FIREWISE COMMUNITIES/USA® RECOGNITION PROGRAM

COMMUNITY ASSESSMENT

Treehouse Neighborhood – November 9, 2021
Southwest Hills
Eugene, OR, 97405

1) Introduction

The Firewise Communities/USA program is designed to provide an effective management approach for preserving wildland living aesthetics. The program can be tailored for adoption by any community and/or neighborhood association that is committed to ensuring its citizens maximum protection from wildland fire. The following community assessment is intended as a resource to be used by residents within and adjoining the Treehouse neighborhood for creating a wildfire safety action plan. The plan developed from the information in this assessment should be implemented in a collaborative manner and updated and modified as needed.

The Oregon Department of Forestry (ODF) field office of Western Lane has conducted the following wildfire risk assessment on November 9, 2021 in accordance with NFPA, ODF, and the United States Forest Service (USFS) guidelines for assessing community wildfire risk. Joint funding towards the education and mitigation of wildfire risk to Oregon communities in the Wildland Urban Interface (WUI) by the USFS and ODF made this assessment possible. The local fire planning coordinator and forest management technicians from Western Lane were responsible for the data gathering of this assessment.

2) Definition of the Home Ignition Zone

Treehouse Neighborhood is located in a wildfire environment. Wildfires will happen--exclusion is not a choice. The variables in a fire scenario are when the fire will occur, and where. This assessment addresses the wildfire-related characteristics of the Treehouse community. It examines the area's exposure to wildfire as it relates to ignition potential. The assessment does not focus on specific homes but examines the community as a whole.

A house burns because of its interrelationship with everything in its surrounding home ignition zone----the house and its immediate surroundings. To avoid a home ignition, a homeowner must eliminate the wildfire's potential relationship with his/her house. This can be accomplished by interrupting the natural path a fire takes. Changing a fire's path by clearing a home ignition zone is an easy-to-accomplish task that can result in avoiding home loss. To accomplish this, flammable items such as dead vegetation must be removed from the area immediately around the structure to prevent flames from contacting it. Also, reducing the volume of live vegetation will affect the intensity of the wildfire as it enters the home ignition zone.

Included in this assessment are observations made while visiting Treehouse Neighborhood. The assessment addresses the ease with which home ignitions can occur under severe wildfire conditions and how these ignitions might be avoided within the home ignition zones of affected residents. Treehouse residents can reduce their risk of destruction during a wildfire by taking actions within their home ignition zones. This zone principally determines the potential for home ignitions during a wildland fire; it includes a house and its immediate surroundings within 100 up to 200 feet depending on geographic features such as slope and aspect.

The result of the assessment is that wildfire behavior will be dominated by the residential characteristics of this area. The good news is that by addressing community vulnerabilities, residents will be able to substantially reduce their exposure to loss. Relatively small investments of time and effort will reap great rewards in wildfire safety.

3) Description of size and nature of a severe wildfire event in your area.

Fire intensity and spread rate depend on the fuel type and condition (live/dead), the weather conditions prior and during ignition, and the topography. Generally, the following relationships hold between the fire behavior and the fuel, weather, and topography.

- Fine fuels ignite more easily and spread faster with higher intensities than coarser fuels. For a given fuel, the more there is and the more continuous it is, the faster the fire spreads and the higher the intensities. Fine fuels take a shorter time to burn out than coarser fuels.
- The weather conditions affect the moisture content of the dead and live vegetative fuels. Dead fine fuel moisture content is highly dependent on the relative humidity and the degree of sun exposure. The lower the relative humidity and the greater the sun exposure, the lower will be the fuel moisture content. Lower fuel moistures produce higher spread rates and fire intensities.
- Wind speed significantly influences the rate of fire spread and fire intensity. The higher the wind speed, the greater the spread rate and intensity.
- Topography influences fire behavior principally by the steepness of the slope. However, the configuration of the terrain such as narrow draws, saddles and so

forth can influence fire spread and intensity. In general, the steeper the slope, the higher the uphill fire spread and intensity.

With Treehouse homes being near other residential properties, large, forested land areas, and high use public recreational areas; the risk for ignition is high. Oregon Wildfire risk assessment identified this area as a **high-risk** landscape due to the population density, topography, fire history and land use in the area. A recent fire less than 3 miles away from Treehouse Neighborhood off West 18th Avenue burned over 40 acres in less than 3 hours through a grass field.

In the Treehouse Neighborhood community, your largest risk would be a fire starting below the HOA in your common land/open space and running uphill towards the houses. Homeowners (of which there are many below these shared lands) are just as likely to cause a wildfire as any public passerby. Examples of this include burning debris during fire season, using machine and lawn equipment outside of regulated use times, smoking, and even sparks from car exhaust and trailer chains on roads. If a fire were to start below you, it would climb your hill possibly in minutes depending on weather and wind conditions. Flame height and intensity increases with slope when traveling uphill which could reach heights of 20 feet or more depending on your fuel load.

4) Site Description

Treehouse Neighborhood is an established community since 1979 with second growth fir and oak forest held as community greenspace intermixed with member property. Treehouse Neighborhood includes 2 HOA's with a total of 122 residential lots, plus 16 other non-residential HOA residential lots (138 total). 38 members within this area have enrolled in the Treehouse Neighborhood Firewise Community. Public parks exist in the vicinity as well as private and active forestry holdings to the South. There are numerous dwellings and private property holders surrounding Treehouse Neighborhood. Vegetative types in the area include a dense understory including invasive blackberries and false brome, suppressed conifer trees and a canopy of mixed forest including Douglas-fir, oak, and maple trees. Steep terrain includes a chimney leading to the top of the ridge where multiple dwellings are situated. The community includes over 9 shared acres of predominantly steep, wooded space with a pitch and other topographic features that increase fire risk. Many homes are situated along the boundaries of these wooded spaces. It is suggested Treehouse Neighborhood encourage oak woodlands over a conifer forest. Oak woodlands have lower severity fire risk if properly managed.

5) Assessment Process

The shared community lands were assessed for fuels reduction including removal of ladder fuels, thinning the understory, pruning of tree limbs within 8 feet of the ground and access for fire personnel and labor crews. In addition, community access and dwellings were assessed for wildfire risk including defensible spaces, up to 200 feet on the downslope side. ODF conducted a Community Wildfire Hazard evaluation for the community, specifically for the shared common spaces. In addition to the 150–200-foot defensible space perimeter around homes, the following factors were assessed: road

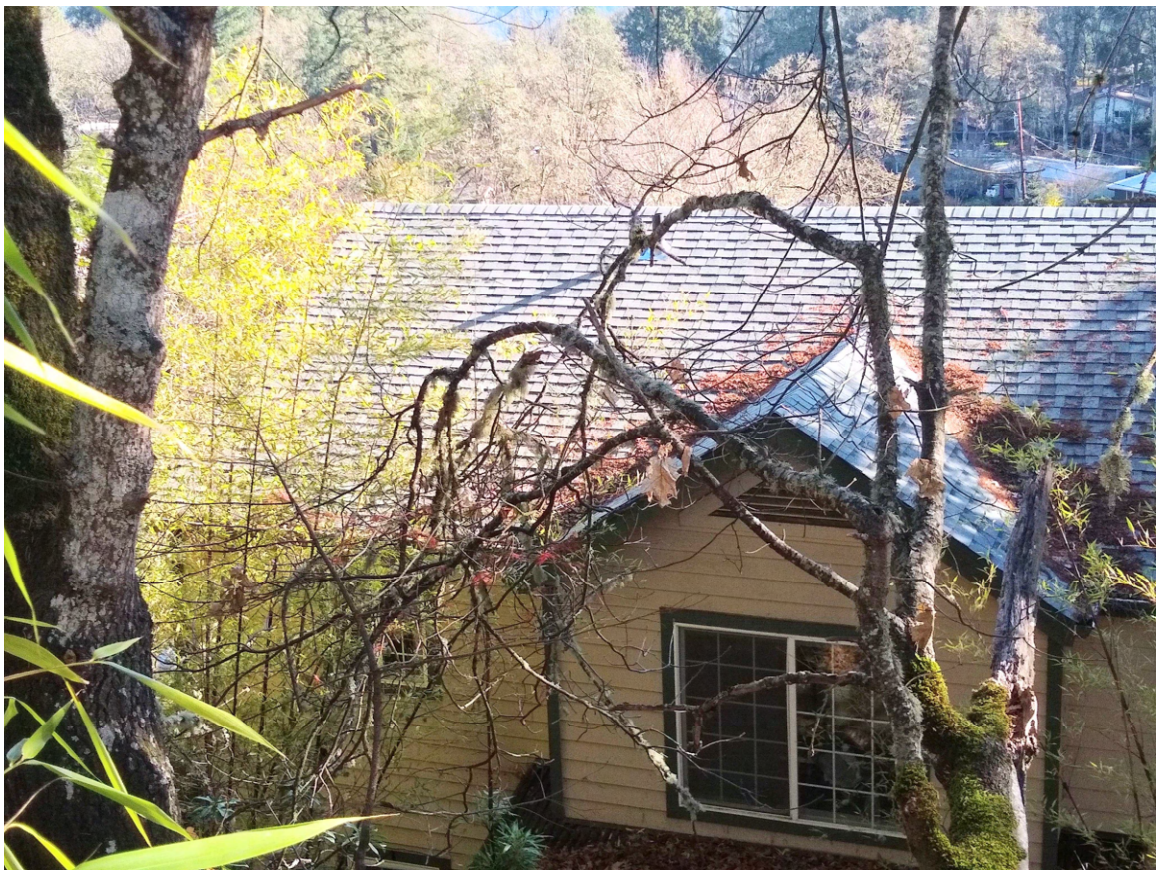
access and signs, driveway characteristics, walking paths, vegetation types, slope, building materials, and additional hazard factors including power lines and alternative egress.

6) Important Considerations

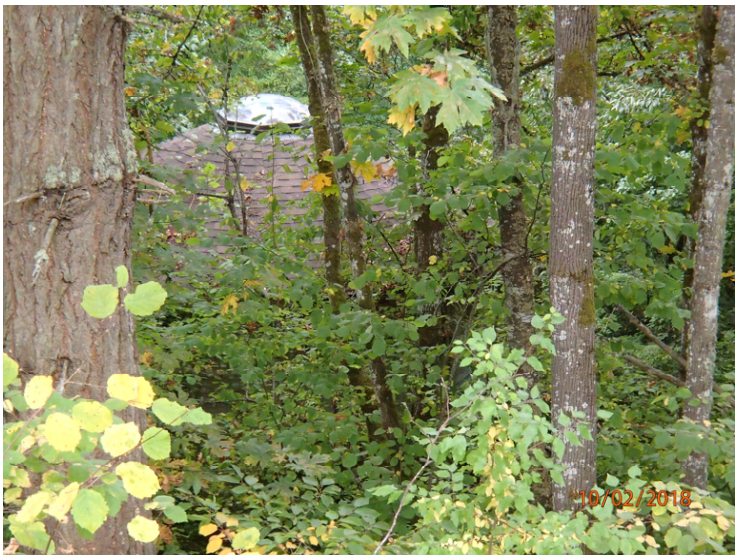
The Firewise Communities/USA program seeks to create a sustainable balance that will allow communities to live safely while maintaining environmental harmony in a WUI setting. Homeowners already balance their decisions about fire protection measures against their desire for certain flammable components on their properties. It is important for them to understand the implications of the choices they are making. These choices directly relate to the ignitability of their home ignition zones during a wildfire.

The most common issues within this community are the following, supported with photos:

1. ***Dead and/or flashy fuel touching house****, such as needles on the roof and conifer trees within 5 feet of home walls. Continue to monitor this within the community as firebrands are easily ignited with light flashy fuels both in the gutters and covering the roof.*



2. ***Lacking defensible space****: (generally extending up to 100 feet from a house, up to 200 feet for downhill sides of homes): Good practice on left and attention needed on right.*



3. ***Continuous fuels within 50 feet of the house****. In the picture below, continue to prune branches up and away from the ground to create vertical separation between branches and ground fuel. Decrease horizontal connectivity by properly spacing out crowded trees via thinning crowded, suppressed/dying and or dead trees.*

7) Observations and Recommendations

Generally, zone 1 is completed in the picture below but be cautious about the type of plants and material you put close to your home. Zone 1 (30 feet from the house) is the most critical portion of defensible space and drastically impacts your home's survivability in a wildfire event.

Because most of your community sits on steep hillsides and ridges with forests below, (see picture below) it is extremely important to maintain your defensible space up to 200 feet on the downslope side. Examples of this include, walking paths to create a fire break amongst continuous low/ground level vegetation, utilizing gravels where appropriate to mitigate/slow down fire spread, pruning low lying limbs, and eliminating contiguous fuels adjacent to the homes.

Image 1: This photo exhibits excellent defensible space within Zone 1 of the homesite. Note that as the slope increases, the area that the home would need to be defensible increases.

Image 2: This photo is a great example of creating walking paths in order to break up fuel continuity and access for fuel removal and labor crews (West Common Area).

Images 3 and 4: The photos exhibit areas of moderate/severe storm damage in which fuels both on the ground and horizontal to the ground should be reduced. Additionally, the understory within the stand could be thinned and replanted with native species. (Photos from the East Upland Common area.)

Images 5 and 6 (respectively): These photos demonstrates the predominant dense blackberry and false brome monoculture growth in the Dellwood-Lawrence common area.

8) Successful Firewise modifications

When adequately prepared, a house can likely withstand a wildfire without the intervention of the fire service. Further, a house and its surrounding community can be both Firewise and compatible with the area's ecosystem. The Firewise Communities/USA program is designed to enable communities to achieve a high level of protection against WUI fire loss even as a sustainable ecosystem balance is maintained.

A homeowner/community must focus attention on the home ignition zone and eliminate the fire's potential relationship with the house. This can be accomplished by disconnecting the house from high and/or low-intensity fire that could occur around it. The following photographs were taken from Treehouse Neighborhood lands and homes and are examples of good Firewise practices.

1.) ***Address clearly visible and easily seen*** *for fire response personnel. Contrasting light and dark, using reflective material, and having >4-inch numbers are all good practices to increase the visibility of your address.*

2. *A.* ***Horizontal continuity has been reduced*** *by limiting excessive understory growth. Vertical continuity has been reduced by pruning low branches. Continue to manage horizontal and vertical continuity within the common spaces as shown in the photos to the right and below.*

*3. **Crowded, dying and suppressed trees have been properly thinned** in Zones 2 and 3 (30-200 foot zone). Fire resistant trees and shrubs like Oaks, Oregon Crabapple, Pacific Madrone and Snowberry should be retained, while highly flammable tree species including Cedar and Douglas-fir have been removed or heavily thinned and pruned. The picture below is a good example of reducing tree density and fuel loads in Zone 3. (Photo from West Common Area)*

9) Next Steps

After walking through the Treehouse Community and evaluating their progress and continued areas of concern, the following are recommendations of actionable items in order to further the reduction of Wildland Fire risk in the community's common areas:

- Continue eliminating large blackberry groves within the common spaces – specifically the Dellwood-Lawrence and East Uplands areas closest to the homes at the edge of the HOA boundary. There is significant evidence of false brome monoculture growth that will need attending in the next steps for this common area. Discussions were explicitly had on various ways to manage the blackberry including but not limited to manual removal, herbicide use and mechanized equipment.
- It is recommended that the storm damaged trees and dead fuel load on the forest floor in the East Upland area be managed and removed. Discussions were had surrounding the management of an area that presents difficult access. With that said, the following were options to consider for this area:
    - Hire a crew to come in and manually take down storm damaged trees and drag out larger pieces of dead and down on the forest floor.
    - Options to remove biomass include burn piles (following burn season regulations), renting and/or buying a chipper and lop and scatter of the heavier materials. Note: Lop and scatter is OK on a small scale but not appropriate for the entire area as it continues to leave large fuel loads in the area for extended periods of time until all the biomass is able to break down over a period of 5-10 years. Concluding that the fire risk on the East Upland slope would still be high given the fuels' relative humidity and higher temperatures throughout the summer.
- The introduction of native plant species would aid in fire abatement, fuels management longevity and creating further wildlife habitat in the surrounding areas. See details below.
- Residents atop the ridge of the East Uplands and West common space are recommended to continue and maintain 200 feet of defensible space surrounding their homes as slope presents a unique and often severe circumstance should fire be established at the bottom of the hillside. Note: There was discussion around leaving some dead standing as it aids in soil/hillside erosion. It is important to note that Douglas Fir trees have a shallow root system and do not benefit from being left standing dead as they have an increased risk of injuring those recreating in the surrounding area. Additionally, native cover crops such as clover (red and crimson clovers), phacelia, brassicas, and wildflowers aid in controlling erosion, reducing invasive weeds and maximizing carbon sequestration when implemented during the correct season.