FIREWISE COMMUNITIES / USA
RECOGNITION PROGRAM

Forest Hills Community Assessment
Grants Pass, Oregon

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 Forest Hills 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.

An assessment of the Forest Hills community, located in the City of Grants Pass Oregon, was conducted on November 30, 2012. The assessment team included Brian Ballou – Wildland Urban Interface Specialist from the Oregon Department of Forestry, John O'Connor – Fire Prevention Specialist Oregon Department of Forestry, Randy Delonge – Forest Hills resident and Corporal for Grants Pass Fire and Rescue, and Bob Schumacher Grants Pass Firewise Coordinator. The Forest Hills area comprises approximately 38 acres (including city-owned land) and includes 60 homes on 69 parcels. The area is bordered by an older sub-division on the east, an active railroad on the south and west, and undeveloped wooded large tracts of land on the north. The land slopes upward from the railroad in a northeasterly direction.

2) Definition of the Home Ignition Zone

Forest Hills is located in a wildfire prone 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 Forest Hills. 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 Forest Hills. 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. Forest Hills 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 200 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 the Severe Case Wildland Fire Characteristics that Could Threaten the Area

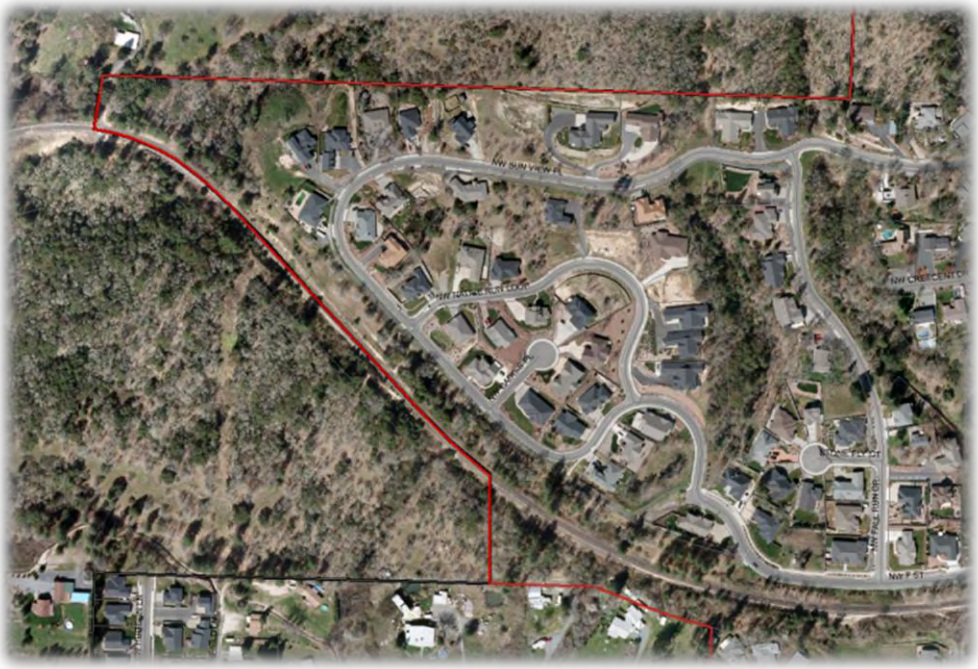
Fire intensity and spread rate depends on the fuel type and condition (live/dead), the weather conditions prior to and during ignition, and the topography. Fine fuels ignite more easily, spread faster, and burn with higher intensities than coarser fuels. For a given fuel, the greater the volume and the more continuous it is, the greater the intensity and the faster the fire spreads.

The Forest Hills neighborhood of Grants Pass could be affected by wildfires in a number of ways. Wildfires need oxygen, fuel, and heat to ignite. The areas surrounding the Forest Hills sub-division, both public and private, contain a variety of wildland fuel types with moderate to steep slopes on hot, dry south to southeast-facing aspects. The most probable fire scenario would be an ignition within a surrounding area, thus creating showers of heat-producing burning embers capable of igniting vegetation and flammable materials adjacent to, or on the home. Due to the close proximity of homes within this community, once a home is ignited the fire can spread quickly to neighboring homes and surrounding vegetation through either direct flame contact, or additional ignitions from burning embers. Flammable vegetation used in decorative landscaping can also help contribute to flame spread, and provide more points of ignition. The combined fuel sources of the vegetation around homes, the common areas, and the homes themselves, provide the potential for a fast-moving large-scale fire.

Another possible wildfire scenario be a wind-driven fire burning upslope through grass and brush from a surrounding area, or from within the neighborhood itself. Due to the high volume of fuels in some areas adjacent to Forest Hills, a wind-driven fire can create considerable potential for ignitions within the boundaries of the community.

4) Site Description

The Forest Hills neighborhood is located on the western edge of the City of Grants Pass, and is within Josephine County in Southwest Oregon. Josephine County consists of mainly mountainous terrain which is heavily forested. More than 70% of the county is Federal land. Forest Hills comprises approximately 38 acres and includes 60 homes on 69 parcels. The area is bordered by an older sub-division on the east, an active railroad on the south and west, and undeveloped large wooded tracts of land on the north. The land slopes upward from the railroad in a northeasterly direction. There are two tracts of city property contained within Forest Hills. Both of these tracts are wooded and contain native vegetation on steep ravines. Forest Hills is classified as a "high" risk area for wildfire under the "Oregon Forestland-Urban Interface Fire Protection Act".



Aerial view of the Forest Hills community.

Generally, the following relationships hold true between the fire behavior, topography, weather and fuel.

Topography:

Topography influences fire behavior principally by the steepness of the slope. In general, the steeper the slope, the greater the uphill fire spread and intensity. The Forest Hills sub-division ranges in elevation from between 1000 to 1300 feet above sea level. The slopes within the neighborhood range from generally flat, to 50% or more near or adjacent to some residences. Some City of Grants Pass owned common areas within the neighborhood have steep vegetated slopes of up to 70%, the steepest of which is adjacent to Fall Run Drive. Overall, aspects within the community are mostly south, southwest, to southeast-oriented. Prior surface fuels treatments have been done on some city-owned parcels within the neighborhood. However, the steepness of the slopes presents a constant challenge for the City of Grants Pass to keep these areas thinned and pruned adequately to disrupt the vertical fuels ladder.

Weather:

As with the majority of Southwest Oregon, the Forest Hills neighborhood has an average temperature range of 80 to 105 degrees Fahrenheit during the summer months. Relative humidity (RH) ranges between 10 to 35%, with the lows occurring usually by mid-afternoon during fire season. The low RH during the hot afternoons creates lower fuel moisture contents, particularly in finer fuels. Lower fuel moistures produce higher spread rates and fire intensities. In addition, ridgetop wind speeds within the 1000 to 1300-foot elevation community range between 5 to 15 mph, under normal conditions. The higher the wind speed, the greater the spread rate and intensity.

General Fuels:

Many different fuel types exist within the Forest Hills neighborhood. Ornamental plants, many fire-resistant, have been used around the perimeter of the homes in this fairly new sub-division. However, flammable privacy screen vegetation such as arborvitae, Leyland cypress, and Italian cypress has been used to separate some residences, or has been planted directly underneath roof eaves. In some cases, the vegetation surrounding homes is in need of pruning and cultivation to maintain the needed clearances between the exterior walls and windows of structures. Overgrown plants, the presence of some flammable plant and groundcover vegetation, and intermittent wooden fences between some homes, all combined provide potential fuel or ignition points for a wildfire.

City-owned common areas within Forest Hills consist mostly of natural wildland vegetation found in Southwest Oregon. Vegetative communities include mixed conifer and hardwood forestlands, interspersed oak woodlands, and native grass and brush areas. Overstory tree species include mostly Oregon white oak, California black oak, incense cedar, Pacific madrone, Douglas-fir, and ponderosa pine, with native grasses and brush species in the understory. Around the edges of some common areas, heavy patches of invasive and flammable blackberry and scotch broom can be found. These fuel types are also prevalent on the property owned by the railroad adjacent to Forest Hills.

Image 4-A: Native mixed conifer/hardwood plant community on city-owned property with 50% slopes, adjacent to a Forest Hills residence. Previous surface fuel treatments have been done.

Image 4-B: Common area with east-facing slope adjacent to Fall Run Drive. Slopes range between 30 to 70% and vegetation consists of native conifer/hardwood species, with intermixed grass and brush understory.

5) Assessment Process

Letters were sent to all homeowners within Forest Hills to notify them that their neighborhood was considered to be at-risk from wildfire and the subsequent damage from burning embers. Several individual home assessments were conducted at the request of homeowners. An informational meeting was held at one of the homes with about 40 residents in attendance. After this meeting a neighborhood assessment was requested. The assessment was conducted on November 30, 2012. The assessment's emphasis was placed on community landscaping and the areas adjacent to the Forest Hills sub-division.

Image 5-A: Firewise assessment team assessing the flammable potential of groundcover vegetation.

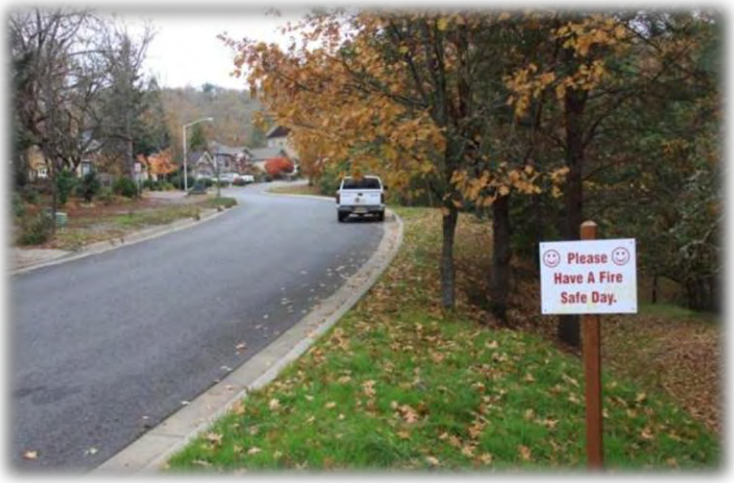


Image 5-B: Initial assessment of the current conditions within a city-owned common area with previous surface fuels treatments.

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 Wildland Urban Interface (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.

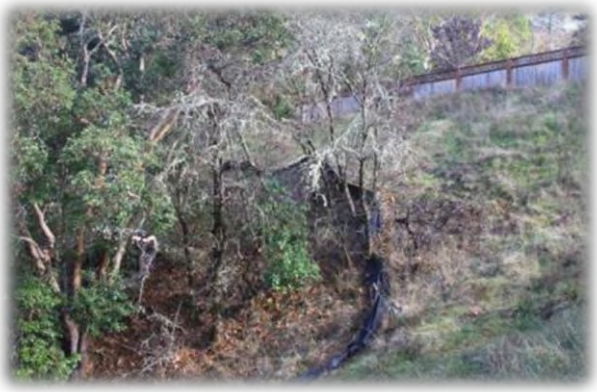
During the Forest Hills neighborhood assessment, several considerations were noted that may potentially lead to ignition and/or the spread of a wildfire to homes. Common areas are beginning to accumulate flammable groundcover such as blackberry and scotch broom in close proximity to some Forest Hills residences.

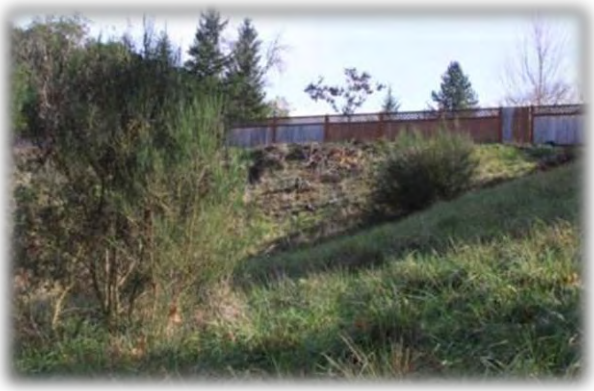
Image 6-A: Flammable blackberry and brush growing on city-owned property encroaching residences.

Another area of concern is the flammable fuel build-ups adjacent to the railroad tracks on the southwest corner and along F Street.

Image 6-B & C: Flammable scotch broom and other vegetation adjacent to railroad tracks and the community bike path on F Street.

In addition, flammable fuels build-up can be found on the neighboring undeveloped lands to the north of the community. These areas are a growing concern.





Images 6-D & E: Flammable wildland fuel build-ups on undeveloped lands adjacent to Forest Hills subdivision.

Flammable plants such as arborvitae and Leyland cypress can be found close to homes, fence lines, and being used as privacy screens. In some areas, potentially flammable groundcover has been planted on slopes near homes. In many instances, overgrown plants are touching windows, exterior walls, and wooden fences separating properties.

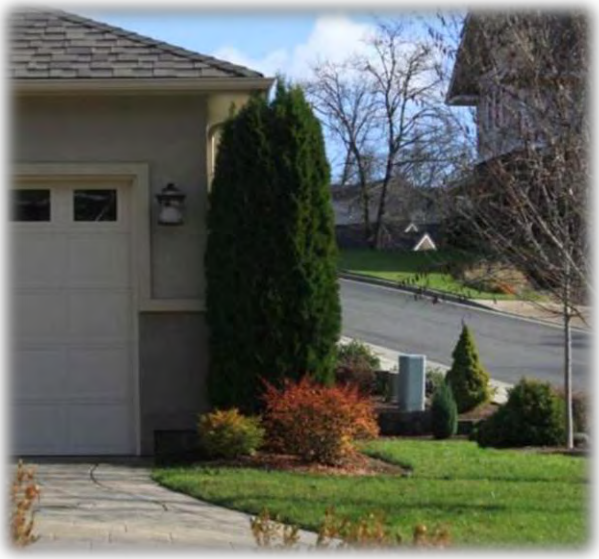


Image 6-F & G: Flammable arborvitae growing up to roof lines and vegetation beginning to grow close to sidewalls, windows, and wooden fences.

7) Observations and Recommendations

During the Forest Hills neighborhood assessment, several considerations were noted that may potentially lead to ignition and/or the spread of a wildfire to homes.

The exterior sidewalls of most residences within this newer community are constructed of fire-resistant stucco or composite concrete siding. Though the roofing material used on homes is mostly fiberglass-based asphalt shingles, the eaves underneath in some cases are exposed wood. This makes them susceptible to ignition from below by flammable vegetation planted next to exterior sidewalls.

Flammable plants such as arborvitae and Leyland cypress can be found close to homes, fence lines, and being used as privacy screens. In some areas, potentially flammable groundcover has been used on slopes near homes. In other parts of the community, though much of the vegetation used was fire-resistant, since their initial planting they have grown and are now in need of pruning. In some cases overgrown plants are touching windows, exterior walls, and wooden fences separating properties.

Recommendation #1- Continue to educate homeowners on Firewise landscaping techniques, including recognizing fire prone vs. fire-resistant shrubs, proper watering and trimming of landscape plants and shrubs. Financial assistance may be available for the cost of removing hazardous landscaping.

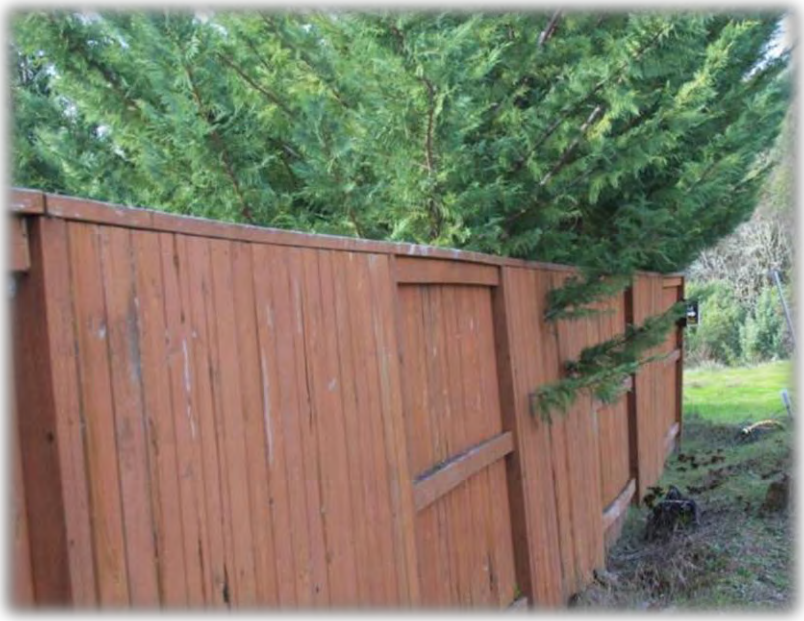


Image 7-A: Flammable Leyland cypress growing through wooden fences and adjacent to homes used as privacy screens. Pruning lower limbs will reduce ladder fuels and help promote tree growth. However, removal and planting of a more fire-resistant privacy screen is the best option.

Image 7-B: Dense groundcover with waxy foliage and lots of dead material beneath its surface is extremely vulnerable to ember ignition. Whenever possible, remove flammable groundcover and replace with a more fire-resistant species.

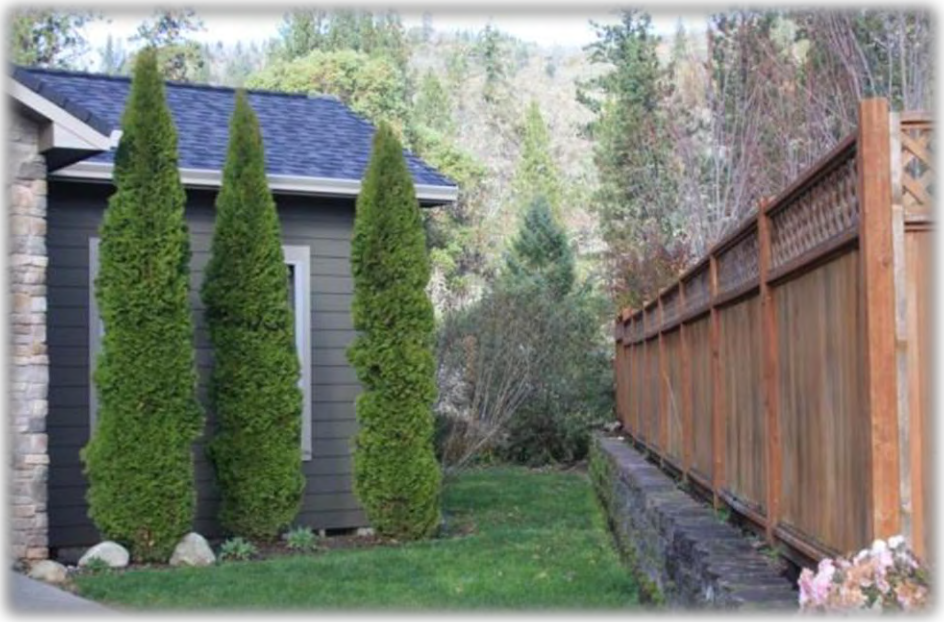


Image 7-C: Replace flammable plants such as arborvitae and Italian cypress growing under roof lines or being used as privacy screens. Plants such as these are highly susceptible to burning ember ignitions and can spread fire to a home and/or other vegetation.

Due to the close proximity of the railroad tracks along F Street to the community, the adjacent flammable fuel build-ups are of concern. This includes the forested area between the railroad tracks and the community bike path.

<u>Recommendation #2</u> - Work with the Railroad to have hazardous fire fuels removed from their property.

Image 7-D: Reduce heavy concentrations of surface and ladder fuels adjacent to the railroad tracks on the community's southwest corner. This will provide an added measure of safety by creating a fuel break between the tracks, and the vegetation bordering the community's bike path.

Image 7-E & F: Reduce/remove blackberry patches and other flammable vegetation adjacent to homes and alongside the community bike path on F Street. These plants are highly susceptible to ember ignitions and can spread fire to the home and surrounding vegetation.

Since their last surface fuel treatments, city-owned common areas are beginning to accumulate flammable groundcover such as blackberry and scotch broom in close proximity to some Forest Hills residences. The steep slope on these areas requires that ground and ladder fuels be kept low.

<u>Recommendation #3 -</u> Work with the City of Grants Pass to ensure that its property is maintained in a fire safe manner.

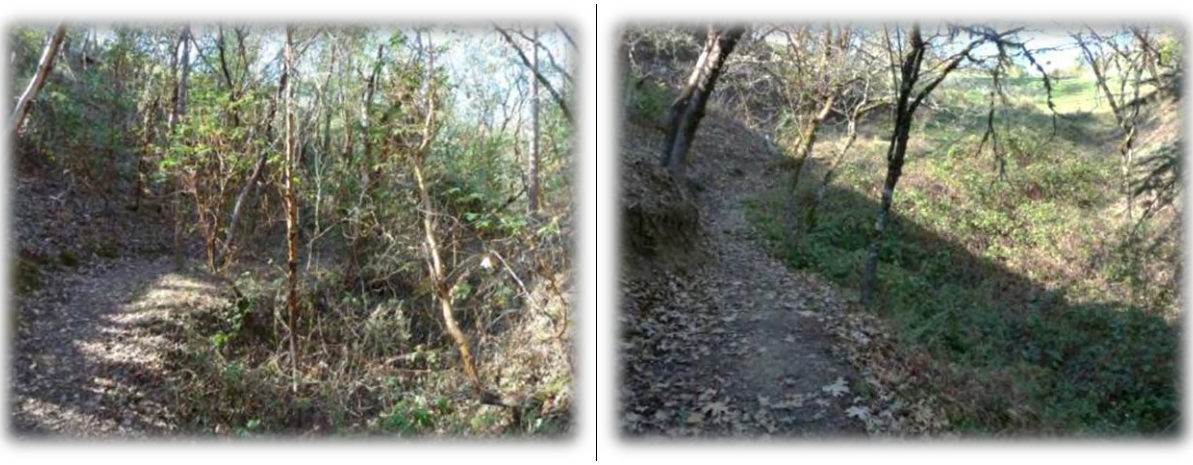


Image 7-G & H- Ground fuels and blackberries starting to grow back on the slopes of the city property.

Currently, there is a heavy fuel load on undeveloped lands beyond city boundaries, which are adjacent to the Forest Hills community. These fuels have the potential to spread a wildfire and create significant amounts of burning embers.

<u>Recommendation #4</u> - Establish and maintain a fuel break between Forest Hills and the adjacent undeveloped property to the north of the subdivision. Seek cooperation with the adjacent landowners.

Image 7-K & L- Area of heavy fuels adjacent to the undeveloped land north of Forest Hills.

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 the Forest Hills neighborhood and are examples of good Firewise practices.

Image 8-A & B: Fire-resistant vegetation planted around homes that are kept pruned from touching the home's exterior sidewalls and windows. Maintain a 3 to 5-foot fuel free zone and keep plants in a lean, clean, and green condition.

Before **After**

Image 8-C & D: Removing excessive understory ladder fuels and surface vegetation significantly reduces wildfire hazards, while promoting better overall forest health.

9) Next Steps

After reviewing the contents of this assessment and its recommendations, the Forest Hills Firewise Committee in cooperation with the Grants Pass Department of Public Safety, Fire & Rescue Division will determine whether or not it wishes to continue seeking Firewise Communities/USA recognition.

The Grants Pass Firewise Coordinator will contact the Firewise Board representative by [date] to receive its decision.

If the site assessment and recommendations are accepted and recognition will be sought, the Forest Hills Firewise Committee will create agreed-upon, area-specific solutions to the Firewise recommendations and create an action plan in cooperation with the Grants Pass Department of Public Safety, Fire & Rescue Division.

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

- Sponsor a local Firewise committee that maintains the Firewise Community program and status.

- Enlist a WUI specialist to complete an assessment and create a detailed plan from which identifies agreed-upon, achievable local solutions.

- Invest a minimum of $2.00 annually per capita in its local Firewise activities. (Work done by municipal employees or volunteers, using municipal or other equipment, can be included, as can state/federal grants dedicated to that purpose.)

- Observe a Firewise Communities/USA Day each year that is dedicated to a local Firewise event.

- Submit an annual report to Firewise Communities/USA. This report documents continuing participation in the program

This assessment addresses observations and recommendations for the neighborhood as a whole. It is important that homeowners continue to assess their own home ignition zone for fire hazards such as the buildup of leaf litter in gutters and on the roof, in addition to flammable debris and fire-prone plants directly adjacent to the house. Homeowners should identify the things that will ignite their homes and address those. Wildfire cannot be eliminated from a property, but it can be reduced in intensity. When 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, and other flammable items. More information is available GrantsPassFirewise.org and Firewise.org