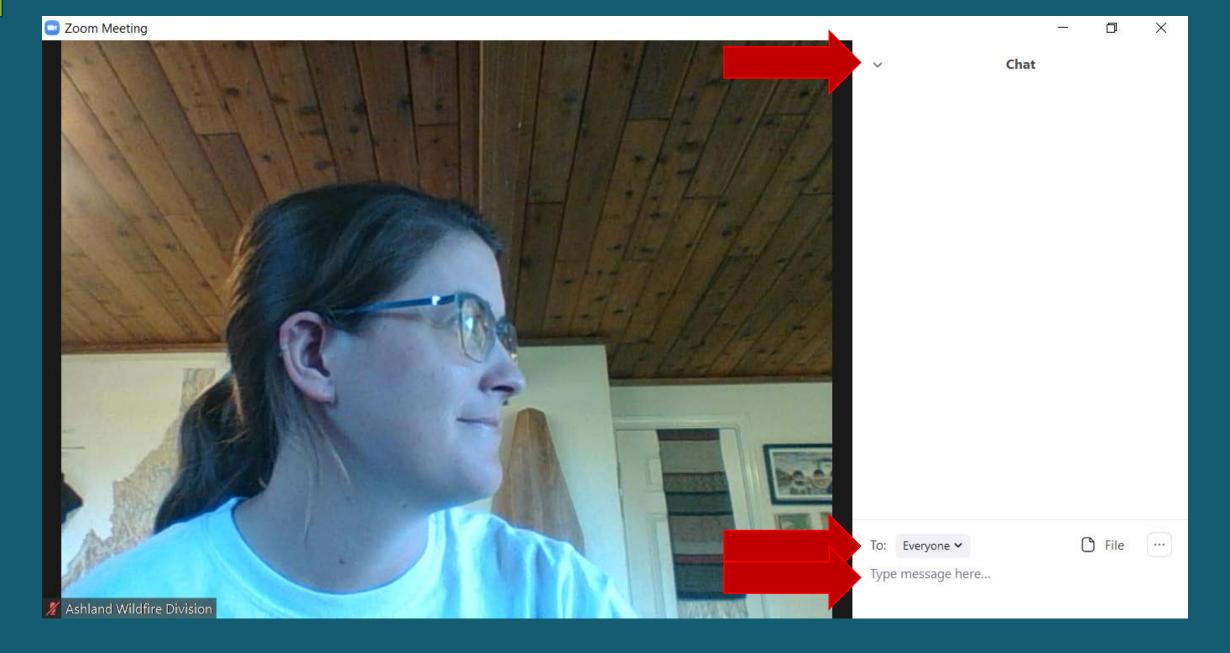




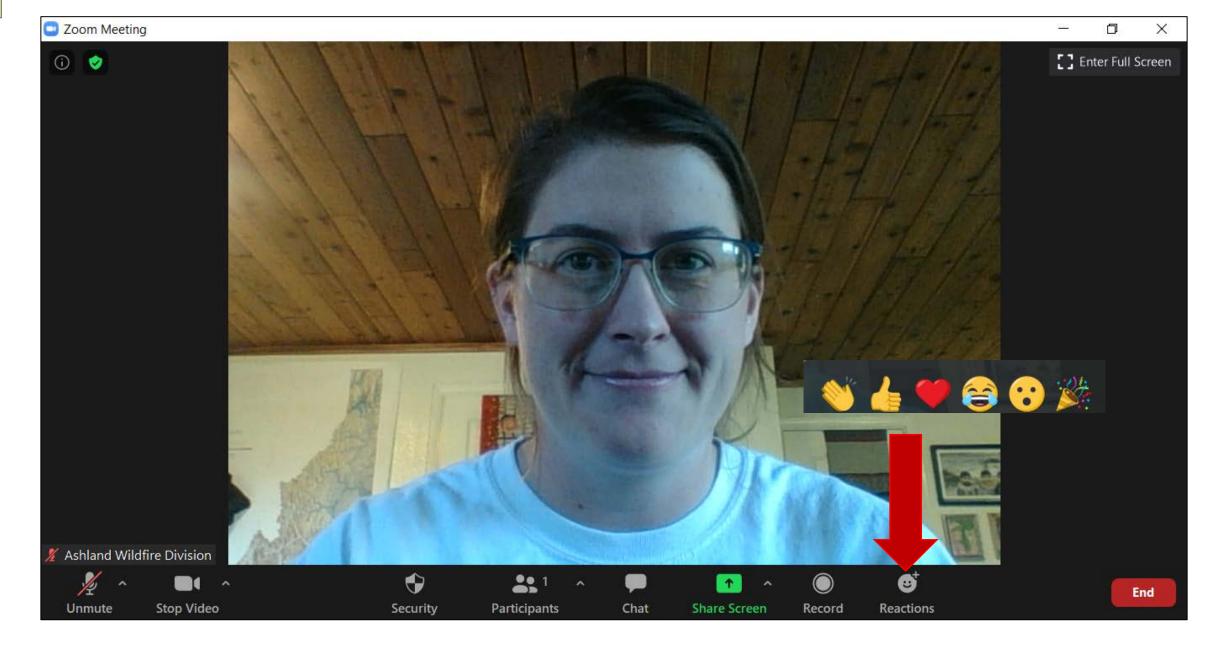


















Class Outline

- I. Introduction
- II. Fire context
- III. Understanding the Wildland Urban Interface
- IV. How structures ignite in wildfire the basics
- V. What is defensible space?
- VI. Local ordinance and programs











In Becoming Fire Adapted

We Need You

We all have a role to play:

- Local wildfire practitioners
- Community members
- Businesses and tourism industry
- Land managers
- State/Local/Tribal Government
- Federal agencies
- Researchers/Academia
- Public health officials and practitioners



Community Members (homeowners, renters, commuters, visitors, unsheltered residents)



Local Wildfire Practicioners (Non-Profits, Fire Departments, Emergency Management)



State/Local/Tribal Government (planners, elected officials, regulators)





Land Managers (public, private)



Business and Tourism (business leaders, insurance, chambers, visitor bureaus)



Public Health (EPA, hospitals)



Researchers (academia, other)



Federal Agencies (USFS, BLM, BIA, FEMA)





This program may become a model for other communities

















Understanding Wildfire

 Fire is an essential, natural process (in the wild):

- Replenishes soil nutrients
- Removes dead and dying vegetation
- Creates conditions for healthy re-growth



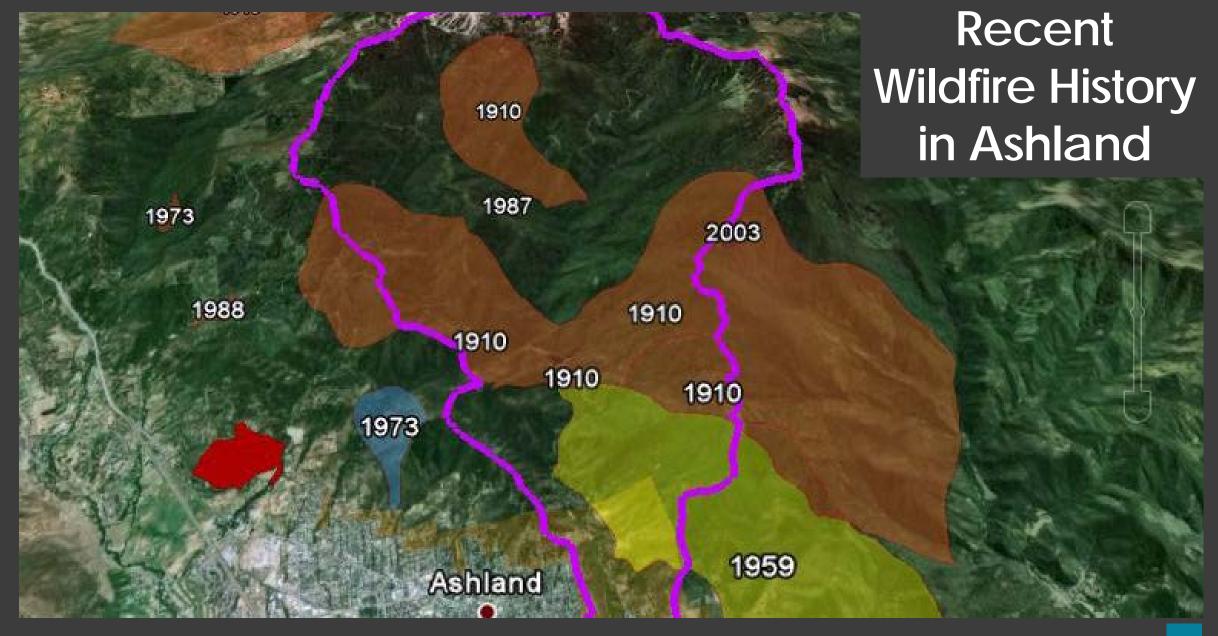










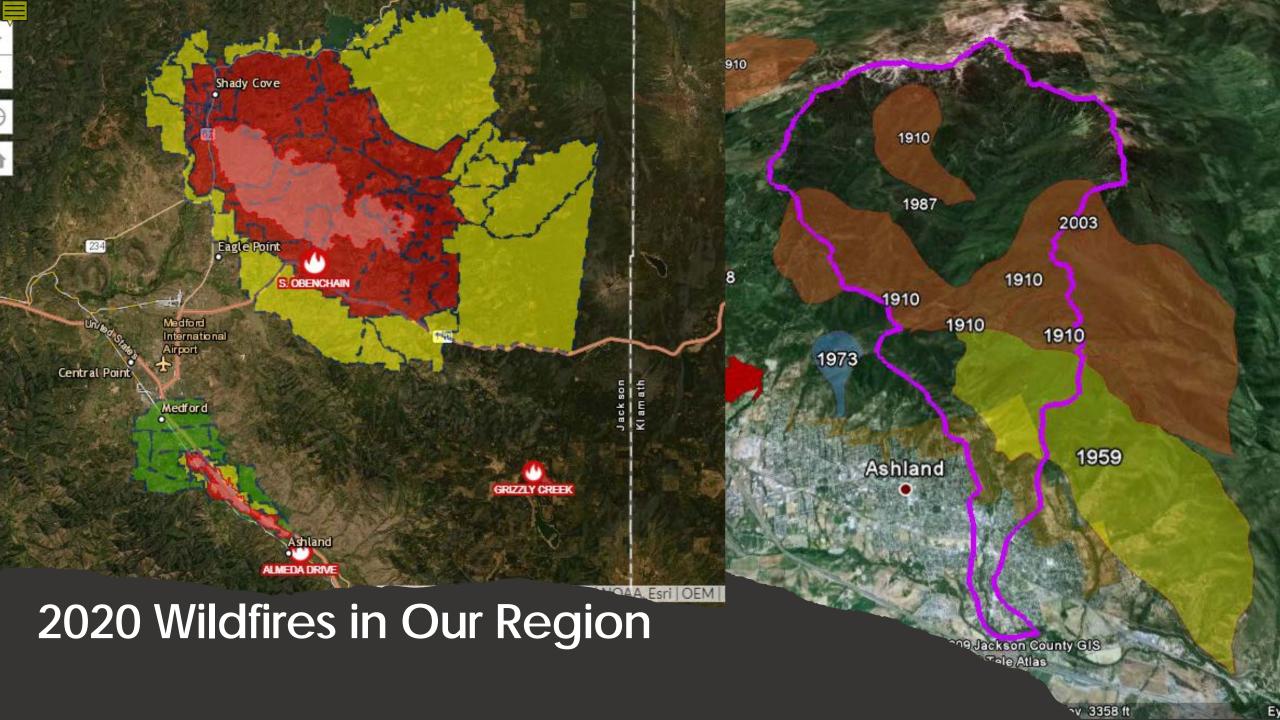




Impactful Wildfires in Ashland pre-2020

- Siskiyou Fire, September 2009
 - Burned 190 acres
 - Evacuations off Tolman Creek Rd
- Oak Knoll Fire 2010
 - Grass fire, jumped the I-5
 - 11 homes burned, 2 damaged
 - Shake roofs & fire-prone vegetation to blame for losses











Most Recent Wildfires

- Almeda Fire, September 2020
- Obenchain Fire, September 2020







National Trends

HOW WILL CLIMATE IMPACT ASHLAND?

Regional projections indicate that by the 2080s, Ashland could experience the following climate-driven environmental changes:4





Heavy rainfall and drought risk

+0.8-1.3 in rainfall increase during the heaviest rain days'

+4-6 day increase in the longest dry spells' More winter precipitation



Temperature increase and extreme heat

+7-12° F increase in the hottest day of the year

+39-90 more days a year of warm spells



Wildfire risk

- +30% increase in probability of large wildfires"
- -40 year decrease in average time between fires' Increased burn acreage



Changes to snowpack and water availability

-71 to -86% decline in April 1 snowpack in the Middle Rogue subasin More precipitation as rain instead of snow Earlier spring snowmelt Higher winter streamflow Lower summer streamflow



- +30% increase in probability of large wildfires"
- -40 year decrease in average time between fires Increased burn acreage

⁴These ranges represent mean projections under the high emissions scenario (RCP 8.5). Source: Oregon State University, 2016

^{*}Some models show decreases
*Source: Stavros, Abatzoglou, Larkin, McKenzie, & Steel (2014).
**Source: Sheehan, Bachelet, & Ferschweiler (2015).



Wildland Urban Interface

What does this mean? How do we define it?





Wildland Urban Interface

The US Forest Service defines the <u>Wildland Urban Interface</u> as a place where "humans and their development meet or intermix with wildland fuel"





Wildland Urban Interface in Oregon as of June 30, 2022

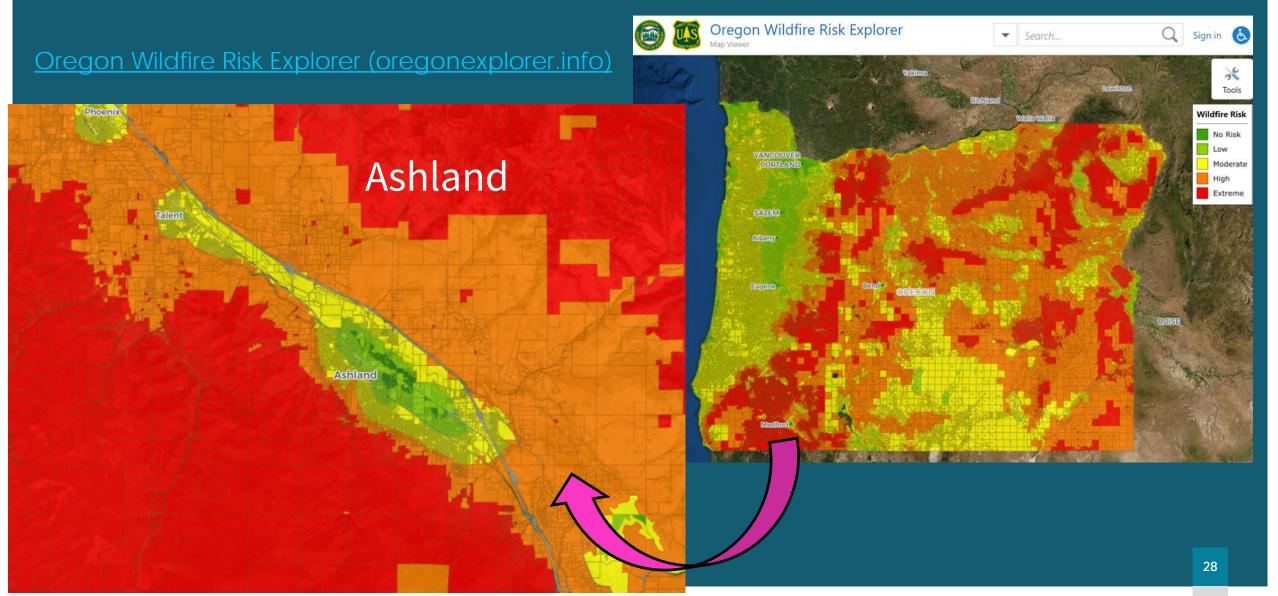












Photo examples of structure ignitions

Is the home on the right a "miracle home"?



Severe Fire Conditions

Fuel, weather, and topography



Rapid spread and/or high intensity

Urban Fire

Multiple, simultaneous ignitions



Resources cannot cover the exposure



Many homes ignite & burn without attention



Multiple Homes totally destroyed





Fuel, weather, and topography



Rapid spread and/or high intensity



Mu sle, simu a rous



Resources cannot cover the exposure



Many homes ignite & burn without attention



Multiple Homes totally destroyed





If it can't ignite, it doesn't burn

Preventing home ignition is key to preventing WUI fire disasters

This program provides tools for you to:

- A) talk to buyers & sellers about the basics of wildfire risk
- B) Supply homebuyers moving to this area with valuable information to help them prepare for wildfire



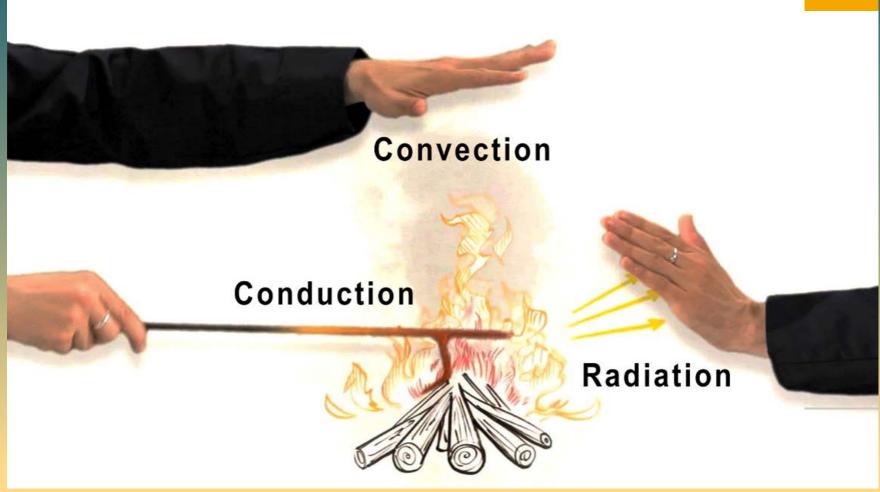
^{*}these tools and resources are specific to Ashland, but principles of wildfire mitigation do not change



Questions so far?





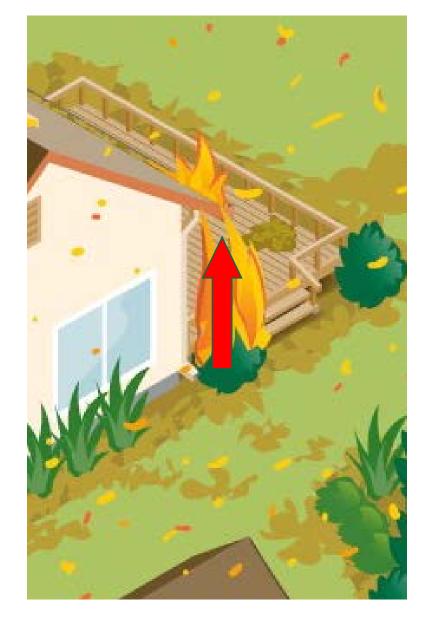


Methods of Heat Transfer

- Convective heating
- Conductive heating
- Radiant heating









Convective Heating





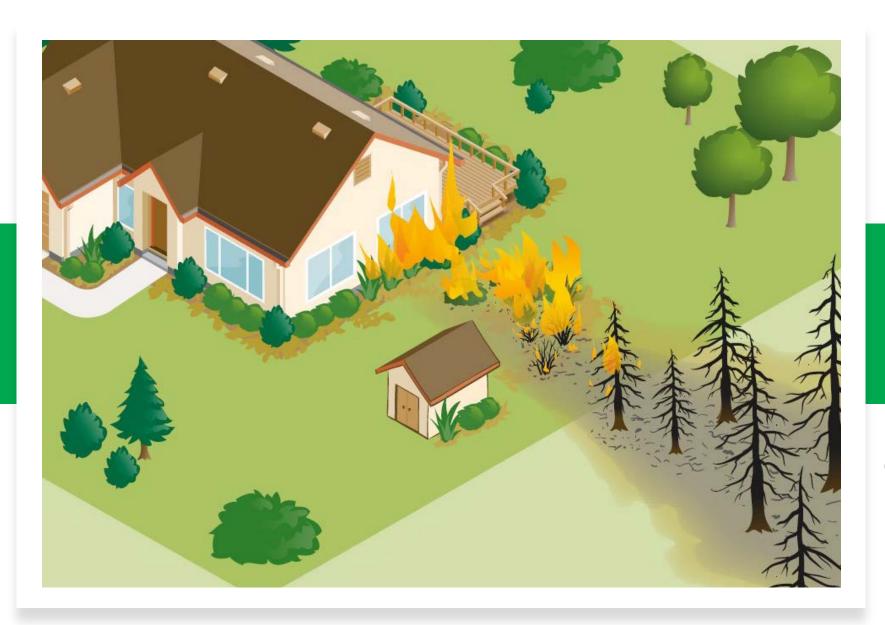




Exposures





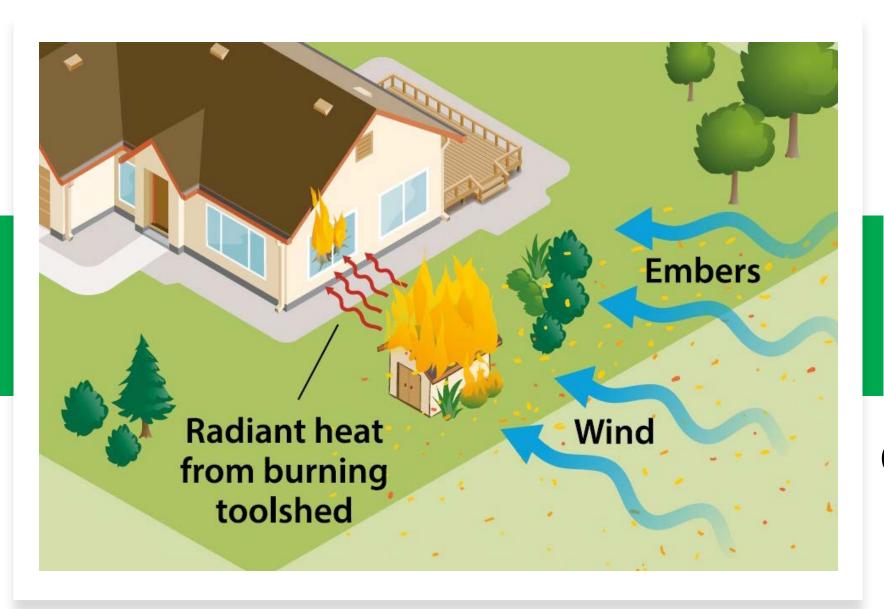


Direct Flame Contact

(Conductive Heating)



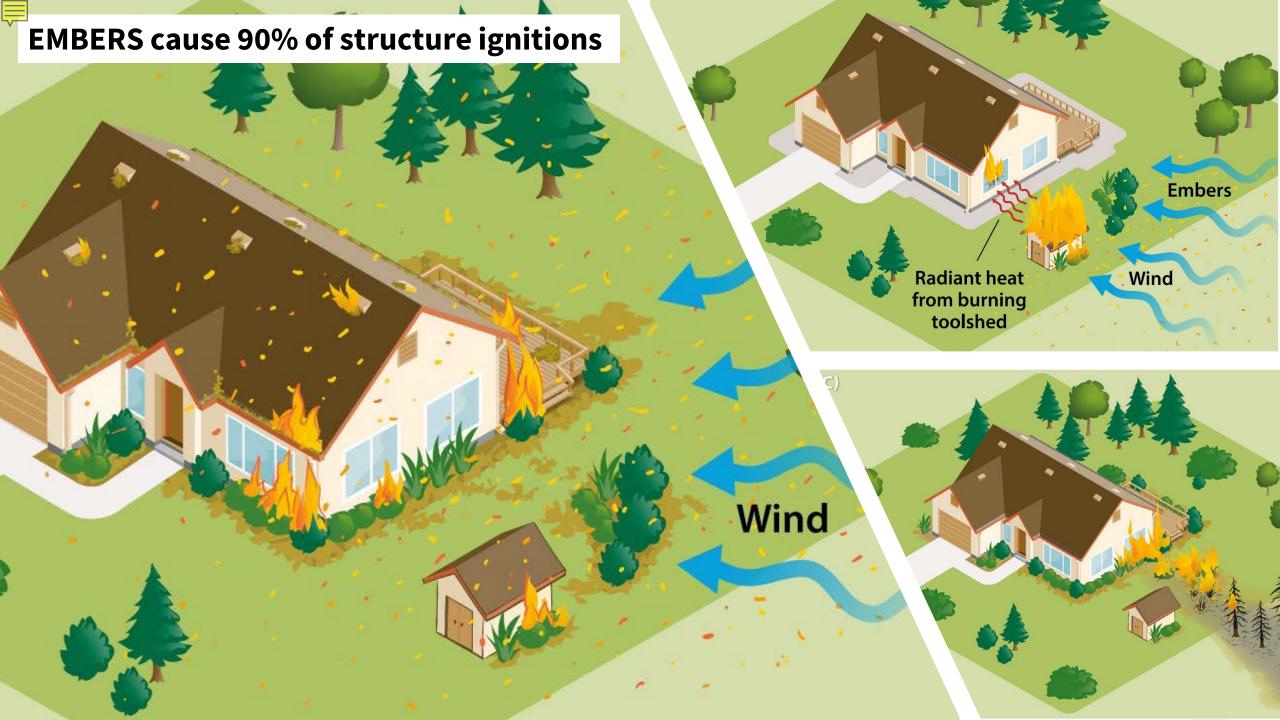




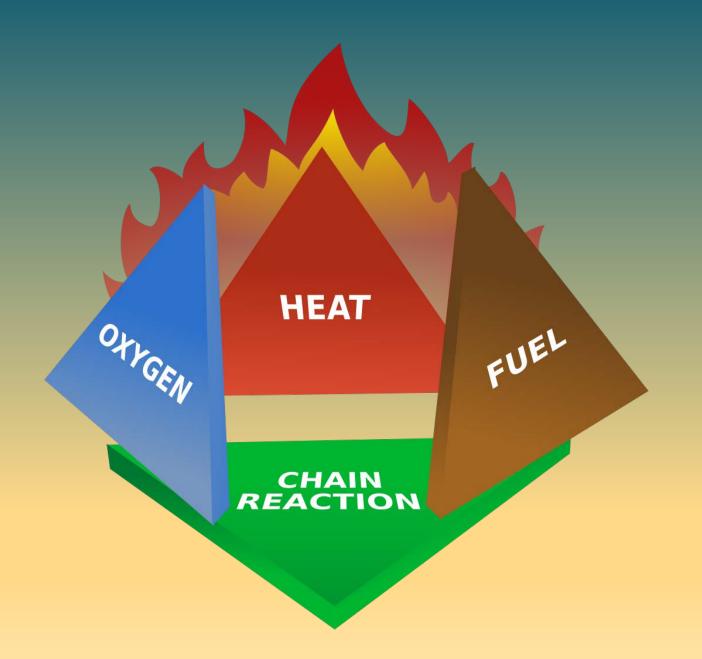
Radiant Heat Exposure

(Radiant Heating)









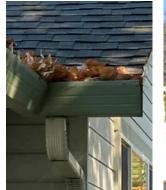
Wildfire Fundamentals

- Primarily and secondary causes of home ignitions during a wildfire
- Why urban homes and landscapes are vulnerable to wildfire
- Reasons for designating "Hazard Ignition Zones"





















- 1. Ember blizzard
- 2. Latent heating





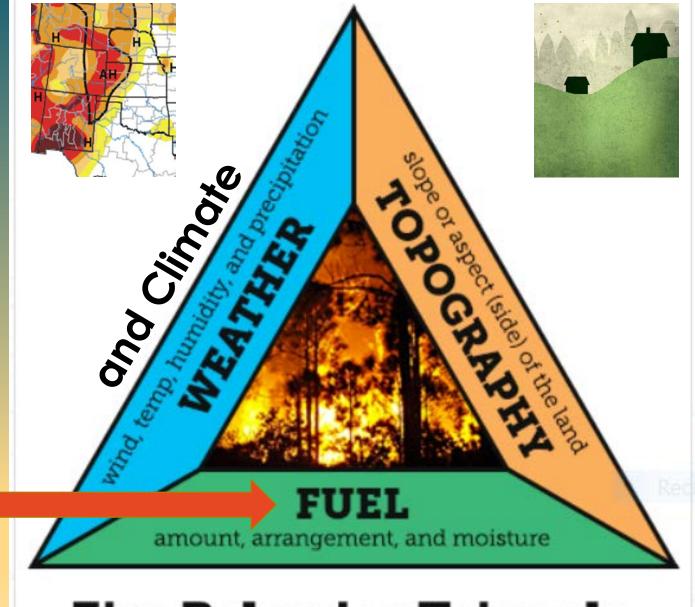












Fire Behavior Triangle



Fuel Characteristics

Fuel loading

Chemical content

Fuel Arrangement

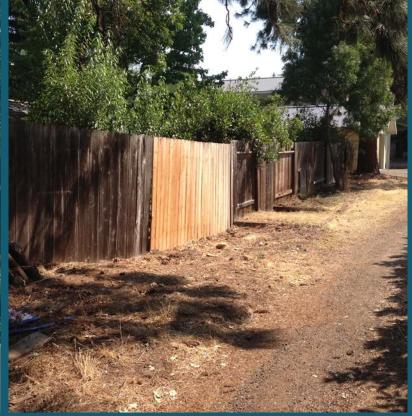
Moisture content

Size and shape









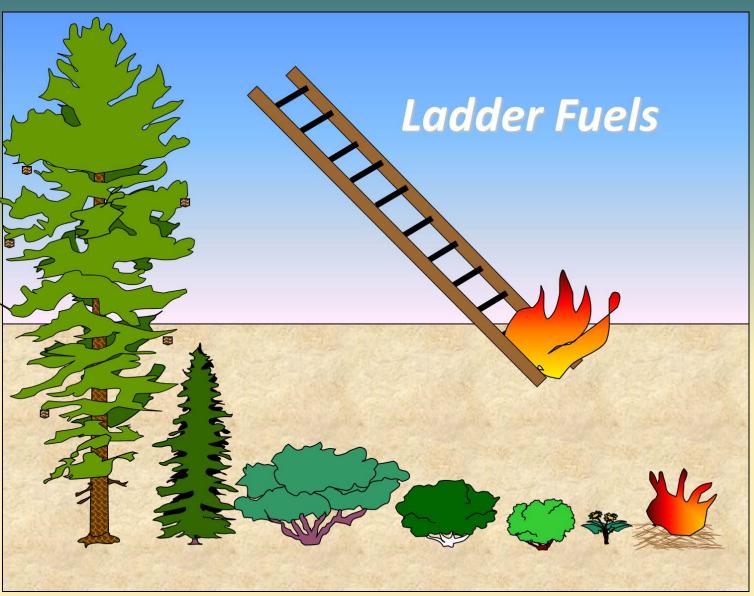
Examples of Horizontally Continuous Fuel

(Surface Fuels that can also be ladder fuels)



- Surface fuels
- Ladder fuels
- Crown fuels

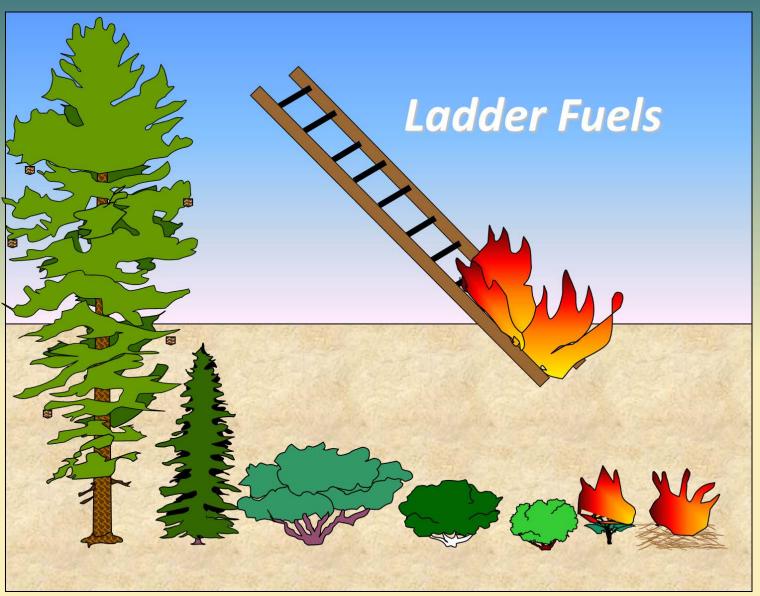






- Surface fuels
- Ladder fuels
- Crown fuels

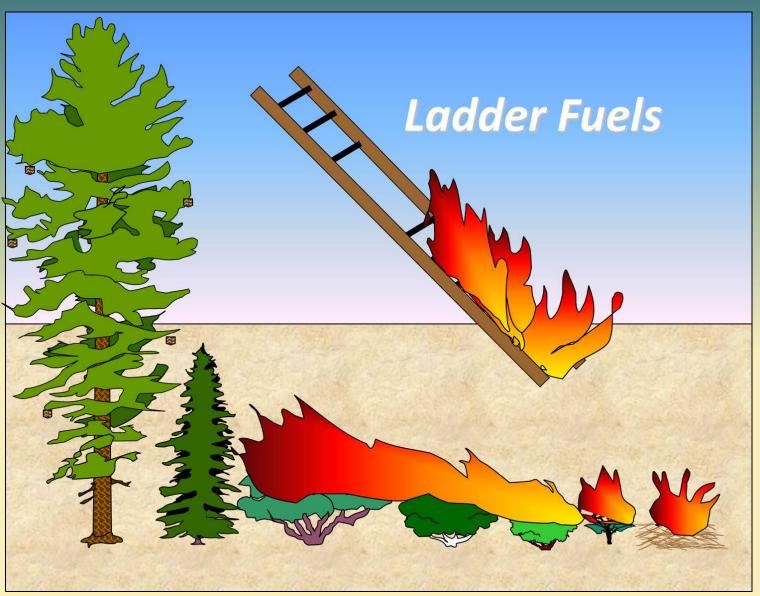






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- Ladder fuels
- Crown fuels

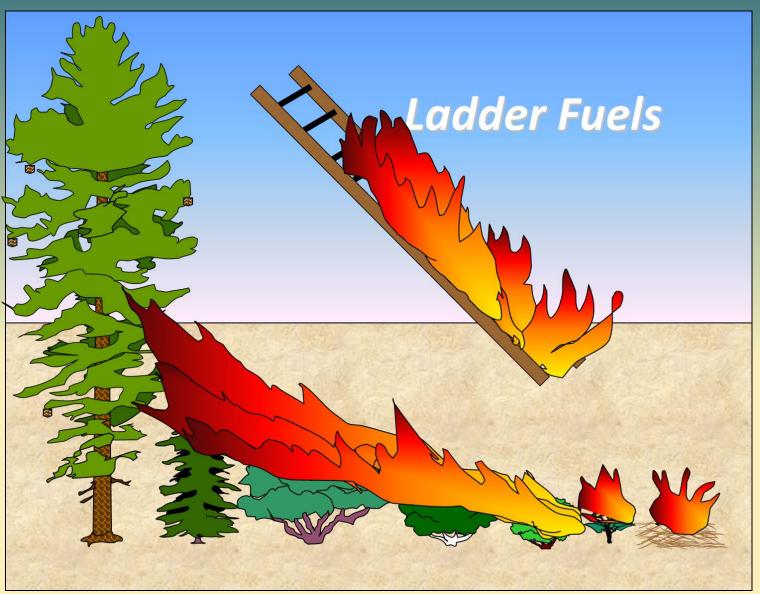






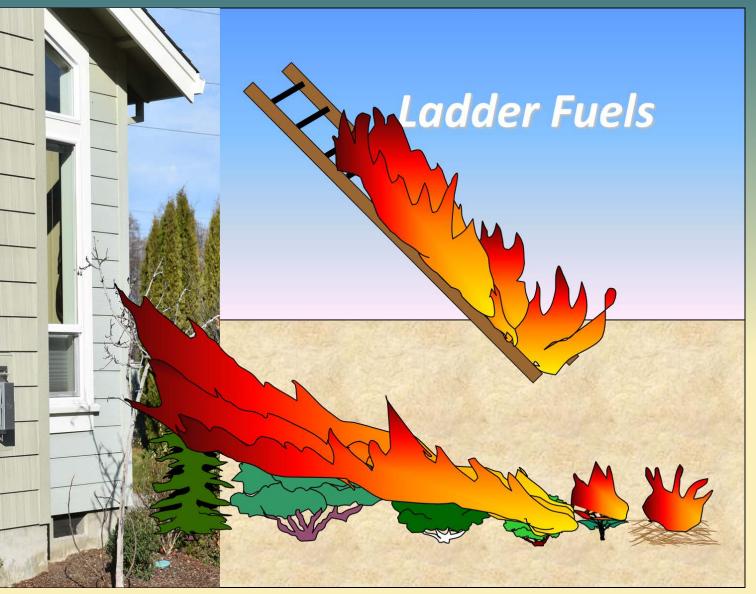
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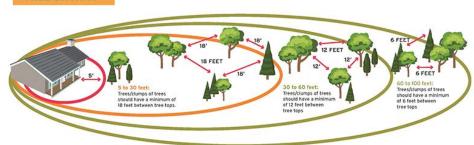












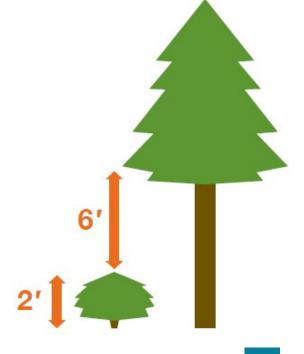
SPACING MATTERS

Minimum

Vertical

Clearance

3 x the height of the shrub to the lowest branches of the tree





What actions can a homeowner take to reduce the ability of a wildfire to ignite their home?

*Think vertically <u>and</u> horizontally

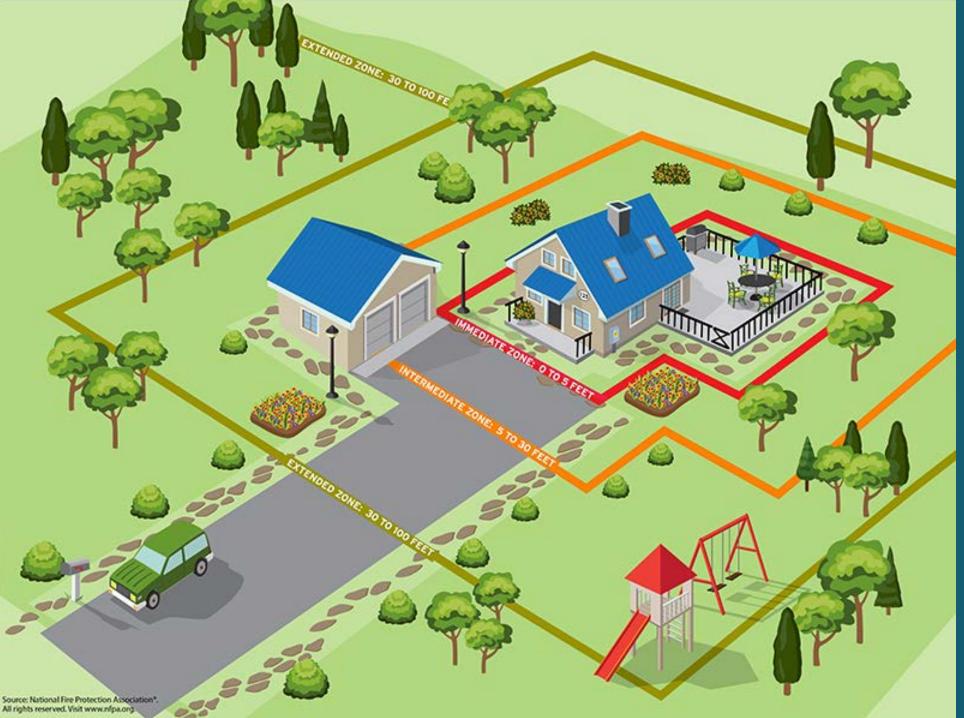
Goals:

- Reduce ignitability of structures, personal property, and vegetation from <u>embers</u>
- Minimize the ability of fire to spread throughout your property



Creating a
Firewise
Landscape and
Defensible Space

(Reducing the ability of a wildfire to ignite a home)



Home Ignition Zones

- Immediate Zone
 - 0-5 Feet
 - Includes structures
- Intermediate Zone
 - 5-30 Feet
- Extended Zone
 - 30-100/200 Feet

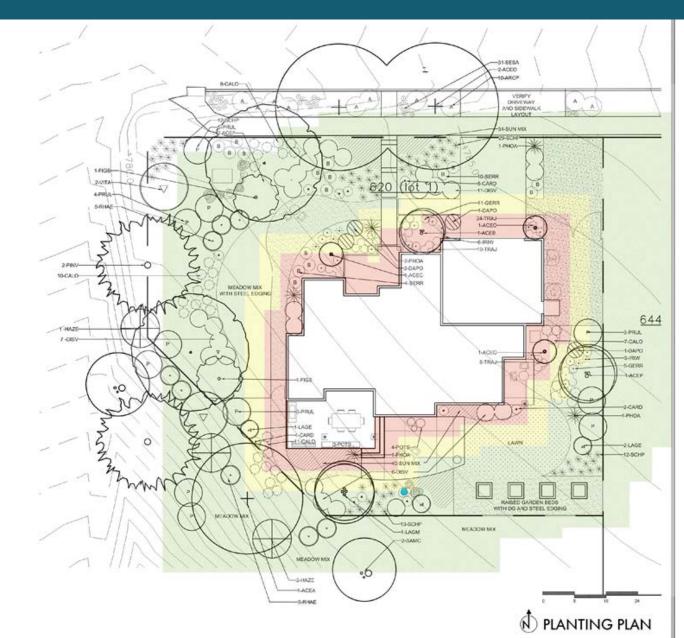


FIRE-RESISTANT LANDSCAPING

Lean, Clean, and Green Home Ignition Zones

Home Ignition Zone: The home in relation to its surroundings within 100 to 200 feet





Revision Date:

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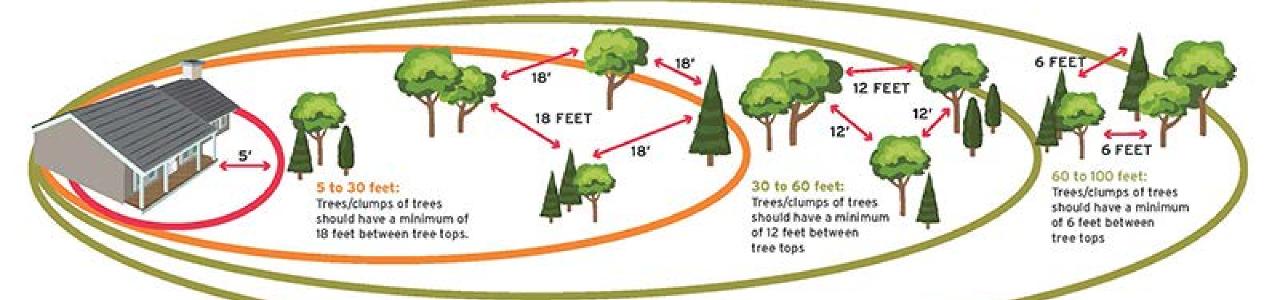
11X17 Scale: 1* = 16'0* 24X36 Scale: 1* = 8'0*

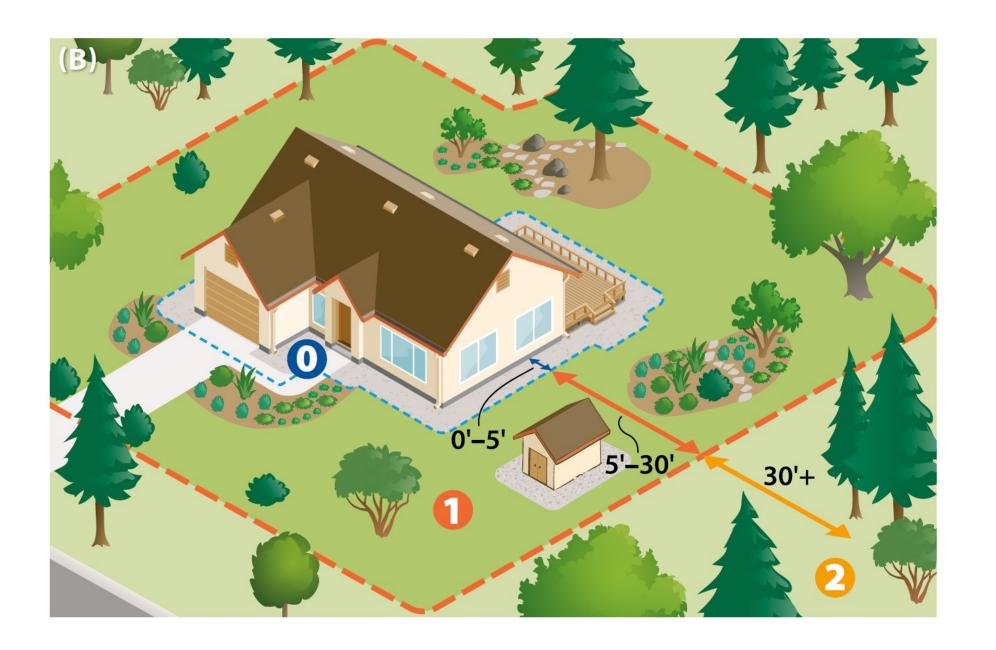
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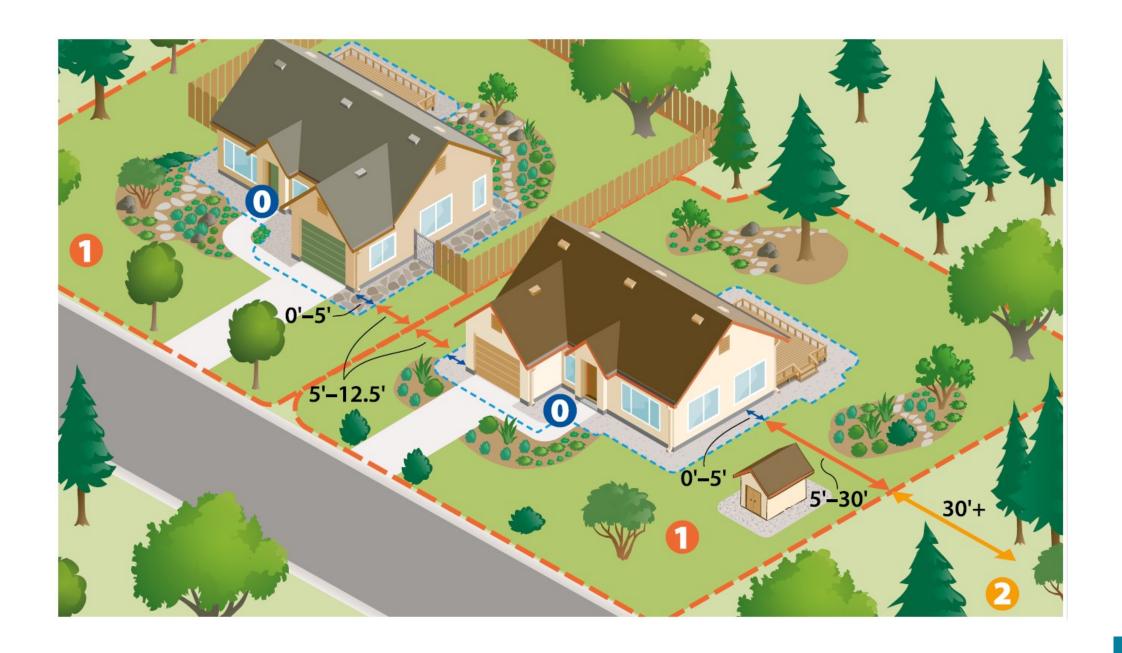
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TREE SPACING



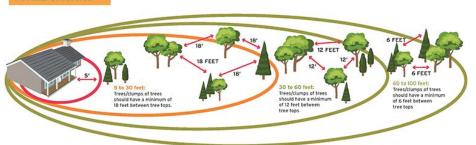












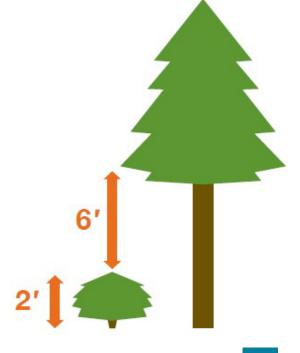
SPACING MATTERS

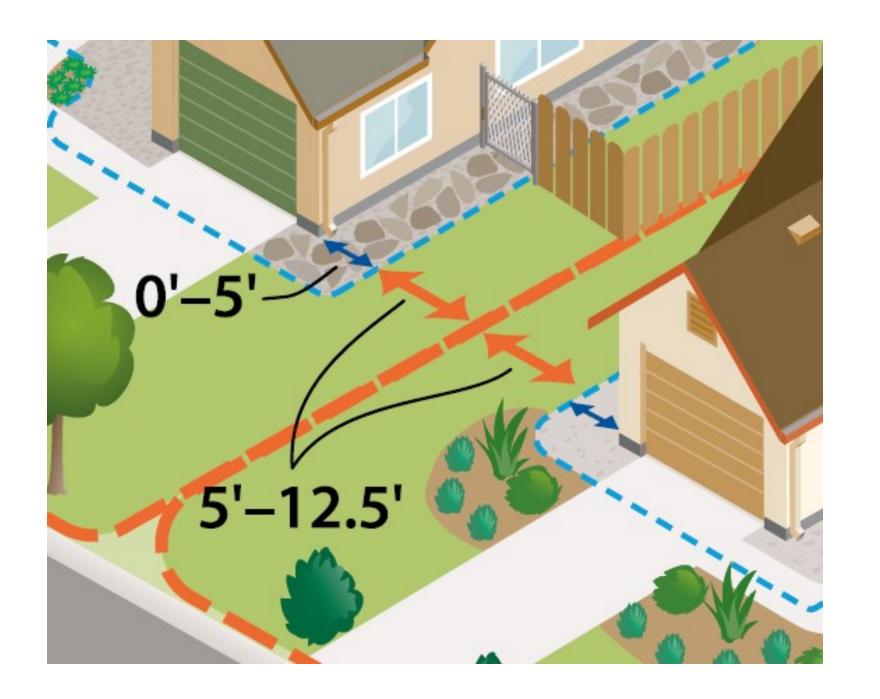
Minimum

Vertical

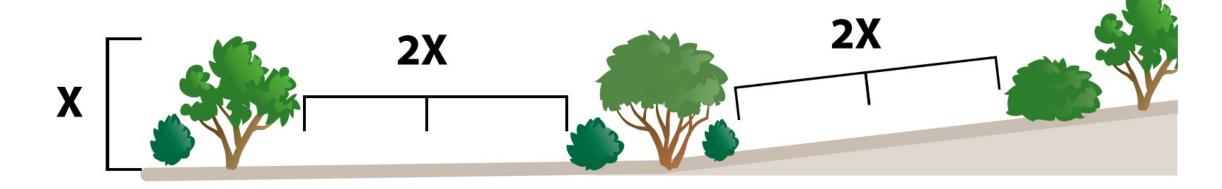
Clearance

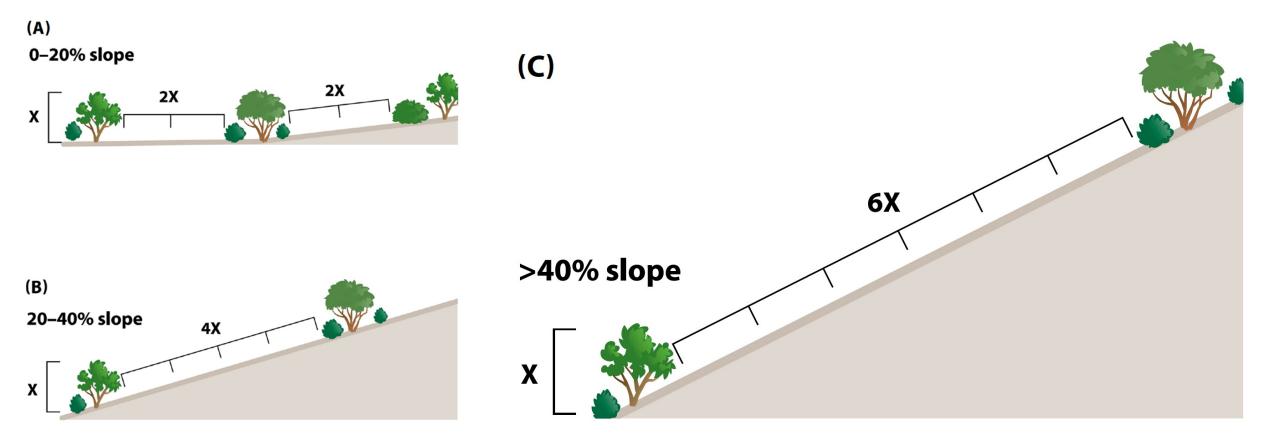
3 x the height of the shrub to the lowest branches of the tree





(A) 0-20% slope







0-5 foot zone (Immediate zone)

Includes the structure itself

Key structural components

- Rated roof material
- 1/8-inch metal screening at vents and soffits
- Fire-resistant siding

Refer homeowners to brochure for more information and resources to learn more

Guidelines for Wildfire Safety when buying a home



 Use Fire-Resistant Building Material on Exterior Walls Examples include cement, plaster, stucco, fiber cement siding, (e.g. hardiboard), masonry (concrete, stone, brick or block)

While vinyl is difficult to ignite, it can fall away or mait when exposed to extreme heat.

Use Double-Paned or Tempered Glass Double-pane glass can help reduce the risk of fracture or collapse during an extreme wildfire. Tempered glass is the most effective. Using metal window screens instead of fiberglass can offer additional protection. Fuel Free Zone Keep a fuel free area 3-5 feet near your house.









0-5 foot zone (Immediate zone)

Includes attachments

Attachment criteria

- Ignition-resistant deck and porch material
- Enclosed decks
- Non-wood fence attachments to home



Guidelines for Wildfire Safety when buying a home



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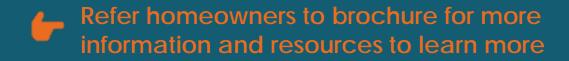


0-5 foot zone (Immediate zone)

Immediate landscaping

Key landscaping components

- No flammable plants
- No bark mulch
- No stacked firewood or other material



Guidelines for Wildfire Safety when buying a home



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More Examples of Horizontally Continuous Fuel













5-30 foot zone (Intermediate zone)

Intermediate landscaping

Goals:

- No high intensity fire
- No long fire duration
- No flame contact with home



How:

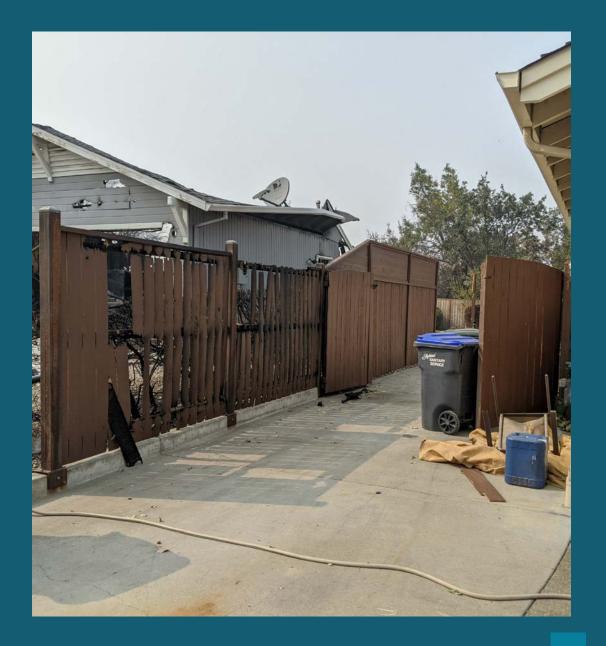
- No flammable vegetation in this zone
- Lean, clean and green landscaping
- No continuous paths of wildfire fuel
 - isolate privacy screening veg
 - create 'islands' of bark mulch



Refer homeowners to brochure to find flammable plants list









30-100 foot zone (Extended zone)

Extended landscaping

Goals:

Keep fire on the ground



How:

- Reduce canopy density
- Remove ladder fuels
- Keep surface fuel to a minimum



Refer homeowners to brochure to find flammable plants list







Understanding of the Home Ignition Zones drives Ashland ordinance:

- Weed abatement
 - Cut weeds and grass to 4-inches or less by no later than June 15th. Maintain throughout fire season.
- Wildfire Safety Ordinance (enacted October, 2018)
 - All of Ashland is a Designated Wildfire Hazard Zone
 - Landscaping criteria for new construction and additions
 - Fire Prevention & Control Plans for certain construction
 - No new plantings of flammable species







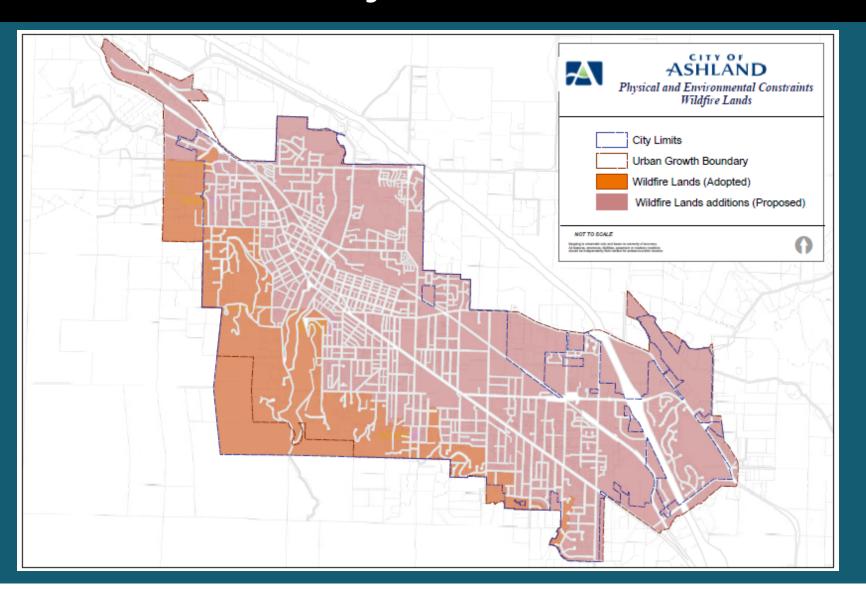


Wildfire Safety Ordinance

- New Landscaping
- Fence installation/replacement
- Building decks, additions or accessory structures
- New construction on a single vacant lot
- Fire prevention and control plan for subdivisions, multifamily dwellings, commercial development or partitions



Ashland's Wildfire Lands - Physical and Environmental Constraints





Tools

- Grants currently available in Ashland
- Wildfire Risk Assessment Portal (MyHome Portal) fireadaptedashland.org
- Ashland Wildfire Hazard Zone Advisory
- Guidelines for Wildfire Safety when Buying a Home brochure
- FREE 2-day course for home inspectors

Ashland Wildfire Mitigation Project

A FEMA Pre-Disaster Mitigation Grant

 Defensible space around the top 1100 at-risk homes in Ashland

 Replace wood shake roofs with Class A or Class B shingles

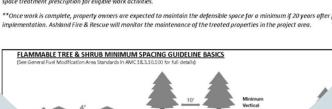


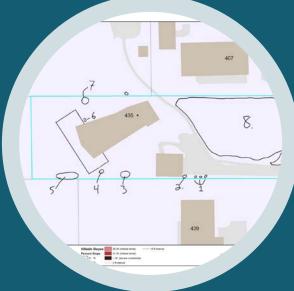




- Increase spacing between flammable shrubs by removing middle shrub or modify all 3 so that they achieve appropriate spacing (distance =2x the height of the shrub) *see diagram below
- 2. Remove or relocate dwarf cedar at corner of garage, OR keep pruned to a small bonsai style tree
- 3. Prune lower limbs of large incense cedar so that it achieves 8 feet of ground clearance (limbs hanging over fence
- 4. Remove incense cedar growing within 10 feet of deck, OR remove lower limbs growing towards deck to increase
- 5. Remove bamboo growing up to property line to increase distance from deck.
- 6. Prune limbs of laurel tree so it is not touching chimney or deck.
- 7. Remove lower limbs of large Douglas fir growing near north property line to achieve 10 feet of clearance from
- 8. Limb up all conifers to 8 feet of ground clearance (or 1/3 the trees height, whichever is less), remove all dead and dying trees and limbs from this area. If budget allows, selectively remove small conifers to generally thin tree cover in this area and reduce fuel loading.
- 9. Remove lower limbs of cedars growing above rosemary bushes and reduce size of rosemary bushes to achieve a vertical clearance of 3x the height of the rosemary bushes (*see diagram below)

^{**}Once work is complete, property owners are expected to maintain the defensible space for a minimum if 20 years after project







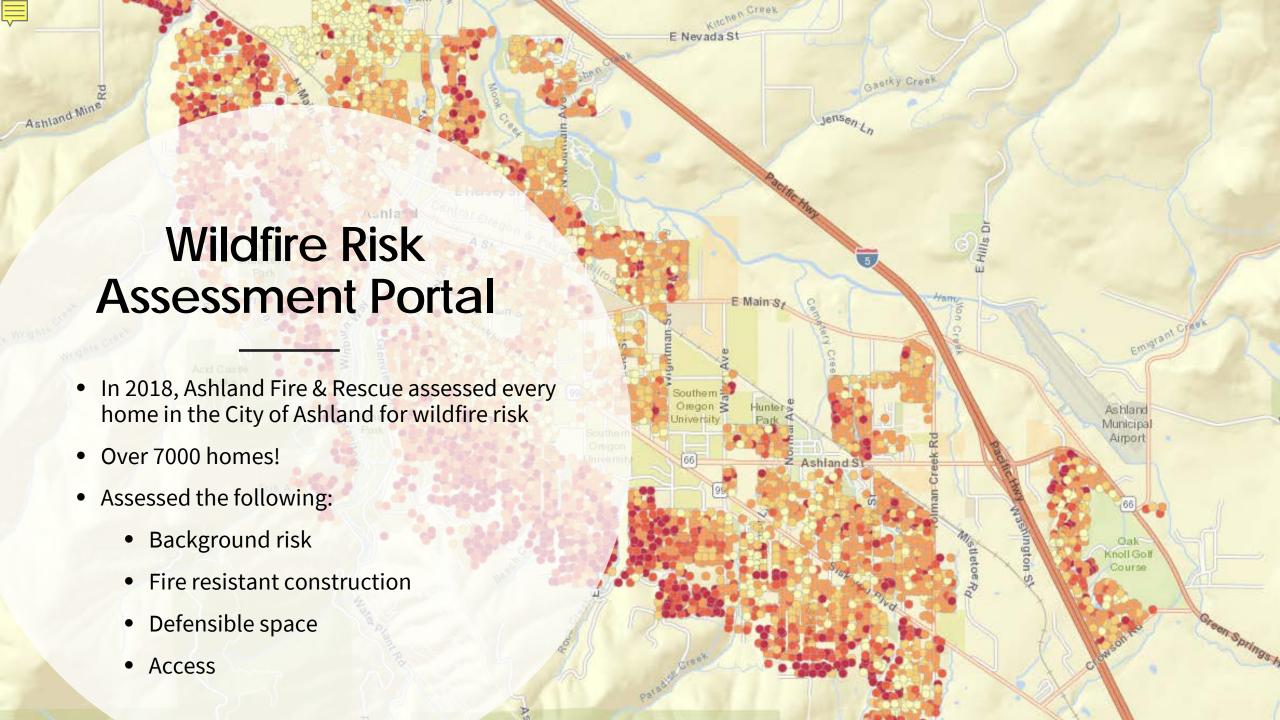
Ashland Wildfire Mitigation Project

A FEMA Pre-Disaster Mitigation Grant

- Grant Coordinator performs project assessment
 - Educates homeowner about reimbursable mitigation activities
- Residents receive a Defensible Space Work Plan
 - Residents hire a contractor, perform the work themselves, or a combination of both.
- Receipts and Proof of Payment are submitted
 - 75% of eligible costs are reimbursed, up to \$2,150.



^{*}All work locations detailed on defensible space work map are approximate and property owners should refer to the FEMA defensible



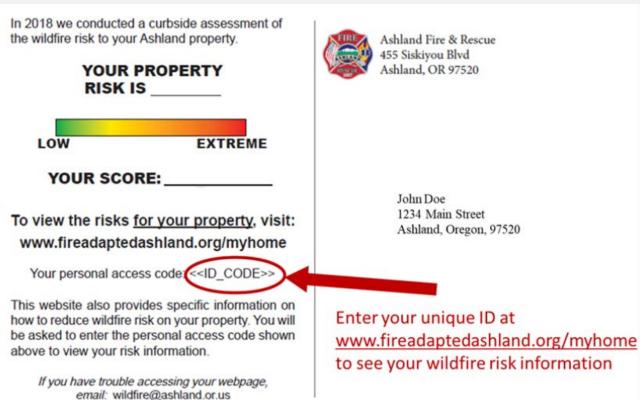


Wildfire Risk Assessment Portal

fireadaptedashland.org/myhome

- Provides a break down of wildfire risk around the home
 - Background risk
 - Fire resistant construction
 - Defensible space
 - Access







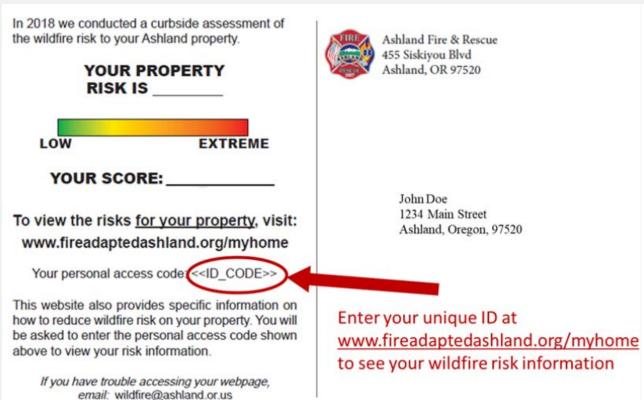
Wildfire Risk Assessment Portal

fireadaptedashland.org/myhome

If you have a homebuyer interested in knowing the wildfire risk at an individual home:

- 1. Ask the current owner permission to share information (access code)
- 2. Contact: wildfire@ashland.or.us to request access code







Ashland Wildfire Hazard Zone Advisory

- Distributed on RVAR's website
- Provides general information about the Hazard Zone
- Describes features of the Wildfire Safety Ordinance
- Buyer and Seller versions

ASHLAND WILDFIRE HAZARD ZONE ADVISORY

This advisory will assist current or potential property owners in the City of Ashland, Oregon in understanding the ramifications of living in Ashland's Wildfire Hazard Zone.

GENERAL INFORMATION

While wildfire plays a natural role in the ecosystems of southern Oregon, it can threaten the lives and property of people who live within those ecosystems. As of October 18, 2018, Ashland's expanded Wildfire Safety Ordinance applies to all lots within city limits; all homes are now within the Wildfire Hazard Zone. The Ordinance updates the standards for development (including both new construction and additions over 200 square feet) and restricts new plantings of known flammable trees and shrubs within 30 feet of dwellings.

FEATURES

Ashland's Wildfire Safety Ordinance enhances standards for several types of projects that property owners may conduct within Ashland's City Limits, including:

- Installing or Updating Fences
- · Installing New Landscaping
- Building a Deck, Addition, or Accessory Structure
- New Construction on a Single, Vacant Lot
- · Development of Subdivisions, Multi-family Dwellings, Commercial Buildings, or Partitions

Review Ashland's Wildfire Safety Ordinance (website provided in the Resource section) to ensure compliance with the project types listed above.

Preparing a home for wildfire includes meeting the following guidelines when a property owner constructs, expands or updates structures on their property:

- Class B roofing material or better. Includes composition, cement tile or clay shingles, metal
- · Skylights with glass windowpanes, not plastic
- Non-flammable fencing within the first 5 feet of any connection to the home
- Vents and soffits with metal screens not larger than 1/8th inch
- Fire-resistant siding on exterior walls. Includes cement, plaster, stucco, fiber cement (e.g. Hardi-board), and masonry (concrete, stone, brick or block)
- · Double-paned or tempered glass windows
- Enclosing underside of decks by screening in with metal mesh no larger than 1/8th inch
- · Creating defensible space within at least 100 feet of any structure, including
 - No new plantings of flammable plants within 30 feet of the home (see link in the Resources section of this advisory to view the Prohibited Flammable Plants List)

Homes built after October 18, 2018 are required to complete a General Fuel Modification Area on the entire property. Additions or decks over 200 square feet are required to complete a General Fuel Modification Area extending 30 feet from the furthest extent of the building or deck. For complete information about the requirements of the General Fuels Modification Area, visit the web link provided in the Resources Section of this advisory

Ashland Wildfire Hazard Zone Advisory

- Provides the homeowner with resources to act
 - Many of the same resources that we've talked about today
- Includes an acknowledgement line

RESOURCES

Potential property owners who are concerned about wildfire risk on a property may consider receiving a wildfire assessment from a local inspector trained by Ashland Fire & Rescue. These inspectors are certified to assess properties for wildfire risk and to provide recommendations for how to best prioritize optimal reduction of that risk. A complete list of inspectors who have been trained by Ashland Fire & Rescue can be found on the City of Ashland's website:

Certified Wildfire Inspectors		ashland.or.us/inspectors
Referenced Resources		
Ashland's Wildfire Safety Ordinance	ashla	nd.or.us/wildfiresafetyordinance
Complete Requirements of the Genera	l Fuels Modification Area	ashland.or.us/GFMA
Ashland's Prohibited Flammable Plants	List	ashland.or.us/prohibitedplants
Other Useful Resources		
FireWise Plant Recommendations		ashland.or.us/firewiseplants
Wildfire Risk Reduction resources		ashland.or.us/resources
Sign up for "Nixle", Ashland's commun	ity alert system ashland.or.	us/nixle OR text 97520 to 888777
	RECEIPT ACKNOWLEDGEMENT	
Client understands that real estate bro providing guidance through the proce understands that following the guideli Fuel Modification Area do not guarant Client has read and understands this A this Advisory.	ess of investigating the concerns des nes listed in this advisory and meetin ee, but greatly increase, the chances	cribed herein. Additionally, Client g the requirements of the General that a home will survive a wildfire.
Client Name	Signature	Date
Client Name	Signature	Date
Broker Name	Signature	Date
Firm Nama	Drincipal Broker Paview	Data







Home Ignition Zone course for Inspectors

- Fire department has limited capacity to conduct wildfire home risk assessments on-call
- Homebuyers who are interested in learning more detail about their wildfire risk will be able to call an inspector to conduct a detailed assessment
- Have interested Inspectors email <u>wildfire@ashland.or.us</u> and we'll invite them to the next class, when scheduled.



Tools

Digital package of information covered in this course:

ashland.or.us/realtors

Printed brochures are available at RVAR office:

629 Franquette St, Medford, OR 541-770-7060

Advisory form is available on the RVAR website

https://rvar.realtor

Wildfire Risk Assessment Program (WRAP)

- One-on-one wildfire risk home assessments
- Currently have 6 trained volunteers
- Expanded capability to engage residents
- New volunteer training being developed for the fall to help expand the program

Go to fireadaptedashland.org to sign up for free



Thank you for attending!

Brian Hendrix

Fire Adapted Communities Coordinator

Ashland Fire & Rescue

(541) 552-2231

Brian.Hendrix@ashland.or.us



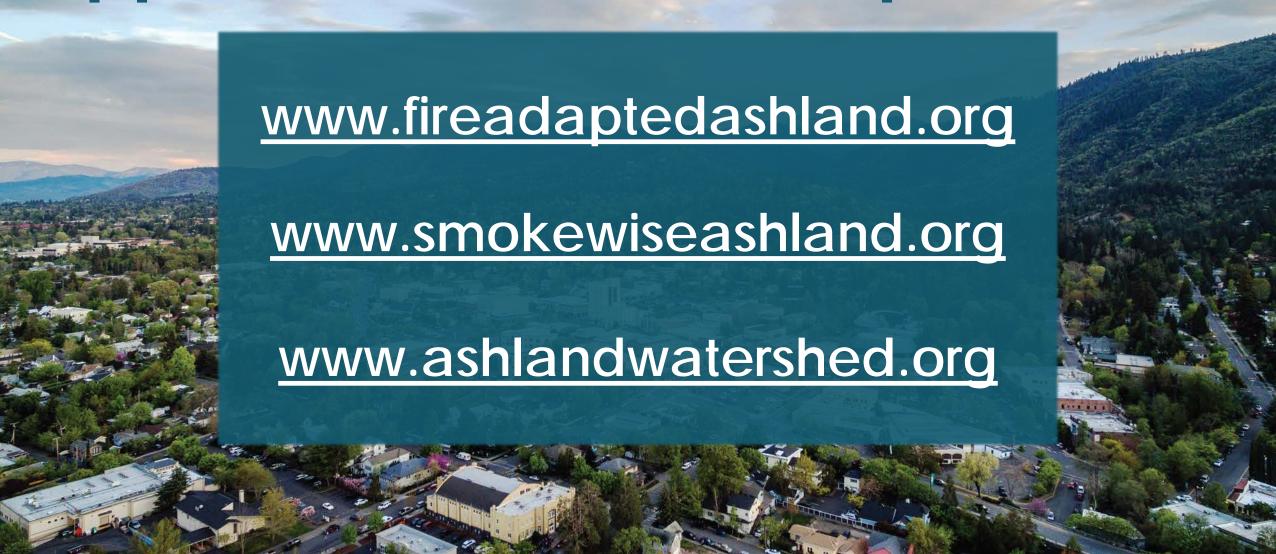
We Need Your Help.

We all need to do our Part.

"With adequate planning and cooperation among varying interests, wildfires can occur without disastrous loss of life, property, and resources."







Additional Info Slides not used in Presentation

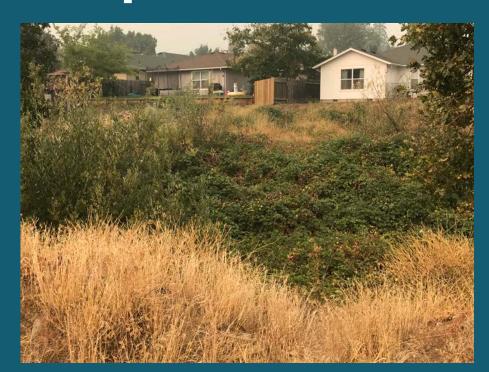


The contours of the land around your home will affect fire behavior.
Mitigate appropriately.



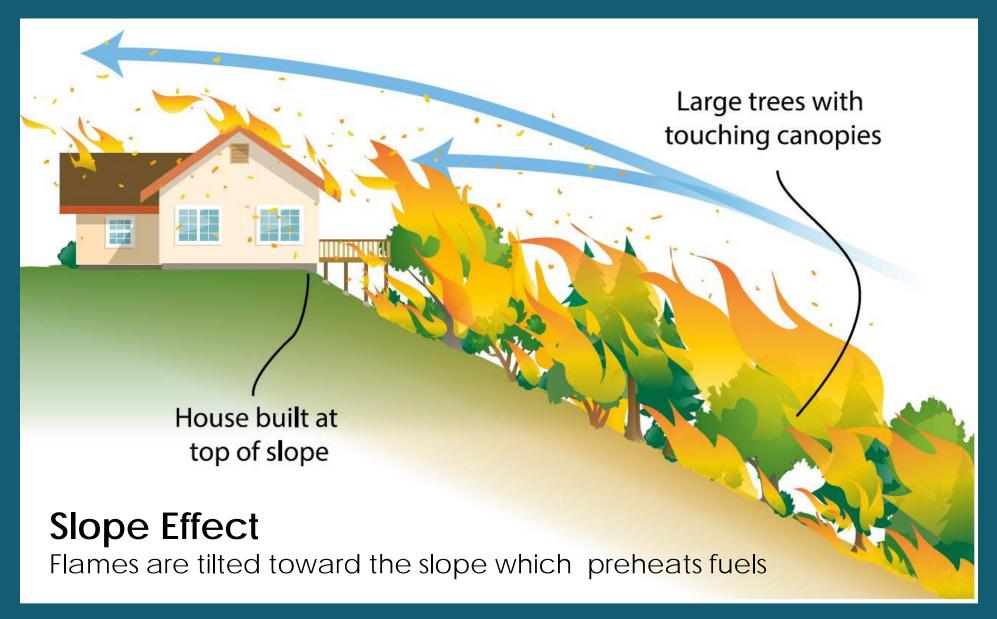
Slopes Matter





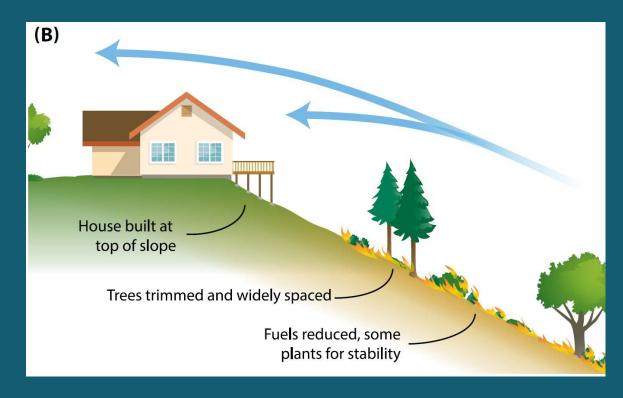


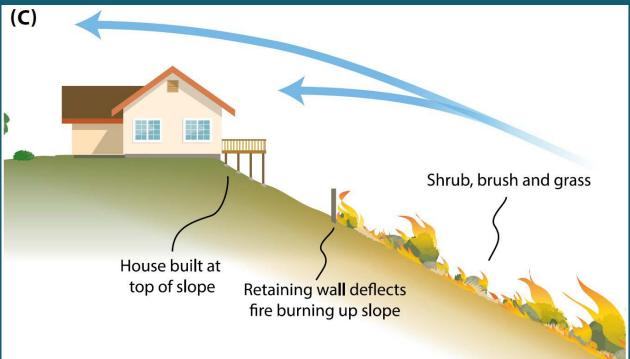




Slope Matters

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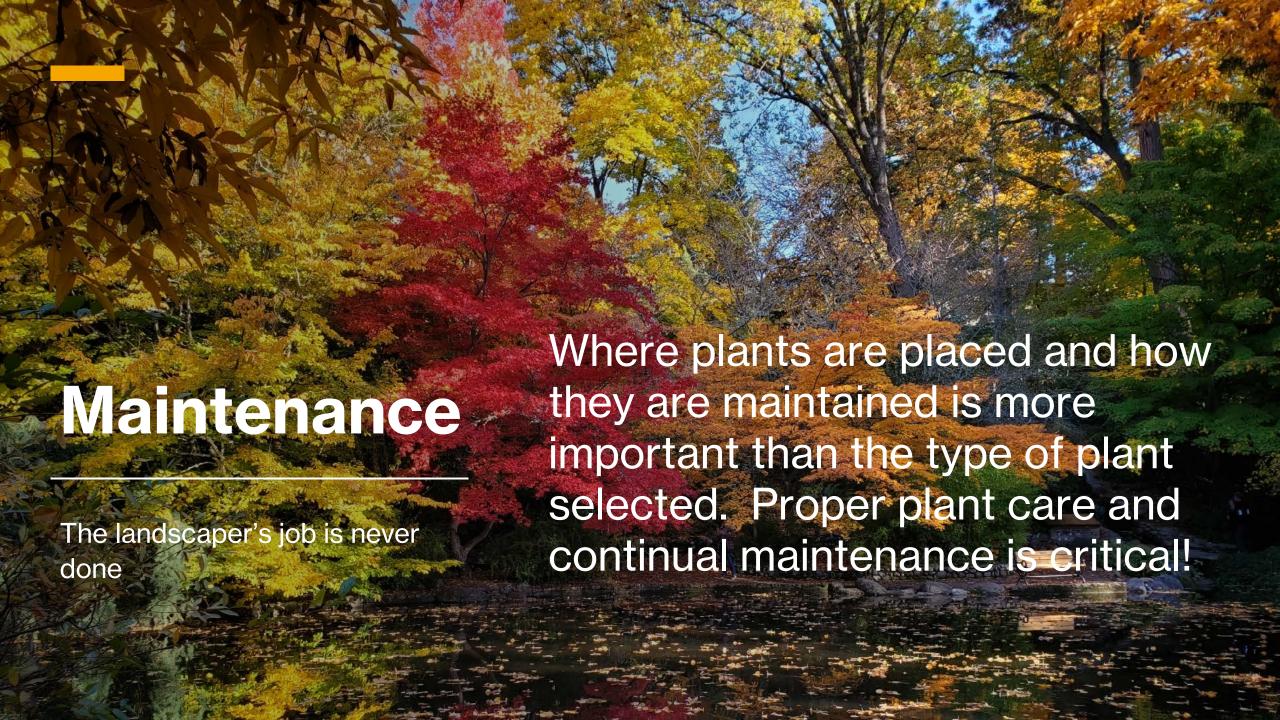


Slopes Matter

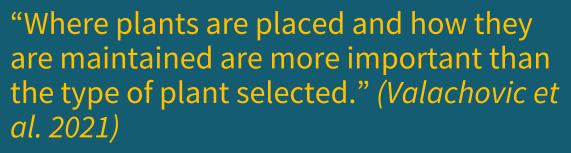














Proper plant care and maintenance are critical to mitigate wildfire risk









Fire-Resistant Landscaping Best Practices

- Follow plant <u>siting guidelines</u> in "hazard ignition zones"
- Remove <u>flammable vegetation</u> within 30 ft of structures and from under trees and shrubs
- Avoid planting anything within 5-ft of structures
- Plant only "fire-reluctant" plants within 10-ft of structures
- Emphasize plants that don't grow over <u>2-ft high</u> within 30-ft
- Plant <u>deciduous trees and shrubs</u> sparingly within 30-ft
- No evergreen shrubs or trees within 10-ft
- Eliminate combustible <u>mulches</u> within 30-ft of structures.
- <u>Isolate</u> planted areas by outlining with non-combustibles.
- Avoid mass plantings
- Keep the soil and plants vigorous and healthy.
- Select the <u>right plants!</u>



Select the Right Plants

Well adapted to local conditions

Do not retain dead leaves

Do not accumulate dead twigs and branches

Do not have waxy, oily, resinous, or odorous leaves

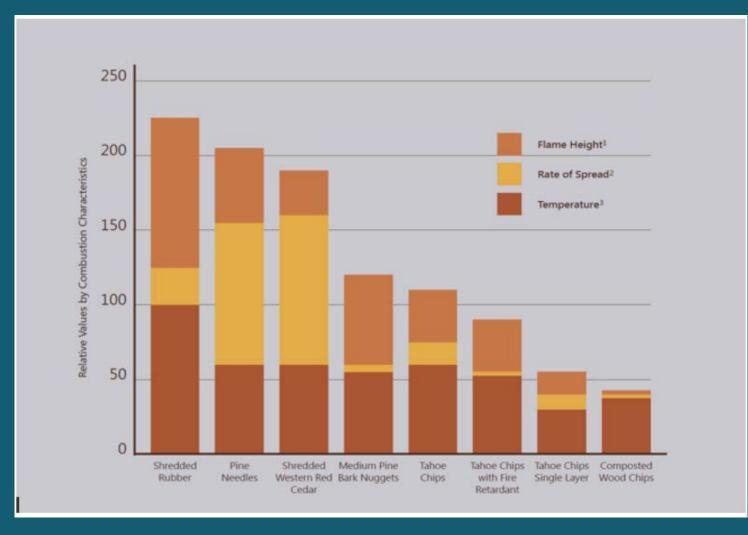
Have high salt, soap, or latex content

Have high-water content throughout fire season

Are not prone to disease and do not have invasive qualities.



Euphorbia polychroma



Combustible Mulches

https://ucanr.edu/sites/fire/Prepare/Lan dscaping/Mulch/

Mulch Handout

• Mulch plays an important role in your landscapes. Proper mulch application provides benefits to water retention, soil temperature, weed inhibition, and soil erosion. These qualities can help reduce fuel risk in fire prone areas, but also introduces a new combustible material into your landscape. For this reason, it is important to consider the type, location, and quantity of mulch used.

Cautionary Notes:

- Siting recommendations listed are usually for <u>flat terrain</u>. On a slope of 10-20% the distances should be doubled where shrubs are concerned. On a 20-40% slope the distance should be 4 times greater and on a 40+% slope the distance between plant should be 6 times further.
- Species within the same genus DO NOT necessarily have <u>equivalent fire-</u> <u>resistance</u>. Assess each species individually. <u>Plant size and growth form</u> <u>can make a big difference</u>.

