

## Forest Lakes Narrative

### (A/E/F/G/H) Community Design (43 pts)

Forest Lakes (FL) is a community in the southeastern corner of Coconino County surrounded by the Apache-Sitgreaves National Forest. The community has a combination of full & part time residents. The roads in Forest Lakes are unpaved, at least 20 feet wide, and well maintained. Wildfire smoke plus road dust could make evacuation or visibility in Forest Lakes challenging. The street signs are larger than four inches, and reflective. Lot sizes vary. The predominant home construction consists of Class-A metal/asphalt shingle roofs with combustible siding/decks. Siding condition varies from very well maintained to dry and peeling. There are numerous hydrants located in the community and the closest Fire Station is in town off of Merzille Rd. The town does have a water tank. Additional water sources are within 30-45 minutes in Heber-Overgaard or Christopher Creek. APS-Electricity is above ground and most homes utilize propane.



Aerial of the community

### (B) Vegetation (19 pts)

Vegetation in FL consists of Ponderosa Pine with grass and brush component. The Apache-Sitgreaves National Forest in this area is a dense mixed conifer forest. The majority of homes have, between 30-50 feet of defensible space around the structures. Separating fuel from the structure is paramount to minimize direct flame contact. There appears to be stressed vegetation in and around Forest Lakes.



Ponderosa Pine stand with grass component.



Another photos of Ponderosa Pine stand with metal electrical pole in foreground. .

**(C) Topography (4 pts)**

Forest Lakes is on a south-facing slope with rugged terrain located directly on the edge of the Mogollon Rim. Elevation ranges from 7,500-7,800 feet featuring rolling hills and steep canyon drop-offs. Average slope grade is between 5%-15%. This topography may influence diurnal wind patterns around the area.



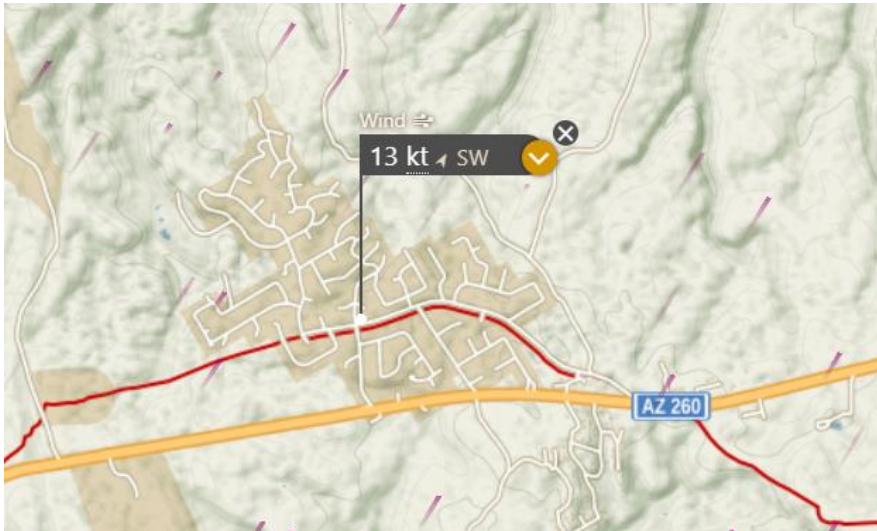
Above-Facing north. ---- Below-Facing south..



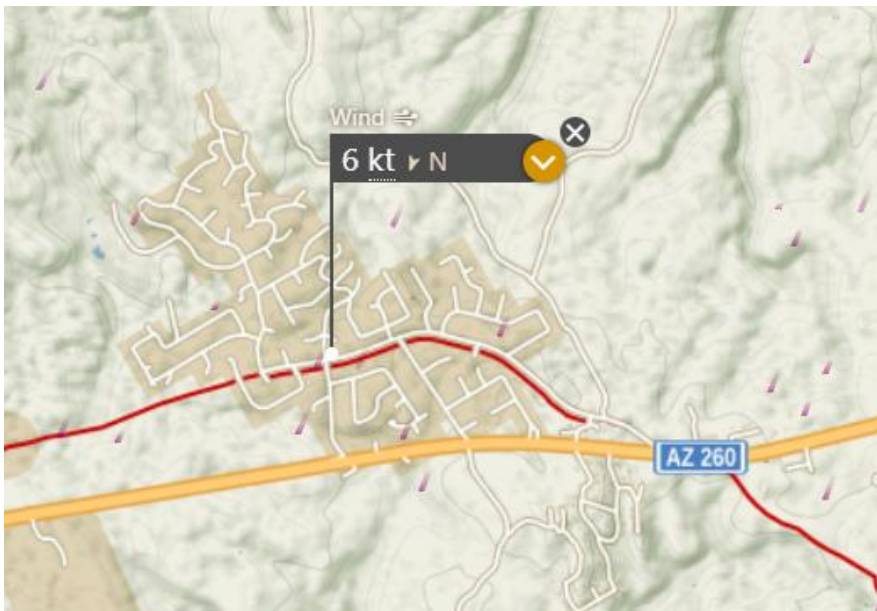
#### (D) Additional Rating Factors - Weather (8 pts)

FL is located on the edge of the Mogollon Rim at 7,500 feet. As such, it is subject to tamer temperatures. The Rim creates significant slope influence on wind. FL experiences a diurnal wind pattern, meaning upslope daytime, and downslope nighttime patterns. Wind is the most inconsistent variable with fire behavior. Wind and slope alignment can occur and support extreme fire behavior with uphill runs. The Mogollon Rim produces a sudden uplift to approaching storms resulting in a high incidence of lightning strikes during the summer. Winter snow plays a pivotal environmental role in providing the area with the winter recovery. FL and the Mogollon Rim has experienced less than normal snow fall in recent winters. With less moisture it may stress the Ponderosa Pine stand along the Rim.

Two snippets below show the wind shift from day to night. This is similar to diurnal wind patterns.



Southwest winds at 2PM



North winds at 2AM.

## Additional Rating Factors – Fire Occurrence

There are fires around Forest Lakes. Notable fires: Rim Fire (2026), Sheep Spring (2025), Forest Lake Fire (2025), Rodeo-Chediski (2002).

## Firewise Home Ignition Zone Assessment



### HOME IGNITION ZONE STRUCTURE ASSESSMENT GUIDE

Note: The assessment is designed to help determine “how vulnerable the structure” will be during the wildfire and to convey recommendations that should be taken so that the home will have a better chance to survive a wildfire. Remember, the following assessment items are for prevention/mitigation measures to be done well in advance of wildfire season.

Date of Assessment: Property Address: Resident Name: Property Owner:	
Assessment Items	Mitigation Recommendations
<b>1. OVERVIEW OF SURROUNDINGS</b>	
How is the structure positioned in relationship to severe fire behavior?	
Type of Construction.	
<b>2. CHIMNEY TO EAVES</b>	
Inspect the roof – noncombustible? Shingles missing? Shingles flat with no gaps?	
Gutters – present? Noncombustible?	
Litter on roof, in gutters and crevices.	
<b>3. TOP OF THE EXTERIOR WALL TO FOUNDATION</b>	
Attic, eave, soffit vents and crawl spaces.	
Inspect windows and screens – metal screens? Multi-paned windows? Picture windows facing vegetation?	

DFFM teaches a Firewise Home Ignition Zone (Assessor) course periodically across the State. This one-day course teaches attendees the foundation of Firewise USA, challenges/myths regarding Firewise USA or defensible space, basic fire behavior, understanding the WUI (Wildland Urban Interface) fire, Waldo Canyon Case study, and lastly the Home Ignition Zones. We can schedule a course in Forest Lakes for the fall of 2026.

# HOME IGNITION ZONE CHECKLIST

## SIMPLE STEPS FROM ROOF TO FOUNDATION TO MAKE A HOME SAFER FROM EMBERS AND RADIANT HEAT

- Clean roofs and gutters of dead leaves, debris and pine needles that could catch embers
- Replace or repair any loose or missing shingles or roof tiles to prevent ember penetration
- Reduce embers that could pass through vents in the eaves by installing 1/8 inch metal mesh screening
- Clean debris from exterior attic vents and install 1/8 inch metal mesh screening to reduce embers
- 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 combustible materials from accumulating
- Move any flammable material away from wall exteriors - mulch, flammable plants, leaves and needles, firewood piles - anything that can burn
- Remove anything stored underneath decks or porches

**VISIT [FIREWISE.ORG](https://www.firewise.org) FOR MORE DETAILS**

Image by NFPA, with funding from USDA Forest Service

This checklist is included in the NFPA Firewise trifold.

Photos below will highlight where resident's can make the most impact when reducing wildfire risk on their property.

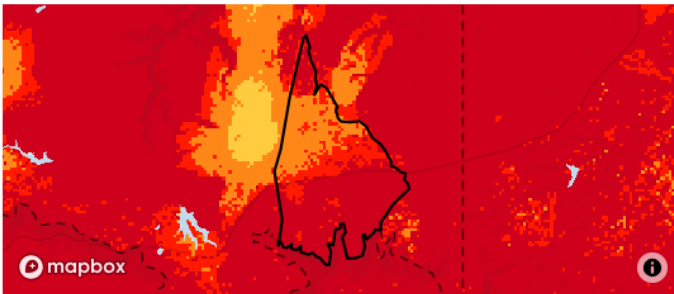
# Forest Lakes has a **very high risk** of wildfire—higher than 99% of communities in the US.

↓ Choose from the topics below to learn more

## Understand your risk

### Risk to Homes

Where are homes at risk of wildfire?



### Wildfire Likelihood

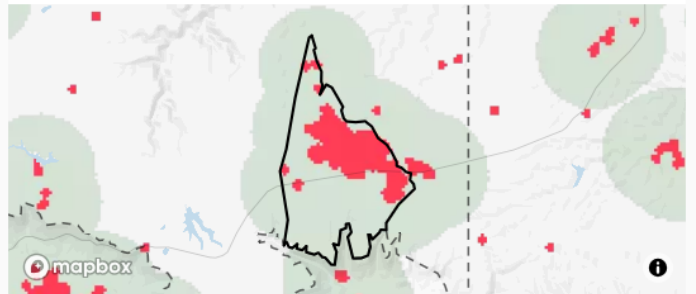
How likely is a wildfire in this area?



## Reduce your risk

### Risk Reduction Zones

Which actions are most effective to reduce risk?



### Vulnerable Populations

Who is most at risk and how do you reach them?



### ***Forest Lakes scores in the high Hazard category with 74 points***

The score does not discount or minimize the efforts of Forest Lakes and its partners. The community has been putting in a lot of time, energy, and effort into reducing wildfire risk for over 20 years. This score is a general and community based number. This score will help set the foundation for the community to get started.

### **Action Plan “Goal” Recommendations**

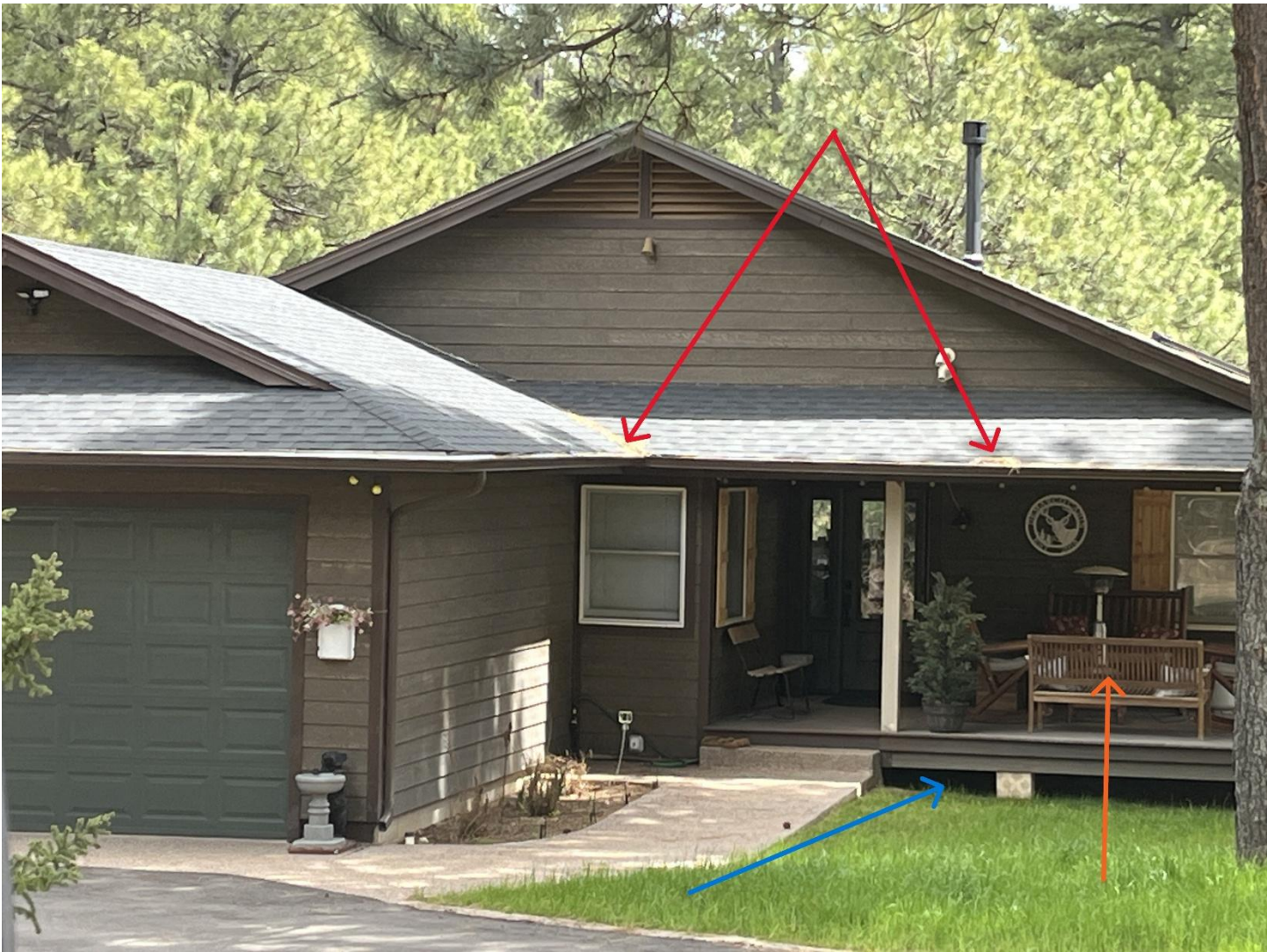
- 1) The intention of Firewise USA is empowering residents to band together to reduce wildfire risk. Home hardening and vegetation management out to property line is the area of focus. Each partner, including residents, has a role in the overall success.
  - a) Continue future information events, newsletters, e-mail blasts.
  - b) Home Ignition Zone
    - i) Engage residents and share information regarding Home Ignition Zones.
      - (1) Immediate Zone: Structure to 5ft
      - (2) Intermediate Zone: 5ft to 30ft
      - (3) Extended Zone: 30ft-100ft+
    - ii) Attend a Home Ignition Zone Course.
      - (1) Perform home assessments in Forest Lakes
  - c) Community centric goals:
    - i) What does Forest Lakes want to achieve with NFPA Firewise USA recognition?
    - ii) How does Forest Lakes plan to achieve those goals?
- 2) Home Hardening recommendations
  - a) Fire Brands (embers) and surface fire, within 5ft of structure, pose the highest threat to structure ignition.
  - b) Provide fire investigative reports and case studies to reaffirm residents of the “micro” focus.
  - c) Regular maintenance and spot checks should focus on roof tops, gutters, skylights, chimneys and eaves. Roofs can be vulnerable to fire embers because of their large surface area and the accumulation of flammable debris.
- 3) Vegetation management.
  - a) Discuss how homeowners can manage and treat vegetation within their property envelope.
- 4) Continue to improve defensible space



Install, at least, 1/8 inch mesh screening to resist ember penetration



Non-combustible (immediate zone)



**RED** arrows point at accumulated needles on roof and gutter. This can be a receptive fuel bed for fire embers.

**ORANGE** arrow is pointing at patio furniture that can ignite from fire embers that land and smolder.

**BLUE.** If the grass grows under the deck and dies/dries out, it may become a light flashy fuel that ignites from fire embers and ignites the deck.

**NOTE:** Non-combustible driveway and pathway creates fuel break from grass.



**RED** arrows identifies heavy needle accumulation on the roof

**BLACK** arrow identifies the corner of structure where dead grass may ignite and make contact with structure OR heavy fire ember accumulation at the base of the structure ignites the siding.



**RED** arrow identifies needle accumulation on a wooden deck. Deck also appears to be dry.

**BLUE** arrows identifies bare dirt 0-5ft (immediate zone)

NOTE: Rock base to structure is non-combustible.



**RED** arrow identifies needle accumulation on roof.

**ORANGE** arrow identifies combustible material within 5ft of structure. Vulnerable to fire embers.

**BLUE** arrow highlights brick wall around visible portion of propane. Brick/cinders are non-combustible

**GREEN** arrows highlight non-combustible driveway that creates fuel break.



**RED** arrow identifies a firewood stack too close to the structure. It is understandable to have wood close during winter months, but homeowners must determine the appropriate time to relocate at least 30ft from the structure.

**BLUE** arrows identify a potential path for radiant and convective heat to be transferred to the wooden stairs behind the wood pile if it ignites.



**RED** arrows identify a heavy needle layer within 5ft of the deck. This is a light flashy receptive fuel bed that may ignite and burn long enough to ignite the deck. ALSO, fire embers could land directly on the deck igniting it.

**ORANGE** arrows identify needle layer on metal roof. Needles may ignite and transfer heat radiantly and/or convectively to the wood siding around the window.



RED arrows identify needle layer on asphalt single roof.



**GREEN** arrows identify good non-combustible foundation.

**RED** arrows identify clean metal roof.



**RED** arrow identifies a wooden fence that appears to be connected to the rear corner of the structure. If it's attached to the home, it is a part of it. This fence may ignite and fire can move along until it comes into contact with the corner of the home.

**ORANGE** arrows identify needle layer on asphalt shingle roof.



**RED** arrow identifies a firewood pile underneath the main home. This is a receptive fuel bed for fire embers to land and ignite.



**GREEN** arrows identify a natural surface fuel break-driveway.

**RED** arrows identify gaps in deck lattice that may allow fire embers to travel under the deck and ignite any combustible material underneath. Consider screening or boxing in with mesh.

**ORANGE** arrows identify patio furniture that may ignite from fire embers that land on them. OR if the deck is ignited/involved from fire underneath the deck (Red arrows).



**RED** arrow identifies good bare dirt within the immediate zone (0-5ft) from wooden deck.



**Photo** includes needle layer on metal roof and combustible material up against the wall. There also is a thick needle layer leading up the siding of the structure.



Firewood on deck. Needle layer on asphalt shingle roof.



Firewood pile up against structure with needle layer around it.

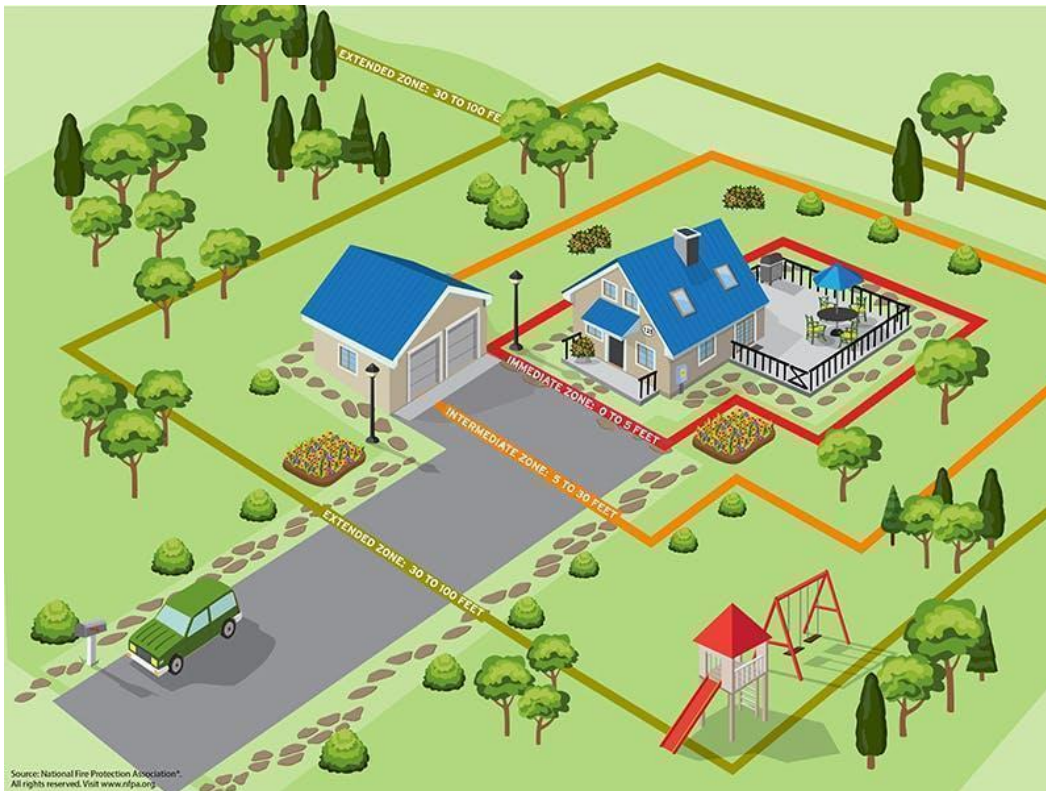


Deck height is good compared to needle cast. Minimal to no combustible material underneath the deck.

## How do Homes Burn in a Wildfire?

Contrary to popular belief, most homes do not burn down from direct contact with wildfire flames or radiant heat. Misconceptions about wildfires are too often perpetuated in the media as massive walls of flame that scorch everything in their path. In fact, most structures lost in a wildfire are destroyed by wildfire embers. These embers are usually small burning pieces of debris that are spit away from the wildfire. Embers land on your property, pile up, smolder, and then ignite. These small ignitions on roofs, decks, porches, and other areas of your property are often the main cause of a home being lost to wildfire.

To increase your home’s chance of surviving a wildfire, choose fire-resistant building materials and limit the amount of flammable vegetation in the three home ignition zones. The zones include the Immediate Zone: (0 to 5 feet around the house), the Intermediate Zone (5 to 30 feet), and the Extended Zone (30 to 100 feet).



## Immediate zone

The **home** and the area 0-5’ from the furthest attached exterior point of the home; defined as a non-combustible area. Science tells us this is the most important zone to take immediate action on as it is the

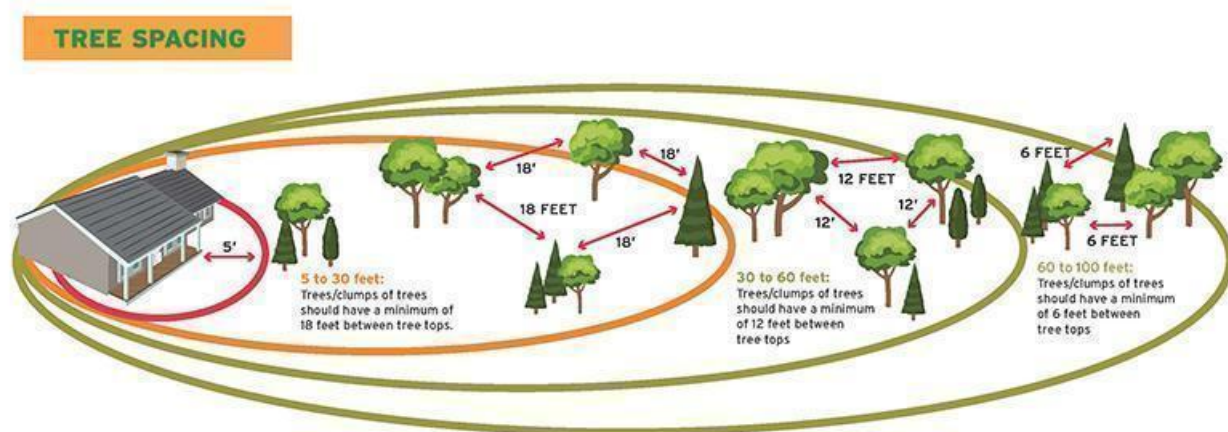
most vulnerable to embers. START WITH THE HOUSE ITSELF then move into the landscaping section of the Immediate Zone.

- Clean roofs and gutters of dead leaves, debris and pine needles that could catch embers.
- Replace or repair any loose or missing shingles or roof tiles to prevent ember penetration.
- Reduce embers that could pass through vents in the eaves by installing 1/16 inch metal mesh screening.
- Clean debris from exterior attic vents and install 1/8 inch metal mesh screening to reduce embers.
- 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 combustible materials from accumulating.
- Move any flammable material away from wall exteriors – mulch, flammable plants, leaves and needles, firewood piles – anything that can burn. Remove anything stored underneath decks or porches.

### Intermediate zone

5-30' from the furthest exterior point of the home. Landscaping/hardscaping- employing careful landscaping or creating breaks that can help influence and decrease fire behavior

- Clear vegetation from under large stationary propane tanks.
- Create fuel breaks with driveways, walkways/paths, patios, and decks.
- Keep lawns and native grasses mowed to a height of four inches.
- Remove ladder fuels (vegetation under trees) so a surface fire cannot reach the crowns. Prune trees up to six to ten feet from the ground; for shorter trees do not exceed 1/3 of the overall tree height.
- Space trees to have a minimum of eighteen feet between crowns with the distance increasing with the percentage of slope.
- Tree placement should be planned to ensure the mature canopy is no closer than ten feet to the edge of the structure.
- Tree and shrubs in this zone should be limited to small clusters of a few each to break up the continuity of the vegetation across the landscape.



### Extended zone

30-100 feet, out to 200 feet. Landscaping – the goal here is not to eliminate fire but to interrupt fire's path and keep flames smaller and on the ground.

- Dispose of heavy accumulations of ground litter/debris.
- Remove dead plant and tree material.
- Remove small conifers growing between mature trees.
- Remove vegetation adjacent to storage sheds or other outbuildings within this area.
- Trees 30 to 60 feet from the home should have at least 12 feet between canopy tops.\*
- Trees 60 to 100 feet from the home should have at least 6 feet between the canopy tops.