



**FIREWISE USA™**  
RESIDENTS REDUCING WILDFIRE RISKS

**FIREWISE COMMUNITIES/USA® RECOGNITION  
PROGRAM**

**COMMUNITY ASSESSMENT**

Sunrise Village  
Bend, Or  
1/15/2021

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 the Sunrise Village residents 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.

On November 5<sup>th</sup>, 2020, representatives from the community and supporting agencies gathered to conduct the assessment of Sunrise Village. In attendance were community members Bart Mitchell and Ray Page, in addition to Boone Zimmerlee from Deschutes County and Chase Duncan from Oregon Department of Forestry.

2) Definition of the Home Ignition Zone –

Sunrise Village 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 Sunrise Village. 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 Sunrise Village. 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. Sunrise Village 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 to 150 feet.

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] THE SEVERE CASE WILDLAND FIRE CHARACTERISTICS THAT COULD THREATEN THE 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.

The anticipated fire event would likely be similar to the Awbrey Hall fire event that impacted the community in the past. Fire characteristics included torching of single and groups of trees would be common where ladder fuels exist, and rapid advancing flame fronts in continuous fuels would also be expected. Portions of the forward advance of the fire would be driven from embers created from torching trees being deposited ahead of the flaming front and burning together. This kind of behavior would be expected in areas where fuel mitigation has not taken place in the recent past.

#### 4) SITE DESCRIPTION –



Sunrise Village is 140 acres in size with 180 lots. Bordering the neighborhood on the North west side are privately owned adjoining neighborhoods. Running along the Southeast edge is the Deschutes River. Vegetation includes ponderosa pine, bitterbrush, juniper, sage brush, and bunch grass. The majority of the community has a slope ranging 0-15% with the river rim along the Southeast border reaching slopes around 60%. Much of river rim area does have wildland fuels, but also a large portion is made up of lava rock.

#### 5) ASSESSMENT PROCESS –

For the assessment process we gathered at the club house and walked through the community from there. As we walked through the community we allowed for discussion of known issues of the community members and issues that were identified by Oregon Department of Forestry and Deschutes County. The tour consisted of walking the paths and roads within the community and stopping to look at the fuels around the houses.

#### 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.

During the assessment, we observed three main suggestions for improvement.

1. Attention to individual structures and the immediate zone around homes (0-5 ft.): Work needs to be focused where there is highly flammable vegetation growing directly adjacent to structures, under eaves, and under trees.
2. Fuels accumulation in the intermediate zone around homes (5-30 ft.): Remove fuels in areas where continuous vegetation has provided a horizontal path for potential fire spread.
3. Fuels accumulation along roadways: Clear flammable vegetation adjacent to roads to allow space for emergency vehicles to pull over. Create breaks where current horizontal paths for fire spread exist.

## 7) OBSERVATIONS AND RECOMMENDATIONS –

The largest concern of the group as we walked the community was the amount of highly flammable vegetation in the immediate zone around homes. The immediate zone is the first 5' from the structures edge. Below are some photos of highly flammable vegetation growing immediately against houses or under the eaves. If these plants were to ignite they would create intense flames that could either ignite the siding of the house or enter into the attics and ignite the roof.



Areas around these types of plants should be kept clear of receptive fuels. It is recommended that steps be taken to move towards removal of these types of plants or replacement with more fire resistance plants. Accumulation of pine needle litter was observed on several roofs of homes within the community. Roofs are at increased risk of igniting from embers when pine needle litter is left to accumulate. Annual clearing of Pine needles and leaves is needed around the immediate zone.



The high volume of fuels adjacent to this home pose a serious risk. The ladder fuels present would create a path for fire to climb into the trees and create a significant threat. Also, the pine needles have accumulated in the gutters and would be a bed for embers to ignite in.

The second most common theme was the accumulation of fuels in the intermediate zone. The intermediate zone is 5'-30' from the edge of the house. Continuous vegetation was observed and often connected to vegetation within the immediate zone around homes.

Creating space in between plants and shrubs would help disrupt the path of fire. Removing ladder fuels in this zone is also recommended to prevent fires from moving into the canopies of larger trees.



Ladder Fuels in the intermediate zone. Fire would be able to climb into the canopies of larger trees.



Continuous fuels in the intermediate zone lead directly to the immediate zone of the house.

The final theme we discussed during the assessment walk was the existence of heavy fuel loading along roadsides. Heavy fuels along roads could create intense fire behavior that may prohibit travel. A major concern in the event of a fire is evacuation which could be inhibited by heavy fuels. It is recommended that the community work towards removal of

continuous fuels and ladder fuels along the common roadways.



Heavy fuel loading along roadways could inhibit travel for evacuation.



Ladder fuels in this photo would create intense flames and restrict travel along this road.

## 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 in Sunrise Village and are examples of good Firewise practices.



Many homes within the community had great examples of Firewise practices already in place. The photo above shows a great example of disconnecting the structure from the wildland fuels through the use of gravel around the perimeter. The final photo below

shows a good example of converting to fire resistant plants in the immediate zone around the home and maintaining a clean bed around the base.



## 9) NEXT STEPS –

After reviewing the contents of this assessment and its recommendations, the Sunrise Village Firewise Board in cooperation with the Oregon Department of Forestry and Deschutes County will determine whether or not it wishes to continue seeking Firewise Communities/USA recognition.

If the site assessment and recommendations are accepted and recognition will be sought, the Sunrise Village Firewise Board will create agreed-upon, area-specific solutions to the Firewise recommendations and create an action plan in cooperation with the Oregon Department of Forestry and Deschutes County.

Assuming the assessment area seeks to achieve national Firewise Communities/USA recognition status, it will integrate the following standards into its plan of action:

- Create a local Firewise board, task force, committee, commission or department that maintains the Firewise Community program and status.
- Enlist a WUI specialist to complete an assessment and create a plan from which it identifies agreed-upon, achievable local solutions.
- Use the risk assessment as a tool to determine risk reduction priorities within the community and develop a multi-year action plan that includes risk reduction

- projects/investments, suggested homeowner actions, and education activities. This action plan will be updated every three years.
- Observe a Firewise Communities/USA Day annually that is dedicated to a local Firewise project or education outreach event.
  - Provide the total number of residents living within the site's boundary.
  - Establish a minimum of 8 dwelling units (maximum 2,500 dwelling units) within the identified boundary with an investment of a minimum of \$25.43 per unit in wildfire risk reduction actions annually (Work done by municipal employees or volunteers, using municipal or other equipment, can be included, as can state/federal grants dedicated to that purpose.) All dwelling units must have a resident.
  - Submit and renew your community to Firewise Communities/USA web portal annually. This report updates continuing participation in the program.

Sunrise Village residents are reminded to be conscious of keeping high-intensity fire more than 100 feet from their homes. It is important for them to avoid fire contact with their structures. This includes firebrands. The assessment team recommends the establishment of a 'fire free zone', allowing no fire to burn within ten feet of a house by removing fuels located there. It is a bad idea for fire to touch a house during a wildfire. Remember that, while wildfire cannot be eliminated from a property, it can be reduced in intensity.

Homeowners are reminded that street signs, addresses, road widths and fire hydrants do not keep a house from igniting. Proper attention to their home ignition zones does. They should identify the things that will ignite their homes and address those.

Weather is, of course, of great concern during wildfire season. At such time as fire weather is severe, homeowners should remember not to leave flammable items outside. This includes rattan doormats, flammable patio furniture, firewood stacked next to the house, or other flammables.