



FIREWISE USA™
RESIDENTS REDUCING WILDFIRE RISKS

Firewise USA™ Recognition Program Community Wildfire Risk Assessment – Shasta Forest Village

1) Introduction

The Firewise USA™ program teaches people how to adapt to living with wildfire and encourages neighbors to work together and take action now to prevent damage and losses. Participation in the program can be attained by any community and/or neighborhood committed to reducing risks from wildland fire. The following risk assessment will help identify threats and hazards and guide the priorities and actions for Shasta Forest Village. The risk assessment will be the committee's primary tool in determining the risk reduction priorities within your site's boundaries. Assessments need to be **updated every five years**.

On June 21, 2018 data was collected by Nick Wallingford from CAL FIRE, Gary Lauben and Nora Kennedy from the Western Shasta Resource Conservation District, and Ken Nolte a resident of Shasta Forest Village. Data was collected by driving slowly through the neighborhood and looking for examples of hazards as well as good Firewise techniques. Discussion about fire risks and what changes could be made were noted and several photographs were taken.

2) Definition of the Home Ignition Zone

Shasta Forest Village is located in a wildfire environment. The variables in a fire scenario are when the fire will occur, and where. This assessment addresses the wildfire-related characteristics of Shasta Forest 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 prepare their home to withstand ember attacks and minimize the likelihood of flames or surface fire touching the home or any attachments. This can be accomplished using hardscaping and landscaping techniques that create breaks in the vegetation in the HIZ, helping to influence and decrease fire behavior. Maintenance activities such as removing dead vegetation from the area immediately around the structure, reducing the amount of vegetation on the ground, and pruning trees are simple and easy steps that will affect the intensity of the wildfire within the HIZ.

Included in this assessment are observations made while visiting Shasta Forest 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. Shasta Forest Village residents can reduce their risk of destruction during a wildfire by taking actions within their home ignition zones, which includes the home and everything around it, up to 200 feet from the foundation.

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,



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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 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.

Shasta Forest Village would be most susceptible to wildfire influenced by two predominant weather patterns, and from a slope driven fire due to its topography. Diurnal winds during a typical summer weather pattern result in an upslope wind from the southwest that will typically surface from early afternoon to just after sunset. This wind is a concern because it puts the wind direction in alignment with the slope.

More prominent during the fall months, a downslope wind from the northeast will often occur in several multiday wind events. This downslope or foehn wind may occur for longer durations (1-4 days) than the diurnal winds and typically is associated with a lower relative humidity and higher temperatures. Both the upslope and downslope winds have historically driven fires in the area around Shasta Forest.

The northern side, and to a lesser extent the western side, of the subdivision would be impacted by a slope driven fire, moving upslope. The north side of the subdivision along Shasta Forest Drive has a much higher hazard level due to a potential slope driven fire originating from the South Fork of Bear Creek and the 1(one) Hundred Road area. Generally, slope driven fires experience rapid spread rates, but are shorter in duration than wind driven fires. They typically will affect smaller areas than wind driven fires and will have slower rates of spread when the slope decreases.



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4) Site Description

Shasta Forest Village is located on the west side of Shingletown, just north of I-44. It is the largest subdivision in Shingletown with approximately 454 parcels and 405 homes. Bordering the northern boundary of the subdivision is managed forestland. Shasta Forest Village is located in a fire-prone region of dense conifers often with an understory of Manzanita and other "ladder fuels". It exemplifies a community in the Wildland/Urban Interface (WUI) and is an prime candidate for firewise activities. The subdivision is largely overgrown with small to large trees and shrubs acting as ladder fuels to the overstory hardwood and conifers. The close proximity of homes to each other (within the HIZ of 200 feet), means extra measures should be taken by homeowners to reduce the likelihood of ignition of their own home as well as their neighbors.



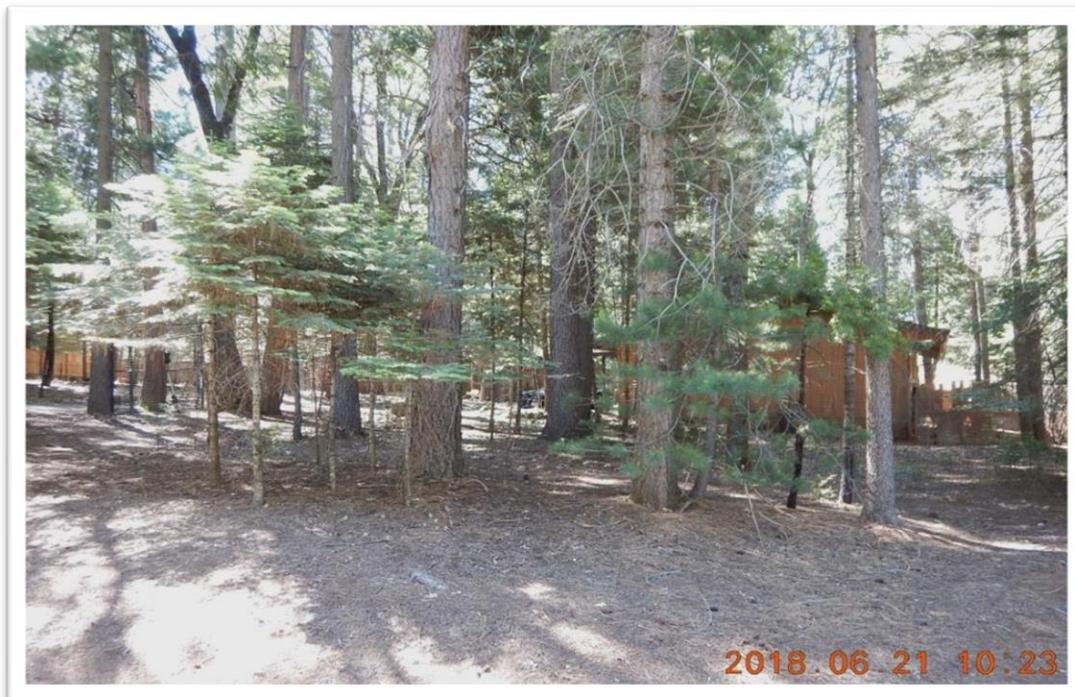
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5) Assessment Process

CAL FIRE, Western Shasta Resource Conservation District (WSRCD) and a community member of Shasta Forest Village met at the local fire station on the morning of June 21st, 2018 to conduct a visual data collection via a drive through. Ken Nolte, local resident, was able to give insight on vacant and seasonal homes as well as newly constructed homes in the area. Nick Wallingford explained what CAL FIRE looks for when they issue citations and warnings to landowners, as well as some common causes of home ignitions (embers and slow crawling fires). Observation notes and photographs were collected by the Resource Conservation District.

6) Important Considerations

The Firewise USA™ program acknowledges that there are many reasons and values that lead a person to live in the WUI and that there may be a desire for certain flammable components to exist on their property. It is important for residents 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.



Picture 1: Too many trees spaced too closely together within 100-200' of homes. These trees could not only spread fire through their crowns, but contribute to the amount of ignitable leaf litter on or near the home.



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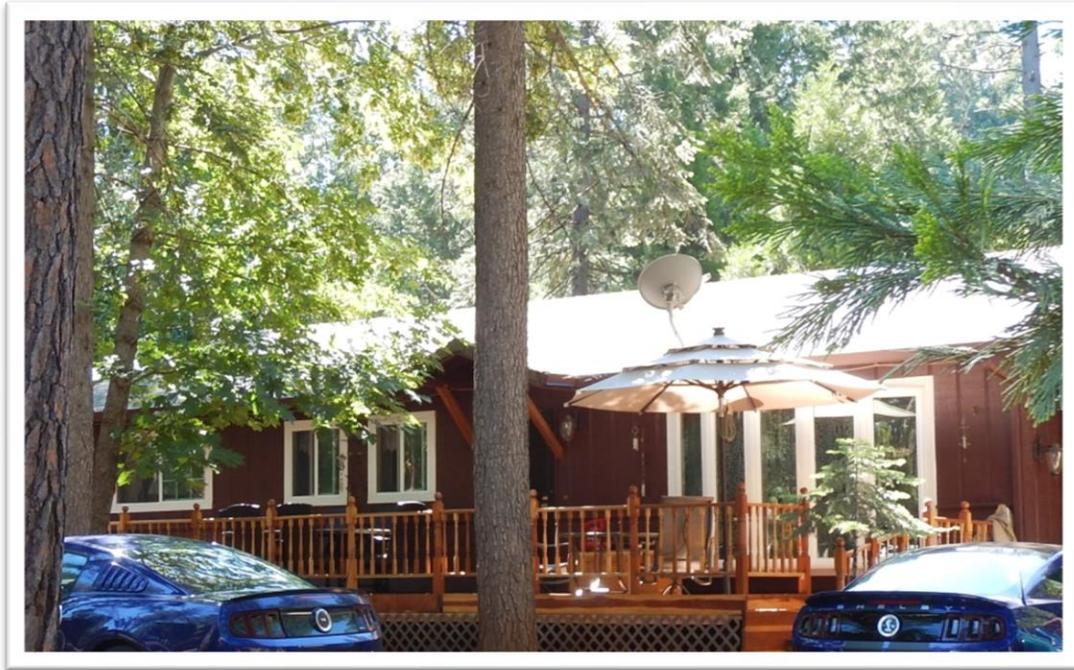
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Picture 2: Vegetation planted in the immediate (5 foot) zone. Many homes were seen with juniper or other shrubs right against the siding.

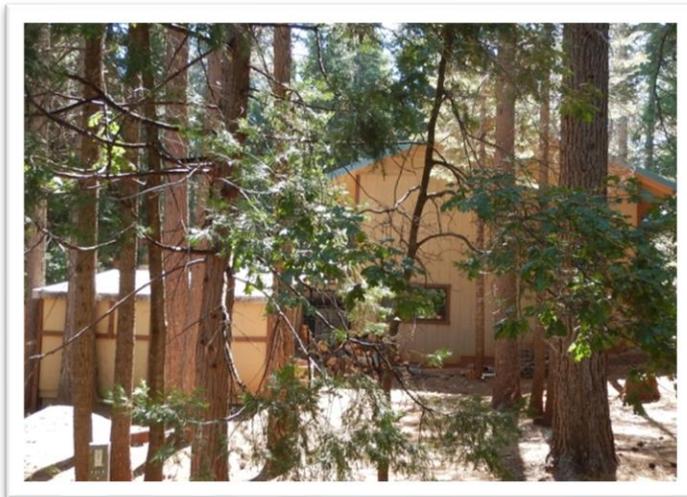


Picture 3: Firewood stacked too close to the home. Firewood should be stored at least 30 feet from any structure, there were many instances where firewood was stacked on a wooden deck attached to the house or stacked against a garage.



Picture 4: Most of the homes have wooden decks that are attached to the house. Many of these decks were not screened and were used for extra storage, increasing this risk. While this may seem convenient for the homeowner, it will make it easier for an ember to find fuel.

7) Observations and Recommendations



Picture 5

A range of maintenance on was observed. Most properties had at least some maintenance but a 80% could use more firewise practices. Some homes (about 20%) needed significant or numerous changes. In such a wooded neighborhood, maintenance is an ongoing necessity for all.

A common practice that everyone noted during the assessment was the implementation of a privacy screen of thick brush along the roadsides. These areas were either shrubs or thick stands of trees, contributing to a large fuel load. Some landowners have limbed their

trees reducing the fuel ladder as well as raked excess pine needles, but many have not. Several homes had firewood stacked near the structure (picture 5).

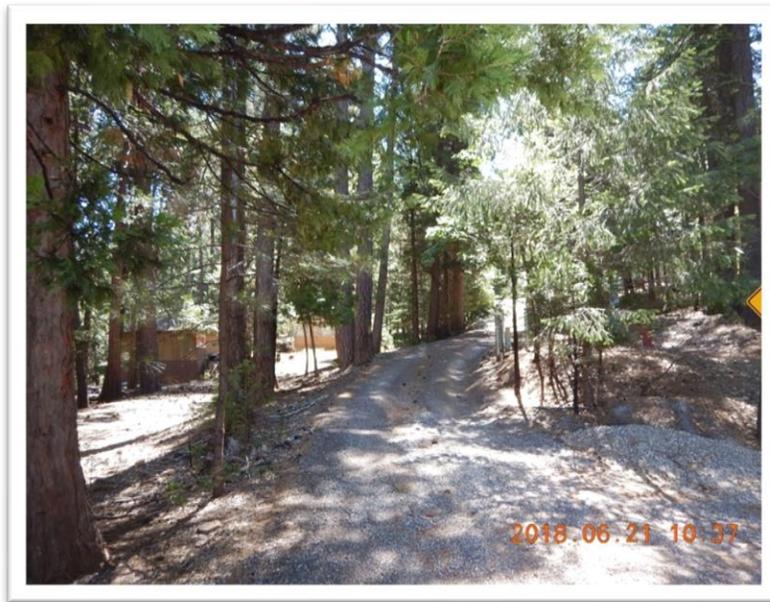


A few homes have upgraded wooden fences to metal or chain-link fences, as well as upgrading the roof to tile or metal. A few homes were observed to have overhanging limbs resting on the roof, in one example both an oak and a cedar tree.

Many different house siding materials were observed, the most ignitable and the ones recommended to be changed were cedar shake siding or any kind of exposed wood siding (Picture 6).



Picture 6



Picture 7

On the northern side of the subdivision there is a steep slope. The homes with attached wooden decks and pine needle build up would be in the most fire danger. Driveways were discussed. Nick Wallingford from CAL FIRE noted that fire trucks would have a hard time accessing a fire if there was a long, curvy and unmaintained driveway. One was seen that had overgrown limbs and curved out of sight that may be hard to access especially at night (Picture 7).

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 ignition resistant and compatible with the area's ecosystem. The Firewise 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 Shasta Forest Village and are examples of good wildfire risk reduction practices.



Picture 8

- Fire resistant roofing material (metal, enclosed tile, etc). (Picture 8)



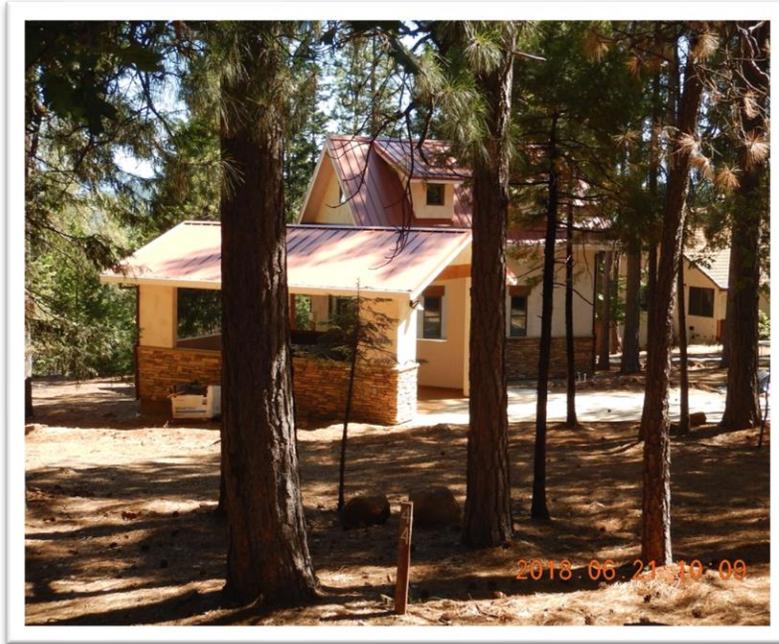
Picture 8

- Gravel perimeter (river rock or smooth rock) and a cleared perimeter around house of at least 5'. (Picture 9)



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- Hardy plank siding or concrete siding
- Green grass (irrigated lawn) or xeriscape
- Newly constructed buildings with non-combustible materials including stucco, metal roofs, masonry, etc. (Picture 10)



Picture 9

9) NEXT STEPS

After reviewing the contents of this assessment and its recommendations, the committee for Shasta Forest Village in cooperation with CAL FIRE will determine whether or not it wishes to continue seeking Firewise USA™ recognition. The Firewise USA™ representative will contact the committee representative by [Click here to enter a date.](#) to receive its decision.

If the site assessment and recommendations are accepted and recognition will be sought, the Shasta Forest Village committee will create agreed-upon, area-specific solutions to the wildfire risk reduction recommendations and create an action plan in cooperation with CAL FIRE.

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



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- Form a committee that's comprised of residents and other applicable wildfire stakeholders. This group will collaborate on developing the site's risk reduction priorities, develop a multi-year action plan based on the risk assessment and oversee the completion of the annual renewal requirements needed to retain an "in good standing" status.
 - Action plans are a prioritized list of risk reduction projects/investments for the participating site, along with suggested homeowner actions and education activities that participants will strive to complete annually, or over a period of multiple years. Action plans are developed by the board/committee and need updating at least every three years.
- At a minimum, each site is required to invest the equivalent of **\$24.14 per dwelling unit*** in wildfire risk reduction actions annually (the rate is based on the 2017 annual National Hourly Volunteer Rate; which is updated every year in April when the new amount is published). Qualifying expenditures include contractor costs, rental equipment, volunteer activities, grants, etc. Residents completing select home modifications, along with any qualifying work performed at their home and in the adjacent home ignition zones can contribute related hours and/or costs towards meeting the sites collective investment amount.
- Each participating site is required to have a **minimum of one wildfire risk reduction educational outreach event**, or related activity annually.
- Every year participating sites must **submit an annual renewal** to maintain their "In Good Standing" status. The annual renewal application can be accessed through the Firewise USA™ online management portal (<http://portal.firewise.org/>).

Shasta Forest 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, including firebrands or embers. Science tells us that the home itself and 0-5 feet from the furthest attached exterior point of the home are most vulnerable to ember attacks. Residents should focus on making this a non-combustible area by removing any flammable vegetation or materials from wall exteriors; cleaning debris from roofs and gutters; and addressing home construction issues. 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.